Western Pacific
Country Health Information Profiles

World Health Organization
Western Pacific Region

2010 REVISION

CHiPS

WESTERN PACIFIC

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Western Pacific Country Health Information Profiles: 2010 Revision

1. Health status indicators 2. National health programs 3. Health priorities

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Contents

Introduction

Country health information profiles (CHIPS) was first published in 1974 by the WHO Regional Office for the Western Pacific. It was intended primarily as a reference document for WHO staff responsible for briefing others, writing reports, drafting plans of action and verifying statistical data. Over the years, CHIPS has evolved from a purely statistical report to a more comprehensive description of each of the 37 countries and areas in the WHO Western Pacific Region and it has now become a resource tool used by other United Nations agencies, international organizations, government agencies and the general public.

CHIPS comprises ***country profiles*** and ***health databanks*** for each country and area of the WHO Western Pacific Region. It contains mostly crude data that are supplied either by health ministries/departments or compiled from national surveys, reports, policy documents and databases. Estimates and adjusted data from various published sources are also used. Every effort is made to update the information in CHIPS annually in response to ever-growing demands for current data. Clearance by the respective governments is also sought prior to publication. However, data reliability and data coverage may vary for each indicator and from country to country.

In this 2010 edition, the ***country profiles*** provide readers with background on each country's demographic, political and socioeconomic situation as related to health-seeking behaviour and prevailing health conditions. Trends in major disease conditions afflicting specific age groups and the population as a whole are also illustrated. The health system is detailed to provide information as to the country's priorities, policies, strategies and resources to address health problems and improve the health and lives of its people. Specifically, the country profiles provide information as to:

- **Country context** – Provides a picture of the country's population size and distribution, as well as its rate of population growth and movement. The political structure and situation are also described to show how major government initiatives and political events impact on health. Major economic determinants of health, such as economic performance, level of poverty, employment and working conditions, as well as government spending on health, are also explained and quantified. There is an overview of the environmental conditions and prevailing gender and human-rights issues affecting health, and the country's major vulnerabilities, which may be natural, biological, technological or societal, are illustrated.
- **Health situation and trend** – Illustrates the major communicable and noncommunicable diseases afflicting the country, its health transition experience and the leading causes of morbidity and mortality. Maternal health conditions, as well as diseases specifically affecting children and infants, are discussed. Burden-of-disease estimates are also presented, as well as results of national surveys on health risk factors.
- **Health system** – Orients readers on the mission, vision and objectives of the Ministry of Health. The organization of the country's health services and delivery systems, such as the public and private sector set-up, the public

health administrative levels and the health facility network, are described. In addition, the framework for health policy, planning and regulation is presented. The Government's long-term objectives for the health sector are outlined, highlighting policies and directions, legislation recently passed or pending, health reform proposals and health system strengthening strategies. An overview is given of the health care financing system and major financing issues, and key areas and priorities in relation to human resources for health are presented.

- **Progress towards achieving the health-related Millennium Development Goals** – Describes the country's performance as it strives to attain the health-related Millennium Development Goals. It outlines the challenges encountered in working towards the MDG targets, as well as identified priority areas for action. Where possible, an assessment is given on whether or not the targets are likely to be met by 2015.
- **Major information sources** – Lists key resources for additional information on the country. Includes websites, major publications and policy documents, surveys and databases.
- **Contact information for the Ministry/Department of Health and the WHO Representative or Country Liaison Officer for WHO** (if applicable)
- **Health ministry/department organizational chart** (if available)

A country ***health databank*** is annexed to each country profile and is more detailed in containing different sets of indicators to reflect the country's:

- demographic and socioeconomic conditions;
- health status regarding leading causes of morbidity and mortality, and the number of cases and deaths from selected diseases;
- health system, as regards health workforce and infrastructure;
- health service coverage, such as immunization of infants; and
- status in relation to the health-related Millennium Development Goals.

A ***statistical annex*** is made available at the end of the publication. It summarizes most of the information in the health databanks and includes other indicators on selected health conditions and practices, such as HIV and obesity, smoking and drinking behaviour and child care. It also contains human-rights, poverty and gender-related development indicators, as well as details of major emergencies occurring in the Region over the last two years. However, as previously mentioned, data reliability and data coverage may vary for each indicator and from country to country. Thus, intercountry comparisons may not always be possible due either to varying reference years, variations in data sources and/ or methodological issues.

Individual country profiles and the CHIPS volume as a whole are accessible on the website of the WHO Regional Office for the Western Pacific (http://www.wpro.who.int/).

Note on title. As in the 2004, 2005, 2006, 2007, 2008 and 2009 revisions, the year of publication has been used (rather than the year of most recent data). This brings CHIPS into line with other WHO publications, such as the *World Health Report.*

Acronyms

ACT	Artemisinin-based combination therapy
ADB	Asian Development Bank
AFB	Acid-fast bacillus
AIDS	Acquired immunodeficiency syndrome
APEC	Asia-Pacific Economic Cooperation
API	Annual parasite incidence
ARI	Acute respiratory infection
ART	Antiretroviral treatment
AusAID	Australian Agency for International Development
BMI	Body mass index
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CFR	Case fatality rate
COPD	Chronic obstructive pulmonary disease
CRC	Convention on the Rights of the Child
CRS	Congenital rubella syndrome
CVD	Cardiovascular disease
DALY	Disability-adjusted life years
DHF	Dengue haemorrhagic fever
DHS	Demographic health survey
DOTS	Directly observed treatment short-course
ENT	Ear, nose and throat
EPI	Expanded programme on immunization
EU	European Union
FAO	Food and agriculture organization
GAVI	Global Alliance for Vaccine and Immunization
GBD	Global burden of disease
GDI	Gender-related development index
GDP	Gross domestic product
GEM	Gender empowerment measure
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GNI	Gross national income
GNP	Gross national product
HBV	Hepatitis B virus
HDI	Human development index
HIS	Health information system
HIV	Human immunodeficiency virus
HMN	Health metrics network
HPV	Human papillomavirus
HRH	Human resources for health
ICD	International classification of diseases
ICT	Information and communication technology
IDU	Injecting drug users
IHD	Ischaemic heart disease
IHR	International health regulations
IMCI	Integrated management of childhood illness
IMF	International Monetary Fund
IMR	Infant mortality rate
JICA	Japan International Cooperation Agency
LDC	Least developed countries
LLN	Long lasting nets

MCH	Maternal and child health
MDA	Mass drug administration
MDG	Millennium Development Goals
MDR TB	Multidrug resistance Tuberculosis
MICS	Multiple Indicator Cluster Survey
MMR	Maternal mortality ratio
MSM	Men having sex with men
NCD	Noncommunicable disease
NGO	Non-governmental organization
NHA	National health accounts
NZAID	New Zealand Agency for International Development
OCHA	Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
POLHN	Pacific Open Learning Health Network
PLWHA	People living with HIV/AIDS
PPP	Purchasing power parity
PRISM	Pacific Regional Information System
PYLL	Potential years of life lost
RHS	Reproductive health survey
SAR	Special Administrative Region
SARS	Severe acute respiratory syndrome
SIDS	Sudden infant death syndrome
SPC	Secretariat of the Pacific Community
STEPS	STEPwise approach to chronic disease risk factor surveillance
STI	Sexually transmitted infection
SWAp	Sector wide approach
TB	Tuberculosis
TBA	Traditional birth attendants
TCM	Traditional Chinese Medicine
TFR	Total fertility rate
TT	Tetanus toxoid
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNDAF	United Nations Development Assistance Framework
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIFEM	United Nations Development Fund for Women
USAID	United States Agency for International Development
U5MR	Under-five mortality rate
VCT	Voluntary counselling and testing
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization
WTO	World Trade Organization
YLD	Years lost due to disability
YLL	Years of life lost

AMERICAN SAMOA

1. CONTEXT

1.1 Demographics

In 2009, American Samoa had an estimated population of 65 113. Based on 2009 population estimates, around 35% of the population is below 15 years of age, while 4% is above 65 years. Life expectancy at birth for men is estimated to be 69.3 years, while for women it is 75.9 years. The crude birth rate of 30.0 per 1000 population in 2000 is estimated to drop to 23.5 per 1000 population in 2010, with a crude death rate of 4.5 per 1000 population.

1.2 Political situation

American Samoa was defined by an 1899 treaty between the United States of America, the United Kingdom of Great Britain and Northern Ireland, and Germany, which gave the United States of America control of all Samoan islands east of 171°W. In 1978, the first popularly elected Samoan governor was inaugurated. There is a bicameral legislature (*Fono*), consisting of a senate (18 members chosen by county councils) and a house of representatives (20 members elected by popular vote, plus one non-voting member from Swains Island, which is privately owned). There is also an independent judiciary.

1.3 Socioeconomic situation

American Samoa is a small developing economy that depends on two main sources of income: the United States Government and tuna canning. Federal expenditures and the canning business together account for 93% of the economy. The remaining 7% comes from the small tourism industry and the service sector. Transfers from the United States Government add substantially to the country's economy. Annual budget revenues of US$ 121 million comprise grants from the United States of America (63%) and local revenue (37%). The United States is the main trading partner. Gross domestic product (GDP) per capita was estimated at US$ 9041 in 2005.

Water supplies and sanitation systems are well organized and maintained, and 99% of the population have access to safe water. Water is increasingly supplied from deep bores, with a smaller portion from reservoirs, and is chlorinated. However, although 99% of the population have adequate excreta disposal facilities, solid waste disposal is still a problem. Waste collection systems have improved significantly, but space for solid waste landfill operations is very limited.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The most serious health issues relate to the increase in chronic diseases associated with lifestyle, with their roots in improper nutrition and physical inactivity. Significant increases in the prevalence of obesity, in both sexes and at increasingly younger ages, are associated with a number of these conditions. Hypertension, cardiovascular diseases, cerebrovascular diseases, type II diabetes mellitus and its complications, arthritis, gout and some forms of cancer are among these important chronic diseases.

American Samoa reported one positive HIV infection in 2001. The Government is taking the issue of HIV/AIDS seriously and has developed a national policy and prevention programme.

Filariasis is a major endemic problem. The mass drug administration (MDA) campaign in 2001 reported a coverage rate of 52% for the target population, an improvement compared with the 19% coverage rate

of the 1999 MDA. In 2008, MDA coverage among the total population at risk was 52.9%. Blood survey results for filariasis were 2.6% (microfilaria) and 11.5% (immunochromatographic test) in 2001.

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

The morbidity pattern has shifted significantly over the past three decades from infectious diseases to a predominance of noncommunicable diseases related to modernization and lifestyle changes. Based on hospital discharge data and notifiable disease records, the leading causes of morbidity in 2001 were dengue fever, chickenpox, dog bites, road traffic injuries and food poisonings. Heart diseases and malignant neoplasms remained the leading causes of mortality in 2005. Other common causes of death are diabetes mellitus, cerebrovascular diseases, chronic obstructive pulmonary and allied conditions, pneumonia and influenza, hypertension, accidents, perinatal conditions and septicaemia.

2.4 Maternal, child and infant diseases

There has been considerable progress in primary health care in recent years. The total fertility rate for women aged 15-49 years was 4.0 in 2000, while the maternal mortality ratio was 123 per 100 000 live births in 2002.

The infant mortality rate dropped from 15.2 per 1000 live births in 2004 to 11.9 in 2008. The under-five mortality rate was 4.9 per 1000 live births in 2002.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Department of Health and the Hospital Division continue to co-exist as two separate systems. The Department of Health is responsible for public health issues, communicable disease control (including tuberculosis and HIV/AIDS) and health dispensaries at district and community levels. The national hospital in Pago Pago is under the management of the Hospital Board, designated by the Governor, and is subject to the federal rules and regulation of the United States of America (i.e. the hospital does not have to report to the Department of Health). Nevertheless, coordination between the Department of Health and the hospital is generally well conducted at the technical level. Most public health programmes continue to be funded by federal grants.

The territorial health priorities are as follows:

(1) Increase the capacity of the health system to meet the health challenges of the 21st century by:
   - improving health policy development mechanisms,
   - developing the health workforce,
   - improving management processes at all levels, and
   - strengthening long-range health planning and programme planning.

(2) Identify emerging and re-emerging diseases and implement effective interventions.

(3) Implement effective interventions to decrease the burden of chronic diseases related to unhealthy lifestyles, especially cardiovascular disease, cancer and diabetes mellitus.

(4) Actively implement the Healthy Islands concepts of health promotion, health protection and primary health care in priority settings, particularly through community health centres and school-linked programmes.

(5) Increase the effectiveness of public investment in health through development of decision-oriented information systems, applied research, effective deployment of the

health workforce, application of appropriate technology, and increased allocation of funding for health promotion, health protection and primary health care.

3.2 Organization of health services and delivery systems

See Section 3.1.

3.3 Health policy, planning and regulatory framework

See Section 3.1.

3.4 Health care financing

Financial management of public health programmes is mainly grant-driven rather than programme-driven. The hospital generates financial resources from user fees, local government appropriations and federal health care financing through the Medicaid and Medicare programmes. The total government health budget amounts to 14% of the territory's total budget, the bulk going towards curative care, with only about 10% going to public health. Total health expenditures amount to around US$ 32.3 million, which corresponds to a per capita health expenditure of US$ 500.

The United States Health Care Financing Administration provides about US$ 3 million per year to the hospital, the LBJ Tropical Medical Center (16% of its funding), most of which is used to purchase medicines and medical supplies used at the centre. Pharmaceuticals and vaccines are purchased from the United States of America. United States Federal Drug Administration regulations prevent the territory from purchasing pharmaceuticals from foreign sources. There are frequent shortages due to problems with ordering logistics and financial shortfalls.

A planned project to build a new acute care hospital to replace the LBJ Tropical Medical Center has been deferred due to cost. An alternative plan to renovate and expand the existing facility is being implemented.

3.5 Human resources for health

The health infrastructure consists of one hospital (LBJ Tropical Medical Center) and five primary health centres. The LBJ Tropical Medical Center, a 128-bed general acute-care hospital, is the only hospital in the territory. It provides a reasonable range of general inpatient and outpatient services covering: medicine; surgery; obstetrics and gynaecology; ear, nose and throat (ENT) problems; eye problems; paediatrics; mental health; and renal dialysis.

The 2003 health workforce included 49 physicians (American doctors, Fiji School of Medicine graduates and foreign doctors), 15 dentists, 2 pharmacists, 127 nurses, 1 midwife, 98 other nursing/auxiliary staff, 146 paramedical personnel, and 13 other health personnel. However, the absence of an available health workforce pool in a small island population, along with severe government financial difficulties, make long-range health workforce planning uncertain and recruitment and retention problematic. Both the National Hospital and the Department of Health have inadequate resources to fund continuing education for their staff members. This leaves the Department of Health with a rapidly growing gap between evolving professional responsibilities and existing workforce competencies. The long-standing problem of health workforce deficiencies is one of the greatest challenges to health development. Human resource development for health has therefore been identified as a priority area for national health development, particularly for WHO collaboration.

Training of nurses takes place both locally and through overseas education in the American system and, as recognition of qualifications requires certification and/or registration by American professional associations, much undergraduate and postgraduate training is also undertaken in that system. Adequate numbers of licensed practical nurses are produced this way, but the supply of registered nurses is insufficient to meet the quality standards required for United States federal health care financing programmes.

Specialized training courses and workshops sponsored by WHO and American sources are also conducted and help to improve the quality of health services, particularly those related to public health. The telecommunications capability at the LBJ Tropical Medical Center provides additional opportunities for distance learning through the telemedicine/telehealth system housed in that facility.

Medical and dental officers are trained at the Fiji Schools of Medicine and Dentistry, and postgraduate training through short-term courses and attachments is arranged in Australia and New Zealand. A number of medical students are also in medical schools in the United States of America, although this practice does not provide any assurance that these individuals will return to the island to practise as doctors after their training.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Statistical yearbook 2006* *American Samoa Factsheet*
Operator	:	Statistics Division, American Samoa Department of Commerce
Web address	:	http://www.asdoc.info/statistics/statshp.htm
Title 2	:	*Reports*
Operator	:	Department of Health, American Samoa
Title 3		*Basic indicators (Country Statistics- American Samoa)*
Operator	:	Pacific Regional Information System, Secretariat of the South Pacific
Web address	:	http://www.spc.int/prism/Country/AS/ASindex.html
Title 4	:	*American Samoa population: 2007*
Operator	:	ASG Department of Commerce, Statistics Division
Web address	:	http://www.asdoc.info/2007_Mid-year_population_estimate.pdf
Title 5	:	*Pacific Island Populations - Estimates and projections of demographic indicators for selected years (updated April 2010)* *Population 2000-2015 by 1 and 5 year age groups, February 2010*
Operator		Secretariat of the Pacific Community (SPC), Statistics and Demography Programme
Web address		http://www.spc.int/sdp/

6. ADDRESSES

DEPARTMENT OF HEALTH

Office Address	:	Pago Pago, American Samoa 96799
Postal Address	:	American Samoa Government Territory of American Samoa, Pago Pago, AS 96799
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Official Email Address	:	who@sma.wpro.who.int
Telephone	:	(685) 23756
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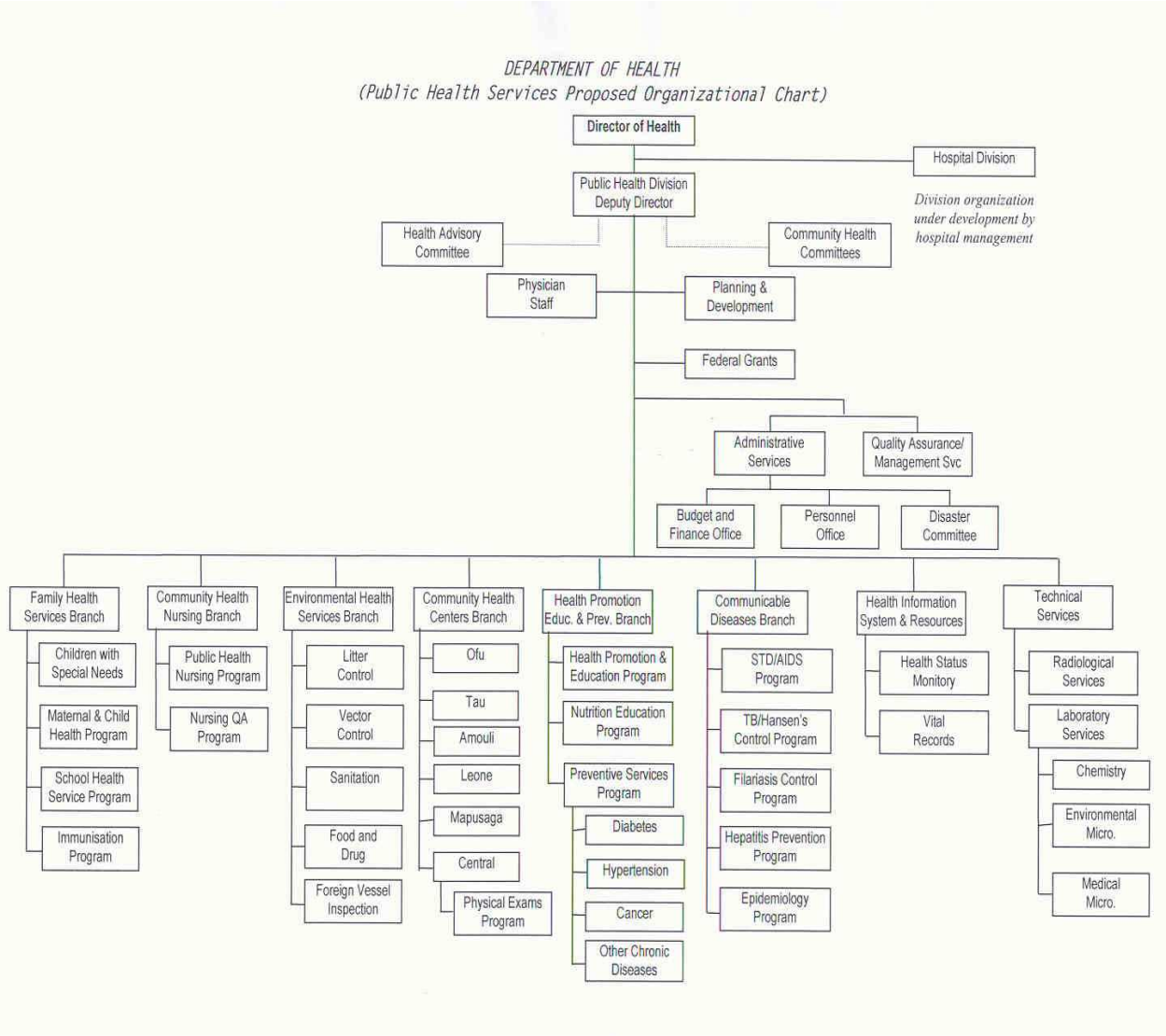
7. ORGANIZATIONAL CHART: Ministry of Health



COUNTRY HEALTH INFORMATION PROFILE

AMERICAN SAMOA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	0.20			2006	1
2	**Estimated population ('000s)**	65.11	33.24	31.88	2009 est	2
3	**Annual population growth rate (%)**	…	…	…		
4	**Percentage of population**					
	- 0–4 years	11.73	11.94	11.51	2009 est	2
	- 5–14 years	24.08	24.35	23.80	2009 est	2
	- 65 years and above	4.33	3.98	4.70	2009 est	2
5	**Urban population (%)**	92.70	…	…	2009 est	3
6	**Crude birth rate (per 1000 population)**	23.50	…	…	2010 est	4
7	**Crude death rate (per 1000 population)**	4.50	…	…	2010 est	4
8	**Rate of natural increase of population (% per annum)**	1.90 [a]	…	…	2010 est	4
9	**Life expectancy (years)**					
	- at birth	72.50	69.30	75.90	2000	4
	- Healthy Life Expectancy (HALE) at age 60	…	…	…		
10	**Total fertility rate (women aged 15–49 years)**	4.00			2000 est	4
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	…	…	…		
12	**Per capita GDP at current market prices (US$)**	9041.00			2005 est	5
13	**Rate of growth of per capita GDP (%)**	…				
14	**Human development index**	…				
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Health care waste generation (metric tons per year)**	…	…	…		
	Communicable and noncommunicable diseases	**Number of new cases**		**Number of deaths**		
16	**Selected communicable diseases**					
	Hepatitis viral					
	- Type A	<5	…	…	0	0	0	2003	6
	- Type B	<5	…	…	0	0	0	2003	6
	- Type C	<5	…	…	0	0	0	2003	6
	- Type E	…	…	…	…	…	…		
	- Unspecified	0	0	0	0	0	0	2003	6
	Cholera	0	0	0	0	0	0	2003	6
	Dengue/DHF	419	…	…	…	…	…	2009	7
	Encephalitis	0	0	0	0	0	0	2003	6
	Gonorrhoea	41	30	11	0	0	0	2003	6
	Leprosy	3	2	1	…	…	…	2009	7
	Malaria	…	…	…	…	…	…		
	Plague	0	0	0	0	0	0	2003	6
	Syphilis	3	1	2	0	0	0	2003	6
	Typhoid fever	<5	…	…	0	0	0	2003	6
17	**Acute respiratory infections**	…	…	…	11	…	…	2002	6
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	0	0	0	2002	6
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	3	...	...	...	...	...	2007	7
	- New pulmonary tuberculosis (smear-positive)	...	...	...	...	...	...		
20	**Cancers**								
	All cancers (malignant neoplasms only)	58	...	...	37	...	...	2002	6
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	7	...	...	3	...	...	2002	6
	- Cervix			7			4	2002	6
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	2	...	...	2	...	...	2002	6
	- Liver	4	...	...	0	0	0	2002	6
	- Oesophagus	2	...	...	6	...	...	2002	6
	- Stomach	7	...	...	5	...	...	2002	6
	- Trachea, bronchus, and lung	2	...	...	7	...	...	2002	6
21	**Circulatory**								
	All circulatory system diseases	...	...	...	88	...	...	2002	6
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	17	...	...	2002	6
	- Hypertension	...	...	...	9	...	...	2002	6
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	2417	1119	1298	29	...	...	2002	6
23	**Mental disorders**	135	...	...	0	0	0	2003	6
24	**Injuries**								
	All types	1500	...	...	26	...	...	2002	6
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	130	...	...	10	...	...	2002	6
	- Occupational injuries	101	...	...	5	...	...	2002	6
	- Road traffic accidents	...	...	...	1	...	...	2002	6
	- Suicide	35	...	...	4	...	...	2002	6
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Dengue fever	3196	...	...	5380.47	...	...	2001	8
	2. Chickenpox	325	...	...	547.14	...	...	2001	8
	3. Dog bites	319	...	...	537.04	...	...	2001	8
	4. Road traffic injuries	182	...	...	306.40	...	...	2001	8
	5. Food poisoning	79	...	...	132.99	...	...	2001	8
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart diseases	45	...	...	68.70	...	...	2005	8
	2. Malignant neoplasm	36	...	...	54.96	...	...	2005	8
	3. Diabetes mellitus	33	...	...	50.38	...	...	2005	8
	4. Cerebrovascular diseases	25	...	...	38.17	...	...	2005	8
	5. Chronic obstructive pulmonary and allied conditions	21	...	...	32.06	...	...	2005	8
	6. Pneumonia and influenza	12	...	...	18.32	...	...	2005	8
	7. Hypertension	12	...	...	18.32	...	...	2005	8
	8. Accidents	11	...	...	16.79	...	...	2005	8
	9. Perinatal conditions	7	...	...	10.69	...	...	2005	8
	10. Septicaemia	5	...	...	7.63	...	...	2005	8
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					33.00		2000	6
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
29	**Percentage of pregnant women with anaemia**					32		2002	6
30	**Neonatal mortality rate (per 1000 live births)**	6.20		...		...		2007	9
31	**Percentage of newborn infants weighing less than 2500 g at birth**	2.85 [b]		...	...	...	...	2006	8
32	**Immunization coverage for infants (%)**								
	- BCG	...		...		...			
	- DTP3	94.00		...		...		2008	7
	- Hepatitis B III	89.00		...		...		2008	7
	- MCV2	...		...		...			
	- POL3	92.00		...		...		2008	7
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	7
	- Diphtheria	0	0	0	...	...	...	2008	7
	- Measles	0	0	0	...	...	...	2009	7
	- Mumps	0	0	0	...	...	...	2008	7
	- Neonatal tetanus	0	0	0	...	...	...	2008	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	7
	- Poliomyelitis	0	0	0	...	...	...	2009	7
	- Rubella	0	0	0	...	...	...	2008	7
	- Total Tetanus	0	0	0	...	...	...	2008	7
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	128	2003	6
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	5	0	2003	6
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			32.30	2003	10
	- total expenditure on health as % of GDP			...		
	- per capita total expenditure on health (in US$)			500.00	2003	10
	Government expenditure on health					
	- amount (in million US$)			31.80	2003	10
	- general government expenditure on health as % of total expenditure on health			98.00	2003	10
	- general government expenditure on health as % of total general government expenditure			14.00	2003	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			70.00	2003	10
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			2.00	2003	10
	- out-of-pocket expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			...		
38	**Health insurance coverage as % of total population**					

	INDICATORS		DATA							Year	Source
39	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	49	36	13	...	...	...	...	2003	6
		- Ratio per 1000 population	0.78	0.58	0.21	...	...	...	...	2003	6
	Dentists	- Number	15	8	7	...	...	...	...	2003	6
		- Ratio per 1000 population	0.24	0.13	0.11	...	...	...	...	2003	6
	Pharmacists	- Number	2	2	0	...	...	...	...	2003	6
		- Ratio per 1000 population	0.03	0.03	0.00	...	...	...	...	2003	6
	Nurses	- Number	127	4	123	...	...	...	...	2003	6
		- Ratio per 1000 population	2.03	0.06	1.96	...	...	...	...	2003	6
	Midwives	- Number	1	0	1	...	...	...	...	2003	6
		- Ratio per 1000 population	0.02	0.00	0.02	...	...	...	...	2003	6
	Paramedical staff	- Number	146	63	83	...	...	...	...	2003	6
		- Ratio per 1000 population	2.33	1.01	1.33	...	...	...	...	2003	6
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	11.30 [c]	...	...	2006-08	4
44	Under-five mortality rate (per 1000 live births)	4.90	...	...	2002	6
45	Proportion of 1 year-old children immunised against measles	86.00	...	...	2008	7
46	Maternal mortality ratio (per 100 000 live births)	123.00			2002	6
47	Proportion of births attended by skilled health personnel	100.00			2002	6
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.00			2002	6
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.00			2002	6
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	70.00			2002	6
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	1.00	...	...	2008	7
60	Tuberculosis death rate per 100 000 population	0.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	0.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	...	...	...		
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	99.00	99.00	99.00	2004	6
64	Proportion of population using an improved sanitation facility	99.00	99.00	99.00	2004	6
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
est	Estimate
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to birthweight less than 2501 grams
c	Revised data and reference year

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AUSTRALIA

1. CONTEXT

1.1 Demographics

In 2009, Australia had a population of 22 065 670: 10 987 130 males and 11 078 540 females. Most of the population is concentrated along the eastern seaboard and the south-eastern corner of the continent. It is one of the world's most urbanized countries, with around 89% of Australians living in urban areas. Australia's population density of 2.9 people per square kilometre varies greatly across the country, being very low in remote areas and very high in inner-city areas.

Australia's population grew by 2.1% between 2007-2008 and 2008-2009, with 65% of that increase due to net overseas migration and 35% due to natural increase (300 900 births compared with 143 100 deaths). Between 1961 and 2001, Australia's total fertility rate declined from 3.6 babies per woman to 1.7. Since then, the fertility rate has trended upwards to almost 2.0 babies per woman in 2008. Australia's population is ageing, with the number of people aged 65 years or more projected to increase from 3 million in 2010 to 8.1 million in 2050; an increase from 13.5% to 22.7% of the total population.

Life expectancy at birth is 81.4 years (79.2 for men and 83.7 for women), one of the highest in the world. Gains in Australia have been primarily due to reduced child and maternal mortality in the early decades of last century, and improved longevity for other ages, particularly for older people with chronic diseases.

Despite the ageing of the population over the last 20 years, crude death rates have declined overall. In 1988, the crude death rate was 7.3 deaths per 1000 population, decreasing to 6.7 deaths per 1000 population in 2008. After adjusting for the ageing of the population, the standardized death rate (SDR) has shown consistent decreases over the past 20 years. In 1998, the SDR was 9 deaths per 1000 standard population, decreasing to a low of 6 deaths per 1000 standard population in 2005 (an overall decrease of 33.3%). Since then, the SDR has remained at 6 deaths per 1000 standard population, indicating that the long-term trend in declining mortality rates in Australia has slowed. However, overall mortality rates for indigenous Australian males and females are 3 and 2.9 times higher, respectively, than for non-indigenous Australians.

1.2 Political situation

The Commonwealth of Australia was formally established in 1901 when the six Australian colonies agreed to The Australian Constitution, creating a federal system of government. Under this system, powers are distributed between the federal government (the Commonwealth or Australian Government) and the six States and two Territories. The written constitution defines the responsibilities of the Australian Government, which include foreign relations and trade, defence and immigration. Governments of the States and Territories are responsible for all matters not assigned to the Australian Government. State parliaments are subject to the National Constitution as well as their own State Constitutions. A federal law overrides any State/Territory law not consistent with it.

The system of government is based on the liberal democratic tradition, which includes religious tolerance, freedom of speech and freedom of association. Its institutions and practices reflect the British and North American models of government, but are uniquely Australian. The Australian Parliament sits at the centre of the Australian Government. It consists of the Queen (represented by the Governor-General) and two Houses (the Senate and the House of Representatives). These three elements make Australia a constitutional monarchy and parliamentary democracy. A federal election held in late 2007 resulted in a change of government for the first time in 11 years.

1.3 Socioeconomic situation

Despite continuing global concerns and uncertainty about economic recovery in 2010, the outlook for the domestic economy remains positive. Responsible economic and fiscal management means Australia is in a strong position to withstand any intensification in global stresses. Over the past year, the substantial fiscal

and monetary stimulus has helped position Australia as one of the strongest economies in the developed world and underpinned solid employment growth, with 353000 jobs added. In the absence of fiscal stimulus, it is estimated that the Australian economy would have contracted by 0.7% in 2008-2009, rather than growing by 1.5%.

In 2009, the labour force participation rate was 65.3% and the unemployment rate 5.6%. The labour market has held up well during the global recession, with Australia having one of the lowest unemployment rates among the advanced economies. The unemployment rate is expected to fall to 5.0% in late 2010-2011, and 4.8% in late 2011-2012, around levels consistent with full employment.

Approximately 2.1 million Australians were estimated to be living in poverty in 2006 (11.7% of the population), that figure reflecting the population with below 50% of median disposable household income. In 2007-2008, the lowest income quintile of households was receiving 7.6% of total income, while the highest income quintile was receiving 39.4%.

1.4 Risks, vulnerabilities and hazards

Australia faces risks from a range of biological hazards, such as viruses with pandemic potential. The country has undertaken a range of preparatory measures, including: leading the Asia Pacific Economic Cooperation (APEC) Pandemic Response Exercise in June 2006 and establishing an Inter-jurisdictional Pandemic Planners Working Group and, in 2008, publishing the *Australian Health Management Plan for Pandemic Influenza.*

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Australia's level of health continues to improve overall and, in most aspects, matches or leads other comparable countries, such as those forming the Organisation for Economic Co-operation and Development (OECD). Between 1987 and 2005, Australia's ranking among OECD countries improved markedly for mortality rates from coronary heart disease, stroke, lung and colon cancer, and transport accidents. In 2005, Australia had the lowest death rates from accidental falls in the OECD. Smoking rates have continued to fall, with the ranking improving from middle third to 'best' third. The ranking for lower alcohol consumption has also improved a little. The dental health of 12 year-olds has slipped in rank since 1987, although it has remained in the 'best' third.

Since 1987, Australia's ranking has fallen in relation to death rates for respiratory diseases, diabetes and, to a lesser extent, prostate cancer. Although there has been a small improvement in ranking for adult obesity rates since 1987, Australia remains in the 'worst' third of all OECD countries on this measure. However, Australia is among a small number of countries that provide bodyweight estimates based on actual measurement of people's heights and weights, rather than self-reporting. This difference in methodology limits data comparability.

Although most Australians now enjoy good health, there are still inequalities in the distribution of health and its determinants according to socioeconomic situation. Specifically, mental health problems, cardiovascular disease and diabetes are the greatest contributors to the socioeconomic gap in disease burden. Some population groups continue to suffer poor health, particularly indigenous Australians. Life expectancy for this group is around 17 years lower than the Australian average. Australians living in regional and remote areas also generally experience poorer health than their major city counterparts.

An example of the Government's response to communicable disease is Australia's framework of national strategies for bloodborne viruses (BBVs) and sexually transmissible infections (STIs). The strategies identify at-risk population groups and priority areas for action, and provide performance indicators for monitoring purposes. In April 2010, the Australian Health Ministers' Conference, which includes the Australian Government Health Minister and State and Territory Government Health Ministers, endorsed five new national strategies for BBVs and STIs. The five strategies are: (1) the Sixth National HIV Strategy; (2) the First National Hepatitis B Strategy; (3) the Second National Sexually Transmissible

Infections Strategy; (4) the Third National Hepatitis C Virus (HCV) Strategy; and (5) the Third National Indigenous Blood Borne Viruses and Sexually Transmissible Infections Strategy. For the next four years, these documents will guide Australian, State and Territory Government responses to BBVs and STIs, including activities for prevention and for testing and treatment.

In contrast to comparable countries, Australia has low HIV/AIDS prevalence rates in all populations. The country's achievements in relation to HIV/AIDS have been largely attributed to the cooperative partnership between all levels of government; community organizations; the medical, health care and scientific communities; and people living with or affected by HIV/AIDS.

2.2 Outbreaks of communicable diseases

The Australian Government coordinates surveillance activities and provides expert advice to support communicable disease (including foodborne diseases) monitoring and response, both nationally and internationally.

There are 65 nationally notifiable diseases in Australia (as defined by the National Notifiable Diseases List), including bacterial infections and bloodborne, sexually transmissible, quarantinable, gastrointestinal, vaccine-preventable and zoonotic diseases. The notifiable diseases most frequently notified during 2009 included chlamydial infections (62 660 notifications), laboratory-confirmed influenza (58 778 notifications), pertussis (29 736 notifications), and campylobacteriosis (15 973 notifications).

Australia is working to ascertain and minimize the impact of foodborne illnesses in the country. This is being achieved by collaborating with government agencies, state and territory health and primary industry portfolios, consumers and the food industry to facilitate improved food-safety practices and to assess the effectiveness and impact through active surveillance, such as OzFoodNet, and applied research projects.

Pandemic preparedness is also a significant area of health protection being addressed by the Australian Government. Since the emergence of pandemic (H1N1) 2009 influenza, Australia has moved through several stages of the response set out in the *Australian Health Management Plan for Pandemic Influenza* (AHMPPI). The Government has purchased 21 million doses of vaccine and is continuing the national pandemic vaccination programme, the largest single vaccination campaign ever undertaken in Australia. The country has also donated 3.8 million doses of the vaccine to WHO for use among priority groups in developing countries in the Region.

A current review of the health sector's response to pandemic (H1N1) 2009 will be used to revise the AHMPPI to further strengthen Australia's ability to respond to pandemics. A public "lessons learnt" report will outline the recommendations for the Australian national health sector on aspects of planning and response arrangements.

The universal vaccination programmes funded under the national immunization programme target the following vaccine-preventable diseases in children and adolescents: measles, mumps, rubella, poliomyelitis, pneumococcal, pertussis (whooping cough), haemophilus influenzae type B (Hib) rotavirus, varicella (chicken pox), diphtheria, tetanus, hepatitis B, hepatitis A (for indigenous children in high-risk areas), human papillomavirus and meningococcal C virus. Incentives are available to both parents and general practices to maximize children's vaccination. The national immunization coverage rate for infants between 12 and 15 months of age has now reached 91.4% (as at 31 March 2010), compared with immunization coverage rates as low as 53% 20 years ago.

2.3 Leading causes of mortality and morbidity

The leading underlying cause of death in 2008 was ischaemic heart disease, with 23 665 deaths (16% of all deaths registered in that year, down from 22% of all deaths registered in 1999). The second most common cause of death was cerebrovascular disease, with 11 973 deaths registered (8.3% of all deaths, down from 9.6% in 1999). Dementia and Alzheimer's disease was the third leading cause of death in 2008, with deaths due to this cause increasing 138% from 3427 in 1999 to 8171 in 2008. Collectively, malignant neoplasms were another major cause of death in 2008, with 42 418 registered deaths. Seven of the 20 leading underlying causes of death were attributable to a form of malignant cancer, cancer of the trachea and lung being the fourth major cause of death, with 7946 deaths. Injuries accounted for 8804

deaths in 2008. Transport accidents and suicide were the major contributors, with 1402 and 2191 deaths, respectively. Males were more likely to commit suicide than females, with 1710 male deaths compared with 481 deaths for females (2008).

Many of the health conditions that significantly affect Australians are associated with lifestyle and health-risk factors, often with their roots in improper nutrition and lack of physical activity. Significant increases in the prevalence of obesity, in both sexes and at increasingly younger ages, are associated with cardiovascular disease, diabetes mellitus and its complications, and arthritis. In the 2007-2008 National Health Survey, cardiovascular disease was reported by 16% of the population, while 4% reported diabetes mellitus and 15% reported arthritis.

The proportions of the population reporting arthritis, asthma and hypertension remained reasonably steady over the period from 1995 to 2007-2008, while the proportions reporting diabetes mellitus, high cholesterol and osteoporosis increased. Reported mental and behavioural problems increased between 1995 and 2001, but remained steady between 2001 and 2007-2008. In 2007-2008, asthma was reported by 9.9% of the population, while hypertension, high cholesterol, osteoporosis and mental and behavioural problems affected 9%, 6%, 3% and 11%, respectively.

2.4 Maternal, child and infant diseases

In 2008, the neonatal mortality rate was 2.9 deaths per 1000 live births; the infant mortality rate was 4.1 deaths per 1000 live births; and the under-five mortality rate was 4.9 deaths per 1000 live births. Although infant and child deaths form only a small proportion (less than 1%) of all deaths, they nevertheless have important public health policy significance.

Despite the continuing high rate of indigenous infant mortality compared with other infants, the gap is narrowing. Between 1991 and 2006, the indigenous infant mortality rate declined by around 47%, compared with a reduction of 34% for non-indigenous infants in Western Australia, South Australia and the Northern Territory.

There has also been a dramatic decline in mortality rates for women during childbirth. Improved nutrition, better general health, the advent of medical interventions like antiseptic procedures, a decrease in pregnancies (due to contraception and family planning), use of blood transfusions and the professional training of those attending births have all contributed to a sustained decrease in maternal deaths following childbirth.

2.5 Burden of disease

In its 2007 report, *The Burden of Disease and Injury in Australia 2003*, the Australian Institute of Health and Welfare (AIHW) reported that cancer and cardiovascular disease were the leading causes of disease burden in Australia in 2003, with cancer (19.4% of total disease burden) and cardiovascular diseases (18.0%) together accounting for more than 37% of the total disease burden. Mental illness (13.3%) and neurological and sense disorders (11.9%) were the next largest contributors, together accounting for a further 25% of total disease burden.

The ageing of Australia's population is expected to result in increasing numbers of people with disability from diseases more common in older ages, such as dementia, Parkinson's disease, hearing and vision loss, and osteoarthritis. Cancer is expected to retain its share of the total health disease burden. Age-standardized rates of death and disability are expected to fall, but it is anticipated that cancer will remain the largest contributor to the health burden in 20 years' time.

A risk driven largely by the ageing of the population is the expected prevalence of adult Australians with hearing impairment will rise from the current 16.6% to an expected 25% by 2050. The Australian Government supports hearing-impaired Australians (adults and children) through the provision of subsidized hearing services to certain eligible groups through a network of private and public hearing service providers.

The burden of disease suffered by indigenous Australians is estimated to be two-and-a-half times greater than the burden of disease in the total Australian population[1]. Long-term health conditions responsible for much of the ill-health experienced by indigenous people include circulatory diseases, diabetes, respiratory diseases, musculoskeletal conditions, kidney disease, and eye and ear problems. For most of these conditions, indigenous Australians also experience an earlier onset of disease than other Australians.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

Australia's health care system is a partnership between the federal, State and Territory governments. Through the Health and Ageing portfolio, the Australian Government works to provide a health care system to meet the health care and ageing needs of all Australians. This is achieved by providing national leadership, determining national policies and outcomes, improving programme management, research, regulation and working in partnership with State and Territory governments, stakeholders and consumers.

The vision of the Department of Health and Ageing is of better health and active ageing for all Australians. The Department's priorities include to:

- support the Government in its reform of the health and hospital system;
- refocus primary health care on people's needs and prevention, to help reduce the incidence of chronic illness;
- improve the capacity of the health workforce through education and training and by expanding the roles of non-medical health professionals;
- improve the delivery of health care and early intervention measures for indigenous Australians, to help close the gap in life expectancy rates between indigenous and non-indigenous Australians;
- support people living with mental illness, their families and their carers through integrated, effective and evidence-based mental health care;
- reconfigure health service delivery to achieve better health outcomes for people living in rural and remote communities; and
- support older Australians with a national health and ageing system responsive to their needs, and improved governance arrangements and reforms.

3.2 Organization of health services and delivery systems

The organization of the public health system is strongly influenced by the federal system, where responsibility and funding for health is shared between the Australian Government and the governments of the States and Territories. The system is complex, with delivery provided by both the public and private sectors.

The Australian Government funds medical and pharmaceutical benefits, private health insurance subsidies and university training places for health workers, and shares responsibility with the States and Territories for funding of public hospital services. The Australian Government also has a national leadership role in strategies to tackle significant health issues, as well as regulatory responsibilities.

The States and Territories provide public hospital services and community and public health services, assist with training of health workers through clinical training in public hospitals, and regulate private hospitals. Private practitioners provide most medical, dental and allied health services.

The aim of the Australian health system is to give universal access to health care under what is known as 'Medicare', while allowing choice for individuals through substantial private sector involvement in delivery and financing. The three pillars of Medicare, funded by the Australian Government, are:

(1) The Medicare Benefits Schedule – a universal programme that provides consumers with access to privately provided medical services and may include co-payments by users where the cost of services is not fully covered by the rebate.

[1] *The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2008*, AIHW.

(2) The Pharmaceutical Benefits Scheme – subsidization of a wide range of prescription medications supplied by community pharmacies.
(3) Funding provided to States and Territories to assist them in providing access to free public hospital services.

The Australian Government also funds a system of private health insurance rebates that subsidize the cost of premiums for private health insurers. Every Australian can elect to be treated as a private patient in a public hospital in order to have a choice of doctor. In addition, private hospitals provide an alternative to the public hospital system for many procedures. A large proportion of the health workforce is employed by the private sector, and corporatization is increasingly becoming a key organizing factor for the delivery of services such as general medicine, pathology and diagnostic imaging.

Australia has a well developed health technology assessment system to inform decisions about public and private health care funding for pharmaceuticals and new medical technologies.

3.3 Health policy, planning and regulatory framework

The core values of the Australian health system are ensuring the affordability and accessibility of health care, as well as equitable access to necessary care, and reducing disparities in health outcomes. Providing consumers with choice in their health care is also a key principle of the system.

Since 2007, the Australian Government has embarked on a major process of reform in the health system. In April 2010, all Australian Governments (with the exception of Western Australia) agreed to the establishment of the National Health and Hospitals Network. The objectives of the Network are to:

- reform the fundamentals of the health and hospital system, including funding and governance to provide a sustainable foundation for providing better services now and into the future;
- change the way health services are delivered through better access to high quality integrated care designed around the needs of patients and a greater focus on prevention, early intervention and the provision of care outside hospitals; and
- provide better care and better access to services for patients through increased investment to provide better hospitals, better infrastructure and more doctors and nurses.

The reforms will re-define the roles of the Australian and State/Territory governments. The Australian Government will be the majority funder of public hospital services; take on full funding and policy responsibility for general practice (GP) and primary health care; and take on full funding, policy, management and delivery responsibility for a national aged care system. The State/Territory governments will be responsible for system-wide public hospital service planning and performance; purchasing of public hospital services and capital planning; and providing support for the Australian Government's responsibility for GP and primary health care policy and service planning coordination.

Implementation of the reforms has commenced and will be driven across eight streams: hospitals; primary health care; aged care; mental health; national standards and performance; workforce; prevention; and e-health.

Supporting the reform package, the National Primary Health Care Strategy was released in May 2010. The strategy represents the first comprehensive national policy statement for primary health care in Australia and provides a road map to guide current and future policy and practice in the Australian primary health care sector. The National Preventative Health Strategy was also released in May 2010 and focuses on addressing the growing economic and health burden associated with obesity, tobacco and alcohol.

The Australian Government is taking action under the National Health and Hospitals Network Agreement to build a national, secure e-Health system. The Australian Government will provide funding of A$ 466.7 million (US$ 461.7 million) over two years from July 2010 to establish a personally controlled electronic health record system. Commencing in 2012-2013, consumers and their authorized health care providers will be able to securely access their own personally controlled e-health record via the Internet.

3.4 Health care financing

Currently, the Australian Government is the major funder of health services, while the State and Territory governments have a major role in health service delivery. Medicare is a compulsory insurance system financed largely by general taxation revenue, some of which is raised by an income-related levy collected by the Australian Government.

In 2008, Australia's total expenditure on health goods and services amounted to US$87.1 billion (A$103.6 billion). Total health expenditure has been growing faster than the economy over the last decade, increasing from 7.7% of GDP in 1996-1997 to 9.1% of GDP in 2007-2008. Over two-thirds of total health expenditure is funded by the public sector; in 2007, 69% of total health expenditure was funded by governments. The remaining one-third (31%) was funded by the private sector. Average annual real growth in total health expenditure over the decade to 2007-2008 was 5.2%. In 2007-2008, hospitals, medical services and medications were the three largest health expenditure areas in the country, accounting for two-thirds of total health expenditure (public hospitals 31%, private hospitals 8%, medical services 19% and medications 14%).

The recently announced reforms, which have as their basis a more cooperative approach to health, including more streamlined financing arrangements, will increase the Australian Government's level of funding for the health and hospital system relative to the States and Territories.

3.5 Human resources for health

Australia's health workforce is influenced by a number of complex and interrelated factors. These include an increase in life expectancy, a greater number and a greater proportion of people aged over 65 years, medical and technical advances that create a need for new specialist knowledge and skills, and increasing consumer awareness and demand for a more sophisticated mix of services.

Although the overall number of health professionals is increasing, growth in workforce demand has partly offset, and in some cases outstripped growth in supply. For example, the increase in general practitioner numbers has barely kept pace with population growth. Reduced working hours has also counteracted the perceived growth in workforce supply.

Although precise quantification of workforce shortages is difficult, there are currently shortages in general practice, various medical specialty areas, dentistry, nursing and some key allied health areas. Health workforce shortages are more acute in rural and remote areas. Future health workforce supply will be influenced by developments in the broader labour market, the level of workforce re-entry, retention rates, overseas recruitment and supply pressures internationally, as well as how effectively the existing workforce is deployed.

The demand for health services will be strongly stimulated by increasing incomes and community expectations, technological advances and changes in disease burdens. An affluent Australian lifestyle and an ageing population has dramatically moved the burden of disease from acute, episodic conditions to chronic disease, which is expected to impose heavier burdens on the demand for health services, even as new threats emerge.

To address current work force shortages and better equip Australia's health system to meet future demands for health care services, Australia will invest in training more doctors and providing education and support to nurses and allied health professionals. In 2010, Health Workforce Australia was established to manage and oversee research and planning into the country's long-term health workforce requirements.

In addition, a national registration and accreditation scheme for health professions has been agreed upon by all Australian governments. The National Registration and Accreditation Scheme (NRAS) was implemented on 1 July 2010, the objectives of the national scheme being to: provide greater safeguards for the public; facilitate workforce mobility; streamline registration processes for practitioners; and facilitate the provision of education, training and assessment of overseas-trained practitioners.

Currently, 10 health professions are registered under the NRAS. These are chiropractors, dental care practitioners (dentists, dental therapists, dental hygienists, dental prosthetists), medical practitioners, nurses and midwives, optometrists, osteopaths, pharmacists, physiotherapists, podiatrists and psychologists. An additional four professions will be regulated under the Scheme starting on 1 July 2012. These are: Aboriginal and Torres Strait Islander health practitioners; Chinese medicine practitioners; medical radiation practitioners; and occupational therapists.

3.6 Partnerships

Australia manages relationships with international bodies such as WHO, the Organisation for Economic Co-operation and Development (OECD) and the Asia Pacific Economic Cooperation (APEC). The country also has a number of bilateral health agreements and partnerships with other countries, primarily within the Asia Pacific Region.

3.7 Challenges to health system strengthening

Australia's health care system is a complex combination of public and private sectors, with services provided by a wide range of professions. It needs to provide care to all members of the community, from the very young to the very old, and to address the health needs of the chronically ill and people from diverse backgrounds and places of origin.

Overall, Australians experience good health, but they still suffer from the major health burdens of the developed world, such as cancer, mental illness, musculoskeletal diseases, obesity and diabetes. In some communities, most notably many indigenous communities, diseases of the developing world are still prevalent.

There are a number of issues that are currently influencing decisions on health priorities to some extent and are likely to take on greater significance in coming years. These include: demographic changes, such as population ageing; changes in service delivery models, including a move to a greater emphasis on community care and coordinated care; changing disease patterns; advances in medical technologies; and increasing consumer expectations. Other challenges include finding ways for disadvantaged groups to more equitably share the achievements of the health system through targeted programmes, such as Aboriginal and Torres Strait Islander health and hospital services. These challenges will put governments around the country under increasing fiscal pressure.

The reforms agreed at the April 2010 Australian Health Ministers' Conference are to ensure that Australia's health system can better cope with future demands and pressures. The Australian Government will take financial leadership in the hospital system, providing leverage for reform and a secure funding base for public hospitals into the future.

4. PROGRESS TOWARDS THE HEALTH MDGs

Progressing the health MDGs (reducing child mortality, improving maternal health and combating HIV/AIDS, malaria and other diseases) remains a high priority for the Australian aid programme. Support to health and HIV in the Region will increase to over A$ 555 million (US$ 549 million) in 2010-2011.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Australia's Health
Operator	:	Australian Institute of Health and Welfare
Specification	:	Biennial report on patterns of health and illness, determinants of health, the supply and use of health services, and health services expenditure.
Web address	:	http://www.aihw.gov.au
Title 2	:	Annual Report 2008-2009
Operator	:	Department of Health and Ageing
Web address	:	http://www.health.gov.au

Title 3	:	Health expenditure Australia 2007-08
Operator	:	Australian Institute of Health and Welfare
Web address	:	http://www.aihw.gov.au
Title 4	:	National Health Survey 2007-08
Operator	:	Australian Bureau of Statistics
Web address	:	http://www.abs.gov.au
Title 5	:	The State of our Public Hospitals, June 2008 Report
Operator	:	Department of Health and Ageing
Web address	:	http://www.health.gov.au
Title 6	:	The burden of disease and injury in Australia 2003
Operator	:	Australian Institute of Health and Welfare
Web address	:	http://www.aihw.gov.au
Title 7	:	
Operator	:	Department of Health and Ageing
Web address	:	http://www.yourhealth.gov.au
Title 8	:	National Aboriginal and Torres Strait Islander Health Survey 2004-05
Operator	:	Australian Bureau of Statistics
Web address	:	http://www.abs.gov.au
Title 9	:	National Health Aboriginal and Torres Strait Islander Social Survey 2008
Operator	:	Australian Bureau of Statistics
Web address	:	http://www.abs.gov.au
Title 10	:	The Aboriginal and Torres Strait Islander Health Performance Framework Report 2008
Operator	:	Australian Health Ministers' Advisory Council
Web address	:	http://www.health.gov.au/internet/main/publishing.nsf/Content/health-oatsih-pubs-framereport
Title 11	:	The burden of disease and injury in Aboriginal and Torres strait Islander Peoples 2003
Operator	:	University of Queensland
Web address	:	http://www.uq.edu.au/bodce/index.html?page=68411

6. ADDRESSES

AUSTRALIAN GOVERNMENT DEPARTMENT OF HEALTH AND AGEING

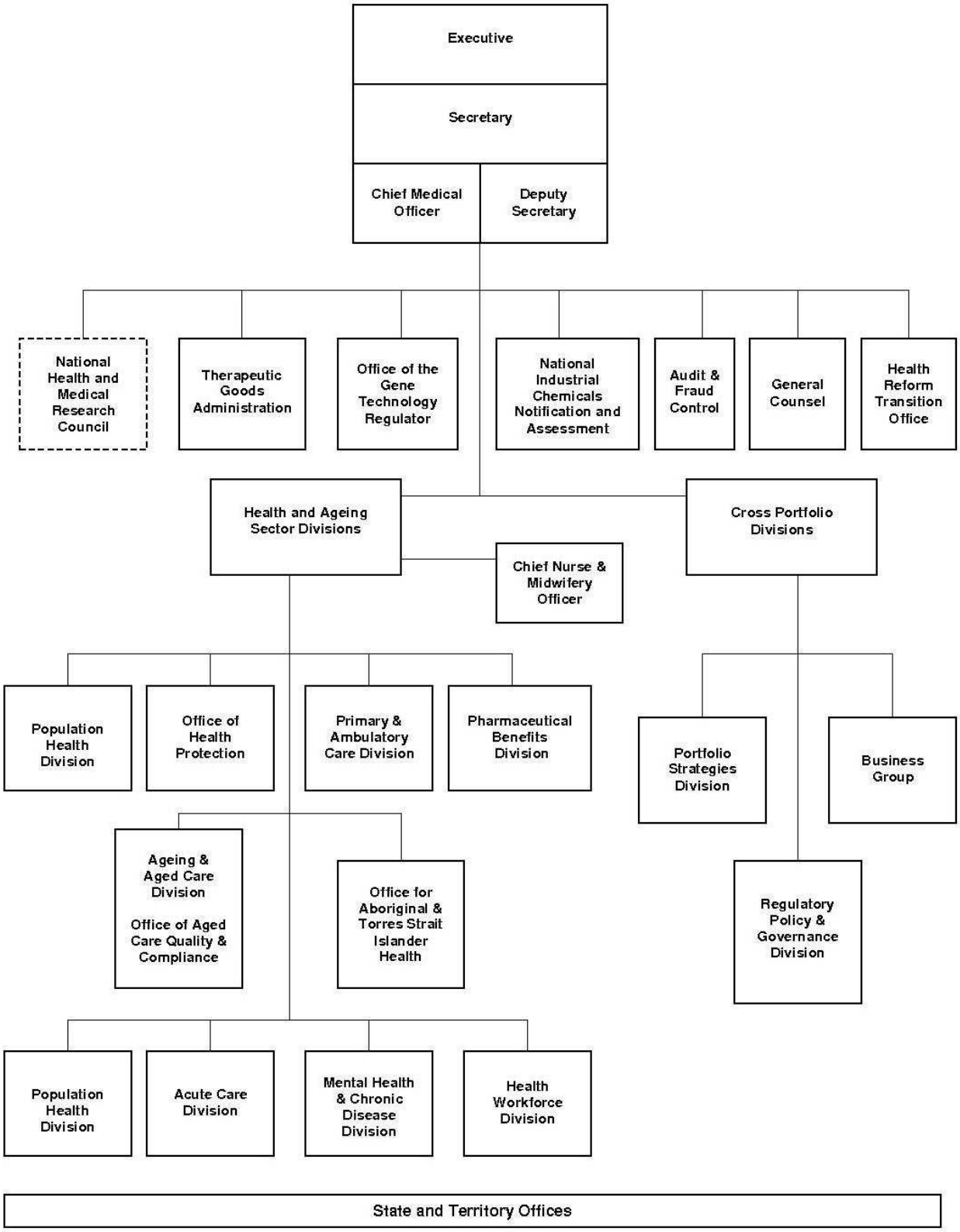
Office Address	:	The Secretary Australian Government Department of Health and Ageing Attention: Assistant Secretary International Strategies Branch, Scarborough House, Woden ACT, Australia
Postal Address	:	GPO Box 9848, MDP 85 Canberra ACT 2601, Australia
Official Email Address	:	enquiries@health.gov.au
Telephone	:	(612) 6289 8091
Fax	:	(612) 6289 7087
Office Hours	:	Mon-Fri 0830-1700
Website	:	www.health.gov.au

WHO REPRESENTATIVE

There is no WHO Representative in Australia. Queries about the WHO programme of collaboration with Australia should be directed to Director, Programme Management, WHO Regional Office for the Western Pacific

Office Address	:	World Health Organization Regional Office for the Western Pacific
Postal Address	:	United Nations Avenue, P.O. Box 2932, 1000, Manila, The Philippines
Official Email Address	:	postmaster@wpro.who.int
Telephone	:	(63 2) 528 8001/ 303 1000
Fax	:	(63 2) 526 0279
Office Hours	:	7:00 -15:30
Website	:	http://www.wpro.who.int

7. ORGANIZATIONAL CHART: Department of Health and Ageing



AUSTRALIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	7692.02						2008	1
2	Estimated population ('000s)	22 065.67 [a]	10 987.13 [a]	11 078.54 [a]				2009p	2
3	Annual population growth rate (%)	2.12	2.15	2.03				2008p	2
4	Percentage of population								
	- 0–4 years	6.50	6.70	6.30				2009p	2
	- 5–14 years	12.62	13.00	12.24				2009p	2
	- 65 years and above	13.34	12.21	14.45				2009p	2
5	Urban population (%)	88.90	…	…				2009est	3
6	Crude birth rate (per 1000 population)	13.84	14.29	13.4				2008	4
7	Crude death rate (per 1000 population)	6.72	6.90	6.54				2008	5
8	Rate of natural increase of population (% per annum)	0.74	…	…				2008p	2
9	Life expectancy (years)								
	- at birth	81.40	79.20	83.70				2006-08	5
	- Healthy Life Expectancy (HALE) at age 60	18.90	17.10	20.50				2003	6
10	Total fertility rate (women aged 15–49 years)	1.97	…	…				2008	4
	Socioeconomic indicators								
11	Adult literacy rate (%)	86.60 [b]	81.60 [b]	91.70 [b]				2006	7
12	Per capita GDP at current market prices (US$)	39 659.60 [c]						2008–09	8
13	Rate of growth of per capita GDP (%)	6.00						2008–09	8
14	Human development index	0.97						2007	9
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	…	…	…					
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	562	278	284	0	0	0	C:2009p D:2007	10,11
	- Type B	7344 [d,e]	4018 [e]	3237 [e]	19	11	8	C:2009p D:2007	10,11
	- Type C	11491 [e,f]	7258 [e]	4172 [e]	85	52	33	C:2009p D:2007	10,11
	- Type E	35	20	15	0	0	0	C:2009p D:2007	10,11
	- Unspecified	0	0	0	3	2	1	C:2009p D:2007	10,11
	Cholera	4	1	3	0	0	0	C:2009p D:2007	10,11
	Dengue/DHF	1399 [d,g]	743 [g]	655 [g]	0	0	0	C:2009p D:2007	10,11
	Encephalitis	…	…	…	40	13	27	C:2009p D:2007	10,11
	Gonorrhoea	8081 [d]	5422	2640	18	11	7	C:2009p D:2007	10,11
	Leprosy	4	2	2	0	0	0	C:2009p D:2007	10,11
	Malaria	530 [d,h]	374 [h]	155 [h]	0	0	0	C:2009p D:2007	10,11
	Plague	0	0	0	0	0	0	C:2009p D:2007	10,11
	Syphilis	2660 [d,i]	2014 [i]	634 [i]	2	0	2	C:2009p D:2007	10,11
	Typhoid fever	116	59	57	0	0	0	C:2009p D:2007	10,11
17	Acute respiratory infections	26 237 596	12 310 741	13 926 855	2778	1240	1538	C:2003est D:2007	6, 12
	- Among children under 5 years	844139	429926	414213	21	16	5	C:2003est D:2007	6,12

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	17 457 098	7 867 069	9 590 029	88 [j]	39 [j]	49 [j]	C:2003est D:2007	6, 11
	- Among children under 5 years	342264	158289	183975	1	1	0	C: 2003est D:2007	6,11
19	**Tuberculosis**								
	- All forms	1213	...	...	52	32	20	C:2008p D:2007	23,11
	- New pulmonary tuberculosis (smear-positive)	299	...	...	...	...	...	2008	23
20	**Cancers**								
	All cancers (malignant neoplasms only)	104 592	59 058	45 534	39 323	22 248	17 075	C: 2006 D: 2007	11,12
	- Breast	12 716	102	12 614	2706	26	2680	C: 2006 D: 2007	11,12
	- Colon and rectum	13 591	7432	6159	4107	2221	1886	C: 2006 D: 2007	11,12
	- Cervix			715			208	C: 2006 D: 2007	11,12
	- Leukaemia	2624	1513	1111	1469	892	577	C: 2006 D: 2007	11,12
	- Lip, oral cavity and pharynx	2853	2029	824	676	474	202	C: 2006 D: 2007	11,12
	- Liver	1159	833	326	1109	717	392	C: 2006 D: 2007	11,12
	- Oesophagus	1212	846	366	1098	790	308	C: 2006 D: 2007	11,12
	- Stomach	1946	1277	669	1129	704	425	C: 2006 D: 2007	11,12
	- Trachea, bronchus, and lung	9563	6030	3533	7626	4715	2911	C: 2006 D: 2007	11,12
21	**Circulatory**								
	All circulatory system diseases	...	...	...	46 626	22 070	24 556	2007	11
	- Acute myocardial infarction	...	...	...	11 341	5856	5485	2007	11
	- Cerebrovascular diseases	19 627	9129	10 498	11 491	4516	6975	C:2003est D:2007	6, 11
	- Hypertension	...	...	...	1627	552	1075	2007	11
	- Ischaemic heart disease	38 675	24 651	14 024	22 729	12 119	10 610	C:2003est D:2007	6, 11
	- Rheumatic fever and rheumatic heart diseases	1925	635	1290	255	88	167	C:2003est D: 2007	6, 11
22	**Diabetes mellitus**	818 000	...	...	3810	1923	1887	C:2007-08 D:2007	11, 13
23	**Mental disorders**	494 618 [k]	308 668 [k]	185 950 [k]	5715	2102	3613	C:2003est D:2007	6, 11
24	**Injuries**								
	All types	309 026	183 853	125 173	7893	5168	2725	C:2003est D:2007	6, 11
	- Drowning	183	131	52	183	131	52	D:2007	11
	- Homicide and violence	16 986 [l]	13 356	3631	165	105	60	C:2003est D:2007	6, 11
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	41 151 [l]	29 429	11 723	1155	859	296	C:2003est D:2007	6, 11
	- Suicide	24 385	9533	14852	1880	1453	427	C:2003est D:2007	6, 11
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Care involving dialysis (Z49)	990 787 [m]	589 790	400 997	4665.18	5585.21	3755.34	2007-08	14
	2. Other medical care (Z51)	311 537 [m]	143 231	168 306	1466.89	1356.37	1576.19	2007-08	14
	3. Rehabilitation (Z50)	195 580 [m]	85 367	110 213	920.90	808.41	1032.15	2007-08	14
	4. Other cataract (H26)	125 799 [d,m]	51 635	74 156	592.33	488.97	694.47	2007-08	14
	5. Pain in throat and chest (R07)	115 684 [d,m]	59 450	56 232	544.71	562.98	526.61	2007-08	14
	6. Abdominal and pelvic pain (R10)	111 036 [m]	37 311	73 725	522.82	353.33	690.44	2007-08	14
	7. Other malignant neoplasms of the skin (C44)	83 465 [d,m]	49 573	33 890	393.00	469.45	317.38	2007-08	14
	8. Angina pectoris (I20)	71 801 [m]	45 444	26 357	338.08	430.35	246.83	2007-08	14
	9. Embedded and impacted teeth (K01)	71 470 [d,m]	29 097	42 323	336.52	275.54	396.36	2007-08	14
	10. Adjustment of implanted device (Z45)	70 655 [m]	34 253	36 402	332.68	324.37	340.91	2007-08	14

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Ischaemic heart diseases (I20-I25)	23 665	...	...	109.85 [p]	...	...	2008	25
	2. Strokes (I60-I69)	11 973	...	...	55.58 [p]	...	...	2008	25
	3. Dementia and Alzheimer disease (F01-F03, G30)	8171	...	...	37.93 [p]	...	...	2008	25
	4. Trachea and lung cancer (C33-C34)	7946	...	...	36.89 [p]	...	...	2008	25
	5. Chronic lower respiratory diseases (J40-J47)	6255	...	...	29.04 [p]	...	...	2008	25
	6. Diabetes (E10-E14)	4191	...	...	19.45 [p]	...	...	2008	25
	7. Colon and rectum cancer (C18-C21)	4120	...	...	19.12 [p]	...	...	2008	25
	8. Blood and lymph cancer (including leukaemia) (C81-C96)	3889	...	...	18.05 [p]	...	...	2008	25
	9. Heart failure (I50-I51)	3360	...	...	15.60 [p]	...	...	2008	25
	10. Diseases of the kidney and urinary system (N00-N39)	3224	...	...	14.97 [p]	...	...	2008	25
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					65.00 [n]		2001	15
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
29	**Percentage of pregnant women with anaemia**					6.20 [o]		2005	16
30	**Neonatal mortality rate (per 1000 live births)**	2.88		3.20		2.54		2008	4, 5
31	**Percentage of newborn infants weighing less than 2500 g at birth**	6.20		5.70		6.70		2007	17
32	**Immunization coverage for infants (%)**								
	- BCG	...		...		...			
	- DTP3	92.10 [q]		...		...		2009	18
	- Hepatitis B III	91.60 [q]		...		...		2009	18
	- MCV2	...		...		...			
	- POL3	92.00 [q]		...		...		2009	18
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			1	2007	11
	- Eclampsia			...			0	2007	11
	- Haemorrhage			...			1	2007	11
	- Obstructed labour			...			0	2007	11
	- Sepsis			...			0	2007	11
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	C:2009p D:2007	10,11
	- Diphtheria	0	0	0	0	0	0	C:2009p D:2007	10,11
	- Measles	105	66	39	0	0	0	C:2009p D:2007	10,11
	- Mumps	165	99	66	1	1	0	C:2009p D:2007	10,11
	- Neonatal tetanus	0	0	0	0	0	0	C:2009p D:2007	10,11
	- Pertussis (whooping cough)	29 656 [d]	12 803	16 813	0	0	0	C:2009p D:2007	10,11
	- Poliomyelitis	0	0	0	12	4	8	C:2009p D:2007	10,11
	- Rubella	26	16	10	0	0	0	C:2009p D:2007	10,11
	- Total Tetanus	3	2	1	1	1	0	C:2009P D:2007	10,11
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	737	54 338	2008-09	19
		- Specialized hospitals	19 [r]	2140 [r]	2008-09	19
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	561	27 466	2008-09	19
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			91 342.02 [t]	2008est	20
	- total expenditure on health as % of GDP			8.80	2008est	20
	- per capita total expenditure on health (in US$)			4301.00	2008est	20
	Government expenditure on health					
	- amount (in million US$)			62 077.31 [t]	2008est	20
	- general government expenditure on health as % of total expenditure on health			68.00	2008est	20
	- general government expenditure on health as % of total general government expenditure			17.60	2008est	20
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2008est	20
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			32.00	2008est	20
	- out-of-pocket expenditure on health as % of total expenditure on health			17.56	2008est	20
	Exchange rate in US$ of local currency is: 1 US$ =			1.19 [t]	2008est	20
38	**Health insurance coverage as % of total population**			100.00 [u]	2009	21

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	62 800 [v]	40 800 [v]	22 000 [v]	...	...	...	...	2009p	22
		- Ratio per 1000 population	2.93 [v]	1.90 [v]	1.03 [v]	...	...	...	...	2009p	22
	Dentists	- Number	14 500 [v]	10 600 [v]	3900 [v]	...	...	...	...	2009p	22
		- Ratio per 1000 population	0.68 [v]	0.49 [v]	0.18 [v]	...	...	...	...	2009p	22
	Pharmacists	- Number	17 821 [v]	8543	9 278	...	...	...	...	2010	24
		- Ratio per 1000 population	0.81 [v]	0.39	0.42	...	...	...	...	2010	24
	Nurses	- Number	188 300 [v,s]	13 900 [v,s]	174 400 [v,s]	...	...	...	...	2009p	22
		- Ratio per 1000 population	8.79 [v,s]	0.65 [v,s]	8.14 [v,s]	...	...	...	...	2009p	22
	Midwives	- Number	13 000 [v]	0 [v]	13 000 [v]	...	...	...	...	2009p	22
		- Ratio per 1000 population	0.61 [v]	0.00 [v]	0.61 [v]	...	...	...	...	2009p	22
	Paramedical staff	- Number	96 800 [v,w]	40 500 [v,w]	56 300 [v,w]	...	...	...	...	2009p	22
		- Ratio per 1000 population	4.52 [v,w]	1.89 [v,w]	2.63 [v,w]	...	...	...	...	2009p	22
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	2139	926	1213	...	...	...	...	2008	27
		Dentists	349	162	187	...	...	...	...	2008	28
		Pharmacists	1649	...	...	...	...	...	...	2008	29

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	8786	1134	7652	...	...	...	...	2008	28
		Midwives	642	...	...	...	...	...	...	2008	29
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	4.10	4.60	3.60	2008	5
44	Under-five mortality rate (per 1000 live births)	4.92	5.50	4.30	2008	4, 5
45	Proportion of 1 year-old children immunised against measles	93.80 [x]	...	...	2009	18
46	Maternal mortality ratio (per 100 000 live births)	8.40			2003-05	30
47	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.20			2007	17
48	Contraceptive prevalence rate	...	...	65.00	2001	15
49	Adolescent birth rate	4.10			2007	17
50	Antenatal care coverage - At least one visit	99.60			2001	31
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	<0.08	<0.15	<0.02	2008	32
53	Estimated HIV prevalence in adults	0.08 [y]	0.15	0.02	2008	32
54	Percentage of people with advanced HIV infection receiving ART	61.00 [z]	...	...	2008est	32
55	Malaria incidence rate per 100 000 population	NR [h]	NR	NR	2009P	10
56	Malaria death rate per 100 000 population	NR [h]	NR	NR	2009P	10
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	NR [h]	NR	NR	2009P	10
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	NR [h]	NR	NR	2009P	10
59	Tuberculosis prevalence rate per 100 000 population	5.00	...	...	2008	23
60	Tuberculosis death rate per 100 000 population	0.00	...	...	2008	23
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	89.00	...	...	2008	23
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	85.00	...	...	2007	23
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2008	26
64	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2008	26
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
P	Provisional
est	Estimate
NR	Not relevant
a	Estimated figure includes Other Territories comprising Jervis Bay Territory, Christmas Island and the Cocos (keeling) Islands
b	Data for 15-year-old schoolchildren. Literacy defined as Levels 2-5 using OECD PISA (Programme for International Student Assessment) standards
c	Revised figure refers to current prices based on Purchasing Power Parities (PPP) from <http://www.oecd.org/std/ppp> (accessed 19 May 2010)
d	Number includes records where sex was unknown/not reported
e	Includes both newly acquired cases less than 24 months and where period of infection is unknown
f	Figure includes records where sex was unknown/not reported and may be an underestimate as Queensland did not report Hepatitis C (incident) in 2008
g	Includes imported and locally acquired cases
h	Not endemic, absence of local transmission
i	Includes infectious syphilis, and syphilis where duration is > 2yrs or unknown duration, excludes congenital syphilis
j	Includes deaths due to Intestinal infectious diseases (A00-A09)
k	Includes substance use disorders, schizophrenia, anxiety amd depression, bipolar disorder, personality disorders, eating disorders, dementia, ADHD and autism
l	Total does not always equal the sum of its components due to incidence estimation process
m	Data refer to episodes of admitted patient care (separations). Separations can be overnight or same-day
n	Percentage of women aged 18-49 (or their partners) reporting using contraceptive methods (including hysterectomy, tubal ligation and partner vasectomy)
o	Estimate based on South Australia
p	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
q	At 12–15 months
r	Number refers to psychiatric hospitals
s	Registered nurses
t	Based on OECD Health Data monetary exchange rates.
u	Under the Medicare Scheme introduced in 1984, all residents began eligible for free in-patient care and obtain a universal rebate on the cost of ambulatory medical services
v	These data are subject to sampling error and may not directly correspond to other Australian labour force data
w	Includes dieticians, imaging specialists, occupational health workers, chiropracters, complementary health workers, physiothrapists, podiatrists, speech therapists, anaesthetists and paramedics
x	At 24-27 months (age calculated at 31 December 2009)
y	Based on all persons living with HIV (rather than just adults)
z	The estimate is for all people living with diagnosed HIV infection rather than for people with advanced HIV infection.

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BRUNEI DARUSSALAM

1. CONTEXT

1.1 Demographics

The population of Brunei Darussalam is estimated to have been 398 000 in 2008 and is increasing at a rate of 2.1% per annum. With an area of 5765 square kilometres, the country's population density is 69 persons per square kilometre, although 75.2% of the population are considered urban.

The population comprises 211 000 (53.0%) males and 187 000 (47.0%) females, giving a gender ratio of 113 males per 100 females. The population structure is essentially that of a young population; about 8.8% are under five years of age, 26.7% are under 15 years, and only 3.3% are 65 years or over.

Brunei Darussalam has a multi-ethnic population, with Malays, comprising 66.6%, the predominant ethnic community, and Chinese, with 11.0%, the next major group. Other races and expatriates make up the rest of the population.

In 2008, life expectancy at birth was 76.6 years for males and 79.8 years for females. The crude birth rate had declined slightly from 16.2 in 2007 to 16.1 per 1000 population in 2008 and the crude death rate was 2.7 per 1000 population decreasing from 3.0 in 2007. The total fertility rate had remained at 1.7 children per woman of reproductive age period since 2007.

1.2 Political situation

Brunei Darussalam is an independent sovereign sultanate governed on the basis of a written constitution, and achieved full independence on 1 January 1984. The Head of State, the Head of Government and the Supreme Executive Authority is His Majesty, the Sultan and Yang Di-Pertuan, who also holds the Defence and Finance portfolios in the Cabinet and is the Supreme Commander of the Royal Brunei Armed Forces, the Inspector-General of the Royal Brunei Police Force, and the supreme head of religious affairs in the sultanate.

Brunei's first written constitution came into force in 1959 and was subject to important amendments in 1971 and 1984. The 1959 Constitution provides the Sultan, as the Head of State, with full executive authority. The Sultan is assisted and advised by five councils—the Religious Council, the Privy Council, the Council of Ministers (the Cabinet), the Legislative Council and the Council of Succession.

The Council of Cabinet Ministers is appointed and presided over by the Sultan and handles executive matters. The Religious Council advises on religious matters, the unicameral Legislative Council or *Majlis Mesyuarat Negeri* handles constitutional matters (legislative branch), and the Council of Succession determines the succession to the throne if the need arises. For the judicial branch, the Sultan swears in a Supreme Court (Chief Justice and judges) for a three-year term.

1.3 Socioeconomic situation

Brunei Darussalam's economy, which is growing at a slow and steady rate, has been dominated by the oil and gas industry for the past 80 years. The economy, which has remained stable with an average inflation rate of 1.5% over the past 20 years, encompasses a mixture of foreign and domestic entrepreneurship, government regulation, welfare measures and village tradition. Crude oil and natural gas production account for nearly half of gross domestic product (GDP). Per capita GDP is far above most developing countries (US$35 840 in 2008), and the substantial income from overseas investments supplements income from domestic production. The Government provides all medical services and subsidizes rice and housing.

There is rising awareness in the country of the depletion of natural resources and the subsequent need to diversify the economy away from its over-reliance on oil and gas. Plans for the future include upgrading

the labour force, reducing unemployment, strengthening the banking and tourism sectors, and further widening the economic base beyond oil and gas.

In its efforts to stimulate economic growth, the Brunei Government is actively promoting the development of various target sectors through its five-year national development plans. The current 9th National Development Plan (2007-2012) marks a strategic shift in the planning and implementation of development projects, as it is the first to have been formulated in line with the objectives of Brunei Darussalam's recently launched long-term development plan, *Wawasan* Brunei 2035 (Brunei's Vision 2035).

A large percentage of the budget is allocated to the Ministry of Health each year as a measure towards creating a proper infrastructure for the health system and health services. In the 9th National Development Plan (2007-2012), a total of B$149 152 000 (US$ 102 383 300) is allocated to medical and health services, 1.6% of the Plan's total allocation. Emphasis is on several areas, such as national health emergency preparedness; improvement of health service quality and management and staff proficiency; improvement of hospital facilities and services; and improvement of primary health care services.

1.4 Risks, vulnerabilities and hazards

Natural hazards, such as typhoons, earthquakes and severe flooding, are very rare in Brunei Darussalam. However, the country has not been exempt from the impacts of climate change. The incessant and heavy rains during the Northeast Monsoon season have caused floods in low-laying areas and landslides in several areas. There has also been seasonal smoke/haze resulting from forest fires in neighbouring countries in recent years.

Recent events, such as emerging infectious diseases and natural disasters, have led the Government to take steps towards preparedness for such events. A National Committee on Disaster Management has been formed to strengthen the country's preparedness and planned response to any possible disaster.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The trend in the major causes of death has changed over the past 30 years from infectious diseases to chronic, degenerative diseases related to sedentary lifestyles. The five leading causes of death in 2008 were heart disease, cancer, diabetes mellitus, cerebrovascular disease, and influenza and pneumonia. Most of these noncommunicable diseases involve similar modifiable behavioural risk factors, namely unhealthy diet, obesity, lack of physical activity, and smoking—all of which can be addressed through health-promotion strategies, as well as legislation.

Brunei Darussalam has an enviable record in being almost entirely free from major communicable diseases. WHO declared the country malaria-free in 1987 and, in 2000, along with other countries in the WHO Western Pacific Region, it was declared poliomyelitis-free.

Notification of infectious diseases is required by law under the Infectious Diseases Order 2003. To date, a total of 57 infectious diseases are listed as notifiable in the country. All notifications must be reported to the Disease Control Division at the Department of Health. Authorities have been vigilant in detecting and preventing the invasion of newly emerging infectious diseases, such as severe acute respiratory syndrome (SARS) and highly pathogenic H5N1 avian influenza.

Brunei Darussalam has a comprehensive child immunization programme to protect against vaccine-preventable diseases. All these services are free. Medical advances in vaccines have been made widely available through the Expanded Programme on Immunization, which is incorporated into the Child Health Services and School Health Services. The country's health services are monitoring developments to ensure immunization measures and facilities continue to be in line with best practice for disease prevention.

The overall improvement in general sanitation, housing, food hygiene, regular screening and counselling of food handlers, safe drinking water and health education measures have successfully kept foodborne and waterborne diseases under control.

2.2 Outbreaks of communicable diseases

Brunei Darussalam recognizes the threats of emergence and outbreak of new and existing diseases, such as influenza A (H1N1) and highly pathogenic H5N1 avian influenza. Hence major investments have been made in capacity building, disease surveillance and prevention, as well as education, to address potential health threats and strengthen disaster preparedness capacity. International collaboration and participation have also been strengthened and heightened.

Brunei Darussalam, in preparedness for pandemic influenza, has activated the Influenza Pandemic Plan, involving multisectoral agencies. National pandemic preparedness plans include surveillance; prevention and disease control; management of patient treatment; logistics and technical assistance; laboratory assistance; media and communications; human resource development; and disease control. Brunei Darussalam has also commenced a vaccination programme against influenza A (H1N1), making it available to all residents in the country.

2.3 Leading causes of mortality and morbidity

Data on the main diseases affecting health status (morbidity) are derived from hospital discharge summaries, outpatient morbidity reports and notifiable disease returns. The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD10) has been used since 1 January 1998 to code inpatient morbidity data.

The five leading causes of morbidity in 2008 were: acute lower respiratory infection; pregnancy with abortive outcome; asthma; diarrhoea and gastroenteritis of presumed infectious origin; and acute upper respiratory infection. As regards mortality, the leading causes were: heart disease; cancer; diabetes mellitus; cerebrovascular disease; and influenza and pneumonia.

In 2008, there were 1091 deaths registered, with males accounting for 181 more deaths than females. Heart disease, the prime cause of mortality, constituted 19.3% of total deaths. The second was cancer, accounting for 18.4%, followed by diabetes mellitus (8.9%). The most common type of heart disease is ischaemic heart disease, while the most common types of cancer are of the trachea, lung and bronchus; colon and rectum; liver and intrahepatic bile ducts; cervix uteri; and stomach.

2.4 Maternal, child and infant diseases

Infant mortality has been reduced as a result of higher standards of living, improved sanitation, improved levels of education and literacy, increasing empowerment of women, and the rising standard of infant care services. Brunei Darussalam has achieved high immunization coverage of above 95% for all vaccinations included in the national immunization schedule.

Maternal health has also improved dramatically and no maternal death was recorded in 2008. To maintain these outcomes, Brunei Darussalam is striving to ensure the availability and practice of antenatal care, skilled care during childbirth and postnatal care, and quality health services. Currently, 99.7% of all births are delivered in hospitals and 99.7% of all deliveries are attended by skilled health personnel.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is responsible for all aspects of health care in the country and its vision is to become a highly reputable health service organization that is comparable to the best in the Region and that enables every citizen and resident of the nation to attain a high quality of life by being socially, economically and mentally productive throughout the life span. The Ministry's mission is to improve the health and well-being of the people of Brunei Darussalam through a high quality and comprehensive health care system that is effective, efficient, responsive, affordable, equitable and accessible to all in the country.

The Government is fully committed to continuously improving the health status of the people and considers government funding for health care a major public investment in human development. It is the aspiration of the Government that the Ministry of Health's agenda for the 21st century should focus on health improvement for people-centred development. Health policies and programmes will, therefore, continue to be constantly reviewed in the context of changing economic, social and technological environments and health situations. In looking ahead to the future, the following four principles are observed in the provision of health services for all citizens:

- ensuring universal access to better health care;
- enabling equity of access to comprehensive health services;
- promoting partnership and public participation in the concept of co-production of efficient and effective health services for all; and
- ensuring that the health service system is sustainable within the institutional capacity and financial resources of the Ministry of Health.

The Government recognizes that it needs to continue its broad involvement in the provision of health care and, wherever possible, policy decision-making and proposed programmes will be strongly evidence-based. In that respect, the Ministry of Health will continue to pursue the following set of goals, or 'policy objectives', derived from careful analysis of the strategic issues and themes. These goals and their implementation measures are classified into two categories, strategic goals and instrumental goals, based on their logical relationships.

Strategic goals:

- to promote primary health care;
- to focus on the management of priority chronic diseases;
- to pursue high quality in health care;
- to achieve a more equitable allocation of funds for diverse health services and to venture into alternative sources of health care financing; and
- to promote selected areas of excellence in health services.

Instrumental goals:

- to develop comprehensive health databases and information management systems that support operational, professional and managerial functions;
- to improve the quality of policy-making and management decisions at higher levels of the organization so that the Ministry becomes an effective enterprise and its administrators effective managers;
- to create and promote a disciplined workforce with positive work attitudes, through teamwork, a sense of belonging and responsibility, to achieve the organizational mission, goals and objectives;
- to improve competency and standards among all health care professionals;
- to enhance cost-effectiveness in the delivery of all aspects of health services; and
- to improve the management of support services in order to contribute to the overall quality of health services.

With noncommunicable diseases now the dominating causes of morbidity and mortality, Brunei Darussalam has identified health promotion as a major initiative in its National Health Care Plan 2000-2010. This strategy provides the basis for a more integrated health programme. In recognition of the need to promote positive health measures, a multidisciplinary committee, the National Committee on Health Promotion, has been established with the aim of increasing public awareness about health problems, as well as developing strategies to modify public behaviour in favour of healthier lifestyles through community participation and intersectoral collaboration. The Committee has identified seven priority areas for action: nutrition; food safety; tobacco control; mental health; physical activity; healthy environments/settings; and women's health. These priorities are promoted by special events, publicity about major health issues, and appropriate measures to modify lifestyles.

3.2 Organization of health services and delivery systems

The people of Brunei Darussalam enjoy free medical and health care provided via government hospitals, health centres and health clinics. A large network of health centres and clinics, located throughout the country, provides primary health care services, including those for mothers and children. In remote areas that are not accessible or are difficult to access by land or water, primary health care is provided by the Flying Medical Services.

As of 2008, there were four government general hospitals, 16 health centres, 14 maternal and child health clinics, eight travelling health clinics and four Flying Medical Services teams for remote areas. The Ministry of Defence also operates nine medical centres that mainly provide services for its personnel and their families. In addition to the government hospitals in each district, there are two private hospitals.

The main referral government hospital in the country is Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital, situated on a 32-acre site about 0.8 km from the heart of the capital. The hospital was officially opened in August 1984 and is equipped with modern, cutting-edge medical technology. The hospital also offers a very wide and comprehensive range of medical and surgical services, currently totalling 28 different specialties and subspecialties.

Public Health Services is the main division in the Ministry of Health responsible for providing community-based preventive and promotive primary health care services in the country. As a result of its monitoring and surveillance activities and preventive programmes, such as immunization, the country is free from major communicable diseases.

The decentralization programme, started in 2000, is a concerted and ongoing effort by the Ministry of Health to provide access to primary health care for the general population throughout the country. Through decentralization, primary health care is being further strengthened by the provision of more comprehensive services. In addition, patients with chronic illnesses can now be followed up by the primary care services. Thus, decentralization has resulted in better access to care, with primary care services serving as a 'gatekeeper' for secondary and tertiary care.

The Ministry of Health has categorized the respective health care services available in Brunei Darussalam into two main services. The Directorate of Medical Services is responsible for hospital, nursing, laboratory, pharmaceutical, dental and renal services, while the Directorate of Health Services oversees community health, environmental health and scientific services.

3.3 Health policy, planning and regulatory framework

The provision of a comprehensive health care system for the people is a priority for the Government. The Ministry of Health formulates the National Health Policy, which is designed to provide the highest level of health care that is cost-effective and to provide a high quality of life for the whole population in a clean and healthy environment.

To attain the target of health for all, emphasis has been given to the development of a health care system that is based on primary health care, aimed at providing a wide range of preventive, promotive, curative and rehabilitative health care and support services to meet the needs of the population. The main policy

objectives are: reduction of infant mortality, diseases and disabilities, as well as premature deaths, thereby increasing life expectancy; improvement of the environment; and control of communicable diseases.

3.4 Health care financing

Health care services are primarily funded by the General Treasury. The budget for health care is allocated by the Ministry of Finance and administered by the Ministry of Health. User fees currently constitute a very small percentage of the total funds available to health care. Data regarding private health care spending are very limited. However, an estimate in 2000 stated that the ratio of public to private spending was approximately 97.2% public versus 2.8% private. Private insurance is offered in several markets. Since the Government provides and pays for comprehensive health care services, there is a limited market for private insurance for citizens and permanent residents. Employers of foreign nationals typically purchase health insurance locally unless the employer is multinational company (e.g. banks, oil companies), in which case the corporation provides health insurance through international insurance companies.

3.5 Human resources for health

In 2008, a total of 564 physicians and 82 dentists were registered to practise. The doctor-to-population ratio was 1:706. A comprehensive manpower development programme for the community, as well as hospital-based health personnel, is to be extended to strengthen health care services throughout the country, with emphasis on the primary health care approach.

The Ministry of Health, in its effort to provide quality health care, puts great emphasis on the continuous skill and professional development of its health care workforce. Upgrading professionalism, skills, credibility and quality of services towards excellence is one of the strategic themes in the National Health Care Plan 2000-2010. Towards that end, the Ministry of Health has made a long-term plan for development of more professionals in various specialities through training courses, workshops and seminars, both local and overseas. Efforts are also being made to develop postgraduate training programmes, including sending local doctors to undergo further highly specialized training overseas. This has progressed to provide such training locally with the accreditation of RIPAS Hospital by the University of Queensland, Australia; the Royal College of Physicians, United Kingdom; the Royal College of Surgeons, Edinburgh, United Kingdom; the Royal College of Obstetrics and Gynaecology, London, United Kingdom; and the Royal College of Paediatrics and Child Health, London, United Kingdom.

In 2000, the Ministry of Health, in collaboration with the Institute of Medicine, University of Brunei Darussalam (UBD) and St. George's Hospital Medical School, started a part-time postgraduate diploma course in Primary Health Care. Since 2004, it has been run by the Institute of Medicine, UBD. With the increase in local expertise and the number of graduates in health care, the Ministry has been able to expand the scope of its medical services.

To support capacity-building initiatives, the Primary Health Care Orientation and Training Centre was established in 1986, primarily to provide training courses on the primary health care concept for health personnel. Many training programmes have been conducted for community health nurses by the Centre, including refresher courses, seminars and workshops for continuing professional development to increase the knowledge and skills of nurses in the community, including nurses from Outpatient Services, School Health Services and other services in the Department of Health.

3.6 Partnerships

The Government continues to forge stronger partnerships among various stakeholders to provide the synergy necessary to reach the shared vision of improved health, including other government agencies, academic institutions and other organizations, both local and international. Government agencies provide support to many national health programmes. For some health programmes, the Ministry of Health works very closely with international organizations and global initiatives to strengthen priority health programmes. Assistance for the health sector comes mainly in the form of grants and technical assistance. At present, a sectorwide development approach between the Government and partners is being initiated to ensure maximization of investment and generation of necessary resources, not just for the health sector, but also for other sectors.

3.7 Challenges to health system strengthening

The Ministry of Health has embarked on several health care reforms that present a challenge to the nation's health system. These have been necessitated by the rising cost of health care, changing disease patterns and lifestyles, changing population demography, advancements in health technology and increased public expectation of receiving better quality health care. Over time, the role of the Ministry will evolve from that of a provider of health services to that of a facilitator and regulator. Delivery of services will be enhanced to improve the quality and efficiency of care.

Regarding the challenges faced by the Ministry of Health, six aspects may be highlighted: fiscal problems relating to escalating health costs; the paradigm shift in health care (formal and informal activities to preserve and maintain health status); the epidemiological transition (from communicable to noncommunicable diseases and the relationship to lifestyle); and the demographic transition (the increasing number of older people with different needs and demands for health care services). Others include the paradigm shift in public sector management (innovations in the style of managing public services) and the technological revolution.

Critical success factors include the priority given by the Government to the importance of health, as manifested through: the recurrent and development budget; comprehensive health care that is of high quality and is cost-effective in the areas of prevention, health promotion and education, treatment and rehabilitation; the control of major communicable diseases; the potential development of the information and communication system; effective and committed leadership; and the availability of highly qualified and competent staff to provide high quality, comprehensive and cost-effective services. Other success factors include collaboration with other government and nongovernmental organizations, as well as the private sector; support and participation from the public in improving services and health status; and establishment of the RIPAS Hospital as a centre of medical excellence and a referral hospital, as well as a centre for the treatment of more complicated diseases.

4. PROGRESS TOWARDS THE HEALTH MDGs

Brunei Darussalam has made remarkable progress towards achieving the health-related targets of the Millennium Development Goals through significant development and progression of its health services, encompassing improvement in the quality of services, human resources and technology, and development of infrastructure and health facilities.

Goal 4: Reduce child mortality

Infant and under-five mortality rates had been reduced to a low level of 7.0 and 9.5 per 1000 live births, respectively by 2008, and there was no maternal death recorded. The reduction in child and maternal mortality was due to improvements in maternal and child health services, the objective of which is to provide optimum health care to all children below the age of five years and all pregnant women throughout their antenatal and postnatal periods. Services offered include antenatal care, postnatal care, child health care, well women clinics, health education, treatment for minor illnesses, domiciliary care and home nursing.

The national childhood immunization programme, which is also delivered in the extensive network of Maternal and Child Health Clinics and by School Health Services, is another factor that has contributed to the progress in reducing child mortality. The vaccinations included in the schedule protect infants/children against the following diseases: tuberculosis, hepatitis B, diphtheria, neonatal tetanus, pertussis, haemophilus influenza type B, mumps, measles, rubella and poliomyelitis. The National Committee on Immunization was set up in 1991 to formulate policies, reviews and monitor the implementation of the programme. Through the Expanded Programme on Immunization, immunization coverage in Brunei Darussalam has consistently been above 95% for all vaccines in the programme, meeting the targets set by WHO.

Improvement in all child health indicators is also a result of the rising standard of accessible health services, a higher standard of living, with improved hygiene and sanitation, improved levels of education

and literacy, and the increasing empowerment of women. The challenge is to achieve further reductions in the child mortality rate, particularly reducing deaths during the perinatal period, which can be addressed by further improving the antenatal care, nutrition and well-being of pregnant women, especially those identified as high-risk pregnancies, as well as improving the quality of obstetrics and intensive newborn care. In 2008, the perinatal mortality ratio was 10.0 per 1000 live births.

Goal 5: Improve maternal health

All pregnant women (100%) in Brunei Darussalam receive antenatal care. On average, each woman makes about seven antenatal visits during her pregnancy, which is well above the WHO minimum recommendation of four visits per year. More than 99% of deliveries take place in hospitals and are attended by qualified and skilled health personnel. Brunei Darussalam will maintain low levels of maternal mortality by ensuring continued access to quality antenatal and postnatal care and continued safe deliveries by skilled health personnel, with provision of emergency obstetric care throughout the country. All pregnant mothers continue to be routinely screened for HIV to ensure that all HIV-positive mothers receive antiretroviral treatment and the risk of mother-to-child HIV transmission is virtually eliminated.

Goal 6: Combat HIV/AIDS, malaria and other diseases

The incidence of HIV/AIDS in Brunei Darussalam remains at a low level, with eight new cases identified in 2008. Those living with HIV/AIDS receive equitable care and are given antiretroviral treatment without charge. In its efforts to combat HIV/AIDS, the Ministry of Health has adopted strategies which include HIV/AIDS education awareness, protection of the national blood supply, surveillance of high-risk groups, case management and multisectoral approaches. In 1999, the Brunei Darussalam AIDS Council, an NGO dedicated to HIV/AIDS, was established, marking the formal involvement of the nongovernmental sector in the national response to the threat of a pandemic. The focus of this organization is to increase awareness on HIV/AIDS in the community. Even although HIV/AIDS is not widespread in Brunei Darussalam, continued vigilance is essential to contain its impact, especially in the light of increasing STIs rates in the country.

Communicable diseases have been reduced and are being controlled successfully in Brunei Darussalam. The country was declared malaria-free by WHO in 1987 and, for more than 20 years, the Vector Control Unit in the Ministry of Health has been vigilant in carrying out operations to ensure that it remains free of malaria. No case of human malaria transmission (indigenous case) or secondary transmission of malaria from imported cases has been notified since 1987.

The Government's full commitment to combating tuberculosis is clearly reflected in the continuous availability of resources for management of the disease, including anti-TB drugs and BCG vaccines. In addition, considerable resources have been allocated to strengthening of existing capacity and capability in tuberculosis management, including diagnostic services, as well as the continuous training of health and medical personnel. Tuberculosis management is under the purview of the National TB Prevention Control Programme, established in March 2000, which undertakes contact-tracing and directly observed treatment, short-course (DOTS), as recommended by WHO. In addition, with the maintenance of high coverage of BCG immunization at birth (over 95% for the past few years), Brunei Darussalam has had no reported case of disseminated tuberculosis during infancy and childhood for almost 20 years. Similarly, no cases of tubercular meningitis or miliary tuberculosis have been reported among children aged 10 years and below.

The Infectious Disease Order 2003 provides comprehensive regulations for preventing the introduction, transmission and the spread of infectious diseases in Brunei Darussalam.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Statistics Unit, Research and Development Section,
Operator	:	Ministry of Health
Title 2	:	Disease Control Division, Environmental Health Services,
Operator	:	Ministry of Health
Title 3:	:	*Health Information Booklet 2008*
Operator	:	Department of Policy and Planning, Ministry of Health
Website	:	http://www.moh.gov.bn/satisticshealthguidelines/download/HIB_2008c.pdf

6. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	Jalan Menteri Besar Bandar Seri Begawan BB3910 Brunei Darussalam
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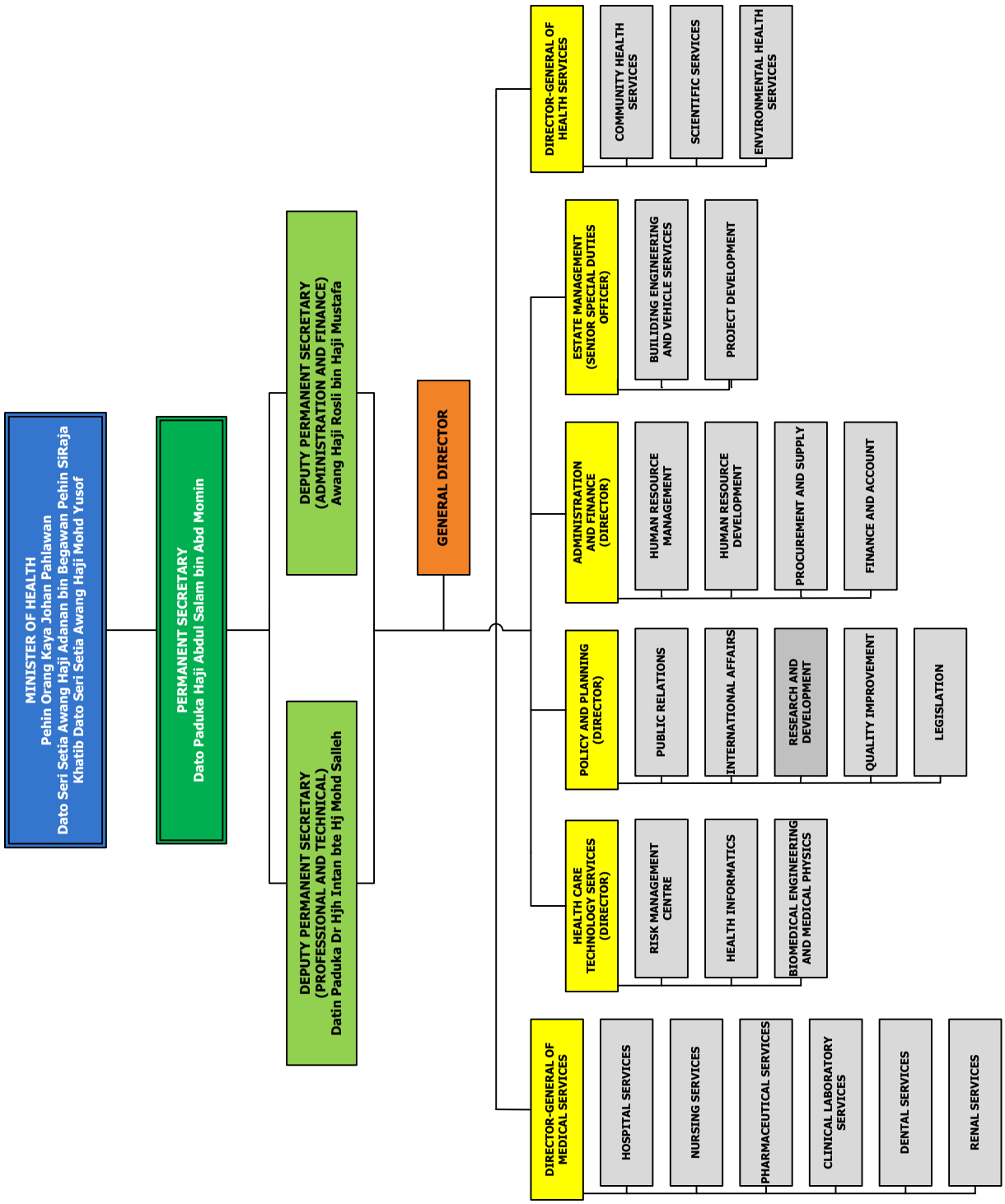
7. ORGANIZATIONAL CHART: Ministry of Health



BRUNEI DARUSSALAM

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	5.77						2008	1
2	Estimated population ('000s)	398.00	211.00	187.00				2008	1
3	Annual population growth rate (%)	2.10	...	...				2008	1
4	Percentage of population								
	- 0–4 years	8.80	8.90	8.80				2008	1
	- 5–14 years	17.80	18.20	17.40				2008	1
	- 65 years and above	3.30	3.10	3.60				2008	1
5	Urban population (%)	75.20	...	...				2009 est	2
6	Crude birth rate (per 1000 population)	16.10	...	...				2008	3
7	Crude death rate (per 1000 population)	2.70	...	...				2008	3
8	Rate of natural increase of population (% per annum)	1.34	...	...				2008	1
9	Life expectancy (years)								
	- at birth	78.20	76.60	79.80				2008	1
	- Healthy Life Expectancy (HALE) at age 60	...	13.10	13.30				2002	4
10	Total fertility rate (women aged 15–49 years)	1.70						2008	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	94.90	96.50	93.10				2007	5
12	Per capita GDP at current market prices (US$)	35 839.90						2008	1
13	Rate of growth of per capita GDP (%)	8.30						2008	1
14	Human development index	0.92						2007	5
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	...	...	...					
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	9	7	2	0	0	0	2008	6
	- Type B	1	0	1	0	0	0	2008	6
	- Type C	8	6	2	0	0	0	2008	6
	- Type E	0	0	0	1	0	1	2008	6
	- Unspecified	0	0	0	0	0	0	2008	6
	Cholera	0	0	0	0	0	0	2008	6
	Dengue/DHF	33	...	...	0	0	0	2009	7
	Encephalitis	0	0	0	0	0	0	2008	6
	Gonorrhoea	391	359	32	0	0	0	2008	6
	Leprosy	2	0	2	...	...	...	2009	7
	Malaria	18	15	3	0	0	0	2008	6
	Plague	0	0	0	0	0	0	2008	6
	Syphilis	47	34	13	0	0	0	2008	6
	Typhoid fever	1	0	1	0	0	0	2008	6
17	Acute respiratory infections	4205	2335	1870	132	86	46	2008	3
	- Among children under 5 years	304	190	114	2	2	0	2008	3

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	334	186	148	0	0	0	2008	6
	- Among children under 5 years	158	...	...	0	0	0	2008	6
19	**Tuberculosis**								
	- All forms	210	125	85	...	...	...	2008	6
	- New pulmonary tuberculosis (smear-positive)	129	80	49	...	...	...	2008	6
20	**Cancers**								
	All cancers (malignant neoplasms only)	368	157	211	201	104	97	2008	3
	- Breast	16	0	16	8	1	7	2008	3
	- Colon and rectum	40	33	7	22	12	10	2008	3
	- Cervix			61			13	2008	3
	- Leukaemia	4	2	2	7	4	3	2008	3
	- Lip, oral cavity and pharynx	7	4	3	5	2	3	2008	3
	- Liver	12	6	6	14	7	7	2008	3
	- Oesophagus	0	0	0	2	0	2	2008	3
	- Stomach	22	19	3	12	9	3	2008	3
	- Trachea, bronchus, and lung	35	21	14	50	31	19	2008	3
21	**Circulatory**								
	All circulatory system diseases	1637 [a]	897	758	336 [a]	197	136	2008	3
	- Acute myocardial infarction	37	29	8	72	46	26	2008	3
	- Cerebrovascular diseases	128	83	45	93	54	39	2008	3
	- Hypertension	745	382	363	24	12	12	2008	3
	- Ischaemic heart disease	163	111	52	135	86	49	2008	3
	- Rheumatic fever and rheumatic heart diseases	13	3	10	0	0	0	2008	3
22	**Diabetes mellitus**	791 [b]	332 [b]	459 [b]	97	53	44	2008	3
23	**Mental disorders**	67	38	29	1	0	1	2008	3
24	**Injuries**								
	All types	2769	1883	886	79	55	24	2008	3
	- Drowning	6	5	1	11	9	2	2008	3
	- Homicide and violence	57	36	21	11	9	2	2008	3
	- Occupational injuries	117	...	...	...	...	...	2008	3
	- Road traffic accidents	340	221	119	33	23	10	2008	3
	- Suicide	62	23	39	9	6	3	2008	3
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute Lower Respiratory Infections	1201	704	497	301.80	333.60	265.80	2008	3
	2. Pregnancy With Abortive Outcome	1067		1067	268.10		570.60	2008	3
	3. Asthma	1055	568	487	265.10	269.20	260.40	2008	3
	4. Diarrhoea and Gastroenteritis of Presumed Infectious Origin	1026	582	444	257.80	275.80	237.40	2008	3
	5. Acute Upper Respiratory Infections	1016	568	448	255.30	269.20	239.60	2008	3
	6. Non-Inflammatory Disorders of Female Genital Tract	984		984	247.20		526.20	2008	3
	7. Diabetes Mellitus	791	332	459	198.70	157.30	245.50	2008	3
	8. Hypertensive Diseases	745	382	363	187.20	181.00	194.10	2008	3
	9. Fever of Unknown Origin	737	410	327	185.20	194.30	174.90	2008	3
	10. Maternal Diseases Classifiable but Complicating Pregnancy, Childbirth and The Puerperium (Indirect Obstetric Causes)	660		660	165.80		352.90	2008	3

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart Diseases (including Acute Rheumatic Fever)	211	124	87	53.00	58.80	46.50	2008	3
	2. Cancer	201	104	97	50.50	49.30	51.90	2008	3
	3. Diabetes Mellitus	97	53	44	24.40	25.10	23.50	2008	3
	4. Cerebrovascular Diseases	93	54	39	23.40	25.60	20.90	2008	3
	5. Influenza and Pneumonia	53	39	14	13.30	18.50	7.50	2008	3
	6. Bronchitis, Chronic & Unspecified Emphysema & Asthma	39	23	16	9.80	10.90	8.60	2008	3
	7. Transport Accidents	33	23	10	8.30	10.90	5.30	2008	3
	8. Septicaemia	32	17	15	8.00	8.10	8.00	2008	3
	9. Hypertensive Diseases	24	12	12	6.00	5.70	6.40	2008	3
	10. Certain Conditions Originating In The Perinatal Period	20	8	12	5.00	3.80	6.40	2008	3
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					…			
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					75.00		2009	7
29	**Percentage of pregnant women with anaemia**					…			
30	**Neonatal mortality rate (per 1000 live births)**	4.80		…		…		2008	3
31	**Percentage of newborn infants weighing less than 2500 g at birth**	11.10		…		…		2008	3
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		…		…		2009	7
	- DTP3	99.40		…		…		2009	7
	- Hepatitis B III	100.00		…		…		2009	7
	- MCV2	99.30		…		…		2009	7
	- POL3	99.50		…		…		2009	7
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			1067			…	2008	3
	- Eclampsia			…			…		
	- Haemorrhage			11			…	2008	3
	- Obstructed labour			32			0	2008	3
	- Sepsis			…			…		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	…	…	…	2009	7
	- Diphtheria	0	0	0	…	…	…	2009	7
	- Measles	2	…	…	…	…	…	2009	7
	- Mumps	1	…	…	…	…	…	2009	7
	- Neonatal tetanus	0	0	0	…	…	…	2009	7
	- Pertussis (whooping cough)	0	0	0	…	…	…	2009	7
	- Poliomyelitis	0	0	0	…	…	…	2009	7
	- Rubella	1	…	…	…	…	…	2009	7
	- Total Tetanus	0	0	0	…	…	…	2009	7
	Health facilities								
35	**Facilities with HIV testing and counseling services**						…		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	555	2008	3
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	3	393	2008	3
		- Primary health care centres	16	...	2008	3
	Private health facilities	- Hospitals	2	130	2008	3
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			346.81	2008p	8
	- total expenditure on health as % of GDP			2.40	2008p	8
	- per capita total expenditure on health (in US$)			884.72	2008p	8
	Government expenditure on health					
	- amount (in million US$)			280.85	2008p	8
	- general government expenditure on health as % of total expenditure on health			81.00	2008p	8
	- general government expenditure on health as % of total general government expenditure			6.70	2008p	8
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2008p	8
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			19.00	2008p	8
	- out-of-pocket expenditure on health as % of total expenditure on health			18.81	2008p	8
	Exchange rate in US$ of local currency is: 1 US$ =			1.41	2008p	8
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	564	331	233	...	...	506	58	2008	3
		- Ratio per 1000 population	1.42	0.83	0.59	...	...	1.27	0.15	2008	3
	Dentists	- Number	82	44	38	...	...	66	16	2008	3
		- Ratio per 1000 population	0.21	0.11	0.10	...	...	0.17	0.04	2008	3
	Pharmacists	- Number	45	6	39	...	...	32	13	2008	3
		- Ratio per 1000 population	0.11	0.02	0.10	...	...	0.08	0.03	2008	3
	Nurses	- Number	1 426	...	...	...	...	...	...	2008	3
		- Ratio per 1000 population	3.58	...	...	...	...	...	...	2008	3
	Midwives	- Number	515	0	515	...	...	436	79	2008	3
		- Ratio per 1000 population	1.29	0.00	1.29	...	...	1.10	0.20	2008	3
	Paramedical staff	- Number	27	19	8	...	...	...	...	2008	3
		- Ratio per 1000 population	0.07	0.05	0.02	...	...	...	...	2008	3
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	65	32	33	...	...	...	...	2008	3
		Dentists	5	0	5	...	...	...	...	2008	3
		Pharmacists	2	0	2	...	...	...	...	2008	3

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	40	7	33	...	...	...	...	2008	3
		Midwives	6	0	6	...	...	...	...	2008	3
		Paramedical staff	0	0	0	...	...	...	...	2008	3
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	37	21	16	...	...	...	...	2008	3
		Dentists	1	0	1	...	...	...	...	2008	3
		Pharmacists	0	0	0	...	...	...	...	2008	3
		Nurses	28	5	23	...	...	...	...	2008	3
		Midwives	4	0	4	...	...	...	...	2008	3
		Paramedical staff	1	1	0	...	...	...	...	2008	3
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	7.00	...	...	2008	3
44	Under-five mortality rate (per 1000 live births)	9.50	...	...	2008	3
45	Proportion of 1 year-old children immunised against measles	99.70	...	...	2008	3
46	Maternal mortality ratio (per 100 000 live births)	0.00			2008	3
47	Proportion of births attended by skilled health personnel	99.72			2008	3
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.05			2008	3
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.67			2008	3
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	17.40			2008	3
50	Antenatal care coverage - At least one visit	100.00			2008	3
	- At least four visits	100.00			2008	3
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	<0.10	...	...	2005	7
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	0.00	0.00	0.00	2008	3
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	43.00	...	...	2008	7
60	Tuberculosis death rate per 100 000 population	4.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	86.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	76.00	...	...	2007	7
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	99.90	...	...	2008	1
64	Proportion of population using an improved sanitation facility	80.00	...	...	2002	3
65	Proportion of population with access to affordable essential drugs on a sustainable basis	100.00	...	...	2008	3

Notes:	
…	Data not available
est	Estimate
a	Totals may not tally due to some reported cases with no gender breakdown
b	Figure refers to inpatients

Sources:	
1	Department of Economic Planning and Development (DEPD), Prime Minister's Office.
2	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision [http://esa.un.org/wup2009/unup/].
3	Statistics Unit, Research and Development Section, Ministry of Health.
4	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
5	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
6	Disease Control Division, Environmental Health Services, Ministry of Health.
7	WHO Regional Office for the Western Pacific, data received from the technical units.
8	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html

CAMBODIA

1. CONTEXT

1.1 Demographics

The General Population Census of 2008 put Cambodia's population at 13.4 million by March 2008. The population density is 75 per square kilometre. The male-to-female ratio is gradually normalizing after the distortions caused by 30 years of war during the last century. The average household size is 4.7 people, with 80% of the population living in rural areas. The median age in 2008 was 21 years, which is about four years more than in 1998.

Mainly due to a decline in early mortality, life expectancy increased in the period from 1998 to 2008 from 52.0 to 60.5 years for males and from 56.0 to 64.3 for females. The total fertility rate dropped from 4.0 births per woman in 2000 to 3.4 in 2005 and further decreased to 3.1 in 2008 (Census data), achieving the Cambodian Millennium target for 2010, predominantly occurring as a result of a decline in fertility among rural women; the annual population growth rate between 1998 and 2008 declined from 2.5% to 1.5%. Around 40% of women use contraceptives, with 27.2% using modern methods. One quarter of currently married women have an unmet need for family planning, and this is especially high among women in the lowest wealth quintile and women with no education. The Cambodian Demographic Health Survey (CDHS) 2005 concluded that both education and wealth have an effect on fertility. The interval between births is relatively long, at a median of 36.8 months.

1.2 Political situation

Since completion of the United Nations Transitional Authority in Cambodia (UNTAC) mission and promulgation of the 1993 Constitution of the Kingdom of Cambodia, increased political stability has allowed economic growth, improvements in human development indicators and reintegration of the country into the international community. Parliamentary elections are held every five years, with the most recent in 2008. A policy of decentralization and deconcentration resulted in the first indirect election of commune representatives at administrative district and provincial levels in 2009. Poverty alleviation and governance are increasingly important items on the Government's agenda.

In September 2008, the Government issued phase two of its 'Rectangular Strategy', with reforms focusing on corruption, the judiciary, public administration and the military as core priorities. The National Strategic Development Plan 2006-2010 is being updated until 2013 to align with the governing cycle. Drafted in collaboration with development partners, it combines previous poverty-reduction strategy papers and socioeconomic development plans, and specifies the prioritized goals, targets and actions, including the Cambodian Millennium Development Goals.

1.3 Socioeconomic situation

Cambodia has successfully maintained macroeconomic stability since 1993, allowing for an average annual growth rate of 7.1% for the period from 1994 to 2004, increasing to 13.5% in 2005, 10.4% in 2006, 10.2% in 2007 and 6.7% in 2008. The 2009 projections are close to zero or potentially negative. This growth, while reducing poverty by 10%-15%, has increased inequality, as reflected in a Gini coefficient of 42.0 in 2004. Over 85% of the labour force is in the informal sector, with employment in industry (mainly the garment industry) growing substantially during the period from 1998 to 2004, stimulated by preferential trade status with the United States of America. Although that status ended, the change did not affect growth, but the global economic crisis in 2008-2009 reduced the labour force substantially. The other drivers of recent economic growth are tourism and construction, which have also been affected. Agriculture, mainly rice production, accounts for 40% of gross domestic product (GDP) and employs more than 70.0% of the workforce. Annual flooding and drought, however, result in year-to-year fluctuations in agricultural production. Diversifying this rather narrow income base and strengthening rural development are government priorities.

Thirty years of war and serious internal conflict at the end of the last century left Cambodia severely impoverished, with a significant depletion of skilled, educated professionals. In 1990, the Human Development Index (HDI) was 0.51, but by 2007 it had increased to 0.59, moving Cambodia from the low to the medium human-development category. Despite that achievement, the country still has some of the worst human development indicators in South-East Asia. In 2008, per capita GDP was US$ 640, with 31% of the total population still living below the official rural and urban poverty lines of US$ 0.46 and US$ 0.63 (1999). In some rural areas, the percentage of the population living below the poverty line rises to 79.0%.

The Constitution guarantees women and men the same legal protection. However, women are disproportionately vulnerable in economic terms. While labour-force participation for both is about 60%, over 60% of working women are in unpaid family work, and women head more than 25% of households.

1.4 Risks, vulnerabilities and hazards

Like many developing countries, Cambodia faces a range of vulnerabilities and risks, including traditional, modern and emerging health and environmental risks. These risks emanate from unsafe water and inadequate sanitation; unsafe food supplies, especially from street vendors; indoor air pollution and solid fuel use; as well as disease-vector transmission. However, the country is also subject to emerging issues, including health risks related to changes in the global environment (e.g. climate change and biodiversity loss); development, consumption and production of new products and technologies; consumption and production of more energy sources; and the increasing number and use of chemicals. There are also increasing health risks related to changes in lifestyle, urbanization and working conditions. In September 2009, the country was hit by Typhoon Ketsana, causing damage and loss. The typhoon affected 50 000 families, leaving 43 people dead and 67 severely injured.

According to the latest WHO/UNICEF Joint Monitoring Programme (JMP) Report on Drinking Water and Sanitation, published in 2010, 61% of the total population have sustainable access to an improved water source (81% in urban and 56% in rural areas) and only 29% to improved sanitation (67% in urban and 18% in rural areas). Other environmental health hazards include bacteriological contamination of drinking-water, the most important health-related concern; arsenic in groundwater, which poses a health threat in seven provinces, exposing around 2.24 million people; indoor and urban air pollution, which is a serious health threat due to almost 98% of the population using biomass fuels for cooking or heating; use of banned pesticides and fertilizers, which has the potential to contaminate food and water; and finally, the serious environmental health impacts of solid and hazardous wastes, including health care waste.

Increasingly the Government is recognizing the risks, vulnerability and hazards posed to the health of the Cambodian people by counterfeit and substandard medicines. Besides wasting meagre available resources, they deprive people of effective treatment and cause the development of disease strains that are resistant to antibiotics, antiretroviral drugs and medicines used to treat malaria and tuberculosis. Surveys from different sources indicate that the prevalence of counterfeit and substandard medicines in the country has been declining slowly, from about 13% in 2001 to 8% in 2008.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

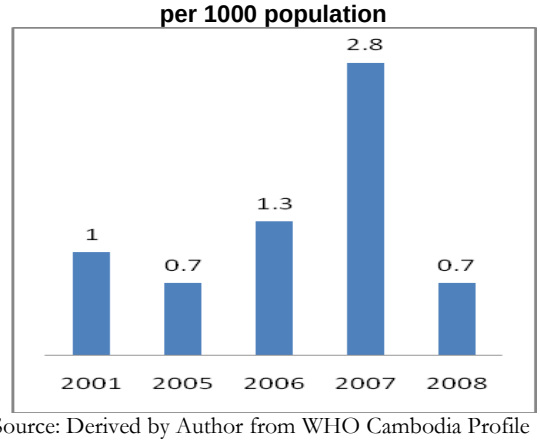
The Cambodian surveillance system includes an indicator-based, passive, zero-reporting weekly surveillance system that reports morbidity and mortality from 12 reportable diseases and syndromes, and a 'rumour-based' system that detects outbreaks and unusual health events in a timely manner. Training in surveillance is ongoing at all levels of the health care system. In addition, there has been a major push to develop cross-cutting policy frameworks for infection control in health care settings and a laboratory policy in 2009. The leading reportable diseases remain unchanged, being acute respiratory infections (ARI) and acute watery and/or bloody diarrhoea.

Malaria continues to affect mostly the poorer communities living in forested areas, where over 2 million people are at risk. The total number of treated malaria cases in public health facilities increased in 2009 to

83 777, following two years of decline. It has been noted that the overall trend since 2000 (129 167 cases) is downward, but during years when the La Niña climate phenomenon is experienced (when rainfall is increased, such as 2006 and 2009), the number of malaria cases spikes. When La Niña ends, the long-term downward trend continues. In addition, new capacity for early diagnois and appropriate treatment by village malaria workers (VMW) and mobile malaria workers (MMW) in the villages at risk has been rapidly scaled up. This has resulted in more cases being diagnosed by VMWs among patients who would otherwise have sought care in the private sector, which has been underreporting. The number of reported malaria deaths in public health facilities has followed a similar long-term downward trend. The management of severe malaria has also improved, and the case-fatality rate (CFR) among severe malaria patients at referral hospitals has continued to decrease from 10.4% in 2005 to 6.4% in 2009. The proportion of confirmed malaria among all cases treated in public health facilities increased from 54% in 2003 to 77% in 2009, indicating better diagnosis. The malaria incidence rate was 616 per 100 000 population in 2009. The country is also right at the centre of the global multidrug-resistant malaria problem because of the presence of artemisinin-tolerant malaria parasites, especially in the Cambodia-Thailand border area. At the moment, an intensified containment effort, with the aim of eliminating the tolerant parasites, is one of the priority objectives for Cambodia; a short-term containment project (2009-2010) is being implemented and there is a medium-term plan (2011-2015) to sustain and scale up containment activities.

Dengue fever (both simple and severe) has become a serious public health problem in the last two decades, the latter being the number one cause of mortality in paediatric wards during the dengue transmission season. The national dengue incidence rate from hospitalized cases decreased from 0.9 per 1000 population in 2003 to 0.7 per 1000 in 2005 and 0.8 per 1000 in 2009. In 2006, however, the rate increased to 1.3 per 1000 due to outbreaks in several provinces, characteristic of the three-to-five-year cyclical pattern of dengue disease. The worst year for dengue on record was 2007, when 39 851 cases, with 407 deaths, were reported (CFR = 1.03%). With a rise in herd immunity against DEN-3, in 2008, the number of reported dengue cases decreased significantly to 9542 cases with 65 deaths (CFR=0.68%). As a result of improved clinical management of severe dengue and increasing awareness among the general population, the case-fatality rate declined steadily from more than 4% in 1995 to 0.3% in 2009, with 11 699 cases and 38 deaths. Further prevention and treatments efforts are therefore still needed to maintain targets, but they appear to be in reach.

Figure 1. Evolution of dengue fever cases per 1000 population



Source: Derived by Author from WHO Cambodia Profile 2008

The national immunization programme continues to improve its coverage. For 2009, the Ministry of Health continued to apply the 2008 census data for the demominator. The official DPT-HepB3 coverage rate increased to 95% and measles coverage to 92%. Preparations have been made to introduce a pentavalent Hib-containing vaccine in 201,0 with support from GAVI, which is expected to reduce mortality due to pneumonia and meningitis. The Government has continued to promote fixed-site immunization at health centres, while still maintaining outreach activities to outlying villages.

Despite a decrease in tuberculosis incidence of 1% per year, Cambodia has the highest incidence in the Western Pacific Region, at 495 cases/100 000 population/year. In 2008, 38 927 new cases were notified under the national TB programme. A treatment success rate of over 90% has been maintained consistently for over a decade. The estimated HIV prevalence among TB patients increased from 11.8% in 2003 to 15.0% in 2008. The identification and treatment of multidrug-resistant (MDR) TB has begun on a small scale, and programmatic management of MDR-TB is expected to begin in 2010.

The HIV prevalence rate among adults aged 15-49 years decreased from 2% in 1998 to 0.9% in 2006 due to strong prevention activities among entertaiment workers since the beginning of the epidemic. Prevention programmes have been expanded to other most-at-risk populations (injecting drug users

[IDU] and men who have sex with men [MSM]). Voluntary and confidential counselling and testing services have been scaled up to 233 sites (484 019 people tested for HIV in 2009), while home-based care has been scaled up to 328 teams, covering 742 health centres. Services for people living with HIV/AIDS are provided through a continuum-of-care package, available in 39 operational districts, with 37 315 patients on antiretroviral treatment in December 2009. Universal access to antiretroviral treatment has been achieved.

A national survey in 2006 found hepatitis B virus among 3.4% of five-year-old children. In 2008, among blood donors there was a 0.6% prevalence rate for HIV, 7.1% for hepatitis B, 1.2% for hepatitis C and 1.5% for syphilis. In the same year, 24.1% of blood collected was donated by voluntary, non-remunerated blood donors, the remaining being family replacement donors (72.5%) and paid donors (3.4%). Some progess was made in 2009 in quality assurance systems for blood safety, but this needs to be sustained, as well as efforts to increase voluntary blood donations.

Although Cambodia suffered several decades of war and civil unrest, as well as more recent rapid socioeconomic development, there is little information on the prevalence of mental illness, although several small studies have shown high levels of depression among adults and behavioural problems among children and adolescents. Mental health services are available at 35 health centres nationwide and at 25 outpatient departments; there is one psychosocial rehabilitation centre in operation and two psychiatric inpatient units have been established. In 2005, 8800 psychiatric cases were assisted and 56 000 consultations provided by the Government's national programme for mental health, which does not include the more substantial services offered by NGOs around the country.

Increasing use of illicit drugs, especially amphetamine-type stimulant use by young people, sex workers, MSM and those in labour-intensive activities, are putting such people at risk of contracting HIV/AIDS, with a prevalence rata of 1.1% among non-injecting drug users in 2006 and 24.4% amonginjectors, as well as risks of other health problems, especially TB and hepatitis C. Currently, there are virtually no services for most drug users, although one Government-approved harm-reduction service is available in Phnom Penh through an NGO. A comprehensive approach to community-based drug-use issues, including prevention, harm reduction, treatment and aftercare, is now under development by the Government and its United Nations and civil society partners to scale up the national response through the health and social sectors.

Cambodia has a significant and growing burden of noncommunicable disease (NCD). Epidemiological surveys conducted in 2004 and published in the *Lancet* (2005) indicated that, in urban areas, 10% of adults had diabetes and 25% high blood pressure, while in a poor rural community, 5% of adults had diabetes and 12% were found to be hypertensive. In total, 255 000 Cambodians are estimated to have diabetes and, if no action is taken, that number will increase. A more comprehensive NCD STEPS survey is being conducted in 2010.

A nationwide survey of adult tobacco use in 2005 found that 48% of men and 3.6% of women smoked cigarettes, while 17% of women and 1% of men chewed tobacco. Another nationwide survey of adult tobacco is being conducted in 2010. Alcohol consumption is also on the increase, and the number of violent incidents, traffic accidents and domestic violence incidents linked to alcohol is alarming. Deaths and injuries due to road traffic accidents in Cambodia are among the highest in the Region. In 2009, there were 11 040 road crashes resulting in 1717 fatalities, 7153 severe injuries and 12 357 minor injuries.

Due to rapid economic growth and changes in lifestyle, the burden of environment-related diseases is an increasing concern, accounting for 26% of the total burden of disease, according to recent WHO estimates. In 2009, WHO reported that the environmental burden of disease due to unsafe drinking-water and poor sanitation and hygiene was 10 900 deaths per year and 26 DALYs/1000 population/year. Compared with other countries in the Region, Cambodia has the second highest environmental disease burden. While environmental risk factors are generally associated with noncommunicable diseases and injuries, in Cambodia they are also strongly associated with communicable diseases.

2.2 Outbreaks of communicable diseases

In 2009, there were four important communicable disease outbreaks that can be highlighted. There was a nationwide dengue outbreak between March and June 2009. A combination of mass media interventions, distribution of larvicides and changes in weather pattern meant that the outbreak did not perpetuate beyond June 2009, resulting in a total of 11 699 reported cases of dengue, with 38 deaths. Pandemic influenza A (H1N1) was first identified in a traveller in June 2009. The pattern of the infection over the months changed from a primarily imported disease to an establihed widespread disease in the country. By the end of 2009, there were 546 confirmed cases, six of whom had died. As in other countries in the Region, the pandemic strain of influenza A (H1N1) virus is becoming the most predominant. In November 2009, confirmed cholera cases were reported in Phnom Penh. By end of 2009 there were 36 confirmed cases with a localised outbreak in a prison. None of the cases died. This outbreak is against a background of a high acute watery diarrhoea outbreak in many provinces that has continued since Typhoon Ketsana in September 2009. By comparison, in 2008, there was no confirmed cases of cholera. Finally, in December 2009, another case of highly pathogenic H5N1 avian influenza was identified in Kampong Cham province. This was Cambodia's ninth confirmed human case since 2005 and the second case to survive. Like the previous case in 2008, there was a close relationship between the case and contact with sick birds confirmed as H5N1-positive. Laboratory investigations showed that no contacts were infected with H5N1.

2.3 Leading causes of mortality and morbidity

Infectious diseases still constitute the main causes of mortality and morbidity, but Cambodia is facing an epidemiological transition. Currently, acute respiratory infections are the leading cause of both mortality and morbidity, with gastroenteric infections contributing substantially to the morbidity burden and dengue outbreaks exacerbating the situation. In addition, the country is still classified as one of the 22 high-burden countries for tuberculosis worldwide. Notably, HIV prevalence has decreased substantially and a high proportion of people living with HIV/AIDS are receiving antiretroviral therapy.

Preventing and treating noncommunicable diseases and injuries will be the challenge in the future. The number of road accidents is rising very rapidly as a leading cause of mortality due to improved infrastructure and rapid socioeconomic development. Surveys have indicated high levels of diabetes (5%-10%) and hypertension (12%-25%) in rural and urban areas, both major risk factors for ischemic heart disease and stroke. As half the male population smokes and alcohol consumption is rising, the composition of the table for leading causes of morbidity and mortality is expected to change in the near future.

2.4 Maternal, child and infant diseases

The maternal mortality ratio (MMR) is high, at 472 per 100 000 live births, and remained unchanged between the last two Cambodia Demographic and Health Surveys (CDHS) in 2000 and 2005. The 2008 Census further confirmed this high rate with its finding of an MMR of 461. Postpartum haemorrhage is the leading cause of maternal death, followed by eclampsia, infections and complications from abortions. Maternal death contributes 17% to overall mortality in women aged 15-49 years. Weaknesses in vital registration statistics and the routine health information system make it difficult to monitor changes in MMR between surveys, but there are indications of improvement. Renewed attention to maternal health and the introduction, in 2008, of performance incentives for facility-based deliveries have resulted in a sharp increase in the proportion of births assisted by trained health professionals. In 2009, 44% of the expected number of births took place in a public health facility, compared with 39% in 2008 and 26% in 2007. Trained health staff assisted 63% of expected births in 2009 compared with 58% in 2008 and 44% in 2005, a figure that includes private service providers. There are multiple reasons for the high MMR, of which inadequate access to emergency obstetric and newborn care (EmONC), the low level of knowledge and competency among health professionals, the low facility-delivery rate, the low level of modern contraceptive use (28% in 2009) and the high rate of unsafe abortions are the most important. Barriers to good quality delivery services include official and unofficial fees, limited physical access for rural populations and the sometimes unprofessional conduct of staff. Limitations in access to EmONC, including emergency blood transfusions and Cesearean sections, are of particlular concern, the latter being less than half of the minimum 5% recommended by WHO. A national EmONC assessment,

followed by development of an EmONC Improvement Plan were undertaken in 2009, with plans to begin implementation in 2010. The Safe Motherhood protocols for health centres and referral hospitals are under revision and will be based on the latest best practice and evidence. There is a chronic shortage of midwives, which has led to raising of the intake to the five public midwife training institutions. A new direct-entry three-year midwifery course began in 2008 and will see around 400 new midwives graduating in 2011. Of note, since late 2009, there has been at least one midwife in every health centre, although about 60% of these are primary midwives with only 12 months of training. This is a major achievement considering that, in 2008, there were still 79 health centres without a midwife and, in 2005, there were 146 health centres without a midwife. A High-level Midwifery Taskforce has been charged with developing a plan for a comprehensive reform of midwifery services, and the Reproductive Maternal, Newborn and Child Health (RMNCH) Taskforce has been charged with developing a fast-track initiative for improving reproductive, maternal, newborn and child health, focusing particularly on interventions with the potential to rapidly decrease maternal and neonatal deaths.

Infant and under-five mortality rates have both declined significantly over the past 25 years, with the most dramatic declines happening since the late 1990s; comparison between the two most recent five-year periods in the CDHS 2005 shows infant and under-five mortality declining by 39% and 35%, respectively, to 66 and 83 deaths per 1000 live births, bringing Cambodia on target to meet its MDG 4 in 2015. Socioeconomic characteristics, such as living in an urban environment, the mother's educational level and the mother's household wealth, influence infant and child survival substantially.

The prevalence of child undernutrition, which has been retrospectively recalculated based on the new WHO growth standards, decreased between 2000 and 2005 from 17% to 8% for weight-for-height, from 39% to 28% for weight-for-age and from 49% to 43% for height-for-age (stunting). However, the Cambodia Anthropometric Survey (CAS) 2008 undertaken to assess the impact of increased food prices and the current economic crisis reveals that the improvements seen in the earlier part of the decade have stagnated and possibly worsened, with chronic child malnutrition one of the highest in the Region at 40% and rates of underweight of 29% and wasting of 8.9% in children under five years of age. The rate of wasting has reached 10% or greater in nine provinces and some urban poor areas. Only four out of ten newborn babies are weighed at birth and the proportion of low-birth-weight babies is 8%. Respiratory infection remains the leading cause of death among children under five years of age (30%), followed by diarrhoea (27%), dengue haemorrhagic fever (11%), severe acute malnutrition and measles. Coverage of integrated management of childhood illnesses (IMCI) services is steadily increasing and reached 78% of health centres in 2009. There are ongoing efforts to improve the quality of child health services. The proportion of deaths in the neonatal period is increasing. One quarter of children who die in the neonatal period have a history of poor feeding after initially feeding well, indicating sepsis, while 7% have symptoms suggestive of neonatal tetanus.

Infant and young child feeding practices have improved. The rate of exclusive breast-feeding for the first six months of life rose significantly from 11% in 2000 to 60% in CDHS 2005 and 65.9% in the 2008 CAS. An important step towards full adherence to the International Code of Marketing of Breastmilk Substitutes was taken in 2005 when the Government issued a Sub-Decree on the implementation of the Code. The anaemia rate among woman of reproductive age (15-49 years) decreased from 58% in 2000 to 47% in 2005, and from 66% to 57% among pregnant women. Anaemia in children aged 6-59 months remained at 62%. The first National Nutrition Strategy (NNS 2009-2015), with the overall goal of reducing maternal and child morbidity and mortality by improving nutritional status, was approved by the Ministry of Health in 2009.

There are indications of increasing disparities in both health outcomes and service utilization between the rich and the poor, and between urban and rural populations. The Government is committed to improving maternal and child health and to achieving MDGs 4 and 5, but the available government and external resources are insufficient to meet the challenges. The Ministry of Health has taken important steps to reduce child mortality at the policy and planning level, but it will take substantially larger investments to achieve universal coverage of the 12 Child Survival Score Card interventions of the Cambodia Child Survival Strategy by 2015.

2.5 Burden of disease

A burden-of-disease study is planned as part of implemention of the new Health Sector Plan 2008-2015. The main risks factors affecting health are still posed by exposure to communicable diseases, facilitated by environmental circumstances (especially due to lack of safe drinking-water and poor sanitation and hygiene). A high prevalence of diabetes, hypertension and tobacco use has been recognized and, in combination with changing lifestyles and increased traffic accidents, this points to an epidemiological transition. Annually, around 1500 women die due to pregnancy-related complications, and almost 30 000 children die before the age of five.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The first national Health Sector Strategic Plan, approved in 2002, was reviewed in 2007 and resulted in the Health Strategic Plan 2008-2015 (HSP2). It presents the vision as: "To enhance sustainable development of the health sector for better health and well-being of all Cambodia, especially of the poor, women and children, thereby contributing to poverty alleviation and socio-economic development." The mission of the Ministry of Health is: "To provide stewardship for the entire health sector and to ensure a supportive environment for increased demand and equitable access to quality health services in order that all the peoples of Cambodia are able to achieve the highest level of health and well-being", based on values of equity and the right to health.

The building blocks of HSP2 are three main health programme areas to:

- reduce maternal, newborn and child morbidity and mortality, with increased reproductive health;
- reduce morbidity and mortality due to HIV/AIDS, malaria, TB and other communicable diseases; and
- reduce the burden of noncommunicable diseases and other health problems,

which implement a set of the following five cross-cutting health strategies:

- health service delivery;
- health care financing;
- human resource for health;
- health information system; and
- health system governance.

The HSP2 implementation plan identifies an initial three-year consolidation phase to decide key policies in relation to health financing and health system governance requirements under decentralization and deconcentration, followed by a scaling-up phase. A monitoring and evaluation process has been established, including indicators to measure performance, refine existing health policies and determine the effectiveness of interventions. Annual targets are monitored at the National Health Congress and Joint Annual Performance Review and directives for the next Annual Operational Plan issued. Three-year Rolling Plans provide medium-term guidance.

3.2 Organization of health services and delivery systems

The Ministry of Health initiated a health sector reform process in the early 1990s and, in 1996, approved the Health Coverage Plan, formulated with WHO support, which divides the country into 73 operational districts within the 24 provinces. Each operational district covers a population of 100 000-200 000 and comprises 10-20 health centres, each covering populations of about 10 000, and a referral hospital. Health centres are expected to deliver a 'minimum package of activities' that includes basic curative, preventive and promotional services provided both in the facility and through outreach. Community participation is obtained through health centre management committees. Referral hospitals provide a 'complementary package of activities'. National institutes, national hospitals, national programmes and training institutions provide the third level of services. As of 2009, there were eight national hospitals, 77 operational districts, 79 referral hospitals, 984 functional health centres and 111 health posts. The Ministry of Health

comprises three directorates at central level—health services, finance and administration, and inspection—with the Minister of Health as chief executive. The structure, roles and functions are being reviewed as part of an institutional strengthening process.

The private health sector has been expanding rapidly in the past decade, absorbing a substantial part of out-of-pocket expenditure. Many public health civil servants have initiated private activities to complement their official government salaries to earn a living wage. In addition, not-for-profit NGO providers supply a significant volume of hospital and diagnostic services. Enforcement of private practice regulation needs to become a more prominent aspect of the Ministry of Health's work.

3.3 Health policy, planning and regulatory framework

In order to strengthen its stewardship over the health sector, the Ministry of Health has been developing tools to apply sectoral resources where they are most needed, through direct allocation as well as through advocacy, influence and regulation. The Ministry recently developed a comprehensive system of sectoral operational planning to support implementation of the Health Strategic Plan. Strategic planning, aligned with the National Strategic Development Plan, is operationalized through Annual Operational Plans, forming the basis for three-year Rolling Plans that link mid-term operational and investment planning. This is consolidated planning, encompassing the entire public health sector. It is bottom-up, with each facility or administrative unit preparing annual plans based on sectorwide priorities, but accounting for its own specific goals, capacities and challenges. The year 2009 marked the fifth year of the Annual Operational Plans, which will become an increasingly useful tool for resource allocation as the links between planning and budgeting processes are strengthened in coming years. The Ministry of Health has introduced the Joint Annual Plan Appraisal for review of resource allocation with health partners to facilitate this.

Implementation of strategic and operational plans is monitored through the Ministry of Health's health information systems, which inform the Joint Annual Performance Review (JAPR) and the National Health Congress. This consultative event reviews performance toward strategic goals and identifies priorities for action during the coming year. At the 2009 Joint Annual Performance Review, key bottlenecks to improvement of sector performance were identified, and a set of priority interventions was recommended for which resource allocations within individual operational plans should increase. Health facility development is guided by the Health Coverage Plan, which will become an important strategic management tool for the health sector once linkages with human resource planning and national capital investment planning are strengthened.

Regulation of the rapidly growing private pharmacy and medical services sector is a priority for the Ministry of Health. However the Ministry's enforcement ability is constrained by weaknesses in the Police and Judiciary. Nevertheless, registration, as well as development and approval of codes of practice, are proceeding. As most private practitioners are also civil servants, these steps are expected to have some impact.

3.4 Health care financing

The government budget for health has been increasing steadily over recent years, reaching US$ 9.4 per capita for the recurrent budget of the Ministry of Health in 2009. The challenge, however, lies, not only in adequate finances, but also in allocation and management. Although overall disbursement at the end of budget execution is acceptable (around 95%), provinces and districts face irregular and untimely disbursement. Cambodia is also still highly dependant on donor funding (US$ 9.5 per capita in 2009) and the challenge is to coordinate action to cover national priorities.

Despite the increasing investment in health from government and external sources, the largest portion of health expenditure comes from out-of-pocket sources and goes towards unregulated private health care. The World Bank Poverty Assessment 2006 estimates out-of-pocket expenditure to be US$ 15 per capita per year (secondary analysis of Cambodian Socio-Economic Survey CSES 2004). CDHS 2005 reports even higher out-of-pocket spending, almost US$ 25 per capita per year, with potential underreporting in the CSES and overreporting in the CDHS. Analysis of CSES 2007 seems to indicate an increase in out-

of-pocket spending for all quintiles except the richest, which points again towards increased inequities despite overall positive progress. The underlying reasons for these findings still need further investigation.

The Ministry's Health Financing Charter was introduced in 1996 and allows establishment of user-fee schemes in health facilities. Of this income, 60% is redistributed as incentives for staff, while 39% is used for operating costs and quality improvement (1% is paid in tax to the Treasury). A positive impact of user fees on access has been to reduce under-the-table payments, but the costs of health care remain a substantial obstacle for a large portion of the population. In this context, Cambodia has, in recent years, developed several alternative financing mechanisms for health, such as contracting and community-based health insurance. At the same time, health equity funds have been scaled up to cover 47 districts (out of 77) and six national hospitals. Lessons from these experiments were the basis for the formulation of Cambodia's strategic Framework for Health Financing. It proposes a set of interventions to achieve the following five objectives:

(1) Increase the government budget and improve the efficiency of government resource allocations for health.
(2) Align donor funding with Ministry of Health strategies, plans and priorities and strengthen the coordination of donor funding.
(3) Remove financial barriers at the point of care and develop social health protection mechanisms.
(4) Ensure efficient use of all health resources at service delivery level.
(5) Improve the production and use of evidence and information in health financing policy development.

3.5 Human resources for health

The strategic vision for human resources for health in the Health Workforce Development Plan (HWDP) 2008-2015 outlines the key issues for health staffing; 2010 will see a mid-term review of the HWDP and 2011 will see monitoring of progress against the Midwifery Review 2006, which highlights the need for competent midwives and quality training.

While the war years decimated the educated population, Cambodia has made strides in replacing its workforce, particularly doctors, although production of secondary midwives has been slow. The total number of health workers in the Cambodian public sector remains low, with only 1.35 secondary midwives and 2.53 doctors per 10 000 population, and these are largely deployed in urban centres. Staff remuneration is one of the key challenges. With over 17 000 staff members, the Ministry of Health salary budget for 2009 allowed for an average monthly salary of US$ 65. Low salaries are a major contributing factor to serious maldistribution of staff, as most graduates are from urban areas and prefer working in cities. Recruitment and training of new staff from remote areas is therefore a Ministry of Health priority and has led to contract commitments being signed with all student primary nurse midwives.

All civil servants, including health staff, need to source additional income, and many clinical health staff have opportunities to make more than double their civil service salaries through user fees and dual practice. Dual practice is a burden on the poor and is often unsupervised, leading to poor quality. The civil service package is designed and managed by the Council of Ministers and the Ministry of Health is tasked with adapting it for health, but within very limited parameters. Recent health system developments offer some opportunities for health-specific compensation, to cover the opportunity costs of dual practice. The new internal contracting mechanism, Special Operating Agencies (SOAs), can allow some local flexibility in staff compensation. The 60% allocation for staff from user fees is becoming an increasingly significant part of public sector income. It is hoped that the design of a new government modality, following the cancellation of previous salary-incentive performance-related schemes, will provide a framework to manage the plethora of salary supplements offered by donors as a partial response to low salaries.

3.6 Partnerships

Cambodia's health sector is a crowded field where the Ministry of Health is joined by some 20 bilateral and multilateral donors, development agencies and global health partnerships, as well as more than 100

international and national NGOs. The Ministry generally welcomes the contribution of health partners and the Health Strategic Plan explicitly promotes public and private partnerships for basic and specialist care. However, sectorwide management, introduced and led by the Ministry of Health as the primary mechanism for sector dialogue, has been reviewed in order to strengthen coordination and implementation of the new Strategic Plan. With the multidonor Health Sector Support Programme being the only significant example of a coordinated direct partnership with the Government, coordination of partners and their activities has taken on an increasingly important role in the sector. In its efforts to achieve more effective stewardship, including through the creation of a Department of International Cooperation, the Ministry is finding it difficult to manage aid as it is delivered (mostly project-based). More broadly, the Government of Cambodia is taking greater ownership of its development processes, assisted by a global agenda for greater harmonization and alignment under the Paris Declaration, to which Cambodia contributes as a pilot country for monitoring of progress. These efforts are also embedded in the National Strategic Development Plan 2006-2010 and were reflected in the move to a more Government-led Cambodia Development Cooperation Forum in mid-2007. While the general contribution of partners to improving health status is unquestioned, their support to Cambodia's health system could be increased considerably if donors were to adapt to more harmonized and efficient modes of cooperation that take into account existing systems at country level. To enable this in-country process, the Ministry of Health signed the International Health Partnership Compact in 2007, as one of the seven first-wave countries globally.

3.7 Challenges to health system strengthening

The formulation process of the Health Strategic Plan 2008-2015 identified a number of key challenges for the health sector that remain valid or have become more pressing:

1. Increasing the utilization of cost-effective health services: The overall utilization of public health facilities is around 0.5 visits per person per year. Except in a few areas where additional resources and semiautonomous management have been provided, utilization rates are not increasing substantially and, to date, the underresourced, publicly funded health services have had little to offer the rural poor. Most people are choosing to use the private sector for treatment, particularly private pharmacies.
2. Improving the quality of care in both the public and private health sectors: The low utilization of health services may be affected by unfavourable staff attitudes and practices in the public sector, an irregular and inadequate flow of funds to service delivery, limited management and leadership capacity, uncertainty about user charges, and a lack of knowledge about available services. The Ministry of Health published the National Policy for Quality in Health in 2005 and the Operational Guidelines for Clients' Rights and Providers' Rights-Duties in 2007 to address these issues. A number of initiatives have been introduced to promote a 'client-centred' approach to service delivery in health staff training programmes, and the newly established Medical Council is introducing a code of medical ethics in an attempt to improve professionalism among medical practitioners.
3. Improving the distribution of staff, particularly midwives, in the health sector: The persistence of a high maternal mortality ratio in the CDHS 2005 confirms the pertinence of this challenge. Currently, many referral hospitals and health centres, particularly in rural areas, have insufficient numbers of midwives to provide safe coverage for emergency obstetric care. A continuing functional analysis process, initiated in 2002, has focused attention on the need to develop policy to address the maldistribution of staff, and there has been an increase in the number of midwifery trainees in recent years. However, a comprehensive midwifery review in 2006 indicated serious gaps in the skills of the current midwife workforce.
4. Improving reproductive and adolescent health services: Cambodia has a recently declining fertility rate and a youthful population, with half under 21 years of age. The main focus of reproductive health services is fertility control and antenatal care. Establishing a continuum of quality care for adolescent and maternal and child health, including a functional referral system, will become increasingly important to continue to improve the indicators, which until now have been substantially influenced by an improving socioeconomic situation.

The Government has recently introduced a policy to improve public service delivery through a purchaser-provider split approach. The Ministry of Health/provincial health departments can now contract operational districts or health facilities to provide services, a strategy that is combined with improved staff remuneration to create an environment to address the listed key challenges.

A new challenge has gradually become more apparent: prevention and treatment of noncommunicable diseases and injuries. Surveys have revealed a high prevalence of diabetes (5%-10%) and hypertension among both rural and urban populations. In combination with the fact that about half of the men in Cambodia smoke and the rapid increase in life expectancy, an epidemiological transition is imminent. Rapid socioeconomic development is constantly changing the social determinants of health, and improved road infrastructure has resulted in a steeply rising number of deaths and injuries due to traffic accidents. Health staff will need to be trained and provided with the means to promote healthy lifestyles and treat chronic diseases or disabilities. The burden of environment-based diseases is also an increasing concern for the country. These are mainly related to unimproved drinking-water and sanitation, indoor and outdoor air pollution and occupational health risks (occupational carcinogens and particulates). This requires multisectoral collaboration and cooperation among all relevant agencies, including health, environment and agriculture, among others. A health impact assessment is being formulated to address these health burdens.

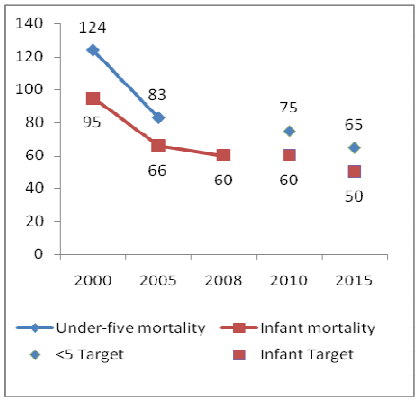
A multipronged challenge will be to improve effectiveness and efficiency in allocation and disbursement of the scarce financial and human resources. As an Organisation for Economic Co-operation and Development (OECD) pilot country for Aid Effectiveness, the Government is assuming a growing leadership role and is taking forward an action plan to facilitate harmonization and alignment processes. This includes improved governance procedures, public financial management reforms and decentralization and deconcentration policies, requiring the involvement of a multitude of government institutions. The international funding institutions need to determine how to move from the current situation of coordinated, but fragmented support for the health sector, to more policy coherence and balanced funding of country priorities. Engaging global health programmes meaningfully and managing the institutional burden will be a particularly demanding undertaking for the Ministry of Health, and improved management information systems are essential to guide analysis of its efficiency and effectiveness.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goal 4: Reduce child mortality

Child mortality is the MDG where most progress has been made and many targets have been reached or exceeded, prompting the Ministry of Health to revise some targets in the Health Strategic Plan (HSP). Infant mortality decreased from 95 to 60 deaths per 1000 live births from 2000 to 2008, (already reaching its 2010 MDG target) and under-five mortality decreased from 124 to 83 deaths per 1000 live births from 2000 to 2005 (with a 2010 MDG target of 75 and a 2015 target of 65). This progress has been attributed to the strong performance of the national immunization programme, successful exclusive breast-feeding promotion, improved access to basic health services, socioeconomic development, an overall reduction in poverty levels and improved access to education and better roads. There are provincial disparities in mortality rates and coverage of most key interventions (apart from immunization, which is uniformly high). Similarly, there are wealth disparities in health outcomes, although these show a clear top inequity pattern indicating that only the wealthiest quintile is any healthier than the other four quintiles. This means that key interventions still need to be directed to all, rather than only the poorest being targeted at this stage.

Figure 2: Evolution of Infant and Under 5 Mortality Rates



Goal 5: Improve maternal health

Of great concern is the persistent high level of maternal mortality, which currently stands at 461 deaths per 100 000 live births (2008 Census) and is among the highest in the Region. The high maternal mortality ratio is attributed to a number of factors including: the shortage, capacity, deployment and retention of midwives; high rates of anaemia in pregnant women; unavailability or inaccessibility of emergency obstetric and newborn care (EmONC); inadequate care-seeking during pregnancy and childbirth; financial barriers to EmONC; a low level of use of modern contraceptives; and limited access to safe abortion services. There has been little change in the MMR since 1997 (noting that measurement error is high for this indicator) and, although the situation is likely to show improvement in the next CDHS, it is unlikely that the new Cambodian MDG target of 250 by 2015 can be reached.

The Ministry of Health has made concerted efforts to increase antenatal care coverage and delivery by trained health personnel, as seen in Figures 3 and 4.

Figure 3. Antenatal care coverage, 2007-2009.

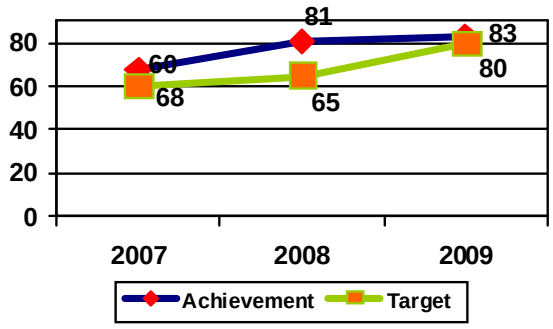
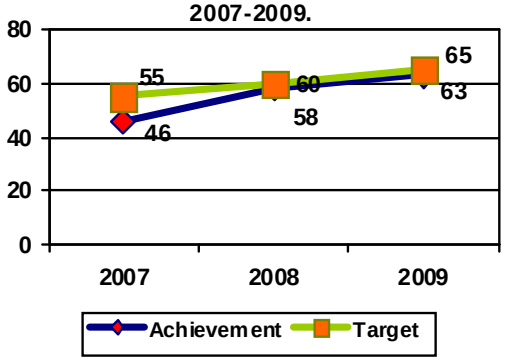


Figure 4. Proportion of births attended by skilled health personnel, 2007-2009.



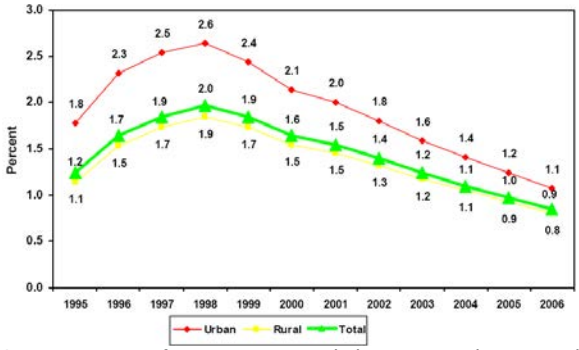
Goal 6: Combat HIV/AIDS, malaria and other diseases

As shown in Figure 5, HIV prevalence decreased from 1.2% in 2003 to 0.9% in 2006 (estimated at 0.7% for 2009), a rate far better than the original 2015 target of 2.3%, which has been modified to <0.9%. This spectacular decrease can be attributed to 100% condom campaigns in brothels. The number of people living with HIV/AIDS (PLWHA) in 2009 is estimated at 57 900 (30 300 women and 27 600 men), and virtually all of those living with advanced HIV infection are receiving antiretroviral combination therapy.

Projections show that HIV prevalence is expected to decline further and to stabilise at 0.6% after 2010, with a total PLWHA of 51 200, as illustrated in Figure 6, although there remain concerns about the possibility of a resurgence in the epidemic among most-at-risk populations, such as sex and entertainment workers, IDU and MSM.

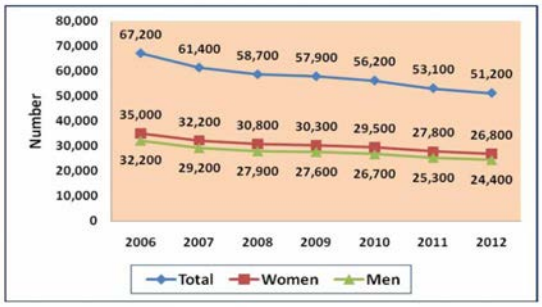
The proportion of new HIV infections through spousal and mother-to-child transmission is increasing: the highest proportions of new infections are among married women (43%) and through mother-to-child transmission (30%). Despite significant improvements, coverage of programmes to prevent mother-to-child transmission remains low and more work is needed

Figure 5. HIV prevalence among 15-49 years by type of residence, 1995-2006.



Source: *Report of a consensus workshop: HIV Estimates and Projections for Cambodia 2006 – 2012.* NCHADS, 2007.

Figure 6. Projections on number of people living with HIV



Source: *Report of a consensus workshop: HIV Estimates and Projections for Cambodia 2006 – 2012.* NCHADS, 2007.

to link sexually transmitted infections, reproductive health, voluntary confidential counselling and testing and other HIV services so that women can have access to a comprehensive package of health services.

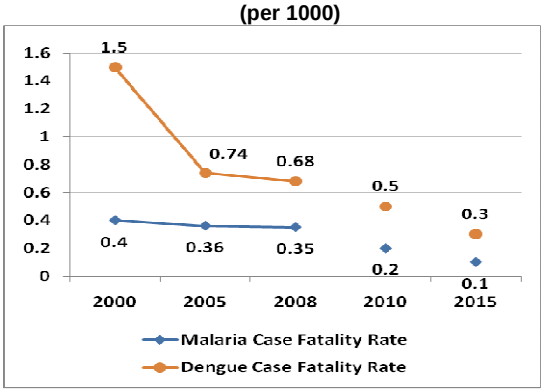
The major challenge now is to maintain and increase the gains made in HIV education and prevention (the proportion of young people aged 15-24 years reporting condom use during sexual intercourse with a non-regular sexual partner is still below target) and to address the risks of a second-wave epidemic due to behaviours among populations at particular risk of HIV infection and other communicable diseases (e.g., IDU, MSM, entertainment workers in brothel and non-brothel settings and their clients and sexual partners, populations in prisons and drug rehabilitation centres). Promiscuous male sexual behaviour, which indicates values placed on women, both formal and informal sex workers, and their wives, is a manifestation of increasingly dysfunctional gender values in the country. This is related to low scores in MDG3 for indicators related to violence against women and must be addressed in the context of general gender equality issues.

Statistics indicate that the number of malaria cases treated in the public health sector per 1000 population declined from 11.4 in 2000 to about 6.2 in 2009 (there were 83 777 cases in public facilities in 2009). There were significant increases in 2003 and 2006, followed by greater decreases the following year.

While the number of cases has reached target, the malaria CFR reported by the public health sector remains far from the 2015 target of 0.1%, having only fallen from 0.4% in 2000 to 0.33% in 2009.

The malaria situation is currently exacerbated by the presence of artemisinin-tolerant malaria parasites in the Cambodia-Thailand border area, which puts Cambodia at the centre of the global multidrug-resistant malaria problem. One of the current priority objectives for Cambodia is to eliminate the tolerant parasites by implementing a short-term containment project (2009-2010) and a medium-term plan (2011-2015) to sustain and scale up the containment activities.

Figure 7. Malaria case (%) and dengue fatality rates (per 1000)



Source: CMDG summary of progess 2009 – January 10, 2010, page 18

Significant progress has been made since 1997 in reducing tuberculosis prevalence from 1100 per 100 000 population to 680 per 100 000 population in 2008,[1] but this must still be reduced by almost half to reach 2015 targets. Little progress has been made in the tuberculosis death rate per 100 000 population, which, at 79, [2] remains more than double the 2015 MDG target of 32.

The proportion of TB cases detected under DOTS increased from 51 in 2002 to 57 in 2008, almost reaching the 2015 target of 70, and the treatment success rate of about 90% has already exceeded targets.

Goal 8: Develop a global partnership for development

Data on the proportion of the population with access to affordable essential drugs on a sustainable basis are currently not available. Poor availability of medicines, particularly in the public sector, continues to be a key barrier to access to essential medicines in the country. Although there are several projects working towards improving the quality and availability of medicines, Cambodia, like many other developing countries in the world, is far from achieving universal access to quality and affordable medicines for its people. A survey of medicine prices, availability and affordability, including documentation of price components, is needed to further inform and guide policy and programmatic options and actions for improving access to essential medicines towards achieving MDG 8 Target 8E at country level. Such a survey was last conducted in 2001.

[1] WHO. Global TB database. Available online at http://www.who.int/tb/country/global_tb_database/en/index.html

[2] Ibid.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Cambodia Demographic and Health Survey 2005*
Operator	:	National Institute of Public Health, Ministry of Health and National Institute of Statistics, Ministry of Planning
Specification	:	Contains information on demographics, family planning, maternal mortality, infant and child mortality, domestic violence, women's status and health-related information such as breast-feeding, antenatal care, child immunization, childhood diseases and HIV/AIDS
Web address	:	http://www.measuredhs.com
Title 2	:	*National Health Statistics 2007*
Operator	:	Health Information Bureau, Department of Planning and Health Information, Ministry of Health
Specification	:	Provides health data, tables and graphs based on statistics generated from the nationwide Health Information System (HIS)
Web address	:	http://www.nis.gov.kh
Title 3	:	*Cambodia Census Survey 2008*
Operator	:	National Institute of Statistics, Ministry of Planning
Features	:	Includes information on population characteristics, household facilities and amenities.
Title 4	:	*Cambodia-Halving Poverty by 2015-Poverty Assessment 2006*
Operator	:	The World Bank
Specification	:	Lays out the key facts on the nature of poverty, poverty trends, education, health and wealth based on the Cambodia Socio-Economic Survey (CSES).
Web address	:	http://www.worldbank.org

6. ADDRESSES

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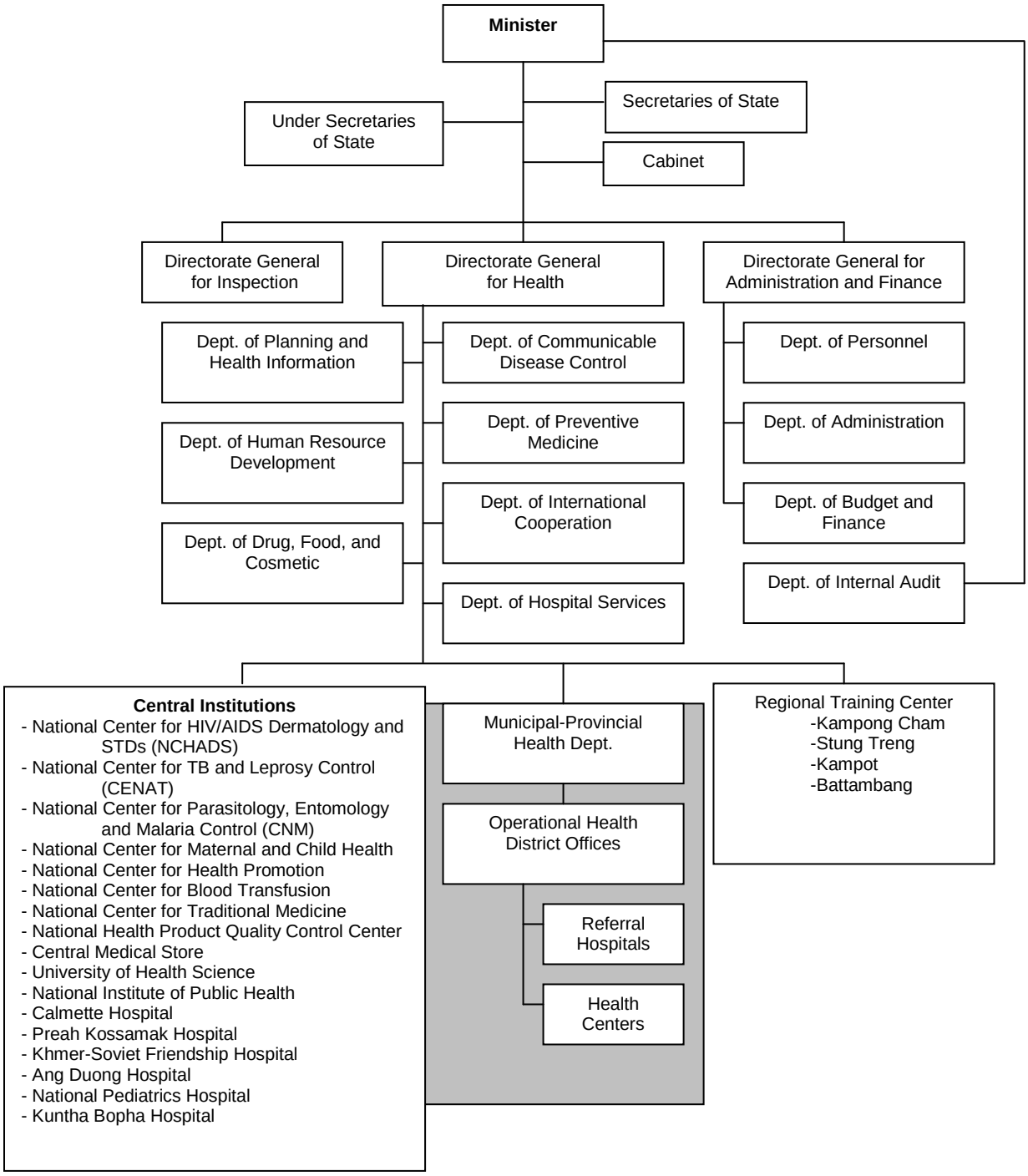
Fax	:	(855-23) 216 211
Office Hours	:	0730 – 1200 and 1400 – 1730

7. ORGANIZATIONAL CHART: Ministry of Health



CAMBODIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	**Total**		**Male**		**Female**			
1	**Area (1 000 km2)**	181.04							1
2	**Estimated population ('000s)**	13 395.68 [b]		6516.05 [b]		6879.62 [b]		2008	2
3	**Annual population growth rate (%)**	1.54		...		...		2008	2
4	**Percentage of population**								
	- 0–4 years	10.25		10.79		9.73		2008	2
	- 5–14 years	23.45		24.74		22.23		2008	2
	- 65 years and above	4.30		3.54		4.96		2008	2
5	**Urban population (%)**	19.80		...		...		2009 est	3
6	**Crude birth rate (per 1000 population)**	25.00		...		...		2004	4
7	**Crude death rate (per 1000 population)**	6.70		...		...		2004	4
8	**Rate of natural increase of population (% per annum)**	1.83 [a]		...		...		2004	4
9	**Life expectancy (years)**								
	- at birth	...		60.50 [b]		64.30 [b]		2008	2
	- Healthy Life Expectancy (HALE) at age 60	...		9.70		11.00		2002	5
10	**Total fertility rate (women aged 15–49 years)**	3.10						2008	2
	Socioeconomic indicators								
11	**Adult literacy rate (%)**	77.60		85.10		70.90		2008	2
12	**Per capita GDP at current market prices (US$)**	640.00 [b]						2008	6
13	**Rate of growth of per capita GDP (%)**	6.70 [b]						2008	6
14	**Human development index**	0.59						2007	7
	Environmental indicators	**Total**		**Urban**		**Rural**			
15	**Health care waste generation (metric tons per year)**	690-1602		...		...		2008	8
	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
16	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	484	...	...	9	...	...	2008	9
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	38 [c]	...	...	0	0	0	2009	10
	Dengue/DHF	11 699	...	...	38	....	....	2009	11
	Encephalitis	2283	...	...	90	...	...	2009	10
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	351	246	105	...	...	...	2009	12
	Malaria	83 777	...	...	279	...	...	2009	12
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	...	...	...	...	...	...		
17	**Acute respiratory infections**	693 737	...	...	195	...	...	2009	10
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	244 075	...	...	38	...	...	2009	10
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	38 927	...	...	...	...	...	2008	12
	- New pulmonary tuberculosis (smear-positive)	19 860	...	...	...	...	...	2008	12
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	169	...	...	2	...	...	2008	9
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			306			5	2008	9
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	247	...	...	17	...	...	2008	9
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	212	...	...	20	...	...	2008	9
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	1333	...	...	43	...	...	2008	9
23	**Mental disorders**	2630	...	...	20	...	...	2008	9
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	11 040	...	...	1717	...	...	2009	13
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infections	66 387	...	...	495.84 [a]	...	...	2008	9
	2. Tuberculosis	30 799	...	...	230.03 [a]	...	...	2008	9
	3. Traffic accident	22 890	...	...	170.96 [a]	...	...	2008	9
	4. Diarrhoea	22 688	...	...	169.45 [a]	...	...	2008	9
	5. Typhod fever	13 241	...	...	98.90 [a]	...	...	2008	9
	6. Dengue	12 035	...	...	89.89 [a]	...	...	2008	9
	7. Genecological Pathology	10 195	...	...	76.15 [a]	...	...	2008	9
	8. High blood pressure	6920	...	...	51.68 [a]	...	...	2008	9
	9. AIDS	6239	...	...	46.60 [a]	...	...	2008	9
	10. Cataract	6032	...	...	45.05 [a]	...	...	2008	9

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Acute respiratory infections	1220	...	...	9.11 [a]	...	...	2008	9
	2. AIDS	449	...	...	3.35 [a]	...	...	2008	9
	3. Traffic accident	446	...	...	3.33 [a]	...	...	2008	9
	4. High blood pressure	417	...	...	3.11 [a]	...	...	2008	9
	5. Tuberculosis	285	...	...	2.13 [a]	...	...	2008	9
	6. Cardiopath	229	...	...	1.71 [a]	...	...	2008	9
	7. Meningitis	218	...	...	1.63 [a]	...	...	2008	9
	8. Dengue	110	...	...	0.84 [a]	...	...	2008	9
	9. Other tetanus	37	...	...	0.28 [a]	...	...	2008	9
	10. Liver cancer	17	...	...	0.13 [a]	...	...	2008	9
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					28.00		2009	21
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					62.20		2009	12
29	**Percentage of pregnant women with anaemia**					57.10		2005	14
30	**Neonatal mortality rate (per 1000 live births)**	28.00		...		...		2005	14
31	**Percentage of newborn infants weighing less than 2500 g at birth**	8.00 [f]		...		...		2005	14
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2009	12
	- DTP3	95.00		...		...		2009	21
	- Hepatitis B III	...		...		...			
	- MCV2	...		...		...			
	- POL3	95.00		...		...		2009	12
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			2960 [e]			...	2008	9
	- Eclampsia			549 [b]			...	2008	9
	- Haemorrhage			1668			...	2008	9
	- Obstructed labour			1268			...	2008	9
	- Sepsis			79			...	2008	9
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	3	...	...	...	...	...	2009	12
	- Measles	4779	...	...	...	...	...	2009	12
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	27	...	...	...	...	...	2009	12
	- Pertussis (whooping cough)	513	...	...	...	...	...	2009	12
	- Poliomyelitis	0	0	0	...	...	...	2009	12
	- Rubella	528	...	...	...	...	...	2009	12
	- Total Tetanus	...	...	...	...	...	...		
	Health facilities								
35	**Facilities with HIV testing and counseling services**					233		2009	14

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals				
		- Specialized hospitals	8	...	2009	15
		- District/first-level referral hospitals	79	...	2009	15
		- Primary health care centres	984	...	2009	15
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			740.43	2008p	16
	- total expenditure on health as % of GDP			6.60	2008p	16
	- per capita total expenditure on health (in US$)			50.85	2008p	16
	Government expenditure on health					
	- amount (in million US$)			171.33	2008p	16
	- general government expenditure on health as % of total expenditure on health			23.10	2008p	16
	- general government expenditure on health as % of total general government expenditure			11.20	2008p	16
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			62.13 [a]	2008p	16
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			76.90	2008p	16
	- out-of-pocket expenditure on health as % of total expenditure on health			65.38 [a]	2008p	16
	Exchange rate in US$ of local currency is: 1 US$ =			4054.17	2008p	16
38	**Health insurance coverage as % of total population**			0.00	2008	16

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	3351	...	...	...	...	...	...	2009	17
		- Ratio per 1000 population	0.25	...	...	...	...	...	...	2009	17
	Dentists	- Number	245	...	...	...	...	...	...	2009	17
		- Ratio per 1000 population	0.02	...	...	...	...	...	...	2009	17
	Pharmacists	- Number	547	...	...	...	...	...	...	2009	17
		- Ratio per 1000 population	0.044	...	...	...	...	...	...	2009	17
	Nurses	- Number	8 720	...	...	...	...	...	...	2009	17
		- Ratio per 1000 population	0.65	...	...	...	...	...	...	2009	17
	Midwives	- Number	3322	...	...	...	...	...	...	2009	17
		- Ratio per 1000 population	0.24	...	...	...	...	...	...	2009	17
	Paramedical staff	- Number	518	...	...	...	...	...	...	2009	17
		- Ratio per 1000 population	0.4	...	...	...	...	...	...	2009	17
	Community health workers	- Number	1638	...	...	...	...	...	...	2004	18
		- Ratio per 1000 population	0.13	...	...	...	...	...	...	2004	18
40	**Annual number of graduates**	Physicians	290	...	...	...	...	...	...	2009	19
		Dentists	50							2009	19
		Pharmacists	100	...	...	...	...	...	...	2009	19

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	349 [d]	...	...	...	...	...	...	2009	19
		Midwives	208	...	...	...	...	...	...	2009	19
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	119	...	...	...	...	...	...	2009	17
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	177	...	...	...	...	...	...	2009	17
		Midwives	81	...	...	...	...	...	...	2009	17
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	29.00	...	...	2008	20
43	Infant mortality rate (per 1000 live births)	60.00	...	...	2008	2
44	Under-five mortality rate (per 1000 live births)	83.00	...	...	2005	14
45	Proportion of 1 year-old children immunised against measles	92.00	...	...	2009	12
46	Maternal mortality ratio (per 100 000 live births)	461.00			2008	2
47	Proportion of births attended by skilled health personnel	63.00			2009	21
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	19.00			2009	21
	- Percentage of deliveries in health facilities (as % of total deliveries)	44.00			2009	21
48	Contraceptive prevalence rate	29.00	...	...	2009	21
49	Adolescent birth rate	5.20			2005	14
50	Antenatal care coverage - At least one visit	83.00			2009	21
	- At least four visits	27.00			2005	14
51	Unmet need for family planning	25.00	...	...	2005	14
52	HIV prevalence among population aged 15-24 years	84.40	...	...	2005	14
53	Estimated HIV prevalence in adults	0.70	...	...	2009	14
54	Percentage of people with advanced HIV infection receiving ART	100.00	...	...	2009	14
55	Malaria incidence rate per 100 000 population	616.00	...	...	2009	11
56	Malaria death rate per 100 000 population	2.05	...	...	2009	11
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	680.00	...	...	2008	12
60	Tuberculosis death rate per 100 000 population	79.00	...	...	2008	12
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	57.00	...	...	2008	12
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	94.00	...	...	2007	12
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	61.00	81.00	56.00	2008	22
64	Proportion of population using an improved sanitation facility	29.00	67.00	18.00	2008	22
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Revised data
c	Based on data reported by Ministry of Health as part of their outbreak report
d	Primary nurses and midwives included in other nursing/auxiliary staff graduated between 2002-2004, Ministry of Health
e	Revised figure includes induced abortion cases (364) and spontaneous cases (2596)
f	Among 40% of the infants who were weighed at birth

Sources:	
1	Information furnished by the WHO Representative for Cambodia, 09 March 2004.
2	General Population Census of Cambodia 2008, National Institute of Statistics, Ministry of Planning.
3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision, http://esa.un.org/wup2009/unup/, Tuesday, June 01, 2010; 10:28:05 PM
4	Cambodia Inter-Censal Population Survey 2004, General Report, Ministry of Planning, Department of Demographic Statistics, Censuses and Survey, November 2004.
5	Demographic Estimates and Revised Population Projections 2007, National Institute of Statistics, Ministry of Planning.
6	Emerging Stronger from the Crisis. World Bank East Asia and Pacific Economic Update 2010, Volume 1. The Word Bank
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14	Cambodia Demographic and Health Survey 2005, National Institute of Public Health, National Institute of Statistics (Cambodia) and ORC Macro, 2006. Phnom Penh, Cambodia and Calverton, Maryland, USA. National Institute of Statistics and ORC Macro. <http://www.measuredhs.com>.
15	Annual Health Financing Report 2009, Ministry of Health
16	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html.
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18	Human Resources Database, Minstry of Health, 2004 (civil service employees).
19	Human Resources Department, Ministry of Health.
20	Cambodia Anthropometric Survey, 2008.
21	Joint Annual Performance Review 2010, Ministry of Health Cambodia
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CHINA

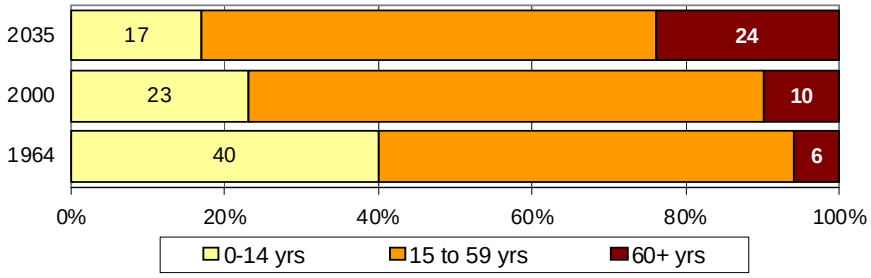
1. CONTEXT

1.1 Demographics

China is the most populous country in the world, with more than 1.3 billion citizens. Population growth rates have slowed and life expectancy has risen in recent decades.[1] While a child born in China in the 1950s could expect to live for 46 years, one born in 2000 could expect to live for over 71 years.

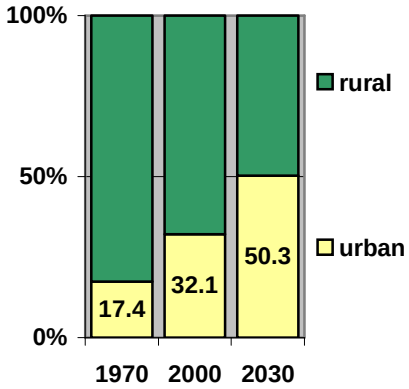
China's population is ageing rapidly, and one in four people living in the country in 2035 will be aged 60 years or older (Figure 1).[2] Population ageing leads to a shift towards chronic diseases and disabilities and pressures on the health system to address more complex health conditions that generate higher costs. In addition, the tradition of providing long-term care at home for elderly parents and grandparents will be challenged in the light of the one-child policy.

Figure 1. Population of China by age group (%), 1964, 2000, 2035



In line with the Government's policy to accelerate urbanization, half of the population will be living in urban areas by 2030 (Figure 2),[3] placing great pressure on water, air and electricity resources.

Figure 2. Urban population (%), 1970, 2000, 2030



[1] *Earth trends*. World Resources Institute.
[2] Population Reference Bureau
[3] *Op cit.* Ref 1.

1.2 Political situation

China's 11th Five Year Plan (2006-2010) forms the basis of the Government's current economic and social development efforts. In continuity with the 10th Five Year Plan, the 11th Plan aims to sustain the rapid and steady development of China's 'socialist market economy' while, in addition, aiming to achieve the 'five balances':

- *Balance between urban and rural development*: The gap between urban and rural areas increased during the 1990s for some important economic and health indicators.
- *Balance in regional development*: The Government is promoting development in the western regions in an effort to address the regional imbalances that have grown over time.
- *Balance in social and economic development*: The Government has made a commitment to focus more on social issues, including poverty, education, medical care and public health, in its overall goal to build a well-rounded, better-off society.
- *Balance between human beings and nature*: Industry, agriculture and humans are competing for scarce resources, including water and air.
- *Balance between domestic and international development*: This balance promotes international cooperation and emphasizes the importance of fulfilling international commitments.

The 11th Plan includes two key quantitative targets:

- to achieve an annual gross domestic product (GDP) growth rate of 7.5%, with the goal of doubling 2000 per capita GDP by 2010; and
- to reduce energy consumption per unit of GDP by 20%, and the total discharge of major pollutants by 10%, by 2010.

It also includes a number of strategic priorities and major tasks, including: rebalancing China's pattern of growth; deepening reforms and opening up further to the outside world; constructing a 'new socialist countryside'; promoting more balanced development among the different regions; and increasing capacity for independent innovation.

To enable a larger proportion of the population to take advantage of the opportunities afforded by economic growth, future programmes aim to reduce poverty; develop the education, health, technology, scientific and cultural fields, among others; and strengthen the social safety net. The Plan is referred to as a 'people's agenda' because it focuses on inclusive social development that will make a measurable difference in people's lives by 2020.

The Government is currently preparing its 12th Five Year Plan;the priorities include the economy and the role of the state in the economy, efficiency, employment, and China's global role.

1.3 Socioeconomic situation

China has made impressive gains in improving living standards, reducing poverty and maintaining strong economic growth since initiating market reforms in 1979. GDP averaged a real annual growth rate of 10% during the period from 1979 to 2006. During 1979-1984, economic growth was driven by the labour shift from agriculture to rural industry. Between 1985 and 1992, growth benefited from the improved efficiency in capital allocation stemming from price liberalization and opening up to foreign trade. Further opening up of the economy to foreign direct investment in the 1990s stimulated technological progress.

China's earlier high health standards have played a pivotal role in the country's economic success. Impressive growth performance has been correlated with reductions in poverty and advancements in social development. Using the standard international poverty line of US$ 1 per day, an estimated 400 million people in China have been lifted out of poverty over the past 30 years. This is primarily a result of the liberalization of agriculture and other rural industries. At China's official poverty line, the rural population living in absolute poverty with an annual per capita net income below 668 Yuan (US$ 87) decreased from 250 million in 1978 (31% of the rural population) to 24 million in 2005 (3% of the rural population). New estimates of poverty using purchasing power parity (PPP) suggest even greater gains in

poverty from 71%-77% in 1981 to 13%-17%. By whatever measure, China alone has accounted for over 75% of poverty reduction in the developing world over the last 30 years.

In March 2009, as a result of the global economic downturn in late 2008, the Government put forward an economic stimulus package of 4 trillion Yuan (US$ 585 billion) for 2010-2011, for 10 key sectors. Of the total, 1.2 trillion Yuan is from the Central Government, and the remainder is to come from local governments, state-owned enterprises or the private sector. Some 63% of the total is dedicated to infrastructure (public and post-quake reconstruction). In addition to the stimulus package, the Central Government invested substantial resources in alleviating the impact of the economic crisis in 2009, including investing 293 billion Yuan (US$ 43 billion) to improve the social safety net, offering 5 trillion Yuan in additional loans, and investing 42 billion Yuan (US$ 6.2 billion) to stimulate employment. As a result of the large stimulus packet, combined with policies that encouraged consumption, China's economy grew by 8.7% in 2009. GDP growth estimates for 2010 are projected at 9.5%, with increases in export activity and declines expected in Government-led investments as the crisis eases.

1.4 Risks, vulnerabilities and hazards

The Government is focused on maintaining employment and economic growth. Public health policies may be considered less important than encouraging consumption. Emerging health threats related to the environment, and workplace and lifestyle are becoming more evident. Air pollution and water contamination by industrial and municipal waste, as well as overuse of chemical fertilizers and pesticides, annually cost China over 400 000 lives.[4,5]

The benefits of growth have, however, not been shared equally across geographic regions, rich and poor households, urban and rural residents, and migrant and resident populations within cities. The major health threats in underdeveloped areas of rural China include unsafe water, lack of sanitation, undernutrition, vitamin and mineral deficiencies, and indoor pollution. Efforts to move from a fee-for service to a prepaid system with a comprehensive benefits package are underway. However, ill-health continues to be a contributor to poverty, and out-of-pocket medical expenses remain high.

2. HEALTH SITUATION AND TREND

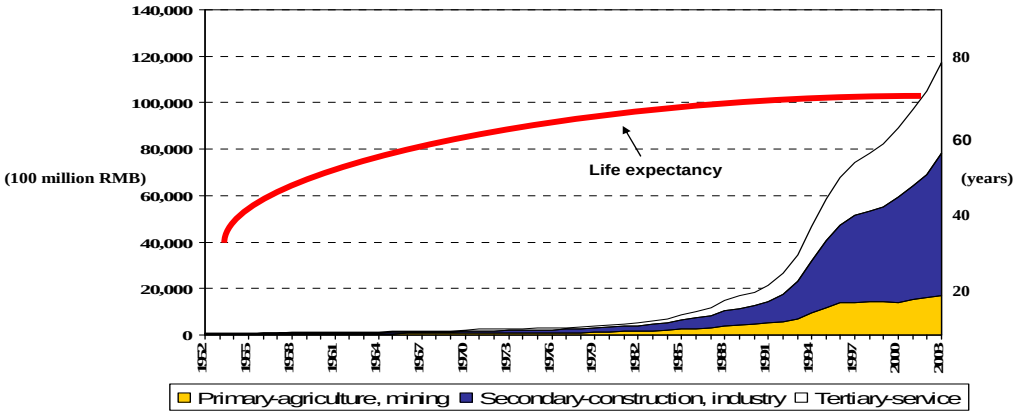
2.1 Communicable and noncommunicable diseases, health risk factors and transition

Publicly financed health programmes provided access to basic care during the 1960s and 1970s, especially in rural areas. Health outcomes continued to improve between 1980 and 2005, although at a slower pace. Figure 3 shows the increase in life expectancy over almost 50 years in comparison with economic growth. Other health indicators improved as well. By 2008, the maternal mortality ratio (MMR) had declined to 34.2 per 100 000 livebirths, and the infant and under-five mortality rates to 14.9 and 18.5 per 1000 live births, respectively. Immunization coverage of one-year-olds against tuberculosis and measles exceeded 90%, while malnutrition rates among the under-fives had declined to less than 10%. A critical health challenge relates to inequality in health outcomes. Life expectancy is also generally lower in rural provinces and those with higher poverty rates.

[4] Guang X. An estimate of the economic consequences of environmental pollution in China. Smil V, Yushi M, eds. *Project on environmental scarcities, state capacity and civil violence*. Committee on International Security Studies, 1997.

[5] The relatively easy availability of pesticides in rural markets and homes is also associated with China's internationally very high suicide rates among young rural women.

Figure 3. Life expectancy and GDP, 1952-2003



Source: China Statistical Yearbook 2004 and UNIDO analysis

2.2 Outbreaks of communicable diseases

China is one of 22 high-burden countries for tuberculosis, with the prevalence for all forms of the disease estimated at 88 per 100 000 people in 2008. WHO estimates that each year there are approximately 1 million new cases, of which 500 000 are infectious, smear-positive pulmonary disease.[6] Multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB) are becoming critical public health threats. Based on a national baseline survey on drug-resistant tuberculosis in 2007, 5.7% of new cases (95% CI: 4.6-7.1) and 25.6% of previously treated cases (95% CI: 21.7-30.0); 0.68% (CI: 04-1.1) of sputum-smear-positive cases had XDR-TB. It has been estimated that there are approximately 84 000 new MDR-TB cases per year in China.[7] In April 2009, the Government hosted a high-level meeting on M/XDR-TB, and initiated WHO Resolution WHA 62.15 on prevention and control of multidrug-resistant atuberculosis and extensively drug-resistant tuberculosis, urging all Member States to achieve universal access to diagnosis and treatment of MDR-TB and XDR-TB.

Although HIV prevalence in adults is currently low (0.057%), several provinces in central, southern and western areas of the country face serious concentrated epidemics, with the epidemic spilling into the general population in some areas. Yunnan, Sichuan, Guangxi, Xinjiang and Guangdong provinces are the worst affected, with over 33 000 HIV infections reported in 2009. Sexual transmission is now the main mode of transmission. Among those living with HIV reported in 2009, 44.9% of infections were through heterosexual transmission, 10.2% through homosexual transmission, and 27% via injecting drug use.[8]

Emerging disease threats include HIV/AIDS, severe acute respiratory disease syndrome (SARS) and influenza. Emerging infectious diseases, such as SARS, highly pathogenic H5N1 avian influenza (H5N1), and pandemic influenza A (H1N1) are important because of their epidemic potential. In addition to the illness and death they bring, they can cause social instability and considerable financial and economic loss. The SARS outbreak in 2003 affected 5327 people in mainland China and killed 348. Since 2003, 38 people in China have been reported to have H5N1 and 26 of them have died.

While China remains vulnerable to the health threats posed by emerging and re-emerging infectious diseases, known and preventable diseases such as malaria, cholera and schistosomiasis, continue to occur in the country despite the availability of effective treatment and preventive measures. The large-scale national malaria control programme, launched in 1955, successfully reduced the 30 million malaria cases that had been occurring annually before 1949. However, China still faces major malaria control issues in the border areas of the country's tropical south, and in the central area of the country, where malaria has re-emerged since 2001. Twenty of 31 provinces, municipalities and autonomous regions are considered malaria-endemic: they have reported at least one locally acquired case in the past three years. However,

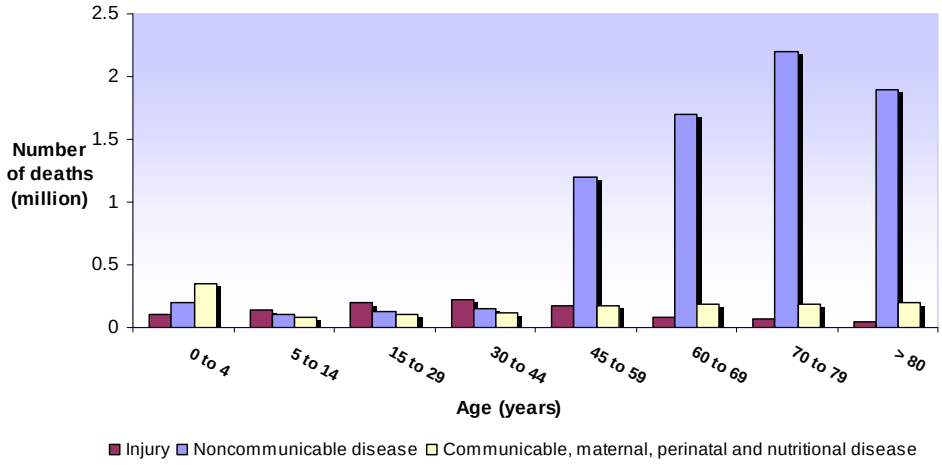
[6] *Global tuberculosis control, A short update to the 2009 report.* Geneva, World Health Organization, 2009.
[7] *M/XDR-TB surveillance and response: 2010 global update(draft).* Geneva, World Health Organization, *2010*
[8] *Joint assessment of HIV/AIDS prevention, treatment and care in China*. Beijing, United Nations China, State Council AIDS Working Committee Office and United Nations Theme Group on AIDS in China, 2009.

higher endemic counties have been concentrated in eight provinces. In 2008, all counties with incidence ≥1.0 per 10 000 came from Anhui, Yunnan, Henan, Hainan, Hubei, Jiangsu, Guizhou and Tibet, accounting for 86% of reported cases. In 2009, the malaria incidence rate was 1.06 per 100 000 population.

2.3 Leading causes of mortality and morbidity

According to the surveys conducted in 2003, a decline in infectious diseases was seen between 1998 and 2003, while noncommunicable disease conditions rose continually over the same period. The disease profile resembles that of a developed country, with some 80% of total deaths due to noncommunicable diseases and injuries. Figure 4 shows causes of death, by age, in 2003. Among the remaining infectious diseases, hepatitis B, TB and lower respiratory infections still account for significant mortality and lost disability-adjusted life years (DALYs).

Figure 4. Number of deaths, by cause and age, 2003



Source: WHO World Health Report (2005)

In 2008, the leading causes of morbidity were diseases of the circulatory system; diseases of the respiratory system; diseases of the digestive system; pregnancy, childbirth and the puerperium; injury and poisoning; cerebrovascular diseases; diseases of the genito-urinary system; hypertension; malignant neoplasm; and musculo-skeletal conditions. The major causes of death were: malignant neoplasm; heart diseases; cerebrovascular diseases; diseases of the respiratory system; injury and poisoning; endocrine, nutritional and metabolic diseases; diseases of the digestive system; diseases of the genito-urinary system; diseases of the nervous system; and mental disorders.

2.4 Maternal, child and infant diseases

The country has remained polio-free since 1994 and the incidence of immunization-targeted diseases, such as measles and diphtheria, has declined significantly. The goal of measles elimination by 2012 has been adopted by the Government. Currently the Expanded Programme on Immunization also includes hepatitis B vaccine, with coverage of 88% for timely Hep B birth-dose delivery in 2006. The Government recently expanded the immunization programme to include vaccines to prevent a total of 12 diseases (TB, poliomyelitis, diphtheria, tetanus, pertussis, measles, hepatitis B, Japanese encephalitis, meningococcal meningitis, hepatitis A, rubella and mumps) in all children, as well vaccines to prevent leptospirosis, anthrax and epidemic hemorrhagic fever in selected populations. Vaccines now exist that can help to prevent pneumonia and diarrhoea; the Government will be considering whether and how to introduce these vaccines in the future. The 11th Five Year Plan stipulates that immunization coverage should reach more than 90% by 2010. The Plan also sets 2010 targets for infant mortality (17 per 1000 live births) and the maternal mortality ratio (40 per 100 000 live births). All of these targets have been achieved.

China has been remarkably successful in achieving maternal and child health goals, exceeding national targets. While regional disparities exist, since the mid-1980s, the infant and under-five mortality rates in China as a whole have continued to fall. National statistics show that the MMR decreased from 80 to 34.2 per 100 000 live births between 1996 and 2008 [9,10] and reductions also occurred in the infant mortality rate (IMR) and under-five mortality rate (U5MR) to 14.9 and 18.5 per 1000 live births, respectively, in 2008 [11]. Like other health indicators, the MMR, IMR and U5MR are higher in western China compared with coastal areas. Girls continue to be disadvantaged.

2.5 Burden of disease

Global burden-of-disease estimates produced by WHO indicate that 80% of deaths in China are due to noncommunicable diseases and injuries. Cerebrovascular disease, chronic obstructive pulmonary disease and heart disease account for nearly 50% of all deaths. The rankings based on disability-adjusted life years (DALYs)[12] also highlight the emergence of noncommunicable chronic diseases and injuries as the predominant health conditions. Much of the disability and death attributable to chronic diseases, particularly among working-age adults, could be reduced through a reduction in risk factors, including improvements in the quality of air, water and sanitation; reductions in tobacco and alcohol use; improvements in diet and nutrition; and increases in exercise. It is projected that disabilities and deaths related to chronic diseases will result in a US$ 550 billion loss in productivity between 2005 and 2015.

The disease burden varies by age group. It is estimated that 70% of deaths among children less than five years of age are attributable to maternal, perinatal or nutritional conditions, including sepsis, pneumonia, diarrhoea, measles and tetanus, many of which could be addressed through high quality health care. Among children aged five to 14 years, the number of deaths is a very small part of the total disease burden; however, most of these deaths are attributable to injuries and accidents, including drowning and road accidents. For those between the ages of five and 44 years, injuries and violence account for an even larger share of deaths, at over 50%. Some 69% of disability and 80% of deaths among adults and older people are due to noncommunicable diseases.

Among the remaining infectious diseases, hepatitis B, TB and lower respiratory infections still account for significant mortality and lost DALYs, particularly among children. While infectious diseases attract enormous interest both domestically and internationally, injuries and violence contribute about 11% of total mortality each year, compared with 8.6% attributed to infectious diseases. In 2007, most injury deaths were attributed to suicide (28%), road traffic injuries (25%) and drowning (11%), with the suicide rate for women estimated to be 25% higher than that for men, and traffic injury mortality rates twice as high for males than for females.[13] Mental and neurological disorders are responsible for about 20% of the overall disease burden in China. More than 30 million children and adolescents under 17 years of age have behavioural and emotional problems, of which about 50%-70% need mental health services, but remain untreated.[14]

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

China's political commitment to health system reform was declared at the highest level when President Hu Jintao stated in October 2006 that all Chinese people should have access to affordable essential health services. The Health Care Reform Leading Group was established the same year, composed of 16 ministries and chaired by Vice Premier Li Keqiang of the State Council, with the

[9] National Maternal and Child Health Surveillance System
[10] *Chinese health statistical digest 2006, 2007, 2008, 2009*, and online statistics Ministry of Health, http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohwsbwstjxxzx/s8208/201004/46556.htm
[11] *Ibid*.
[12] DALY is a statistical formulation widely used to put a specific number on the combined loss of health and loss of years of life due to disability from disease or injury.
[13] *Turning the tide: injury and violence prevention in China*. Beijing, World Health Organization, 2006.
[14] *National Project on Mental Health (2002-2010)*. Beijing, China Department for Disease Control and Prevention, Ministry of Health, 2002.

Ministers of Health and the National Development and Reform Commission (NDRC) as Vice-Chairpersons.

After three years of deliberation, in 2009, the Group announced their national health reform blueprint. The plan's main objective is to provide universal coverage of basic health care by the end of 2020. Reforms are proposed in five areas: the public health system, the medical care delivery system, the health security system, the pharmaceutical system, and pilot hospital reform. The initial three-year implementation plan for 2009-2011 emphasizes several programmes, including improving the social health security system (urban employees, urban residents, rural CMS, and medical assistance programmes); establishing an essential medicines system; strengthening primary-level health care facilities; reducing disparities in public health care between regions; and piloting reforms in public hospital financing by reducing the reliance on drug sales for operational costs and salaries. The Government has committed to spending 850 billion Yuan (US$ 124 billion) on fulfilling the three-year plan (est 0.8% annual increase in [2008] GDP), 39% from Central Government. The Central Government allocation to implementing health reform in 2009 amounted to 118 billion Yuan, including 30.4 billion Yuan (US$ 4.4 billion) dedicated to insurance, 24.6 billion Yuan (US$ 3.6 billion) for public health and disease control, and 6.5 billion Yuan (US$ 2.4 billion) for construction.

Specific targets for 2009 included: (1) 29 000 township health centres built; (2) revised essential medicines list published; and (3) a 15 Yuan government subsidy for public health. Targets for 2011 include: (1) 90% health insurance coverage for both urban and rural areas; (2) a 120 Yuan government subsidy to urban residents' basic medical insurance and the new rural coooperative health insurance; and (3) 2000 new county hospitals, 3700 urban community health centres and 11 000 community health stations built or renovated. After one year of implementation, the Government has announced a series of achievements, including 94% of the rural population (833 million people) covered by health insurance, 36% of counties adopting the essential medicines list, 32 million people receiving hepatitis B vaccine, 1.49 million women screened for breast cancer, 6.27 million women subsidized for hospital delivery, and clinical pathways for 112 diseases formulated.

3.2 Organization of health services and delivery systems

Since 2003, dramatic increases in insurance coverage have been accompanied by increased service utilization, particularly in rural areas. Between 2003 and 2008, national insurance coverage increased from 23.1% to 87.4% [15], while hospital admission rates nearly doubled to 6.8%.

Changes in health financing have led to other changes in utilization patterns. Increasing rates of Caesarean section, particularly in urban areas, and frequent use of injections and infusions in primary care settings illustrate the unnecessary use of certain treatment measures. Cesarean section rates have increased from 16.3% to 26.8%, and urban rates were 50.9% in 2008. An assessment of 121 471 prescriptions for patients with the diagnosis of a noncommunicable condition in 218 primary care facilities was conducted as part of the National Health Services Survey (NHSS) 2008.[16] In village clinics and township health centres, 66% and 61% of patients were prescribed antibiotics, respectively. Intramuscular and intravenous injection rates were also very high: 30% and 35%, respectively, of rural prescriptions and 13% and 32%, respectively, of urban prescriptions. These high figures correspond to other smaller-scale studies conducted in China. Such treatment patterns are striking given the prevalance of noncommunicable disease treatment.

While health insurance coverage is increasing, especially in rural areas, many people are underinsured and continue to face high out-of-pocket costs. Households continue to face financial barriers in accessing health care, and household health expenditures remain high: 17.4% of patients failed to be hospitalized after referral for financial reasons in 2008, a decline from 21.8% in 2003. An increase was seen in the percentage of households with catastrophic expenses (5.0% to 5.6%), although fewer households became impoverished because of medical care (6.1% to 4.8%), between 2003 and 2008. Inpatient medical services frequently require pre-payment. For the rural health insurance schemes, reimbursement rates

[15] *National Health Services Survey 2003 and 2008*. Center for Health Statistics and Information, Ministry of Health.
[16] Center for Health Statistics and Information, Ministry of Health.

have increased to about 40% of total charges. Benefits are also not portable across localities, which is a major concern for migrant workers.

While major progress has been observed in expansion of rural insurance schemes and in some indicators of service use and expenditures, gaps remain between the poorest and better-off and, for some indicators, between eastern, central and western China. National Health Services Survey data show the need for policies to promote equitable access and risk protection, particularly for the urban and rural poor. The current health reform investments should be monitored closely to determine their impact on trends in service utilization, health-seeking behavior, the quality of care, risk protection and, ultimately, health.

Since medicine expenditure remains an important component of out-of-pocket expenditure, increasing the availability and affordability of generic essential medicines is an important policy. The Government is in the process of outlining reforms to improve access to quality, safe essential medicines, modify the pricing system and strengthen medicine production and distribution systems.

3.3 Health policy, planning and regulatory framework

A major component of the health reforms aims to better define government roles in the health sector. Important efforts have been made to reduce ambiguity and redundancy in responsibilities, as well as the competing interests among departments and in government roles in health across agencies.

Regulations relating to public health and health care delivery systems are underdeveloped and poorly enforced, and monitoring capacity is weak. Most health facilities lack clinical governance systems, and important gaps exist in the regulatory system to ensure the quality of care. Deficiencies in clinical quality have resulted from financial incentives in the delivery system, combined with difficulties in: posting qualified human resources to peripheral facilities, gaining suffiient government resource allocation, and the supervision and regulatory systems for the delivery systems. Safety standards and health regulations, as well as their enforcement, could be strengthened, particularly in rural areas.

The overwhelming majority of the Chinese population seek out traditional Chinese medicine (TCM) to address their health problems. The Government promotes the development of a modern TCM industry, as well as the integration of TCM into the national health care system and integrated training of health care practitioners. In 2008, the Minister of Health identified several key priorities for TCM development, including increasing policy support for TCM; strengthening research on key TCM issues and building capacity for TCM research; training prominent TCM doctors and establishing well-known TCM hospitals and departments; improving and adapting TCM services to meet public need; increasing access to and the quality of TCM services in rural and urban communities; and strengthening international cooperation and communication on TCM.[17]

However, a number of challenges to further development of TCM remain. There is a lack of unified, systematic regulations for assessing the safety and efficacy and ensuring the quality of TCM products. In addition, there are no national TCM standards or guidelines for TCM clinical trials, and evidenced-based TCM product testing and research are still needed. In view of the vast differences in the qualifications of TCM practitioners, the quality of TCM education needs to be strengthened, and the management and supervision of TCM institutions need to be regulated.

3.4 Health care financing

Total health expenditures rose from 3% of GDP in 1978 to 4.8% of GDP, or US$ 157.6 per person in 2008.[18] Of that total, the Government contributed 49.9% and private expenditure amounted to 50.0%. Contributions from both the Government and social health expenditure have declined as a proportion of total health expenditure. The decline in the Government's contribution and the increase in individual out-of-pocket payments is due in part to rapidly escalating health care costs and the lack of incentives for cost or quality control in the health delivery system.

[17] Report by Minister Chen Zhu at the Annual Health Conference, 2008.
[18] *China health statistics yearbook 2010*.

Public resource allocation is highly decentralized.[19,20] Under the current health system, local health departments and other health care providers are expected to generate a significant share of their own operating budgets.[21] Township, county, prefecture and provincial governments administer about 90% of all government spending on health. While localities are given the responsibility to finance health care, however, local governments are unable to raise revenue through taxes to finance basic public services, especially in resource-poor communities. This provides an incentive to focus on more profitable curative care and medicines to generate larger profit margins.[22] Government spending on health tends to be lower in provinces with higher numbers of rural poor. Thus, poor localities have access to fewer and lower quality services for public health. The health reform plan aims to resolve the problem by increasing public spending on basic health services, as well as reducing the reliance on medicines and service sales to fund facility operational costs. The Government has committed to spending 15 Yuan per person on a basic public health package, to be increased to 20 Yuan per person over time. Central government allocation of resources for the public health package varies according to local economic development capacity.

3.5 Human resources for health

Key challenges in improving human resources for health include: improving the human resource strategy for health development; increasing capacity and technical qualifications; distributing staff more evenly nationwide; and creating a more rational balance among the different health care professions.

Over the last several decades, the Government has prioritized increasing the quality and technical capacity of health personnel with two to six years of professional training. However, capacity issues remain: in 2005, 72.9% of health professionals had only technical secondary school diplomas and only 17.1% of health professionals had bachelor degrees or above.[23]

In addition, qualified staff are not well distributed across the country.[24] As in many other countries, poor and rural areas have not been able to attract and retain qualified medical staff. After economic reforms were initiated, many experienced health professionals moved to hospitals in cities and areas with well-paying clinics. This poses an enormous barrier to the delivery of quality basic health services in remote and rural regions.

3.6 Partnerships

The Government has made many international commitments to a wide range of health targets, best exemplified by its acceptance of the Millennium Development Goals (MDGs). Supporting China's achievement of the MDGs provides an important organizational framework for donor coordination in the country, and the majority of donors have reflected this in their country assistance plans. China is ahead of schedule in achieving most of the MDGs, benefiting from the positive effects of both rapid economic growth and targeted government programmes. It may be an appropriate time to develop indicators that reflect the current health challenges, including for the control of noncommunicable diseases, and stronger health policies and systems that could address inequalities in health outcomes.

The United Nations Theme Group on Health (UNTGH) is a Government-donor forum for cooperation on health issues in China. WHO chairs and acts as Secretariat for the UNTGH, which comprises United Nations agencies, bilateral and multilateral donors, government agencies and nongovernmental organizations.

The country has been taking a leading role in improving public health in the Region and the world, and has organized several important regional and global health events, promoting both multilateral and bilateral partnerships. In 2005, China initiated a United Nations resolution on public health,

[19] In China, subnational governments are responsible for 70% of government expenditures. In contrast, in most industrialized countries, subnational governments are responsible for less than 30% of the government budget.
[20] *National development and sub-national finance:review of provincial expenditures*. Washington DC, World Bank, 2002.
[21] Liu XZ, Xu LZ. Evaluation of the reform of public health financing in China. *Chinese health resource*, 1998,1(4):151-154.
[22] Liu XZ, Liu YL, Chen NS. Chinese experience of hospital price regulation. *Health policy and planning*, 2003,15:157-63.
[23] Zhang JH, *Situation and development of the health workforce in China*. Beijing, Health Human Resources Development Center (HHRDC) Ministry of Health, China, 2007.
[24] Wu XL, Rao KQ. 2001. An analysis of health resource development in China since 1980. *China health economics*, 2001,11:38-41.

recommending that public health be further integrated into national economic and social development schemes as a basis for promoting sustainable growth with equity around the world.

China also made an important commitment to better health by signing the Framework Convention on Tobacco Control in November 2003. Ratified by China's National People's Congress in August 2005, the convention became effective in January 2006. China's Ministry of Health has taken further steps to improve public awareness of the health risks related to smoking and inhaling second-hand smoke, and to reduce smoking in public areas.

3.7 Challenges to health system strengthening

It is widely recognized that increasing the level of government spending needs to be done in conjunction with reform and regulatory programmes that provide incentives for quality, performance and health outcomes. WHO provides assistance to the Government in implementing its health sector reforms and national strategies that aim to achieve universal coverage of essential health care services by 2020 and to improve quality, equity and efficiency.

Since 2006, the Government has made an enormous effort to define its role in health more clearly. As many countries around the world attest, launching comprehensive health system reforms is very difficult on political and ethical, as well as technical grounds, and such reforms are further complicated by complex governance structures. In China, as in other countries, the single biggest challenge is securing the political will to balance the influence of interest groups and promote the well-being of the entire population, regardless of political influence, socioeconomic status or cultural background. The involvement of many stakeholders in the ongoing implementation of health reform gives every hope that China will succeed and set yet another example of successful reform that can inspire other countries.

4. PROGRESS TOWARDS THE HEALTH MDGs

As described in the Government's National MDG report for 2008, progress in basic health indicators has been remarkable. However, averages mask variations in health status across regions and hide higher rates of morbidity and mortality in poor western provinces and rural areas. Fiscal inequalities across regions contribute to insufficient funding of public health departments and to incomplete and inequitable coverage of preventive health services. Further progress in health will require reducing the variations in health outcomes across regions, improving the quality of the health care provided, and protecting families from risk related to catastrophic health events. The poorest areas are still inadequately supported by central funds and some populations remain highly vulnerable to health risks. Specific populations groups are out of reach of the health system and are particularly vulnerable. These include rural-urban migrant populations and their children, the poor, the elderly and ethnic minorities. For example, in large cities, urban migrant women account for two-thirds of maternal deaths, but only 10% of pregnancies.

China has already achieved the MDG 4 indicators on reducing mortality rates for infants and children under five years of age (IMR and U5MR). China is also on track to achieve the MDG 5 target on reducing the maternal mortality ratio (MMR). However, as described in the MDG report, infant mortality is almost 2.6 times higher in western than eastern region, child mortality is 2.5 times higher (in western compared with eastern regions); and infant and child mortality is 2.7 and 2.8 times higher, respectively, in rural compared with urban areas[25]. Maternal mortality in rural areas was 3.2 times higher than that in urban areas, and the gap had widened since 1996 when it was 2.7 times higher. In addition, the MMR in inland and remote areas was 4.1 and 7.7 times higher than in coastal areas, respectively, and ratios in poor rural areas exceeded those in wealthy urban areas by 3 to 5 times.

The incidence of tuberculosis has fallen since 1990 and, if current trends in TB prevalence and death rates are sustained, the targets of halving prevalence and death rates by 2015 could be achieved. China is also on track to reverse the spread of HIV/AIDS and has already achieved the MDG6 indicators on reducing the malaria burden. The incidence of malaria fell to 1.09 per 100 000 in 2009 and, in 2010, the national action plan on elimination of malaria was issued, with the goal of eliminating indigenous malaria in the

[25] National maternal and child health surveillance report: 2009.

whole country by 2020. Although China's HIV epidemic remains one of low prevalence, geographic distribution is highly varied and the epidemic is driven by high-risk behaviour within particular sub-populations. Stigma and discrimination against people living with HIV/AIDS (PLWHA) remains a serious problem, and may prevent people from obtaining voluntary HIV testing and obtaining treatment, which can spread HIV further. China's ethnic minority communities have been disproportionately impacted by HIV and AIDS. The trend of other chronic noncommunicable diseases is increasing. It is projected that, over the next 10 years, deaths from chronic diseases will increase by 19%. During the 1990s, there have been increases in the prevalence of intermediate risk factors for chronic noncommunicable diseases, including hypertension, diabetes, and obesity. Health policy-makers face enormous challenges in developing fiscal and public policies to reverse the trend of the chronic disease epidemic.

Further health achievements require addressing the deficiencies in quality of care. Variations in quality remain problematic and could slow progress in achieving the MDGs. Such variations include weak adherence to internationally accepted clinical guidelines to ensure universal access to existing cost-effective treatments. Low quality in the form of inappropriate care is also widespread. It is estimated that up to one-half of antibiotic prescriptions in China were medically unnecessary and could be contributing to the global problem of antimicrobial resistance. Inappropriate prescribing is a factor in the alarming and growing burden of MDR TB in China, and approximately 17% of PLWHA using antiretroviral therapy have developed drug resistance. The Government is fully committed to achieving universal access to basic health care by 2010, and there has been success in achieving nearly universal coverage of basic services in rural areas. For example, coverage with measles and other recommended childhood vaccines now exceeds 90% nationally, and has been stable for the last several years.

Affordability of care remains an important barrier to access and quality. Most families in China remain at risk of falling into poverty because of catastrophic health events. People with chronic conditions, such as hypertension and diabetes, also face very high health care costs for routine care. Since the 1980s, a market-driven medicine policy has resulted in rapid price increases, and per capita annual consumption of medicines alone has reached 332 Yuan (US$ 47). The current health insurance mechanisms frequently do not reimburse for outpatient treatment and most reimbursement rates are low, at less than 50% of the costs.

Addressing the challenges includes improving the quality of human resources, particularly in remote areas and for the most peripheral levels of the health system. Financial incentives in the organization of the public health system contribute to irrational use of medicines and technology by health care providers and weaken the referral system. Ensuring an evidence-based process for selecting essential medicines and the benefits package for insurance would be important steps in promoting cost-effective clinical care. Addressing these issues could greatly improve the ability of health care system to provide the most cost-effective and appropriate health care services and medicine to patients.

The demographic, epidemiological, and nutrition transitions present major new challenges for the health sector. Success in reducing fertility and raising life expectancy has led to a rapidly ageing population, and by 2035, one in four people living in China will be 60 years of age or older. Urbanization is also occuring rapidly. Advances in technology, transportation and communication have led to a decrease in physical activity, as well as to shifts to less physically intense occupations. There are 350 million smokers in China, and spending on tobacco increases with higher income levels.

Nutritional status and micronutrient deficiency remain contributing factors to maternal and child mortality, particularly in rural areas. At the same time, the traditional Chinese diet comprising mainly vegetables and grains has changed dramatically since the 1980s. Rapid expansion of the agro-food industry was spurred by policies in the 1980s and 1990s, including the decentralization of the agricultural production system, privatization of food retailing, and foreign investment. Diets in China today have changed as a result of these policies. Between 1989 and 2000, the percentage of female and male adults classified as overweight doubled and tripled, respectively.

Major social transitions and rapid development are contributing to new health challenges. Chronic diseases already account for 80% of deaths and 70% of disability, and the economic loss from the three

major noncommunicable conditions (heart disease, stroke, and diabetes) was estimated at $558 billion between 2005 and 2015. A large part of this loss is due to premature death and disabilities among adults between 35 and 69 years of age. The indirect costs to the economy resulting from lost productivity attributable to obesity and diet-related noncommunicable diseases alone are projected to reach 8.7%of GDP by 2025.

The lack of data remains a problem in providing a thorough assessment of the health situation in China. It is particularly important to monitor the situation at provincial levels, given the size of China and substantial variation on health indicators across and within provinces. For example, good quality, independent survey data providing provincial estimates of child and maternal mortality remain unavailable; certain vulnerable population groups, such as migrants, are not included in routine data collection efforts; no survey in China collects nationally representative data about the availability, affordability, and use of essential medicines; and data are lacking to assess changes in the knowledge of AIDS among young people over time. There is a need for more systematic monitoring and evaluation of programmes, pilot schemes and community-based initiatives to better inform health policies.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	中华人民共和国国民经济和社会发展第十一个五年规划纲要
Specification	:	China's 11th Five-Year Plan
Web address	:	http://www.china.org.cn
Title 2	:	*2007 NPC & CPPCC Sessions*
Features	:	The National People's Congress (NPC) approved reports on government work, economic and social development, the central and local budgets, the work of the NPC Standing Committee, and the work of the Supreme People's Court and the Supreme People's Procuratorate
Title 3	:	*Report on China's Economic and Social Development Plan*
Features	:	Report on the Implementation of the 2006 Plan for National Economic and Social Development and on the 2007 Draft Plan for National Economic and Social Development, delivered at the Fifth Session of the Tenth National People's Congress on March 5, 2007
Web address	:	http://www.china.org.cn
Title 4	:	*Building a new socialist countryside*
Features	:	China's central Government recently released an important policy document on "building a new socialist countryside," and established it as one of the primary objectives of the 11th Five-Year Guidelines for National Economic and Social Development (2006-10)
Web address	:	http://www.china.org.cn
Title 5	:	*The outline of the Eleventh Five-Year Plan*
Web address	:	http://en.ndrc.gov.cn/
Title 6	:	*Health, poverty and economic development*
Operator	:	WHO and China State Council Development Research Center. Beijing. 2006.
Web address	:	http://www.wpro.who.int/china
Title 7	:	*A health situation assessment of the People's Republic of China.*
Operator	:	United Nations Health Partners Group in China, July 2005.
Web address	:	http://www.wpro.who.int/china
Title 8	:	*China's Progress Towards the Millennium Development Goals 2008 Report*
Operator	:	Ministry of Foreign Affairs of the People's Republic of China and United Nations System in China
Web address	:	http://www.undg.org/docs/11327/China's-Progress-towards-the-MDGs-2008.pdf

6. ADDRESSES

MINISTRY OF HEALTH

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Website	:	http://www.moh.gov.cn
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WHO REPRESENTATIVE IN THE PEOPLE'S REPUBLIC OF CHINA

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Website	:	http://www.wpro.who.int/china

CHINA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	9600.00			2007	1
2	**Estimated population ('000s)**	1 334 740.00	686 520.00	648 220.00	2009	2
3	**Annual population growth rate (%)**	0.80	...	....	1996-2006	3
4	**Percentage of population**					
	- 0–4 years	...	...	...		
	- 5–14 years	18.50 [a]	...	...	2009	2
	- 65 years and above	8.50	...	...	2009	2
5	**Urban population (%)**	46.60	...	...	2009	2
6	**Crude birth rate (per 1000 population)**	12.13	...	...	2009	2
7	**Crude death rate (per 1000 population)**	7.08	...	...	2009	2
8	**Rate of natural increase of population (% per annum)**	0.51	...	...	2009	2
9	**Life expectancy (years)**					
	- at birth	71.40	69.60	73.70	2000	3
	- Healthy Life Expectancy (HALE) at age 60	...	13.10	14.70	2002	4
10	**Total fertility rate (women aged 15–49 years)**	1.74			2005	18
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	91.60	95.65	87.56	2007	6
12	**Per capita GDP at current market prices (US$)**	22 698.00 [b]			2008	6
13	**Rate of growth of per capita GDP (%)**	...				
14	**Human development index**	0.77			2007	7
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Health care waste generation (metric tons per year)**	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	**Selected communicable diseases**								
	Hepatitis viral	1 425 020	...	...	1018	...	...	2009	8
	- Type A	43 841	...	...	21	...	...	2009	8
	- Type B	1 179 607	...	...	792	...	...	2009	8
	- Type C	131 849	...	...	141	...	...	2009	8
	- Type E	20 275	...	...	24	...	...	2009	8
	- Unspecified	49 448	...	...	40	...	...	2009	8
	Cholera	85	...	...	0	0	0	2009	8
	Dengue/DHF	305 [p]	...	...	0	0	0	2009	8
	Encephalitis	3913	...	...	172	...	...	2009	8
	Gonorrhoea	119 824	...	...	0	0	0	2009	8
	Leprosy	1597	1086	511	...	...	...	2009	9
	Malaria	14 491	...	...	12	...	...	2009	8
	Plague	12	...	...	3	...	...	2009	8
	Syphilis	306 381	...	...	63	...	...	2009	8
	Typhoid fever	16 938 [q]	...	...	9	...	...	2009	8
17	**Acute respiratory infections**	...	...	...	213 900 [c]	...	...	2004-05	10
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	975 821	...	...	...	...	...	2008	9
	- New pulmonary tuberculosis (smear-positive)	462 596	...	...	...	...	...	2008	9
20	**Cancers**								
	All cancers (malignant neoplasms only)	2740 000	...	...	1885 500 [c]	...	...	2004-05	10
	- Breast	...	...	...	...	...	32 668	2004-05	10
	- Colon and rectum	...	...	...	85 719 [c]	52 397 [c]	33 322	2004-05	10
	- Cervix			...			16 020	2004-05	10
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	314 266 [c]	235 446 [c]	78 820 [c]	2004-05	10
	- Oesophagus	...	...	...	185 319 [c,d]	134 055 [c]	51 265	2004-05	10
	- Stomach	...	...	...	298 020 [c]	209 588 [c]	88 432 [c]	2004-05	10
	- Trachea, bronchus, and lung	...	...	...	373 083 [c]	266 068 [c]	107 015 [c]	2004-05	10
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	13 160 000	...	...	1 895 800 [c]	...	...	2004-05	10
	- Hypertension	73 100 000	...	...	...	...	...	2004-05	10
	- Ischaemic heart disease	23 140 000	...	...	1 252 000 [c]	...	...	2004-05	10
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	13 360 000	...	...	...	...	...	2004-05	10
23	**Mental disorders**	...	...	...	...	...	...		
24	**Injuries**								
	All types	...	...	...	857 800 [c]	...	...	2004-05	10
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Disease of the circulatory system	...	...	...	1370.00	...	...	2008	6
	2. Diseases of the respiratory system	...	...	...	1020.00	...	...	2008	6
	3. Diseases of the digestive system	...	...	...	910.00	...	...	2008	6
	4. Pregnancy, childbirth, and postpartum complications	...	...	...	900.00	...	...	2008	6
	5. Injury and poisoning	...	...	...	620.00	...	...	2008	6
	6. Cerebrovascular diseases	...	...	...	410.00	...	...	2008	6
	7. Diseases of the genito-urinary system	...	...	...	390.00	...	...	2008	6
	8. Hypertension	...	...	...	320.00	...	...	2008	6
	9. Malignanant cancers	...	...	...	290.00	...	...	2008	6
	10. Musculo-skeletal conditions	...	...	...	270.00	...	...	2008	6

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms	…	…	…	166.97 [e]	204.00 [e]	129.22 [e]	2008	3
	2. Heart diseases	…	…	…	121.00 [e]	123.45 [e]	118.49 [e]	2008	3
	3. Cerebrovascular diseases	…	…	…	120.79 [e]	127.78 [e]	113.66 [e]	2008	3
	4. Diseases of respiratory system	…	…	…	73.02 [e]	83.41 [e]	62.44 [e]	2008	3
	5. Injury and poisoning	…	…	…	31.26 [e]	38.46 [e]	23.92 [e]	2008	3
	6. Endocrine, nutritional and metabolic disease	…	…	…	21.09 [e]	18.72 [e]	23.51 [e]	2008	3
	7. Diseases of the digestive system	…	…	…	17.60 [e]	20.19 [e]	14.96 [e]	2008	3
	8. Disease of the genitourinary system	…	…	…	6.97 [e]	7.26 [e]	6.68 [e]	2008	3
	9. Disease of the nervous system	…	…	…	6.34 [e]	6.62 [e]	6.05 [e]	2008	3
	10. Mental disorders	…	…	…	3.69 [e]	3.21 [e]	4.18 [e]	2008	3
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**						89.60	2006	11
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						…		
29	**Percentage of pregnant women with anaemia**						18.45	2006	12
30	**Neonatal mortality rate (per 1000 live births)**	10.20 [f]		…		…		2008	3
31	**Percentage of newborn infants weighing less than 2500 g at birth**	2.35		…		…		2008	6
32	**Immunization coverage for infants (%)**								
	- BCG	99.50		…		…		2009	9
	- DTP3	99.27		…		…		2009	9
	- Hepatitis B III	99.13		…		…		2009	9
	- MCV2	97.76		…		…		2009	9
	- POL3	99.30		…		…		2009	9
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			…			…		
	- Eclampsia			…			499 [g]	2008	3
	- Haemorrhage			…			1852 [g]	2008	3
	- Obstructed labour			…			708 [g]	2008	3
	- Sepsis			…			…		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	…	…	…	…	…	…		
	- Diphtheria	0	0	0	…	…	…	2009	9
	- Measles	52 461	…	…	…	…	…	2009	9
	- Mumps	299 329	…	…	…	…	…	2009	9
	- Neonatal tetanus	1412	…	…	…	…	…	2009	9
	- Pertussis (whooping cough)	1612	…	…	…	…	…	2009	9
	- Poliomyelitis	0	0	0	…	…	…	2009	9
	- Rubella	69 860	…	…	…	…	…	2009	9
	- Total Tetanus	…	…	…	…	…	…		
	Health facilities								
35	**Facilities with HIV testing and counseling services**						7335 [o]	2009	13

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	13 364	2 271 102	2009	3
		- Specialized hospitals	6444 [h]	802 319 [h]	2009	3
		- District/first-level referral hospitals	105 410 [i]	2 024 572 [i]	2009	3
		- Primary health care centres	186 759 [n]	161 833 [n]	2009	3
	Private health facilities	- Hospitals	3887	163 829	2008	3
		- Outpatient clinics	126 089	135	2008	3
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			209 290.00	2008p	19
	- total expenditure on health as % of GDP			4.83	2008p	19
	- per capita total expenditure on health (in US$)			157.60	2008p	19
	Government expenditure on health					
	- amount (in million US$)			104 470.00	2008p	19
	- general government expenditure on health as % of total expenditure on health			49.95	2008p	19
	- general government expenditure on health as % of total general government expenditure			11.60	2008p	19
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.35	2008p	14
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			50.05	2008p	19
	- out-of-pocket expenditure on health as % of total expenditure on health			40.42	2008p	19
	Exchange rate in US$ of local currency is: 1 US$ =			6.95	2008p	14, 19
38	**Health insurance coverage as % of total population**			87.4	2008	24

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	2435 901 [j]	…	…	…	…	…	…	2009	3
		- Ratio per 1000 population	1.83	…	…	…	…	…	…	2009	3
	Dentists	- Number	50 504 [l]	…	…	…	…	…	…	2005	3
		- Ratio per 1000 population	0.04 [k]	…	…	…	…	…	…	2005	3
	Pharmacists	- Number	456 481	…	…	…	…	…	…	2009	3
		- Ratio per 1000 population	0.34	…	…	…	…	…	…	2009	3
	Nurses	- Number	2457 256	…	…	…	…	…	…	2008	3
		- Ratio per 1000 population	1.84	…	…	…	…	…	…	2008	3
	Midwives	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
40	**Annual number of graduates**	Physicians	409167 [m]	…	…	…	…	…	…	2008	3
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	40863	…	…	…	…	…	…	2005	16

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	130426	...	...	...	...	...	...	2005	16
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	..	..	..	..	..	..		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	..	..	..	..	..	..		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	..	..	..	..	..	..		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	6.90	...	...	2005	5
43	Infant mortality rate (per 1000 live births)	14.90 [h]	...	...	2008	3
44	Under-five mortality rate (per 1000 live births)	18.50 [h]	...	...	2008	3
45	Proportion of 1 year-old children immunised against measles	98.62	...	...	2009	9
46	Maternal mortality ratio (per 100 000 live births)	34.20 [h]			2008	3
47	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	96.30			2009	3
48	Contraceptive prevalence rate	89.74	...	...	2007	15
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	92.20			2009	3
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	0.06	0.04	0.02	2009	13
54	Percentage of people with advanced HIV infection receiving ART	62.40	...	...	2009	13
55	Malaria incidence rate per 100 000 population	1.06	...	...	2009	8
56	Malaria death rate per 100 000 population	0.00	...	...	2009	8
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	100.00	100.00	100.00	2009	8
59	Tuberculosis prevalence rate per 100 000 population	88.00	...	...	2008	9
60	Tuberculosis death rate per 100 000 population	12.00	...	...	2008	9
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	72.00	...	...	2008	9
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	94.00	...	...	2007	9
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	89.00	98.00	82.00	2008	17
64	Proportion of population using an improved sanitation facility	55.00	58.00	52.00	2008	17
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure refers to 0-14 years
b	Current market prices 2008
c	The number of death is calculated according to the rates but not reported data.
d	Totals may not tally due to some reported cases with no gender breakdown.
e	Data refers to certain region (data from city, not county).
f	Figure refers to Surveillance Region (per 1000 live births)
g	Based on cause-specific death rates per 100,000, and 16.1 million livebirths in 2008 from registry of the Ministry of Public Security, and included correction for underreporting based on a yearly surveillance report. Amniotic flu embolism reported as obstructed labor.
h	Figure include TCM hospitals and and other specialized hospitals
i	Figure include health service centre for community, urban health centre and tonwhsip health centre
j	Licensed doctors
k	Computed by Health System Development team of WHO China Office.
l	Revised data for registered dentists.
m	Source of original data: Chinese Education Statistical Yearbook
n	Figure include outpatient department, clinic MCH centre and specialised disease prevention and treatment institute.
o	Figure includes mainly VCT sites established in CDC system or inside hospital.
p	Figure refers to dengue fever
q	Figure refers to paratyphoid

Sources:	
1	Government of China. [http://www.gov.cn/]
2	Statistical Communique of the People's Republic of China on the 2009 National Economic and Social Development. National Bureau of Statistics of China [http://www.stats.gov.cn/english/].
3	Chinese Health Statistical Digest 2006, 2007, 2008, 2009, and online statistics Ministry of Health, http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohwsbwstjxxzx/s8208/201004/46556.htm
4	World health report 2004. Changing history. Geneva, World Health Organization, 2004.
5	Ministry of Foreign Affairs, UN system in China. China's Progress Towards the Millennium Development Goals, 2008 Report, page 25.
6	*China Statistical Yearbook 2009* . National Bureau of Statistics of China.
7	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
8	Ministry of Health of the People's Republic of China [http://www.moh.gov.cn/]
9	WHO Regional Office for the Western Pacific, data received from technical units
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12	Midterm Evaluation report on the Implementation of the National Programme of Action for Child Development in China (2001-2005), NWCCW.
13	2010 UNGASS. This figure includes mainly VCT sites established in CDC system or inside Hospital.
14	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html.
15	National Health Services Survey 2008. Center for Health Statistics and Information, Ministry of Health.
16	China Health Personnel Report 2006
17	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]
18	2006 National sample survey of population and family planning
19	China total expenditure on health report 2008.

Cook Islands

1. CONTEXT

1.1 Demographics

The population of Cook Islands decreased between 1996 and 2001 due to outmigration, but then began to increase again, with an estimated 22 900 people in 2009. Around 28.6% are below 15 years of age and about 7.9% are 65 years and above.

In 2009, overall life expectancy at birth was estimated at 72 years: 70 years for men and 73 years for women. The crude birth rate was 19.2 per 1000 population, and the crude death rate 5.6 per 1000 resident population in 2009.

1.2 Political situation

Cook Islands has a unicameral, democratic parliament with 24 elected members who serve parliamentary terms of five years. However, there have been four government changes since 1999. The current Prime Minister, Jim Marurai, was elected in September 2005. The Government has given priority to education, health, human resources and outer island development.

1.3 Socioeconomic situation

The country went through some economic difficulties during the period from 1996 to 1997. Since then, there have been public sector reforms, the sale of state assets and the stimulation of the private sector, all of which have led to the growth and strengthening of financial and economic management. The four leading generators of income are tourism, fishing, agriculture and financial services. Tourism is the main industry and accounts for around 54% of gross domestic product (GDP).

GDP was estimated at almost 286 million New Zealand dollars (approximately US$ 211 million) and 13 558 New Zealand dollars (approximately US$ 9991) per capita in 2007. The country's focus on development has been affected by various challenges, such as the emigration of skilled workers to New Zealand, an unstable political situation and the insufficient and inequitable distribution of resources. Of central importance is the delivery of health services to all the islands.

In 2008, about 98% of the urban population had access to a clean, safe water supply and 100% had adequate sanitation facilities in both urban and rural areas.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Infectious diseases are rarely seen and usually occur as imported cases. A water supply and sanitation improvement programme, with the building of flush toilets in all schools and health centres on the outer islands, has enhanced the reduction in these diseases and probably also septic skin disease, rheumatic fever and obstructive airways disease. Parasitic intestinal worm disease has been greatly reduced by improved water and sanitation. There has been no case of leprosy in the last ten years. The incidence of sexually transmitted infections (STI) varies. Syphilis is rare, while gonorrhoea, candidiasis, trichomoniasis and chlamydial infection are relatively common. The prevalence of condom use is low. The mass drug administration (MDA) programme for elimination of filariasis continues as part of the WHO Filariasis Elimination Programme. A small-scale blood survey was conducted before the 2001 MDA, in which 460 people from four different islands were randomly tested using ICT test kits. MDA coverage in 2001 was 91.3%, but dropped to 79.2% in 2008.

Noncommunicable diseases, such as hypertension, diabetes, cancer, coronary heart disease, obesity, and injuries and poisonings, continue to be major public health problems. According to a WHO consultancy report in 2001, the prevalence of diabetes is 11.8% for males and 3.8% for females (not including patients with well controlled pre-existing diabetes). The prevalence of obesity is 48.4% for males and 36.2% for females. According to hospital records, 63% of registered patients in 1980-2009 were reported to have hypertension, 16% having both hypertension and diabetes and 21% having diabetes only.

2.2 Outbreaks of communicable diseases

The two main infectious disease outbreak since the dengue outbreaks in 1991 were the dengue outbreaks in 1995 (779 cases), 1997 (1652), 2001-02 (2277), 2006 (468), 2007, (1224), 2008 (89) and 2009 with (1335). In addition, a short mumps outbreak occurred in 2007, with 562 cases reported.

2.3 Leading causes of mortality and morbidity

The leading causes of morbidity and mortality are noncommunicable diseases. Disease of the circulatory system continued to be the leading cause of mortality in the last three years, accounting for 36% of deaths in 2009.

2.4 Maternal, child and infant diseases

There has been no case of maternal mortality since 1993. The infant mortality rate was 7.1 per 1000 live births in 2009. During the 2008-2009 financial year, the country's Expanded Programme on Immunization aimed to achieve 100% coverage.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

To achieve the vision of "accessible quality health for all Cook Islanders", the following health issues are being targeted for priority action.

(1) Sexually transmitted infections, including HIV/AIDS: The prevalence of trichomoniasis and chlamydial infection is relatively high, while the prevalence of condom use is low. The objective is to develop a strategy on STI control, intensify sexual health education and promotion of condom use, and explore the need for qualified counsellors.

(2) Communicable disease surveillance and response: This programme focuses on increasing awareness and formulating and developing a protocol on dengue management to avoid future epidemics of dengue fever, as well as improving vector control and surveillance.

(3) Healthy settings and environment: A healthy environment will be created and promoted through a multisectoral approach and partnerships to improve healthy lifestyles, minimize the risk of disease and reduce the need for hospital and other health services through:

- evaluation of the effectiveness of health education and promotion activities and strengthening of the concepts approach; and
- provision of special training for health personnel and other stakeholder agencies to enable them to deliver services satisfactorily.

(4) Child and adolescent health and development: Child and adolescent health will be further strengthened through increasing awareness of risky behaviours, reducing teenage pregnancy, and reducing STI, with emphasis on:

- conducting seminars that target adolescents to enhance their knowledge of safer sex practices; and

- increasing knowledge on risky behaviours through awareness programmes on television and radio and in newspaper articles.

(5) Reproductive health: There are insufficient trained and skilled personnel to provide quality reproductive health services at various levels of the health care system. At present, there is only one family planning nurse, assisted by a retired staff nurse. There is an immediate need to train younger nurses in technical and management skills.

The responsibilities of husbands or male partners will be emphasized. Through training, their awareness and understanding of the reproductive health needs of women during pregnancy, childbirth and after delivery, and of family planning will be enhanced.

(6) Noncommunicable diseases and dental health: A more vigorous effort will be made to change the attitudes of people through health education and promotion. Technical training of health educators in healthy living (e.g. diet, exercise) is part and parcel of this programme. Monitoring and management of noncommunicable diseases will be strengthened.

Properly trained dental personnel are required for each island to strengthen preventive dental care and the treatment of common dental diseases. There is also a need to upgrade facilities, including rooms and dental equipment.

(7) Tobacco Free Initiative: The Global Youth Tobacco Survey, conducted in 2002, needs to be extended to examine smoking prevalence among adults. The results of the survey will determine and guide the development of the tobacco control programme and strengthen the nationwide promotion of healthy lifestyles, and will reduce the toll of tobacco-related mortality and associated diseases.

(8) Human resource development: Workforce planning has been identified as the key strategy to meet the need for skilled health workers. An increase in the number of qualified health workers with skills tailored towards specific needs of the population is critical if health objectives are to be met.

Developing leadership and management skills will be essential in the transformation of the quality of care currently being delivered to the people of Cook Islands. Training is needed to help health personnel communicate with, inform and educate their patients.

3.2 Organization of health services and delivery systems

While the population on the main island, Rarotonga, has access to the best health care in the country, those on the outer islands, especially the Northern Islands, do not. There is an urgent need to address and rectify this disparity. It is therefore of vital importance that the delivery of health services to the outer islands be addressed, especially the availability of drugs, the deficiency in equipment and the provision of properly trained health staff to provide services.

In 2001, the Ministry of Health opened a new hospital wing that provides ample room for laboratory services, maternal health care, and statistics. There is also a library and a conference room to assist in continuous medical education. A telehealth venture is also being established, which will provide distance-learning education for doctors, nurses and other health staff in Rarotonga and some of the outer islands to improve human resource development and strengthen health services. At the same time, telehealth will be used to consult specialists overseas in regard to problematic cases. Efforts are also being concentrated on continuing medical education and health staff training, both in-country and overseas.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

In 2008, total health expenditure amounted to 13 million New Zealand dollars (US$ 9.2 million), with per capita expenditure on health of US$ 458.

3.5 Human resources for health

During recent years, the Ministry of Health has concentrated on providing sufficient general practitioners to provide health services in the outer islands. To date, there are only two islands, Palmerston and Rakahanga, without a resident doctor. However, there are health officers on these two islands. The Ministry of Health has also provided extra doctors at the Rarotonga Hospital so that services are provided 24 hours a day without any doctor having to work more than eight hours a day.

In the absence of resident dental personnel, the Ministry of Health recently employed two flying dentists to visit the outer islands. Currently, on most of the islands, there are no dental personnel, a lack of proper dental planning, and a lack of oral health promotion and education, preventive care and constant review. There are also no proper facilities or equipment. The high level of "decayed, missing or filled (DMF)" reports clearly shows the lack of diagnosis of dental caries and the absence of restorative treatment for tooth decay. There is also a need to review and improve oral health safety procedures to maintain the provision of quality health care services.

The health infrastructure is well developed. There is a general hospital that is currently renovated with 70 beds in Rarotonga and six primary health care centres. As of 2004, there were 22 physicians, 11 midwives, 52 nurses and 20 dentists.

3.6 Partnerships

New Zealand remains the largest donor, while Australia and the Asian Development Bank provide significant inflows geared towards capacity-building, outer island development and human resource development. WHO is the fourth largest donor and provides support for human development for health, health care delivery and outer island devolution. Other United Nations agencies, agencies based in the Pacific region, and two bilateral donors make up the remaining donor support to the country. Cook Islands has received ad hoc grants and technical support from the governments of China and Japan and has progressed significantly in aid discussions with the European Union.

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

Cook Islands has produced two national Millennium Development Goal reports. The first was prepared in 2005 by the National MDG working group, the Cook Islands Association of Non-Government Organizations (CIANGCO) and the United Nations Country Team of the United Nations Development Programme (UNDP) Office in Samoa. The second report was published in January 2010 by the Central Planning and Policy Office/ Office of the Prime Minister, in association with UNDP. According to the reports, Cook Islands has made good progress towards achieving the MDGs by 2015.

Goal 4: Reduce child mortality

Child mortality rates in Cook Islands have been reduced. The number of under-five deaths decreased from six in 2001 to two in 2008, while the number of infant deaths also fell, from three in 2001 to two in 2008. The proportion of one-year-old children immunized against measles increased from 87% in 2001 to 97% in 2008.

Goal 5: Improve maternal health

Maternal mortality goals and access to skilled health personnel during birth have been achieved. This success can be attributed to the national maternal and child health programme, as well as the upgraded services of the maternity ward and the gynaecology services that are now available in the hospital.

All births throughout the islands are attended by skilled health personnel. The Ministry of Health has embarked on training nurses and enhancing the skills of registered nurses to enable them to become nurse practitioners and midwives. Once they are trained in health service delivery, the intention is for them to return to their home islands to help improve infant and maternal health services for all the island communities.

Goal 6: Combat HIV/AIDS, malaria and other diseases

There has been no registered on-island HIV infection and there are no more reported new tuberculosis cases in Cook Islands. The improvement in tuberculosis can be attributed to public health immunization, awareness campaigns and health inspections.

While there is some growing concern about STI prevalence and its implication for the spread of HIV in the future, the real worry for the country is the continuing increase in NCDs, such as diabetes, hypertension, heart diseases, obesity, cancer, poisonings and accidents.

Goal 7: Ensure environmental sustainability

Between 2001 and 2008, there was a decrease in the proportion of the population with access to safe drinking-water. One possible explanation for the decline is the rising dependence on bottled water for drinking.

The proportion of the population with access to improved sanitation, on the other hand, has increased. This increase is explained by the fact that pour-flush and flush toilets were combined in the counting.

Goal 8: Develop a global partnership for development

Since 2001, the country has been achieving 100% coverage in the supply of essential medicines and other medical supplies to all health clinics, hospitals and services. Support from WHO and other international development partners complements the Ministry of Health's efforts in this area.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*2007 Annual statistical bulletin.*
Operator	:	Ministry of Health Medical *Records* Unit
Web address	:	http://www.health.gov.ck
Title 2	:	*Population Estimates and Vital Statistics*
Operator	:	Cook Islands Statistics Office
Web address	:	http://www.stats.gov.ck/
Title 3	:	*Cook Islands statistical bulletin, Census of Population and Dwellings 2006: Preliminary result*
Operator	:	Cook Islands Statistics Office
Web address	:	http://www.stats.gov.ck
Title 4	:	*Cook Islands Millennium Development Goals Report 2009*
Operator	:	Office of the Prime Minister, Central Planning and Policy Office
Web address	:	http://www.spc.int/prism/MDG/Countries_natrpts/CK_MDGReport_2009.pdf

6. ADDRESSES

MINISTRY OF HEALTH

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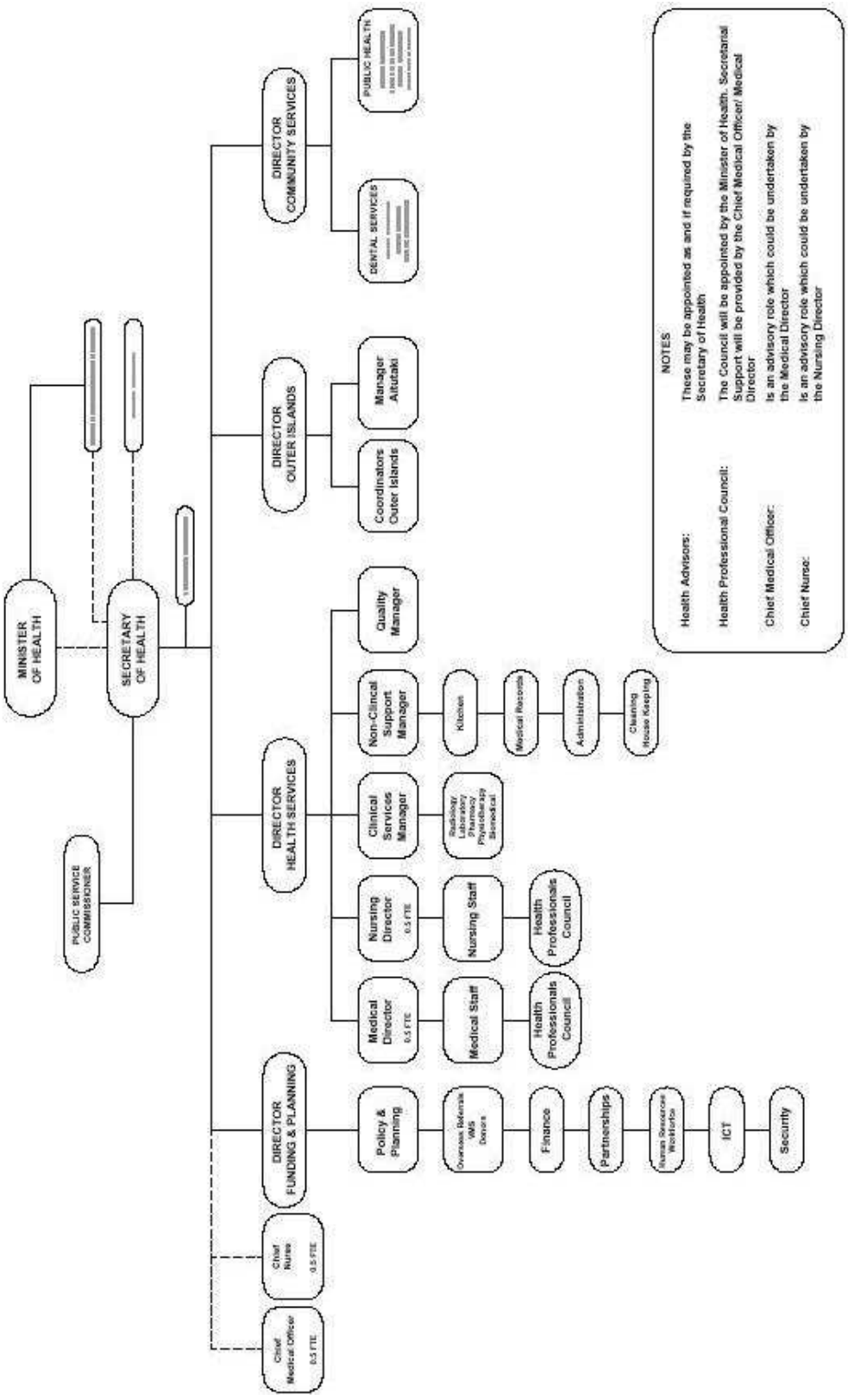
Telephone	:	(682) 22664 (Hospital), (682) 29664 (Admin)
Fax	:	(682) 22670 (Hospital), (682) 23109 (Admin)
Website	:	http://www.health.gov.ck/

WHO REPRESENTATIVE IN SAMOA

Office Address	:	Office of the WHO Representative 4th Floor Ioane Viliamu Building, Beach Road, Tamaligi, Apia, Western Samoa

Postal Address	:	P.O. Box 77, Apia, Western Samoa
Official Email Address	:	who@sma.wpro.who.int
Telephone	:	(685) 23756/ 23757
Fax	:	(685) 23765

7. ORGANIZATIONAL CHART: Ministry of Health



COOK ISLANDS — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.24						2006	1
2	Estimated population ('000s)	22.90		...		...		2009p	2
3	Annual population growth rate (%)	1.70		...		...		2006	3
4	Percentage of population								
	- 0–4 years	9.21		9.24		9.17		2009 est	4
	- 5–14 years	19.39		19.85		18.91		2009 est	4
	- 65 years and above	7.87		7.25		8.53		2009 est	4
5	Urban population (%)	74.50		...		...		2009 est	5
6	Crude birth rate (per 1000 population)	19.20 [a]		...		...		2009p	2
7	Crude death rate (per 1000 population)	5.60 [a]		...		...		2009p	2
8	Rate of natural increase of population (% per annum)	1.36 [b]		...		...		2009p	2
9	Life expectancy (years)								
	- at birth	72.00 [c]		70.00 [c]		73.00 [c]		2009 est	6
	- Healthy Life Expectancy (HALE) at age 60	...		11.50		12.60		2002	7
10	Total fertility rate (women aged 15–49 years)	2.60						2009	6
	Socioeconomic indicators								
11	Adult literacy rate (%)	100.00		...		...		2009	6
12	Per capita GDP at current market prices (US$)	9991.18 [b]						2007p	8
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	...							
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)								
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases								
	Hepatitis viral								
	- Type A	...		...	...	...	...		
	- Type B	6 [d]		...	...	...	...	2009	6
	- Type C	0 [d]		0 [d]	...	...	...	2009	6
	- Type E	...		...	...	...	...		
	- Unspecified	...		...	...	...	...		
	Cholera	0 [d]		0 [d]	0	0	0	2005	1
	Dengue/DHF	170		...	0	0	0	2009	9
	Encephalitis	...		...	...	...	...		
	Gonorrhoea	16 [d]		...	...	...	...	2007	3
	Leprosy	0 [d]		0 [d]	...	...	...	2009	6, 9
	Malaria	0 [d]		0 [d]	...	...	...	2009	6
	Plague	0		0	0	0	0	2005	1
	Syphilis	2 [d]		...	...	...	...	2009	6
	Typhoid fever	0 [d]		0 [d]	0	0	0	2009	6
17	Acute respiratory infections	6776		...	...	...	...	2009	6
	- Among children under 5 years	...		...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	127	...	...	...	...	...	2009	6
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	2	...	...	...	...	...	2009	9
	- New pulmonary tuberculosis (smear-positive)	2	...	...	...	...	...	2009	9
20	**Cancers**								
	All cancers (malignant neoplasms only)	9	3	6	19	10	9	2009	13
	- Breast	1	0	1	5	1	4	2009	13
	- Colon and rectum	0	0	0	0	0	0	2009	13
	- Cervix			1			0	2009	13
	- Leukaemia	0	0	0	0	0	0	2009	13
	- Lip, oral cavity and pharynx	0	0	0	0	0	0	2009	13
	- Liver	0	0	0	0	0	0	2009	13
	- Oesophagus	0	0	0	3	1	2	2009	13
	- Stomach	0	0	0	0	0	0	2009	13
	- Trachea, bronchus, and lung	0	0	0	3 [e]	2 [e]	1 [e]	2009	13
21	**Circulatory**								
	All circulatory system diseases	...	...	...	30	14	16	2009	13
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	19	11	8	6	4	2	2009	13
	- Hypertension	106	...	...	15	4	11	2009	13
	- Ischaemic heart disease	...	...	...	5	2	3	2009	13
	- Rheumatic fever and rheumatic heart diseases	18	...	...	...	...	...	2009	13
22	**Diabetes mellitus**	67	...	...	8	5	3	2009	13
23	**Mental disorders**	...	...	...	0 [f]	0 [f]	0 [f]	2009	13
24	**Injuries**								
	All types	...	...	...	7 [g]	6 [g]	1 [g]	2009	13
	- Drowning	...	...	...	0	0	0	2009	13
	- Homicide and violence	5 [h]	...	...	...	...	...	2007	3
	- Occupational injuries	0	0	0	0	0	0	2005	9
	- Road traffic accidents	42 [i]	...	...	3 [i]	2 [i]	1 [i]	2009	13
	- Suicide	...	...	...	3 [j]	3 [j]	0 [j]	2009	13
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the circulatory system	386 [k]	215 [k]	171 [k]	1829.38 [b,k]	...	...	2007	3
	2. Injury, poisoning and certain other consequences of external causes	274 [k]	174 [k]	100 [k]	1298.58 [b,k]	...	...	2007	3
	3. Diseases of the respiratory system	240 [k]	118 [k]	122 [k]	1137.44 [b,k]	...	...	2007	3
	4. Certain infectious and parasitic diseases	163 [k]	72 [k]	91 [k]	772.51 [b,k]	...	...	2007	3
	5. Diseases of the genitourinary system	134 [k]	50 [k]	84 [k]	635.07 [b,k]	...	...	2007	3
	6. Diseases of the digestive system	130 [k]	82 [k]	48 [k]	616.11 [b,k]	...	...	2007	3
	7. Endocrine, nutritional and metabolic diseases	128 [k]	67 [k]	61 [k]	606.64 [b,k]	...	...	2007	3
	8. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	110 [k]	62 [k]	48 [k]	521.33 [b,k]	...	...	2007	3
	9. Diseases of the musculoskeletal system and connective tissue	107 [k]	72 [k]	35 [k]	507.11 [b,k]	...	...	2007	3
	10. Diseases of the eye and adnexa	73 [k]	37 [k]	36 [k]	345.97 [b,k]	...	...	2007	3

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	30	14	16	131.00 [b]	...	...	2009	13
	2. Neoplasms	19	10	9	82.97 [b]	...	...	2009	13
	3. Endocrine, nutritional and metabolic diseases	9	6	3	39.30 [b]	...	...	2009	13
	4. Injury, poisoning & certain other consequences of external cause	7	6	1	30.57 [b]	...	...	2009	13
	5. Symptoms, signs & abnormal clinical & laboratory findings	5	3	2	21.83 [b]	...	...	2009	13
	6. Diseases of the respiratory system	5	3	2	21.83 [b]	...	...	2009	13
	7. Diseases of the digestive system	4	3	1	17.47 [b]	...	...	2009	13
	8. Certain infectious and parasitic diseases	2	1	1	8.73 [b]	...	...	2009	13
	9. Diseases of the blood & bloodforming organs	1	1	0	4.37 [b]	...	...	2009	13
	10. Certain conditions originating in the perinatal period	1	0	1	4.37 [b]	...	...	2009	13
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					29.00 [l]		2007	3
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2009	13
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	7.10		...		...		2009	13
31	**Percentage of newborn infants weighing less than 2500 g at birth**	3.90		...		...		2009	13
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2009	9
	- DTP3	82.00		...		...		2009	9
	- Hepatitis B III	82.00		...		...		2009	9
	- MCV2	61.00		...		...		2009	9
	- POL3	82.00		...		...		2009	9
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			21			...	2007	3
	- Eclampsia			6 [l,m]			...	2007	3
	- Haemorrhage			22 [l,n]			...	2007	3
	- Obstructed labour			42 [l,o]			...	2007	3
	- Sepsis			4 [l,p]			...	2007	3
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	9
	- Diphtheria	0	0	0	...	...	...	2009	9
	- Measles	0	0	0	...	...	...	2009	9
	- Mumps	0	0	0	...	...	...	2009	9
	- Neonatal tetanus	0	0	0	...	...	...	2009	9
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	9
	- Poliomyelitis	0	0	0	...	...	...	2009	9
	- Rubella	0	0	0	...	...	...	2009	9
	- Total Tetanus	0	0	0	...	...	...	2009	9
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	70	2005	5
		- Specialized hospitals	0	0	2005	5
		- District/first-level referral hospitals	7	57	2005	5
		- Primary health care centres	73 [q]	...	2005	5
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	5	...	2005	5
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			9.15	2008p	10
	- total expenditure on health as % of GDP			4.30	2008p	10
	- per capita total expenditure on health (in US$)			457.75 [b]	2008p	10
	Government expenditure on health					
	- amount (in million US$)			8.45	2008p	10
	- general government expenditure on health as % of total expenditure on health			91.50	2008p	10
	- general government expenditure on health as % of total general government expenditure			12.40	2008p	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			8.33 [b]	2008p	10
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			8.50 [b]	2008p	10
	- out-of-pocket expenditure on health as % of total expenditure on health			7.69	2008p	
	Exchange rate in US$ of local currency is: 1 US$ =			1.42	2008p	10
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	22	...	...	...	...	22	0	2004	11
		- Ratio per 1000 population	1.08	...	...	...	...	1.08	0	2004	11
	Dentists	- Number	20	...	...	...	...	20	0	2004	11
		- Ratio per 1000 population	0.99	...	...	...	...	0.99	0.00	2004	11
	Pharmacists	- Number	1	1	0	...	...	1	0	2004	11
		- Ratio per 1000 population	0.05	0.05	0.00	...	...	0.05	0.00	2004	11
	Nurses	- Number	52	0	52	...	...	52	0	2004	11
		- Ratio per 1000 population	2.56	0	2.56	...	...	2.56	0.00	2004	11
	Midwives	- Number	11	0	11	...	...	11	0	2004	11
		- Ratio per 1000 population	0.54	0.00	0.54	...	...	0.54	0.00	2004	11
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	7.10	...	...	2009	6
44	Under-five mortality rate (per 1000 live births)	7.10	...	...	2009	6
45	Proportion of 1 year-old children immunised against measles	78.00	...	...	2009	6
46	Maternal mortality ratio (per 100 000 live births)	0.00			2009	6
47	Proportion of births attended by skilled health personnel	100.00			2009	6
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.40			2009	6
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.60			2009	6
48	Contraceptive prevalence rate	29.00 [r]	...	...	2007	3
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	100.00			2005	12
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	2.00	...	...	2007	9
56	Malaria death rate per 100 000 population	0.00	...	...	2007	9
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	32.00	...	...	2008	9
60	Tuberculosis death rate per 100 000 population	4.00	...	...	2008	9
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	102.00	...	...	2008	9
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	100.00	...	...	2007	9
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	...	98.00	...	2008	13
64	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2008	13
65	Proportion of population with access to affordable essential drugs on a sustainable basis	100.00	100.00	100.00	2009	6

Notes:	
…	Data not available
p	Provisional
est	Estimate
a	Figure is computed per thousand resident population as of 1992
b	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
c	Figures were estimated using complete life table method - health stats.
d	Figure refers to registered positive cases.
e	Figure refers to deaths due to malignant neoplasm of bronchus and lung.
f	Deaths caused by mental and behavioral disorders due to use of alcohol.
g	Figure refers to hospital admissions due to injury, poisoning and certain other consequences of external causes (ICD10 S00-T98).
h	Figure refers to hospital admissions due to assault (ICD10 X85-Y09).
i	Figure refers to hospital admissions due to transport accidents (ICD10 V01-V99).
j	Figure refers to hospital admissions due to intentional self-harm (ICD10 X60-X84).
k	Figure refers to Rarotonga only.
l	Figure refers to percentage of women of child-bearing ages (15-44 years old) who are current users of any type of family planning contraceptive.
m	Figure refers to hospital admissions due to edema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium (ICD10 O10-O16).
n	Figure refers to hospital admissions classified under maternal care related to the fetus and amniotic cavity and possible delivery problems (ICD10 O30-O48).
o	Figure refers to hospital admissions due to complications of labor and delivery (ICD10 O60-O75).
p	Figure refers to complications predominantly related to the puerperium (ICD10 O85-O92).
q	Figure includes 9 out-patient clinics, 8 dental clinics, 6 health centres and 50 child welfare clinics.
r	Figure refers to women currently practicing any type of family planning contraceptives.

Sources:	
1	Census of Population and Dwellings 2006, Preliminary Result. Cook Islands Statistical Bulletin. [http://www.spc.int/prism/Country/CK/stats/].
2	*Population Estimates and Vital Statistics* . Cook Islands Statistics Office. [http://www.stats.gov.ck/CurReleases/popnestVital/Population.pdf]
3	Annual Statistical Bulletin 2007. Cooks Islands Ministry of Health. http://www.health.gov.ck/docs/annual/2007%20Annual%20Bulletin.pdf
4	Population 2000-2015 by 1 and 5 year age groups, February 2010. Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme. [http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158]
5	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision. [http://esa.un.org/wup2009/unup/] Accessed on June 2010.
6	Annual Statistical Bulletin 2009. Cooks Islands Ministry of Health.
7	World health report 2004. Changing history. Geneva, World Health Organization, 2004.
8	Economic Statistics [http://www.stats.gov.ck/Statistics/Economic/econav.htm]
9	WHO Regional Office for the Western Pacific, data received from technical units
10	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
11	Annual Bulletin 2004. Cooks Islands Ministry of Health. http://www.health.gov.ck/default.asp.
12	Annual Statistical Bulletin 2005. Cooks Islands Ministry of Health. Http://www.health.gov.ck/default.asp
13	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

FIJI

1. CONTEXT

1.1 Demographics

Fiji has the largest population of all the South Pacific island countries, with an estimated 2010 population of 854 000: 433 000 males and 421 000 females. The average annual growth rate stands at 0.8%, this slow growth being due to a moderately low level of fertility and a high level of emigration, especially among Indo-Fijians. Fiji's Economic Exclusive Zone contains 332 islands covering a total land area of 18 333 square kilometres in 1.3 million square kilometres of the South Pacific Ocean. The population occupies around one-third of the 332 islands and is concentrated on the two largest islands, Viti Levu (10 429 square kilometres) and Vanua Levu (5556 square kilometres), with the nation's capital, Suva, located on Viti Levu. People in Fiji are living longer, with life expectancy standing at 68 years for males and 72 years for females.

1.2 Political situation

Since the coup d'etat of 5 December 2006, Fiji has been governed by a military-led government. In April 2009, the constitution was abrogated, and the Government is now being run by special presidential decrees. There is a proposed amendment to the current constitution, with an emphasis on electoral reform. The new timeline for a newly elected government is 2014.

1.3 Socioeconomic situation

Fiji, endowed with forest, mineral and fish resources, is one of the most developed of the Pacific island economies, although there is still a large subsistence sector. Sugar exports, remittances from Fijians working abroad and a growing tourist industry —with 300 000 to 400 000 tourists annually—are the major sources of foreign exchange. Fiji's sugar has special access to European Union (EU) markets, but will be harmed by the EU's decision to cut sugar subsidies. Sugar processing makes up one-third of industrial activity, but is inefficient.

The volatile political situation has had some adverse impact on the country's economy, particularly on tourism numbers and foreign investor confidence. Additionally, the EU has suspended all aid until the interim administration is able to hold a democratic election. Fiji's economy has been dependent on foreign exchange provided by remittances from Fijians working in the British Army, the United Nations, Iraq and Kuwait, and this has increased significantly over the years. The current global financial crisis is also expected to have a significant impact on the local economy and the Fiji dollar has been devalued to cushion some of the effects.

Fiji has a gross domestic product (GDP) of FJD 4861.3 million (US$ 2665.4 million) and a GDP per capita of FJD 5808 (US$ 3184.5), with a per capita GDP growth rate of 3.6%. Government income comes largely from customs duties and port dues, as well as taxation.

1.4 Risks, vulnerabilities and hazards

With the continuing rule of the interim administration and the many international pressures, Fiji is vulnerable to suffer economically, especially when the main income earner, tourism, is one of the industries being affected significantly. The sugar industry should be undergoing reform in an effort to improve its efficiency and production level, but this too remains vulnerable due to the current prevailing political situation.

2. HEALTH SITUATION AND TREND

Fiji generally has a good standard of health and compares well with other Pacific island nations. The country's health status met or exceeded most of the WHO goals for 2000. Such a status is due to

improved health standards, sound comprehensive health care programmes and the untiring efforts of the Ministry of Health in promoting healthy living for the population.

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Like many developing countries, Fiji is still undergoing an epidemiological transition and is faced with a double burden of communicable and noncommunicable disease. In addition, however, the alarming rise in injuries and accidents is producing a third burden that is projected to become a real concern in terms of both intentional and unintentional injuries.

The national health indicators compare favourably with other developing countries. Infant and child mortality rates, the maternal mortality ratio and the incidence of low birth weight have all shown gradual decreases over the last decade.

Noncommunicable diseases (NCD) such as diabetes, heart disease, high blood pressure, respiratory diseases and cancers, have now replaced infectious and parasitic diseases as the principal causes of mortality and morbidity. The revelation of the magnitude of NCD risk factors by the 2002 NCD STEPS survey highlighted the reasons: around 65% of population take one or less servings of fruit a day and there is a low rate of physical activity (25%). This information led to the formulation of the National NCD Strategy 2004-2008 to scale up efforts to curb the growing epidemic, which resulted in an excellent commitment from the Government (a 300% increase in the national NCD budget in the first year). The plan has been reviewed and one for 2010–2014 has been formulated.

HIV/AIDS is still a major challenge for Fiji. As of December 2007, there were 259 HIV-positive individuals, a large proportion of them between the ages of 20 and 29. With a window of five to 10 years from the time of infection to detection, it is clear that many are becoming infected while still in their teens. A strategic plan to prevent and control the spread and impact of HIV/AIDS and sexually transmitted infections (STIs) has been developed, and is being supported through a dedicated government budget, under the coordination of the National Advisory Committee on AIDS.

The threat of emerging and re-emerging communicable diseases, such as tuberculosis, severe acute respiratory syndrome (SARS) and highly pathogenic avian influenza A (H5N1), which pose international threats and would have socioeconomic impacts on Fiji, has highlighted the need for vigilance in surveillance, border control, detection capacity, investigation capacity and capacity to respond in a timely and coordinated manner.

Regional elimination initiatives include those for lymphatic filariasis (Pac ELF) and measles elimination. Control of hepatitis B is also being addressed. Fiji is a committed partner in these initiatives, which are being coordinated by WHO.

2.2 Outbreaks of communicable diseases

The persistence of typhoid fever, especially in the north of the country, is warranting greater attention. In addition, the threat of dengue infection and outbreaks will continue, given the many factors that could introduce the virus. To reduce the disease burden and the case-fatality rate, epidemiological and entomological surveillance must continue to improve, including better emergency preparedness to prevent and control epidemics, effective case management through sensitive diagnostics, infrastructure improvements and strengthened vector-control activities in an integrated vector-management mode.

Leptospirosis represents an underdiagnosed, underreported and misdiagnosed zoonotic infection that continues to spread to humans, with evidence showing shifts in clinical presentations and human pathogenic serovars. With the advent of eco-tourism, people are facing increased risk of acquiring the pathogenic organisms in the environment. Research and identification of animal reservoirs is planned.

2.3 Leading causes of mortality and morbidity

In 2008, the leading causes of mortality were diseases of the circulatory system at about 30% followed by endocrine, nutritional and metabolic diseases at about 20%. Neoplasms constituted about 10% of

mortalities. The other leading causes, which comprised about 30% of total mortalities included: infectious and parasitic disease; injuries and poisonings; diseases of the respiratory, genitourinary, digestive systems; and conditions of the perinatal period.

2.4 Maternal, child and infant diseases

Maternal, child and infant diseases are continuing to decline in Fiji. The infant mortality rate has fallen by 62% in the past 20 years and is now about 13.1 per 1000 live births. Good obstetrical services are contributing to a lower number of infant deaths, with about 98.8% of births being attended by trained medical personnel. The existence of protein-energy malnutrition among children less than five years of age, although minimal, remains a concern for public health, especially when these few are infected with diarrhoea and other infectious diseases that could make them vulnerable to fatality. The introduction of the integrated management of childhood illness (IMCI) strategy has strengthened what used to be the vertical ARI/CDD programme, and a similar integrated approach has been adopted for antenatal care.

2.5 Burden of disease

Although no proper burden-of-disease studies have been carried out, it is clear that the triple burden of communicable diseases, noncommunicable diseases and injuries is plaguing the health system in Fiji. The prematurity of NCD deaths especially is becoming an economic and development issue, as the age of men dying from cardiovascular disease falls every year. In a 2002 study carried out by the World Bank and the Secretariat of the Pacific Community (SPC), it was revealed that 38.8% of all treatment costs could be attributed to NCD and 18.5% to communicable diseases.

3. HEALTH SYSTEM

The Ministry of Health acknowledges that it is the right of every citizen of the Republic of Fiji, irrespective of race, sex, colour, creed or socioeconomic status, to have access to a national health system that provides a high quality health service.

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health Strategic Plan 2007-2011 has as its vision:

A well financed health care delivery system that fosters good health and well-being for all citizens

and as its mission:

To provide quality health services through strengthened divisional health structures for the people of Fiji.

The Plan focuses on five main thematic areas:

- Provision of affordable, well planned, quality health services to everyone in Fiji.
- Protection of the health of citizens through the review of formulations and appropriate policies, legislation, regulations and standards that safeguard health.
- Promotion of health through the development and maintenance of effective partnerships that empower all stakeholders in health promotion so as to reduce risk factors related to communicable and noncommunicable diseases.
- Development and retention of a valued, committed and skilled workforce to enhance the delivery of quality health services.
- Development and use of an integrated management system to empower managers to maximize resources and promote continuous improvement at all levels of health service delivery.

The Ministry of Health Strategic Plan 2007-2011 aims to achieve seven health outcomes:

- a reduced noncommunicable disease burden;
- a start in reversing the spread of HIV/AIDS and preventing, controlling or eliminating other communicable diseases;

- improved family health and reduced maternal morbidity and mortality;
- improved child health and reduced child morbidity and mortality;
- improved adolescent health and reduced adolescent morbidity and mortality;
- improved mental health; and
- improved environmental health through safe water and sanitation.

The work of the Ministry is based on the following values: Customer focus (being genuinely concerned that customers receive quality health care, respecting the dignity of all people); Equity (striving for an equitable health system and being fair in all dealings, irrespective of ethnicity, religion, political affiliation, disability, gender or age); Quality (pursuing high quality outcomes in all facets of activities); Integrity (committing to the highest ethical standards in all activities); and Responsiveness (responsive to the health needs of the population, noting the need for speed in delivery of urgent health services).

3.2 Organization of health services and delivery systems

The Ministry of Health provides services to two types of user: internal (provision of health care to citizens); and external (monitoring of compliance with statutes and regulation; issue of permits, certificates and reports; professional board functions; provision of health care to visitors; provision of accommodation and meals for staff; provision of training to health staff of the region).

Health services are delivered through 900 village clinics, 124 nursing stations, three area hospitals, 76 health centres, 19 sub-divisional medical centres, three divisional hospitals and three speciality hospitals with TB, leprosy and medical rehabilitation units at Tamavua Hospital and St. Giles Mental Hospital. There is also a private hospital,l located in Suva.

HIV/AIDS laboratory testing in Fiji has undergone assessment and validation testing and has commenced confirmatory testing under the guidance of the National Reference Laboratory (Melbourne, Australia)-WHO Collaborating Centre for HIV/AIDS and funding from the Global Fund. Testing will be for diagnosis, surveillance and monitoring of patients on antiretroviral treatment.

3.3 Health policy, planning and regulatory framework

The Ministry of Health Strategic Plan 2007-2011 was developed through extensive consultations with major stakeholders, including the private sector, nongovernmental organizations, central government agencies and senior staff of the Ministry of Health. The Strategic Plan has been developed in recognition of the Government's international commitments, the Government's Strategic Development Plan 2007 to 2011, the major health priorities for the people of Fiji and the planning requirements of the Ministry of Finance and National Planning. The Strategic Plan forms the framework for the development of annual corporate plans for the Ministry of Health for each successive year, from 2007 to 2011 inclusive.

3.4 Health care financing

The public health care system is heavily dependent on general taxation. The increasing demand for and cost of health care, coupled with limited resources, requires the Ministry of Health to place a greater focus on health care financing and cost-recovery strategies. The Ministry is examining a range of health-financing options, including social insurance. Moreover, the proposed financial management reform is expected to provide opportunities for revenue generation and retention. Hospital fees and charges for services, as determined in the Public Hospital and Dispensary Act, need to be reviewed. However, any cost-recovery strategies and fee structures introduced must ensure that disadvantaged groups in the community are not adversely affected.

The immediate priority of the Government is to shorten long queues, reduce long waiting lists and turnaround times and facilitate patient flow. The Ministry hopes to rise to the occasion and to continue to provide quality health care to improve the health status of all citizens through: implementation of the Clinical Services Plan; improved planning and delivery of effective public health and promotion activities; performance budgeting; identification of appropriate financing/resource options to complement the health budget; and implementation of appropriate prevention strategies. However, this may be hampered further by the current political situation and the effects of the global economic crisis.

3.5 Human resources for health

The 2008 health worker-to-population ratio was 1:2609 for doctors, 1:493 for nurses, 1:4580 for dentists. Increasing demand for services has led to an expansion in the number of private general practitioners and specialists practising in Fiji under the Fiji Medical Council.

Emigration of health professionals, including doctors, nurses and paramedics, has increased over the last few years. The Ministry of Health is reviewing the health workforce plan to ensure that the training of doctors and nurses is aligned with the requirements of the health system. A review of the various professional structures in health is being undertaken and appropriate strategies will be put in place. A focus will also be placed on retaining existing staff, training nurse practitioners, employing part-time highly skilled staff and increasing the training opportunities for health professionals.

Implementation of the Government's policy of reducing the retirement age for civil servants from 60 years to 55 years has greatly affected the human resource capacity within the Ministry of Health and will have a negative impact on the efficient delivery of health care services to the people of Fiji for some time.

3.6 Partnerships

With the idea of health being a collective responsibility, the Ministry of Health engages with other partners in delivering the best possible health care services to the people of Fiji. For noncommunicable diseases (NCD), health promotion, HIV/AIDS and suicide prevention there are national multisectoral committees that oversee and coordinate national implementation of the respective strategic plans developed by the same multi-stakeholders. These three committees are usually chaired by the Minister of Health, and members are from the permanent secretary or directorate level of government, non-state actors and civil society groups, including faith-based groups.

The Ministry also works in close partnership with the autonomous Fiji School of Medicine, the University of the South Pacific, Fiji Institute of Technology and other academic institutions for training of its staff members. At the regional level, WHO and the SPC are the main partners.

3.7 Challenges to health system strengthening

Fiji's health system compares relatively well with other Pacific island countries, but inadequate health financing and a shortage of health workers are hampering health care efforts. About 70%-80% of the population has access to health services, but only 40% have access to quality health services. Better government policy is needed to achieve health for all.

The country has a relatively well developed health system with an infrastructure of base hospitals in three geographical divisions, supported by area and subdivisional hospitals, health centres and nursing stations in the smaller towns and rural and remote areas. Clinical services for surgery, medicine, paediatrics, obstetrics and gynaecology, orthopaedics, ENT, emergency medicine and relevant support services, however, need to be strengthened.

Maintenance of appropriate levels of infrastructure and facility is vital for the delivery of health services. Over recent years, new facilities have been built and are in full operation in Nadi, Levuka, Vunidawa, and Taveuni. New infrastructure development is completed for Labasa Hospital, relocation of Navua Hospital, construction of a new hospital in Ba Nausori and the relocation of St Giles Hospital. As an ongoing activity, the Ministry of Health will continue to concentrate on maintaining and improving existing facilities. The safety of hospitals and health facilities in and during emergencies and disasters will be a challenge, especially in the face of changing weather patterns. During the course of the Health Strategic Plan 2007-2011, clinical services in the areas of cardiology, oncology, nephrology and hyperbaric medicine will be strengthened.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goal 4: Reduce child mortality

The under-five mortality rate fell from 27.8 per 1000 live births in 1990 to 23.2 in 2009. However, the target for 2015 is 9.2 per 1000 live births; this would mean a decrease of about 60%. Likewise, while the infant mortality rate declined from 16.8 per 1000 live births in 1990 to 15.2 in 2009, in order to achieve the expected MDG target by 2015, this figure would need to be more than halved over the next five years.

Goal 5: Improve maternal health

The maternal mortality ratio declined from 41.0 per 100 000 live births in 1990 to about 27.5 per 100 000 live births in 2009. However, due to large fluctuations over the period and the absence of a steady downward trend, it is not clear whether the expected target will be met in 2015. Overall, the proportion of births attended by skilled health personnel remained high from 1990 (98%) to 2008 (98.8%). The contraceptive prevalence rate ranged between 35% and 45% between 2000 and 2008.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Fiji today 2006/2007*
Operator	:	Ministry of Information & communications
Web address	:	http://www.fiji.gov.fj
Title 2	:	*Ministry of Health, data update, April 2008*
Operator	:	Health Information Unit
Title 3	:	*Corporate Plan 2008, Ministry of Health*
Operator	:	Ministry of Health
Title 4	:	*Strategic Plan 2007 – 2011: Ministry of Health*
Operator	:	Ministry of Health
Title 5	:	*Pacific Regional Information System (PRISM), SPC,*
Operator	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int/prism

6. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	Ministry of Health, 88 Amy Street., Toorak
Postal Address	:	PO Box 2223, Govt Bulding, Suva
Official Email Address	:	info@health.gov.fj
Telephone	:	679-3306177
Fax	:	679-3 306163

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One, Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	PO Box 113, Suva, Fiji.
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166/ 3234 177
Website	:	http://www.wpro.who.int/southpacific

7. ORGANIZATIONAL CHART: Ministry of Health

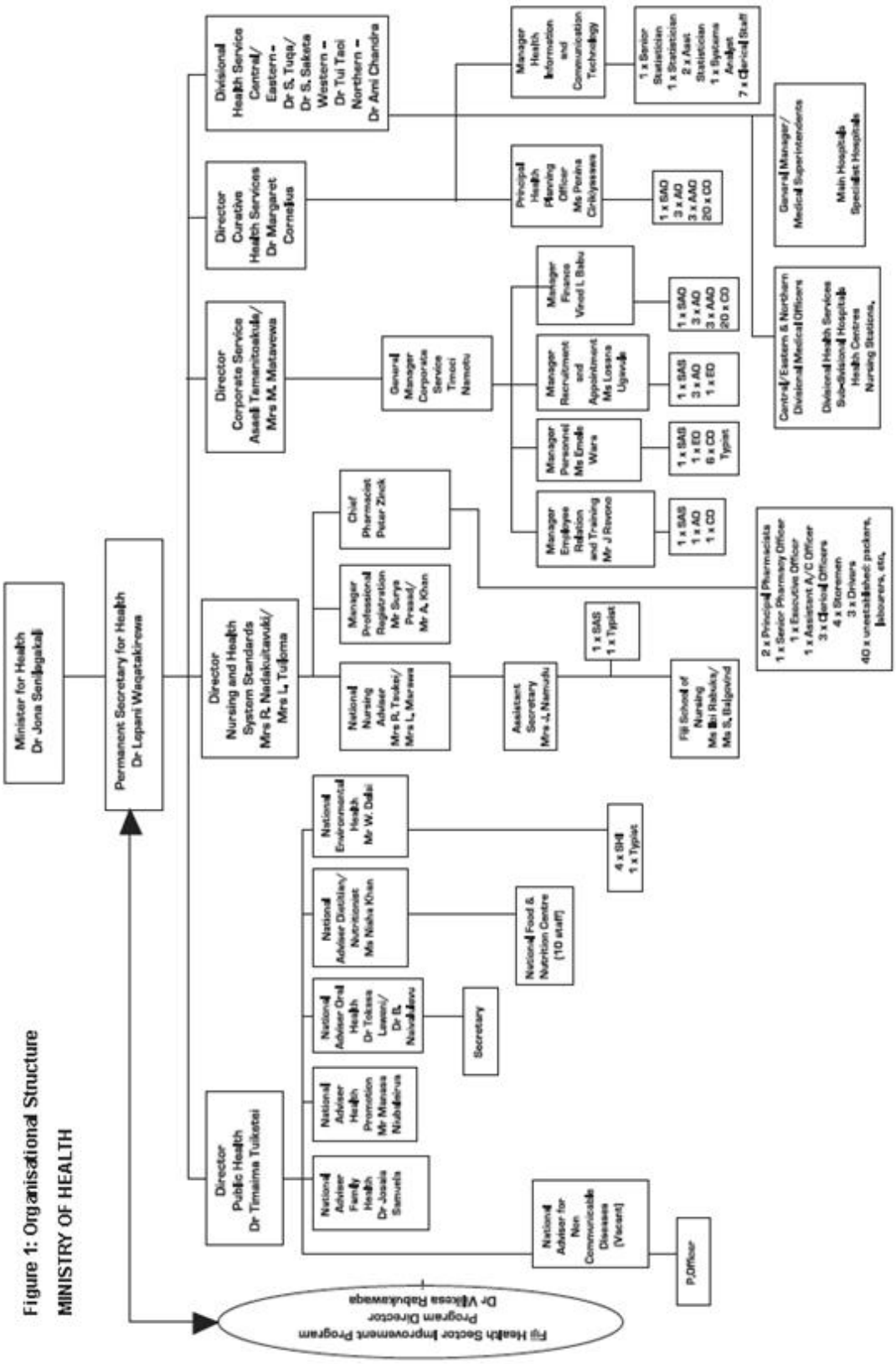


Figure 1: Organisational Structure

MINISTRY OF HEALTH

FIJI — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	18.33						2009	1
2	Estimated population ('000s)	854.00		433.00		421.00		2010 est	2
3	Annual population growth rate (%)	0.82		...		...		2005-10	2
4	Percentage of population								
	- 0–4 years	10.07		10.16		9.98		2010 est	2
	- 5–14 years	20.84		21.25		20.67		2010 est	2
	- 65 years and above	4.92		4.16		5.70		2010 est	2
5	Urban population (%)	51.50		...		...		2009 est	3
6	Crude birth rate (per 1000 population)	21.50		...		...		2008	2, 4
7	Crude death rate (per 1000 population)	7.40		...		...		2008	2, 4
8	Rate of natural increase of population (% per annum)	1.40		...		...		2008	2, 4
9	Life expectancy (years)								
	- at birth	...		68.00		72.00		2007	5
	- Healthy Life Expectancy (HALE) at age 60	...		10.40		11.90		2002	6
10	Total fertility rate (women aged 15–49 years)	2.60						2003	7
	Socioeconomic indicators								
11	Adult literacy rate (%)	94.40 [a]		...		...		2005	8
12	Per capita GDP at current market prices (US$)	3184.53 [b]						2008	9
13	Rate of growth of per capita GDP (%)	3.60						2008	9
14	Human development index	0.74						2007	8
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases				Number of deaths			
16	Selected communicable diseases	Total	Male	Female		Total	Male	Female	
	Hepatitis viral								
	- Type A	...	...	...		...	...	...	
	- Type B	93	...	...		...	...	...	2008	4
	- Type C	...	...	...		...	...	...		
	- Type E	...	...	...		...	...	...		
	- Unspecified	...	...	...		...	...	...		
	Cholera	0	0	0		...	...	...	2008	4
	Dengue/DHF	374	...	...		...	...	...	2009	10
	Encephalitis	1	1	0		...	...	...	2008	4
	Gonorrhoea	1064	...	...			...	...	2008	4
	Leprosy	2	2	0		...	...	...	2009	10
	Malaria	1	1	0		...	...	...	2008	4
	Plague	0	0	0		...	...	...	2008	4
	Syphilis	1004	...	...		...	...	...	2008	4
	Typhoid fever	419	...	...		...	...	...	2008	4
17	Acute respiratory infections	18 787	...	...		...	...	...	2007	11
	- Among children under 5 years	...	...	...		...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	7428	...	...	...	...	...	2007	11
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	106	...	...	...	...	...	2008	10
	- New pulmonary tuberculosis (smear-positive)	78	...	...	...	...	...	2008	10
20	**Cancers**								
	All cancers (malignant neoplasms only)	395	129	266	...	...	...	2005	12
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	10	7	3	...	...	...	2005	12
	- Cervix			69			...	2005	12
	- Leukaemia	24	16	8	...	...	...	2005	12
	- Lip, oral cavity and pharynx	15	9	6	...	...	...	2005	12
	- Liver	4	2	2	...	...	...	2005	12
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	10	8	2	...	...	...	2005	12
	- Trachea, bronchus, and lung	1	1	0	...	...	...	2005	12
21	**Circulatory**								
	All circulatory system diseases	3304	...	...	...	...	...	2005	12
	- Acute myocardial infarction	376	...	...	...	...	...	2005	12
	- Cerebrovascular diseases	277	...	...	...	...	...	2005	12
	- Hypertension	346	...	...	...	...	...	2005	12
	- Ischaemic heart disease	353	...	...	...	...	...	2005	12
	- Rheumatic fever and rheumatic heart diseases	99	...	...	...	...	...	2005	12
22	**Diabetes mellitus**	208	92	116	1190	603	587	2005	12
23	**Mental disorders**	...	...	...	...	...	...		
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	48	35	13	...	...	...	2008	1
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	618	...	...	66	...	...	2008	1
	- Suicide	102	74	28	...	...	...	2008	1
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Injury	3749	2567	1182	447.76 [f]	600.92 [f]	288.22 [f]	2007	11
	2. Influenza and pneumonia	1932	1151	781	230.75 [f]	269.44 [f]	190.44 [f]	2007	11
	3. Diabetes mellitus	1759	761	998	210.09 [f]	178.15 [f]	243.36 [f]	2007	11
	4. Intestinal infectious disease	1485	842	643	177.36 [f]	197.11 [f]	156.79 [f]	2007	11
	5. Ischaemic heart disease	1386	1071	315	165.54 [f]	250.71 [f]	76.81 [f]	2007	11
	6. Chronic lower respiratory disease	1257	723	534	150.13 [f]	169.25 [f]	130.21 [f]	2007	11
	7. Other forms of heart disease	1211	665	546	144.64 [f]	155.67 [f]	133.14 [f]	2007	11
	8. Hypertension	616	269	347	73.57 [f]	62.97 [f]	84.61 [f]	2007	11
	9. Other conditions originating in the perinatal period	190	97	93	22.69 [f]	22.71 [f]	22.68 [f]	2007	11
	10. Infection of skin and subcutaneous tissues	27	12	15	3.22 [f]	2.81 [f]	3.66 [f]	2007	11

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	2195	1327	868	262.02 e	310.64	211.66	2008	4
	2. Endocrine, nutritional and metabolic diseases	1331	649	682	158.88 e	151.93	166.30	2008	4
	3. Neoplasm	639	244	395	76.28 e	57.12	96.32	2008	4
	4. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	431	184	247	51.45 e	43.07	60.23	2008	4
	5. Certain infectious and parasitic diseases	419	222	197	50.02 e	51.97	48.04	2008	4
	6. Injury, poisoning and certain other consquences of external causes	397	284	113	47.39 e	66.48	27.55	2008	4
	7. Diseases of the respiratory system	370	229	141	44.17 e	53.61	34.38	2008	4
	8. Diseases of the genitourinary system	192	115	77	22.92 e	26.92	18.78	2008	4
	9. Diseases of the digestive system	150	93	57	17.91 e	21.77	13.90	2008	4
	10. Certain conditions originating in the perinatal period	138	76	62	16.47 e	17.79	15.12	2008	4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					42.29		2005	12
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					28.70		2009	10
29	**Percentage of pregnant women with anaemia**					7.20		2008	4
30	**Neonatal mortality rate (per 1000 live births)**	9.00		…		…		2008	4
31	**Percentage of newborn infants weighing less than 2500 g at birth**	9.00		…		…		2005	12
32	**Immunization coverage for infants (%)**								
	- BCG	88.90		…		…		2009	10
	- DTP3	70.40		…		…		2009	10
	- Hepatitis B III	70.40		…		…		2009	10
	- MCV2	56.80		…		…		2009	10
	- POL3	68.60		…		…		2009	10
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			1			0	2005	12
	- Eclampsia			0			0	2005	12
	- Haemorrhage			0			0	2005	12
	- Obstructed labour			0			0	2005	12
	- Sepsis			1			0	2005	12
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	…	…	…	2009	10
	- Diphtheria	0	0	0	…	…	…	2009	10
	- Measles	1	…	…	…	…	…	2009	10
	- Mumps	0	0	0	…	…	…	2009	10
	- Neonatal tetanus	0	0	0	…	…	…	2009	10
	- Pertussis (whooping cough)	0	0	0	…	…	…	2009	10
	- Poliomyelitis	0	0	0	…	…	…	2009	10
	- Rubella	1	…	…	…	…	…	2009	10
	- Total Tetanus	0	0	0	…	…	…	2009	10
	Health facilities								
35	**Facilities with HIV testing and counseling services**						31	2008	10

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	3	1743 [g]	2008	1
		- Specialized hospitals	3	...	2008	1
		- District/first-level referral hospitals	19	...	2008	1
		- Primary health care centres	76	...	2008	1
	Private health facilities	- Hospitals	1	...	2008	13
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			137.10	2008p	14
	- total expenditure on health as % of GDP			3.80	2008p	14
	- per capita total expenditure on health (in US$)			162.45 [e]	2008p	14
	Government expenditure on health					
	- amount (in million US$)			93.71	2008p	14
	- general government expenditure on health as % of total expenditure on health			68.40	2008p	14
	- general government expenditure on health as % of total general government expenditure			9.80	2008p	14
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			9.40 [e]	2008p	14
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			31.60	2008p	14
	- out-of-pocket expenditure on health as % of total expenditure on health			24.77 [e]	2008p	14
	Exchange rate in US$ of local currency is: 1 US$ =			1.59	2008p	14
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	337	...	...	...	...	...	...	2008	16
		- Ratio per 1000 population	0.38 [e]	...	...	...	...	...	...	2008	16
	Dentists	- Number	192	...	...	...	...	...	...	2008	16
		- Ratio per 1000 population	0.22 [e]	...	...	...	...	...	...	2008	16
	Pharmacists	- Number	40	...	...	...	...	...	...	2006	12
		- Ratio per 1000 population	0.05 [e]	...	...	...	...	...	...	2006	12
	Nurses	- Number	1784	...	...	...	...	...	...	2008	16
		- Ratio per 1000 population	2.03 [e]	...	...	...	...	...	...	2008	16
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	444	...	...	...	...	...	...	2006	12
		- Ratio per 1000 population	0.52 [e]	...	...	...	...	...	...	2006	12
	Community health workers	- Number	115	...	...	...	...	...	...	2006	12
		- Ratio per 1000 population	0.13 [e]	...	...	...	...	...	...	2006	12
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	7.00	...	...	2004	4
43	Infant mortality rate (per 1000 live births)	13.10	...	...	2008	4
44	Under-five mortality rate (per 1000 live births)	23.60	...	...	2008	4
45	Proportion of 1 year-old children immunised against measles	55.90	...	...	2009	10
46	Maternal mortality ratio (per 100 000 live births)	27.50			2008	4
47	Proportion of births attended by skilled health personnel	98.80			2008	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
48	Contraceptive prevalence rate	44.70	...	...	2008	4
49	Adolescent birth rate	8.50			2007	11
50	Antenatal care coverage - At least one visit	100.00			2005	12
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	0.10	...	...	2007	10
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	25.00	...	...	2008	10
60	Tuberculosis death rate per 100 000 population	3.00	...	...	2008	10
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	81.00	...	...	2008	10
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	95.00	...	...	2007	10
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	47.00	43.00	51.00	2006	15
64	Proportion of population using an improved sanitation facility	71.00	87.00	55.00	2006	15
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure should be interpreted with caution as it refers to estimates for 2005 from UNESCO Institute for Statistics (2003), based on outdated census or survey information.
b	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using 2008 exchange rate=FJD 1.82 per USD
c	Figure refers to serious injuries (hospital) and slight injuries (non-hospital)
d	Totals may not tally due to some reported cases with no gender breakdown
e	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
f	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using 2007 estimated population
g	Figure includes beds in specialized and distrcit hospitals

Sources:	
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16	Ministyr of Health Staff Establishment in 2008.

FRENCH POLYNESIA

1. CONTEXT

1.1 Demographics

Located about 6000 kilometres east of Australia, French Polynesia is a group of five archipelagos covering an area of 4167 million square kilometres, with a land area of 3521 square kilometres. The country comprises 35 volcanic islands and about 183 low-lying coral atolls. Its closest neighbours are Kiribati to the north-west and Cook Islands to the west.

According to annual estimations, the population was 265 654 as of 1 July 2009. Around 88% is concentrated in the Society Islands, which constitute about one-half of the land area. The most populated (82% of the population) and biggest island is Tahiti. Administrative services are centralized in Tahiti within the city of Papeete.

The population is characterized by its youth: 35% are below 20 years of age and 6% above 65 years. The life expectancy at birth in 2008 is 73 for males and 78.2 for females. The majority of the population is Polynesian.

1.2 Political situation

Since the passing of the organic law of February 2004, reinforcing its autonomy, French Polynesia has become a French overseas country within the French Republic. Freely and democratically governed by its representatives and by local referendum, French Polynesia constitutes an overseas collectivity where autonomy, guaranteed by the Republic, is ruled by article 74 of the French Constitution. French Polynesia can dispose representations towards any countries recognized by the French Republic (non-diplomatic representations). In addition, the status gives French Polynesian authorities competences in several fields, particularly civil rights, employment and fiscal rights.

The state core functions, such as justice, security and public order, defence and foreign policy are still under the authority of France, which is represented by a High Commissioner.

1.3 Socioeconomic situation

In 2006, the gross domestic product (GDP) was US$ 16 803 per capita.

French Polynesia has reached a high level of health and socioeconomic development, as shown by the principal indicators, with 13% of GDP being spent on health in 2008. This favourable situation may be attributed to significant socioeconomic development and to the gradual implementation of an efficient health care system.

1.4 Risks, vulnerabilities and hazards

The main challenges facing French Polynesia and its health system are linked to its geography; the spread of its atolls and islands over a vast ocean area; differences between urban and rural areas in terms of social, economic and cultural activities; and the high density of the population on Tahiti island. All these factors make achievement of a really equitable system difficult. The challenges are also linked to the rapid mutation towards a society based on consumption, but with economic and social inequalities, leading to important differences in living standards.

The consequences are an increasing number of environmental issues (habitat, waste management, air, drinking-water, water quality, resources and pollution of the lagoons) for which policies are currently being developed. The main risk factors for health are therefore linked to environmental health factors, smoking, sedentary lifestyles and poor diets, as well as mental health in its broader context.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

French Polynesia is facing challenges related to the evolution of the population's health. There has been a general decrease in the incidence of communicable diseases during recent decades thanks to the development of the health care system and the immunization policy. In parallel, however, there has been an alarming increase in cases of noncommunicable disease, such as obesity, diabetes, cardiovascular diseases and cancers, caused by changes in lifestyles and the emergence of unfavourable social behaviours, such as use of tobacco and alcohol, drug abuse, unbalanced diets and sedentary lifestyles. In years to come, these health problems will predominate, along with their consequences on morbidity and mortality.

Added to these risk factors is an increase in the precariousness of some population groups in urban areas, the increasing fragility of the traditional family solidarity and social structure, and insufficiently controlled environmental health problems.

2.2 Outbreaks of communicable diseases

French Polynesia often faces outbreaks of dengue fever. The severity of the outbreaks has been increasing for the last 30 years and the disease has become an important cause of hospitalization and childhood death. The last outbreak, in 2009, was due to serotype 4, which had not been circulating in the country since 1985. The outbreak lasted 32 weeks, from March to October, and affected all archipelagos, with a total of 2473 laboratory-confirmed cases (44% 10 to 19 years, 30% more than 30 years) and around 25 000 estimated clinical cases, 105 hospitalised cases, three cases of dengue haemorrhagic fever and no death.

The influenza A H1N1 pandemic affected the country during three months in 2009. The first confirmed case was imported from the United States on 2 June (fever detected by thermal imaging camera at the airport), and the first clusters of cases were detected among young persons coming back from study in New Zealand. The epidemic peak was reached in week 34, three weeks after the onset of community circulation of the virus and one week after the return to school. A rapid decrease in the number of cases was observed over the four following weeks, and the end of the epidemic wave was confirmed in week 39. Approximately 35 000 consultations for influenza-like illness (ILI) were reported, corresponding to an estimated 42 000-48 000 cumulative cases of ILI. Thirteen infected patients were hospitalized in intensive care units. A total of seven deaths were reported, with a mean age of 37 years (range: 1.5 months-73 years).

Leptospirosis and lymphatic filariasis are still endemic. A more intensive surveillance system targeting these diseases has been organized, and a stronger vector-control programme is ongoing.

There is also a specific programme and surveillance system for tuberculosis, which is at an intermediate incidence rate.

2.3 Leading causes of mortality and morbidity

While morbidity due to acute respiratory infections remains fairly high, especially in rural and poor urban districts, improvements in medical care have resulted in very low mortality rates for these conditions. At the same time, morbidity due to noncommunicable diseases has been increasing in recent decades; obesity prevalence is high among adults (42%) and among children (10%) and is the major risk factor for chronic diseases.

Like many European countries, the leading causes of mortality are chronic diseases, especially cardiovascular disease and cancer, which are responsible for half of all deaths. The main causes of premature mortality (before 65 years) are attributable to cardiovascular disease, cancer (men: lung; women: breast) and injuries.

2.4 Maternal, child and infant diseases

Almost the entire population have ready access to quality health care, resulting in good immunization coverage levels of over 95%, a low infant mortality rate (5.0 per 1000 live births), a very low maternal mortality ratio (1 maternal death out of 4434 births) and a high life expectancy at birth of 73 years for men and 78.2 years for women.

2.5 Burden of disease

Noncommunicable diseases (NCD) represent an important burden. In addition to the impact of NCD on premature mortality and the high morbidity of chronic diseases (cancer, cardiovascular disease, asthma, etc.), however, there is still considerable morbidity due to communicable diseases. There is a real need for specific and specialized long-term care and treatment programmes. The current disease trend has been taken into account in construction of the new hospital, which will provide modern oncology and cardiology services. However, this will bring about an automatic increase in hospital expenses, causing an overload for the country's health budget.

Chronic diseases also have an economic impact, with an increase in health expenditure, loss of productivity at work, the cost of social insurance coverage for incapacities and handicaps, and decreased family incomes for those concerned. The focus needs to be on prevention aimed at reduction and control of the multiple risk factors causing the rising NCD incidence, including obesity, lifestyles changes, sedentary lifestyles, tobacco use and unhealthy diets. There is currently an imbalance between the resources dedicated to prevention activities and those to curative interventions, and public awareness has still not been raised to a level where substantial changes can take place.

Excessive alcohol and drug consumption represent an important burden because they are linked to mental health problems, suicides, juvenile delinquency, violence within families, insecurity and road accidents.

The epidemic threats due to emerging infectious diseases, such as vectorborne diseases and influenza, are also a public health concern.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

According to the organic law, health is of the responsibility of the French Polynesian Government. The Health Directorate is the health authority under the Health Minister and is one of the most important administrative services in the country.

The mission and organization of the Health Directorate are defined by 1992 and 2004 regulations. The Directorate's mission is to implement, by any means at its disposal, public health objectives determined by public politics. It is in charge of health programme monitoring, coordination, implementation, control and evaluation, which contribute to public health objectives.

Through the documents defining health policy and health system organization, the main objectives of the Health Ministry are:

- to maintain and improve equity in access to care by strengthening local-level health care services;
- to reconcile the accessibility and quality of care services, ensuring sustainability and promoting quality control in all hospital and non-hospital health facilities;
- to develop care channels and networks;
- to combine curative interventions and prevention by reinforcing prevention activities, health education and promotion, and by making users more responsible; and

- to strengthen the role of the health authority in piloting the health system and adapting governance to address reality in the field through an efficient system of information.

3.2 Organization of health services and delivery systems

Both the private and the public health systems deliver curative care.

The hospital system includes five public and four private hospitals, including one for ambulatory treatment and one for physiotherapy. The public hospitals include: the Main Hospital of French Polynesia (Centre Hospitalier de Polynésie Française), which is the referral hospital offering emergency services, neurosurgery, oncology and cardiovascular surgery, including intensive care services; and four hospitals managed by the Health Direction : one general hospital in the Leeward Islands (Uturoa, Raiatea); one hospital in the Marquesas islands with surgical, emergency and medical wards (Taioahe, Nuku Hiva); one hospital with a medical ward, an emergency ward and a long-stay ward in Taravao (Tahiti, Windward Islands); and one hospital with medical and emergency wards in Moorea (Windward Islands).

Primary health care is also delivered through the private and public systems. The private system is mainly concentrated on the Windward Islands and the Leeward Islands.

However, the number of health professionals working in the private sector (medical practitioners, nurses, physiotherapists, dentists) whose services are refunded under the Social Health Insurance scheme, based on agreed fares, is limited. Primary health care is also delivered through the public sector; 115 public health facilities (dispensaries, medical centres, aid posts) are spread across all archipelagos and are managed by the Health Directorate. On the majority of islands, the public sector is the only one present, especially in remote and isolated areas.

The whole public health system is under the authority of the Health Directorate, except the Main Hospital of French Polynesia, which is under the direct authority of the Ministry of Health.

3.3 Health policy, planning and regulatory framework

The latest health plan defining the health policies and priorities of the Ministry of Health was evaluated in 2005 by the Health Directorate and a number of recommendations were formulated. However, a new health plan has not yet been prepared.

In terms of planning and regulation of care services, the implementation period for the most recent health organization scheme has been extended for a further five years, from 2008.

3.4 Health care financing

In 2008, total expenditure on health amounted to US$ 884 million. The government contribution represented 55% of these expenditures, 29% of the country's total expenditure.

Thanks to a generalized health plan run by social security insurance, the whole population is covered.

The budget for the development of prevention activities comes essentially from the funds for prevention, supplied by sugar and alcohol taxation, created in 2001. This US$ 13-15 million budget is attributed to prevention activities implemented by the ministries of health, solidarity, family, youth, sports, transports and education.

3.5 Human resources for health

Human resources for health are distributed throughout three large sectors in the health care system:

- the public hospital (French Polynesia Hospital Centre), which employs close to 1060 workers in Papeete, including 143 doctors and 508 nurses;

- the Health Directorate, which represents 1200 workers disseminated throughout the country, including 116 doctors and 340 nurses; and

- the private sector (three private clinics, private medicine), with 230 doctors and 255 nurses.

In order to strengthen health services, one to two nurses have been assigned to each isolated island and given responsibility for local coordination of the various public health programmes. They are also the liaison persons for the programme managers and are responsible for implementation and evaluation. These nurse coordinators are regularly recalled to share their experiences and be informed on the status of the different public health programmes and their outcomes. Nurses work in about 20 isolated communities where there is no doctor.

3.6 Partnerships

French Polynesia had signed partnership conventions with various governmental health organizations in France, particularly:

- the *Direction Générale de la Santé* (French Health General Directorate), under the Health Ministry of France ,
- the *Institut de Veille Sanitaire* (INVS), in charge of surveillance and alert management,
- the *Agence Française de Sécurité Sanitaire des Produits de Santé* (AFSSAPS),
- the *Institut National de Prévention et d'Education pour la Santé* (INPES), in charge of health development and evaluation programmes),
- the *Centre d'Epidémiologie sur les causes médicales de décès* (CépiDC – INSERM) in charge of mortality data analysis) and national referral centres.

The cancer registry of French Polynesia is linked to the IARC (Association Internationale des Registres des Cancers), FRANCIM (France Cancer-Incidence et Mortalité) and the INVS.

French Polynesia also has significant collaboration in health with WHO and with the Secretariat of the Pacific Community (SPC) in regional and international development of strategic plans in many areas.

3.7 Challenges to health system strengthening

French Polynesia is currently facing a number of challenges (see 3.1), the major one being related to gaining better control over the cost of curative services while improving the accessibility and the quality of care, mainly primary health care, in the most remote and isolated areas. Defining the level of care appropriate to each geographical area is another challenge.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goal 1: Eradicate extreme poverty and hunger

According to a study on living conditions in French Polynesia, conducted in 2009 by the Institute of Statistics of French Polynesia, nearly 20% of households in the Windward Islands (or 27.6% of the population) have an income below the threshold for relative poverty. Since 2001, the incidence of poverty has increased concomitantly with the significant slowdown in overall economic activity and the economic crisis. Income inequalities have increased (GINI 0.4), and 5% of the population is socially excluded, that is to say they are without their own resources and without recourse to the solidarity system. The rise in unemployment since 2008 appears to be related to a crisis in the labour market. Half the unemployed are under 25 years of age.

Goal 4: Reduce child mortality

The infant mortality rate remains low and stable overall (5.0 deaths per 1000 live births in 2008) as a result of the good coverage and quality of both child and maternal care.

Goal 5: Improve maternal health

Maternal mortality is virtually zero in French Polynesia. Fertility in women is in steady decline (2.2 children per woman in 2008), as in metropolitan France, but the number of children per 1000 women aged 25-29 years rose from 145 in 2000 to 101 in 2009. In 2001, laws were passed authorizing abortions and assuring access to contraception. In 2005, 62.9% of women between 15 and 39 years were using contraception.

Goal 6: Combat HIV/AIDS, malaria and other diseases

The prevalence of HIV/AIDS is low in French Polynesia (0.2% in 2009), with 95% of infected persons receiving antiretroviral therapy. No case of malaria has been identified. Tuberculosis prevalence was 20 per 100 000 inhabitants in 2009, and 94% of cases are under DOTS.

Goal 7: Ensure environmental sustainability

Almost the entire population has access to a water supply at home. However, 80% of communes in French Polynesia do not receive a drinking-water supply that meets the criteria of the quality regulations.

In terms of sanitation, waste collection and sewage treatment is mostly carried out on an individual basis (three-quarters of homes) or by small autonomous stations. The development of collective sewage systems is still at the study stage. Population growth, urbanization and the destruction of natural habitats, as well as climate change, are threatening the flora and fauna of the islands. French Polynesia is gradually working towards land-use planning and sustainable development, and general plans are being developed to set regulations as regards land use and buildings at the commune level.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Direction de la Santé en Polynésie française
Title 2	:	Institut de la Statistique de Polynésie française
Web address	:	http://www.ispf.pf
Title 3	:	Centre hospitalier de la Polynésie française
Title 4	:	Pacific Island Populations - Estimates and projections of demographic indicators for selected years, Updated April 2010.
Operator	:	Secretariat of the Pacific Community – Statistics and Demography Programme

6. ADDRESSES

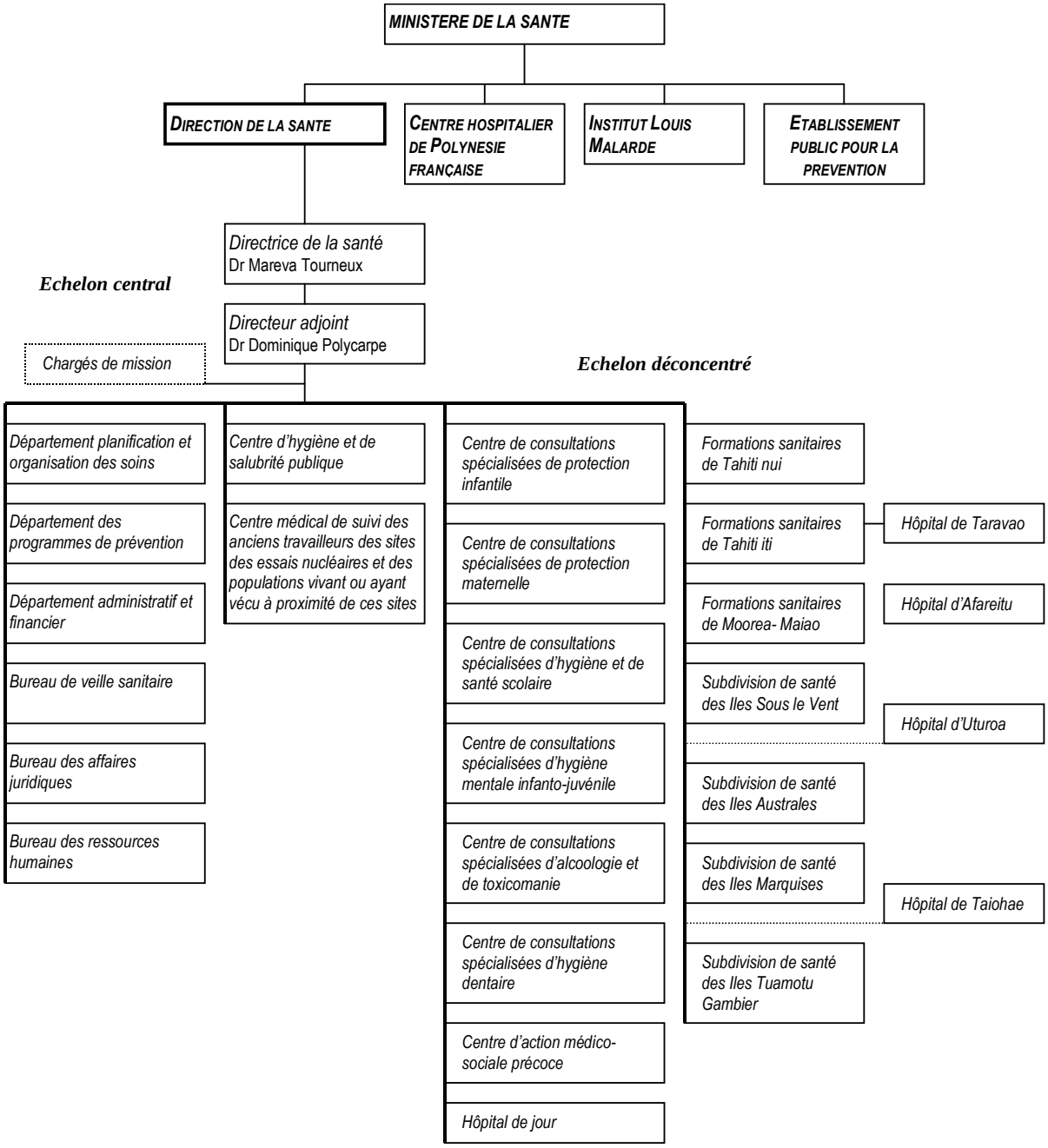
MINISTRY OF HEALTH

Office Address	:	Direction de la Santé Rue des Poilus Tahitiens, Papeete – Tahiti, Polynésie Française
Postal Address	:	B.P. 611, 98713 Papeete – Tahiti
Official Email Address	:	Directrice de la santé : mareva.tourneux@sante.gov.pf Secrétariat : secretariat@sante.gov.pf
Telephone	:	(689) 46 00 02
Fax	:	(689) 43 00 74
Office Hours	:	7:30 am – 15:30 pm

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

7. ORGANIZATIONAL CHART: Ministry of Health



FRENCH POLYNESIA

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	**Area (1 000 km2)**	3.52			2010	1
2	**Estimated population ('000s)**	265.65 [a]	135.97 [a]	129.68 [a]	2009 est	2
3	**Annual population growth rate (%)**	1.20	1.20	1.30	2002-07	3
4	**Percentage of population**					
	- 0–4 years	7.76 [b]	7.81 [b]	7.70 [b]	2009 est	2
	- 5–14 years	17.34 [b]	17.32 [b]	17.36 [b]	2009 est	2
	- 65 years and above	6.02 [b]	5.70 [b]	6.36 [b]	2009 est	2
5	**Urban population (%)**	51.50	…	…	2009 est	4
6	**Crude birth rate (per 1000 population)**	17.53	17.13	17.95	2008	5
7	**Crude death rate (per 1000 population)**	4.48	5.17	3.76	2008	6
8	**Rate of natural increase of population (% per annum)**	1.31	…	…	2008	7
9	**Life expectancy (years)**					
	- at birth	75.40	73.00	78.20	2008	8
	- Healthy Life Expectancy (HALE) at age 60	20.10	18.20	22.00	2008	8
10	**Total fertility rate (women aged 15–49 years)**	2.18			2008	9
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	94.70 [c]	93.70 [c]	95.60 [c]	2007	10
12	**Per capita GDP at current market prices (US$)**	16 803.36			2006	11
13	**Rate of growth of per capita GDP (%)**	-1.20			2005-06	11
14	**Human development index**	0.87			2007	12
	Environmental indicators	Total	Urban	Rural		
15	**Health care waste generation (metric tons per year)**	…	…	…		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	…	…	…	0	0	0	2007	6
	- Type B	…	…	…	0	0	0	2007	6
	- Type C	…	…	…	0	0	0	2007	6
	- Type E	…	…	…	0	0	0	2007	6
	- Unspecified	…	…	…	0	0	0	2007	6
	Cholera	0	0	0	0	0	0	2009	6,13
	Dengue/DHF	2479	…	…	0	0	0	2009	14
	Encephalitis	…	…	…	0	0	0	2007	6
	Gonorrhoea	…	…	…	0	0	0	2007	6
	Leprosy	9	7	2	…	…	…	2009	14
	Malaria	1	0	0	0	0	0	2009	13
	Plague	0	0	0	0	0	0	2007	6
	Syphilis	…	…	…	0	0	0	2007	6
	Typhoid fever	0	0	0	0	0	0	2009	13
17	**Acute respiratory infections**	…	…	…	37 [d]	17 [d]	20	2007	6
	- Among children under 5 years	…	…	…	4	2	2	2007	6

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	26000 [e]	...	...	6	5	1	C:2009, D:2007	6,16
	- Among children under 5 years	11680 [e]	...	...	1	1	0	C:2009, D:2007	6,16
19	**Tuberculosis**								
	- All forms	53	34	19	3	0	3	2009	16
	- New pulmonary tuberculosis (smear-positive)	20	...	...	...	...	...	2008	14
20	**Cancers**								
	All cancers (malignant neoplasms only)	512	279	233	307 [d]	174 [d]	133 [d]	C:2006 D:2007	C:17, D:6
	- Breast	82	2	80	35 [d]	0 [d]	35 [d]	C:2006 D:2007	C:17, D:6
	- Colon and rectum	22	15	7	10	5	5	C:2006 D:2007	C:17, D:6
	- Cervix			15			4	C:2006 D:2007	C:17, D:6
	- Leukaemia	9	5	4	10	4	6	C:2006 D:2007	C:17, D:6
	- Lip, oral cavity and pharynx	25	17	8	10	7	3	C:2006 D:2007	C:17, D:6
	- Liver	14	12	2	23	16	7	C:2006 D:2007	C:17, D:6
	- Oesophagus	10	9	1	11	10	1	C:2006 D:2007	C:17, D:6
	- Stomach	18	9	9	8	6	2	C:2006 D:2007	C:17, D:6
	- Trachea, bronchus, and lung	70	53	17	67	50	17	C:2006 D:2007	C:17, D:6
21	**Circulatory**								
	All circulatory system diseases	...	...	...	292	178 [d]	114	2007	6
	- Acute myocardial infarction	...	...	...	51 [d]	35	16	2007	6
	- Cerebrovascular diseases	...	...	...	96	51	45	2007	6
	- Hypertension	...	...	...	25	10	15	2007	6
	- Ischaemic heart disease	...	...	...	77	57 [d]	20	2007	6
	- Rheumatic fever and rheumatic heart diseases	...	...	...	6	2	4	2007	6
22	**Diabetes mellitus**	...	...	...	36	24	12	2007	6
23	**Mental disorders**	...	...	...	0	0	0	2007	6
24	**Injuries**								
	All types	...	...	...	132	98	34	2007	6
	- Drowning				13	11	2	2007	6
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	38	29	9	2007	6
	- Suicide	188	67	131	31	23	8	C:2008 D:2007	6,18
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infections	12906 [f]	...	...	5069.13 [b]	...	...	2005	19
	2. Infections of the skin and subcutaneous tissues	12235 [f]	...	...	4805.58 [b]	...	...	2005	19
	3. Acute otitis media	5581 [f]	...	...	2192.06 [b]	...	...	2005	19
	4. Pharyngitis	4706 [f]	...	...	1848.39 [b]	...	...	2005	19
	5.	...	...	...	...	...	...		
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Neoplasms	307 [d]	174 [d]	133 [d]	118.21	130.72 [d]	105.06 [d]	2007	6
	2. Diseases of the circulatory system	292	178 [d]	114	112.43	133.72 [d]	90.05	2007	6
	3. Injuries and external causes	132	98	34	50.83	73.62	26.86	2007	6
	4. Diseases of the respiratory system	101	58	43	38.89	43.57	33.97	2007	6
	5. Endocrine, nutritional and metabolic diseases	51	32	19	19.64	24.04	15.01	2007	6
	6. Infectious and parasitic diseases	42 [d]	23	19 [d]	16.17 [d]	17.28	15.01 [d]	2007	6
	7. Diseases of the digestive system	38	23	15	14.63	17.28	11.85	2007	6
	8. Diseases of the genitourinary system	31	18	13	11.94	13.52	10.27	2007	6
	9. Diseases of the nervous system	20	10	10	7.70	7.51	7.90	2007	6
	10. Affections of which l' origin is during the perinatal time	11	7	4	4.24	5.26	3.16	2007	6
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					62.00 [g]		2005	20
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	3.00		...		...		2008	5
31	**Percentage of newborn infants weighing less than 2500 g at birth**	6.20		...		...		2004	21
32	**Immunization coverage for infants (%)**								
	- BCG	99.00		...		...		2009	14
	- DTP3	98.00		...		...		2009	14
	- Hepatitis B III	99.00		...		...		2009	14
	- MCV2	84.00		...		...		2009	14
	- POL3	98.00		...		...		2009	14
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			0	2007	6
	- Eclampsia			...			0	2007	6
	- Haemorrhage			...			0	2007	6
	- Obstructed labour			...			0	2007	6
	- Sepsis			...			0	2007	6
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	13,14
	- Diphtheria	0	0	0	0	0	0	2009	13,14
	- Measles	0	0	0	0	0	0	2009	13,14
	- Mumps	0	0	0	0	0	0	2009	13,14
	- Neonatal tetanus	0	0	0	0	0	0	2009	13,14
	- Pertussis (whooping cough)	30	...	...	0	0	0	2009	13,14
	- Poliomyelitis	0	0	0	0	0	0	2009	13,14
	- Rubella	0	0	0	0	0	0	2009	13,14
	- Total Tetanus	0	0	0	0	0	0	2009	13,14
	Health facilities								
35	**Facilities with HIV testing and counseling services**						9 [h]	2009	13

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	396	2009	22
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	4	150	2009	22
		- Primary health care centres	115	0	2009	22
	Private health facilities	- Hospitals	4	247	2009	22
		- Outpatient clinics	2	0	2009	22
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			884.45	2008	23
	- total expenditure on health as % of GDP			13.09	2008	23
	- per capita total expenditure on health (in US$)			3361.57	2008	23
	Government expenditure on health					
	- amount (in million US$)			259.57	2008	31
	- general government expenditure on health as % of total expenditure on health			55.00	2008	23
	- general government expenditure on health as % of total general government expenditure			29.00	2008	31
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			1.17	2008	31
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			…		
	- out-of-pocket expenditure on health as % of total expenditure on health			6.00	2008	31
	Exchange rate in US$ of local currency is: 1 US$ =			…		
38	**Health insurance coverage as % of total population**			98.00	2008	24

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	565	408	157	429	136	276	289	2009	25
		- Ratio per 1000 population	2.13 [b]	1.54 [b]	0.59 [b]	3.14 [b]	1.06 [b]	1.04 [b]	1.09 [b]	2009	25
	Dentists	- Number	112	91	21	70	42	31	81	2009	25
		- Ratio per 1000 population	0.42 [b]	0.34 [b]	0.08 [b]	0.51 [b]	0.33 [b]	0.12 [b]	0.30 [b]	2009	25
	Pharmacists	- Number	146	77	69	101	45	18	128	2009	25
		- Ratio per 1000 population	0.55 [b]	0.29 [b]	0.26 [b]	0.74 [b]	0.35 [b]	0.07 [b]	0.48 [b]	2009	25
	Nurses	- Number	1 111	287	824	850	261	818	293	2009	25
		- Ratio per 1000 population	4.18 [b]	1.08 [b]	3.10 [b]	6.21 [b]	2.03 [b]	3.08 [b]	1.10 [b]	2009	25
	Midwives	- Number	129	11	118	103	26	82	47	2009	25
		- Ratio per 1000 population	0.49 [b]	0.04 [b]	0.44 [b]	0.75 [b]	0.20 [b]	0.31 [b]	0.18 [b]	2009	25
	Paramedical staff	- Number	436	180	256	338	98	191	245	2009	25
		- Ratio per 1000 population	1.64 [b]	0.68 [b]	0.96 [b]	2.47 [b]	0.76 [b]	0.72 [b]	0.92 [b]	2009	25
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
40	**Annual number of graduates**	Physicians	0	0	0	0	0	0	0	2009	25
		Dentists	0	0	0	0	0	0	0	2009	25
		Pharmacists	0	0	0	0	0	0	0	2009	25

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	24	7	17	...	...	...	...	2009	26
		Midwives	2	0	2	...	...	...	...	2009	27
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	5.00	...	...	2008	5
44	Under-five mortality rate (per 1000 live births)	6.48	...	...	2008	6
45	Proportion of 1 year-old children immunised against measles	99.00	...	...	2009	14
46	Maternal mortality ratio (per 100 000 live births)	22.55 [i]			2007	6
47	Proportion of births attended by skilled health personnel	100.00 [d]			2004	21
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.00 [d]			2004	21
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.00 [d]			2004	21
48	Contraceptive prevalence rate	62.00 [g]	...	...	2005	20
49	Adolescent birth rate	50.08			2008	28
50	Antenatal care coverage - At least one visit	100.00 [i]			2004	21
	- At least four visits	95.00			2004 est	21
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	0.15	0.17	0.12	2009	29
53	Estimated HIV prevalence in adults	0.20	0.28	0.11	2009	29
54	Percentage of people with advanced HIV infection receiving ART	95.00	...	...	2009	29
55	Malaria incidence rate per 100 000 population	0.00	0.00	0.00	2009	13
56	Malaria death rate per 100 000 population	0.00	0.00	0.00	2009	13
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	NR	NR	NR	2009	13
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	NR	NR	NR	2009	13
59	Tuberculosis prevalence rate per 100 000 population	20.07	...	...	2009	16
60	Tuberculosis death rate per 100 000 population	1.13	...	...	2009	16
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	94.33	...	...	2009	16
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	73.00	...	...	2009	16
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2008	30
64	Proportion of population using an improved sanitation facility	98.00	99.00	97.00	2008	30
65	Proportion of population with access to affordable essential drugs on a sustainable basis	99.97	100.00	99.95	2007	28

Notes:	
...	Data not available
est	Estimate
NR	Not relevant
a	Estimated population as of 1 July 2009
b	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
c	Figure refers to French as official language
d	Revised data
e	Estmation of cases extrapolated from syndromic surveillance sentinel network data
f	Figure provided by dispensaries and isolated aid posts only. It does not represent the whole public and private data
g	Figure refers to women aged 15-39 years old.
h	Figure refers to free and anonymous testing and counselling centres or CDAG.
i	Figure refers to 1 maternal death out of 4434 births
j	Totals may not tally due to some reported cases with no gender breakdown

Sources:	
1	Institut de la Statistique de la Polynésie française. Les chiffres essentiels de l'économie polynésienne - Edition 2007.
2	Population 2000-2015 by 1 and 5 year age groups, February 2010. Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme. [http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158]
3	Institut de la Statistique de la Polynésie française. Recensement de la population de la Polynésie française. Points forts de la Polynésie française, n°2/2008.
4	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision, http://esa.un.org/wup2009/unup/, Tuesday, June 01, 2010; 10:28:05 PM
5	Institut de la Statistique de la Polynésie française. Etat-civil - Indicateurs démographiques annuels de la Pf - Années 1994 à 2008; mai 2009 (www.ispf.pf).
6	Direction de la Santé (Observatoire Polynésien de la Santé). Base de données des causes de décès en Polynésie française.
7	Institut de la Statistique de la Polynésie française. Indicateurs démographiques de la Polynésie française depuis 1975; Etat civil, mai 2009 (www.ispf.pf)
8	Institut de la Statistique de la Polynésie française. Espérance de vie en Polynésie française de 1984 à 2008 et table de mortalité abrégé pour la génération 2008; Etat civil, mai 2009 (www.ispf.pf)
9	Institut de la Statistique de la Polynésie française. Etat civil - Taux général de fécondité et taux de fécondité par âge en Pf; février 2009.
10	Institut de la Statistique de la Polynésie française. www.ispf.pf : Accueil > Recensement 2007 > Thèmes > Langues.
11	Institut de la Statistique de la Polynésie française. Comptes économiques de la Polynésie française, 2006 (www.ispf.pf : Accueil > Grands indicateurs > Comptes économiques).
12	Agence française de développement
13	Direction de la Santé (Bureau de Veille Sanitaire). Réseau de surveillance des maladies infectieuses.
14	WHO Regional Office for the Western Pacific, data received from technical units
15	Institut Louis Malardé. Centre d'Investigation Epidémiologique
16	Direction de la Santé (Bureau de Veille Sanitaire). Registre de surveillance de la tuberculose en Polynésie française.
17	Direction de la Santé (Departement des Programmes de Prevention - Registre des cancers de Polynésie française)
18	Bilan de l'enquête START régionale de l'OMS sur les tentatives de suicide et suicides en Polynésie française- Année 2008.
19	Direction de la Sante (Departement des Programmes de Prevention)
20	Direction de la Santé. Comportements sexuels et prévention du Sida en Polynésie française. Rapport d'enquête, décembre 2007.
21	Direction de la Santé. Certficats de santé du 8ème jour. Résultats de l'année 2004. BISES n°5/2006, décembre 2006.
22	Direction de la santé (Département Planification et Offre de Soins) - Bilan de la carte sanitaire, mai 2008
23	Etats généraux de la Polynésie français, documents proviroires de la Présidence de la Polynésie française.
24	Caisse de Prévoyance Sociale, ministère de la solidarité et de la famile.
25	Direction de la santé (Département Planification et Offre de Soins - Bureau des Professions de santé) - Registre des professions de santé (avril 2010).
26	Direction de la Santé (Institut de Formations en Soins Infirmiers de Polynésie française).
27	Ecole de Sages-Femmes de Papeete.
28	Direction de la Santé. Observatoire Polynésien de la Santé.
29	Direction de la Santé (Bureau de Veille Sanitaire). Registre de surveillance du VIH/Sida en Polynésie française.
30	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]
31	Information furnished by the WHO Representative for South Pacific, 22 April 2010.

GUAM

1. CONTEXT

1.1 Demographics

The population of Guam was estimated at 178 287 in 2009, with 105 males for every 100 females. Population density is 330 per square kilometre. Total life expectancy for both sexes is 79.2 years; men are expected to live to 76.8 years of age and women to 81.9 years. The crude birth rate decreased slightly from 20.6 in 2004 to 19.7 in 2008. The crude death rate in 2008 was 4.4 per 1000 population, a slight increase from 4.2 in 2004.

1.2 Political situation

The political situation on Guam remains stable, with elections for the mayors of municipal civil districts (villages) and the unicameral legislature last held in 2004. Cooperation between the Executive Branch and the Legislative Branch is growing.

1.3 Socioeconomic situation

The economy of Guam is largely dependent on the tourism industry. In the late 1990s, the Asian and global economic downturn and other unforeseen events, such as super typhoons, greatly affected tourist arrivals, causing a financial crisis that lasted more than a decade. In 2005, however, tourism started to stabilize and Guam's economy started to recover. Economic growth was due to an increase in construction projects. From 2006 to 2009, construction of military infrastructure and private housing projects increased. The number of tourist visitors remained constant, however. Thus, hotel construction was limited to expansion, renovation and upgrading of existing facilities as there is still substantial vacant capacity. Despite this, rising hotel expenditures have contributed to the country's economic growth and recovery. In 2005, the reported per capita gross island product was US$ 22 661.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

No available information.

2.2 Outbreaks of communicable diseases

There were two food poisoning outbreaks in 2006. The first occurred in September 2006 among over 100 students and four adults at Chief Brodie Elementary School. Victims complained of abdominal cramps, diarrhoea and vomiting, but none required hospitalization. The definite cause of the outbreak was not determined. However, the rapid onset and recovery from symptoms experienced by those affected suggests that it may have been due to *Bacillus cereus* or *Staphylococcus aureaus* intoxication, problems that may be facilitated when transporting food.

The Department Public Health and Social Services was notified of another food poisoning outbreak in October 2006 among 49 tourists staying in a local hotel. Investigation revealed that tourists complained of nausea, vomiting, diarrhoea and headache, but no hospitalization was required. The affected persons had eaten at a number of regulated establishments prior to their illnesses; no significant food establishment violations that might have contributed to the outbreak were identified.

2.3 Leading causes of mortality and morbidity

Based on inpatient data, the leading causes of morbidity in 2007 were diseases of pregnancy, childbirth and the puerperium; diabetes mellitus; ischaemic heart disease; influenza and pneumonia; certain infectious and parasitic diseases; malignant neoplasms; cerebrovascular diseases; asthma; and other chronic obstructive pulmonary diseases.

The leading causes of death in 2003 were: cardiovascular diseases (119.4 per 100 000 population), malignant neoplasms (68.4), cerebrovascular diseases (31.2), accidents (17.4) and bacterial diseases, such as septicaemia (16.2).

2.4 Maternal, child and infant diseases

In 2003, there was no maternal death. About 87% of total deliveries in 2004 occurred in health facilities. The infant mortality rate declined from 12.3 per 1000 live births in 2004 to 11.7 in 2005-2007. In 2006, the coverage rate for poliomyelitis and measles immunization was 85%, while it was 89% for DTP3, and 91% for hepatitis B3.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

Guam is dedicated to the attainment of health for all by 2010. In 1992, the Guam Health Planning and Development Agency identified 13 health service priority areas to be strengthened:

- human resource development;
- health planning;
- wellness promotion;
- health information systems;
- communicable disease control;
- disposal of hazardous and toxic materials;
- availability and accessibility of health services;
- environmental protection;
- drug and alcohol abuse;
- chronic disease prevention and control;
- injury prevention;
- maternal and child health; and
- vector control.

Although some improvement has been seen in the area of health information systems, wellness promotion and communicable disease control, the remaining areas continue to be top priorities.

3.2 Organization of health services and delivery systems

No available information.

3.3 Health policy, planning and regulatory framework

See Section 3.1.

3.4 Health care financing

Total health expenditure amounted to US$ 159.8 million in 2000, with per capita total expenditure on health of US$ 1032.4. As of 30 September, government expenditure on public health for 2005 was US$ 64 million, about 9% of total government expenditure.

3.5 Human resources for health

Guam is experiencing health workforce shortages due to the early retirement of its most experienced professionals. Human resources for health are still lacking in critical areas and must be developed locally to the greatest extent possible. The following training needs are priorities: environmental studies, with an emphasis on environmental law, policy, management, and planning and analysis; and short-term training on retail hazard analysis critical control point (HACCP), as well as on drugs, medical devices and controlled substances.

The Guam Environmental Protection Agency (GEPA) relies heavily on its professional staff to provide technical expertise in all areas of environmental resource protection, management and policy. At the same time, this technical expertise is needed for the young professionals within GEPA, as the fields of environmental protection and science are constantly changing. However, due to early retirement and voluntary separation, all personnel with over 10 years of professional and technical experience have left GEPA, leaving half (two out of four) of the remaining personnel with less than four years of professional GEPA experience. Combined with the local hiring freeze, it is anticipated that no new professionals will be hired within the next two to three years. The lack of well educated and technically trained personnel is severely undermining the professional credibility of GEPA. To further complicate matters, GEPA also serves as the primary regulatory agency for all environmental issues and policies on Guam, and takes the lead for most other islands in Micronesia.

The Division of Environmental Health of the Department of Public Health and Social Services is also greatly understaffed. Over half the Division's staff have fewer than five years experience, and staff generally lack specialized training.

Training in retail HACCP is lacking. The United States Federal Drug Administration is urging all locales, states and territories to explore HACCP as a requirement in retail and food service establishments, and to develop a model food code that incorporates HACCP principles.

All health care products, from toothbrushes to prescription medications, are regulated and monitored by the Drug and Medical Device Programme. Due to Guam's geographical location and the ethnic diversity of its people, various drugs and medical devices of foreign origin are imported, distributed and marketed. These include many poorly labelled, misbranded and adulterated drugs, as well as hazardous medical devices. Training in the area of drug and medical devices is therefore necessary for staff of the Division of Environmental Health.

Forged prescriptions, lack of accountability of controlled substances by businesses, and illegal dispensing of controlled substances are estimated to be significant problems. However, because of the lack of human resources, only urgent cases are pursued and investigated.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

Guam is faced with the challenge of maintaining a health care system that will adequately meet the needs of a predominantly young and growing population. At the same time, it is also facing the added challenge of addressing the problems of the rapidly increasing number of older people, forecast to increase from 3.9% of the total population in 1990 to 7.5% in 2010.

A reduction in human and financial resources has severely impacted the health system. An early retirement programme, instituted at the end of 1999, led many experienced health workers to retire. While the vacated positions have continued to be funded, there is not a large enough resource pool to fill all of them. Tightening government budgets have left some less critical positions vacant, and these vacancies have reduced the overall amount of services available to the uninsured and underinsured population. The vacancies have also affected progress in strengthening other health service priority areas, such as disposal of hazardous and toxic materials, environmental protection, vector control, and drug and alcohol abuse services.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Guam statistical yearbook 2006 and 2008* *Guam cancer facts and figures 2003-2007*
Operator	:	Bureau of Statistics and Plans, Office of the Governor
Web address	:	http://bsp.guam.gov/
Title 2	:	Office of Vital Statistics, Guam Department of Health and Social Services
Web address	:	http://dphss.guam.gov/
Title 3	:	United States of America Bureau of the Census
Web address	:	http://www.census.gov/
Title 4	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int/prism/

6. ADDRESSES

DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES

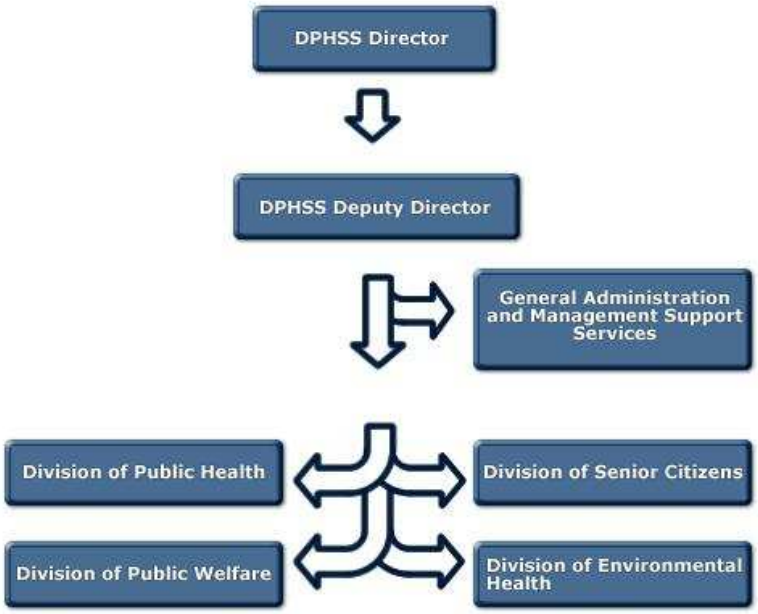
Postal Address	:	123 Chalan Kareta Mangilao, Guam 96913-6304
Website	:	http://dphss.guam.gov/

WHO REPRESENTATIVE

There is no WHO Representative in Guam. Queries about WHO's programme of collaboration with Guam should be directed to the Director (Programme Management):

Office Address	:	World Health Organization Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines 1000
Postal Address	:	P.O. Box 2932, Manila, Philippines 1000
Telephone	:	(632) 528-8001 (trunk line)
Office Hours	:	0700H-1530H
Website	:	http://www.wpro.who.int

7. ORGANIZATIONAL CHART: Department of Public Health and Social Services



GUAM — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.54						2008	1
2	Estimated population ('000s)	178.29 [a]		91.19 [a]		87.10 [a]		2009 est	1
3	Annual population growth rate (%)	…		…		…			
4	Percentage of population								
	- 0–4 years	8.96 [c]		9.01 [c]		8.92 [c]		2008 est	1
	- 5–14 years	18.81 [c]		19.08 [c]		18.52 [c]		2008 est	1
	- 65 years and above	7.21 [c]		6.60 [c]		7.84 [c]		2008 est	1
5	Urban population (%)	93.10		…		…		2009 est	2
6	Crude birth rate (per 1000 population)	19.71 [c]		…		…		2008	1
7	Crude death rate (per 1000 population)	4.41 [c]		…		…		2008	1
8	Rate of natural increase of population (% per annum)	1.53 [c]		…		…		2008	1
9	Life expectancy (years)								
	- at birth	79.20		76.82		81.91		2009 est	1
	- Healthy Life Expectancy (HALE) at age 60	…		…		…			
10	Total fertility rate (women aged 15–49 years)	2.55						2008	3
	Socioeconomic indicators								
11	Adult literacy rate (%)	…		…		…			
12	Per capita GDP at current market prices (US$)	22 661.00						2005	4
13	Rate of growth of per capita GDP (%)	…							
14	Human development index	…							
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	…		…		…			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	0	…	…	…	…	…	2007	5
	- Type B	3	…	…	…	…	…	2007	5
	- Type C	1	…	…	…	…	…	2007	5
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	1	…	…	…	…	…	2007	5
	Dengue/DHF	0	0	0	0	0	0	2009	6
	Encephalitis	2	…	…	0	0	0	2003	6
	Gonorrhoea	142	…	…	…	…	…	2007	5
	Leprosy	6	5	1	…	…	…	2009	6
	Malaria	1 [d]	…	…	…	…	…	2007	5
	Plague	0	0	0	0	0	0	2003	6
	Syphilis	38	…	…	…	…	…	2007	5
	Typhoid fever	0	0	0	…	…	…	2007	5
17	Acute respiratory infections	137	…	…	11	7	4	2000	7
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	…	…	…	0	0	0	2000	7
	- Among children under 5 years	…	…	…	…	…	…		
19	**Tuberculosis**								
	- All forms	89	…	…	…	…	…	2008	6
	- New pulmonary tuberculosis (smear-positive)	31	…	…	…	…	…	2008	6
20	**Cancers**								
	All cancers (malignant neoplasms only)	1580	886	694	720	439	281	2003-07	8
	- Breast	…	…	202	…	…	57	2003-07	8
	- Colon and rectum	165	98	67	82	50	32	2003-07	8
	- Cervix			31			15	2003-07	8
	- Leukaemia	42	27	15	21	11	10	2003-07	8
	- Lip, oral cavity and pharynx	…	…	…	…	…	…		
	- Liver	66	55	11	50	40	10	2003-07	8
	- Oesophagus	…	…	…	…	10	…	2003-07	8
	- Stomach	…	…	…	12	8	4	2003-07	8
	- Trachea, bronchus, and lung	…	233	91	206	141	65	2003-07	8
21	**Circulatory**								
	All circulatory system diseases	…	…	…	246	149	97	2000	7
	- Acute myocardial infarction	….	….	….	25	19	6	2000	7
	- Cerebrovascular diseases	…	…	…	48	33	25	2000	7
	- Hypertension	…	…	…	15	10	5	2000	7
	- Ischaemic heart disease	…	…	…	142	88	54	2000	7
	- Rheumatic fever and rheumatic heart diseases	…	…	…	2	2	0	2000	7
22	**Diabetes mellitus**	…	…	…	19	…	…	2001	9
23	**Mental disorders**	…	…	…	0	0	0	2000	7
24	**Injuries**								
	All types	…	…	…	82	69	13	2000	7
	- Drowning	…	…	…	…	…	…		
	- Homicide and violence	…	…	…	4	2	2	2000	7
	- Occupational injuries	…	…	…	5	4	1	2000	7
	- Road traffic accidents	…	…	…	23	18	5	2000	7
	- Suicide	…	…	…	30	25	5	2005	1
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Pregnancy, childbirth and the puerperium	3700 [e]	….	….	22195.56 [b]	….	….	FY 2007	1
	2. Other forms of heart disease	1117 [e]	….	….	6700.66 [b]	….	….	FY 2007	1
	3. Diabetes mellitus	567 [e]	….	….	3401.32 [b]	….	….	FY 2007	1
	4. Ischaemic heart disease	547 [e]	….	….	3281.34 [b]	….	….	FY 2007	1
	5. Influenza and pneumonia	529 [e]	….	….	3173.37 [b]	….	….	FY 2007	1
	6. Certain infectious and parasitic diseases	516 [e]	…	…	3095.38 [b]	…	…	FY 2007	1
	7. Malignant neoplasm	435 [e]	…	…	2609.48 [b]	…	…	FY 2007	1
	8. Cerebrovascular disease	318 [e]	…	…	1907.62 [b]	…	…	FY 2007	1
	9. Asthma	262 [e]	…	…	1571.69 [b]	…	…	FY 2007	1
	10. Other chronic obstructive pulmonary disease	207 [e]	…	…	1241.75 [b]	…	…	FY 2007	1

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the heart	199	...	...	119.45	...	...	2003	10
	2. Malignant neoplasm	114	...	...	68.43	...	...	2003	10
	3. Cerebrovascular disease	52	...	...	31.21	...	...	2003	10
	4. All other accidents	29	...	...	17.41	...	...	2003	10
	5. Bacterial diseases (septicaemia)	27	...	...	16.21	...	...	2003	10
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					...			
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					NR		2006	6
29	**Percentage of pregnant women with anaemia**					1.20		2001	7
30	**Neonatal mortality rate (per 1000 live births)**	4.33		...		...		2008p	1
31	**Percentage of newborn infants weighing less than 2500 g at birth**	8.46 [f]		...	...	...	...	2004	11
32	**Immunization coverage for infants (%)**								
	- BCG	...		...		...		2006	6
	- DTP3	89.00		...		...		2006	6
	- Hepatitis B III	91.00		...		...		2006	6
	- MCV2	...		...		...		2006	6
	- POL3	85.00 [g]		...		...		2006	6
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			76			0	2000	7
	- Eclampsia			...			...		
	- Haemorrhage			57			0	2000	7
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	6
	- Diphtheria	0	0	0	...	...	...	2009	6
	- Measles	0	0	0	...	...	...	2009	6
	- Mumps	1	...	...	...	...	...	2009	6
	- Neonatal tetanus	0	0	0	...	...	...	2009	6
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	6
	- Poliomyelitis	0	0	0	...	...	...	2009	6
	- Rubella	0	0	0	...	...	...	2009	6
	- Total Tetanus	0	0	0	..	...	...	2009	6
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	2 [h]	187	2008	1
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	77 [i]	0	2008	1
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)		159.81		2000	7
	- total expenditure on health as % of GDP		...			
	- per capita total expenditure on health (in US$)		1032.36		2000	7
	Government expenditure on health					
	- amount (in million US$)		64.07 [j]		2005	10
	- general government expenditure on health as % of total expenditure on health		...			
	- general government expenditure on health as % of total general government expenditure		8.71 [k]		2005	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		...			
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		...			
	- out-of-pocket expenditure on health as % of total expenditure on health		NA			
	Exchange rate in US$ of local currency is: 1 US$ =		...			
38	**Health insurance coverage as % of total population**		76.60 [l]		2005	1

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	141 [m]	...	...	...	...	...	...	2007	1
		- Ratio per 1000 population	0.84 [b]	...	...	...	...	...	...	2007	1
	Dentists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Pharmacists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Nurses	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	11.70	...	...	2005-07 est	12
44	Under-five mortality rate (per 1000 live births)	10.00	...	...	2005 est	13
45	Proportion of 1 year-old children immunised against measles	85.00	...	...	2006	6
46	Maternal mortality ratio (per 100 000 live births)	0.00			2003	14
47	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	87.22			2004	10
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	92.05			2001	7
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	61.00	...	...	2008	6
60	Tuberculosis death rate per 100 000 population	4.00	...	...	2008	6
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	88.00	...	...	2008	6
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	89.00	...	...	2007	6
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2008	15
64	Proportion of population using an improved sanitation facility	99.00	99.00	98.00	2008	15
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Mid-year projected population using 2000 Census percentages
b	Computed by the Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
c	Revised data was computed by the Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
d	Disease contracted "off-island"
e	Figure refers to inpatients in Guam Memorial Hospital
f	Figure refers to birth weight less than 2501 grams
g	Given as inactivated polio vaccine (IPV)
h	Figure includes one civilian hospital and one naval hospital
i	Figure refers to clinics which includes specialized services but excludes eye and dental clinics
j	Figure refers to total expenditure on public health as of 30 Septermber 2005 (audited)
k	Figure refers to percentage total expenditure on public health as to total government expenditure
l	Figure refers to percentage with healthcare coverage which pertains to private health insureance, either individual or group health insurance obtained throught employer or as private individual plan.
m	Figure refers to physicians in Guam Memorial Hospital and includes licensed military physicians working on part-time basis

Sources:	
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HONG KONG (CHINA)

1. CONTEXT

1.1 Demographics

Hong Kong (China) had an estimated mid-year population of 7 003 700 in 2009, representing an increase of 0.4% over mid-2008. There were 889 males for every 1000 females. The population density was 6480 persons per square kilometre, and about 94.9% of the population were city dwellers. Both births and the inflow of one-way permit holders from mainland China were important constituents of the overall population increase. The population are 95% ethnic Chinese, the major non-Chinese ethnic groups being Filipinos and Indonesians.

In 2009, life expectancy at birth was 79.8* years for males and 86.1* years for females, while the registered crude birth rate was 11.8 per 1000 population and the registered crude death rate was 5.9 per 1000. The total fertility rate was 1.0* known live births per woman.

As a result of increasing life expectancy, Hong Kong's population has been ageing steadily. In 2009, 12.8% were aged 65 years and above (10.7% in 1999), while those aged 14 and below made up 12.5% of the population (17.5% in 1999).

There were two* registered maternal deaths in 2009. The number of registered infant deaths was 137* and the infant mortality rate was 1.7* per 1000 registered live births. The under-five mortality rate was 2.2* per 1000 registered live births.

Note: * Provisional figure.

1.2 Political situation

Hong Kong is a Special Administrative Region of the People's Republic of China. Under the Basic Law, Hong Kong (China) has a high degree of autonomy, except in defence and foreign affairs, and enjoys executive, legislative and independent judicial power, including that of final adjudication. There are currently 12 bureaux, each headed by a Director, which together form the Government Secretariat. The Government introduced an accountability system for principal officials on 1 July 2002. Under that system, the politically appointed principal officials are held accountable for matters occurring within their respective portfolios.

1.3 Socioeconomic situation

The gross domestic product (GDP) grew at an average annual rate of 4.1%* in real terms during the 10 years to 2009. Per capita GDP increased by 2.0%* in money terms over the same period, reaching US$ 30 088* (HK$ 233 239*) in 2009.

The major source of government income is taxation. In the financial year 2008-2009, about 46% of government revenue was collected from direct taxes and 23% from indirect taxes. Other sources of revenue include fines; forfeitures and penalties; utilities; fees and charges; income from properties and investments; reimbursements and contributions; loan repayments; net proceeds from issuance of bonds and notes; land premiums; and capital revenue.

Based on the results of the General Household Survey, the size of the total labour force in 2009 was 3.7 million, of whom 53% were male. This represents 61% of the total land-based non-institutional population aged 15 and over. A total of 3 479 800 persons were employed, of whom 53% were male. The unemployment rate was 5.4%, higher than the 3.6% rate in 2008, while the underemployment rate was 2.3%.

In the past decade, the share of the services sector in total employment has risen from 79% to 87%. As for individual services, "public administration, social and personal services" accounted for 25% of the

total in 2009. This was followed by "financing, insurance, real estate, professional and business services" with a share of 18%; "import/export trade and wholesale", 16%; "retail, accommodation and food services", 16%; and "transportation, storage, postal and courier services and information and communication", 12%. In contrast, there has been a significant decline in the number of workers in the manufacturing sector, with its share decreasing from 11% in 1999 to 4% in 2009.

In 2009, nearly 100% of the population had sustainable access to an improved water source, while 99% had access to improved sanitation.

Note: * Provisional figure.

1.4 Risks, vulnerabilities and hazards

Hong Kong is geologically stable. It is occasionally hit by tropical cyclones between June and October, which can bring strong winds and heavy rain. The resultant landslips and flooding sometimes cause considerably more damage than the winds.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Hong Kong takes pride in having achieved health indices that rank among the best in the world.

Like many other developed economies, Hong Kong has gone through an epidemiological transition in mortality from communicable to noncommunicable diseases (NCD). With gradual urbanization, adoption of more affluent lifestyles and medical advances over the past few decades, the proportion of registered deaths due to infectious and parasitic diseases dropped from 15.3% in 1961 to less than 2.7%* in 2009. In 2009, the four major chronic NCD—cancer, heart diseases, stroke and chronic lower respiratory diseases—accounted for about three-fifths (59.9%*) of all registered deaths. The age-standardized mortality rates for these four major NCD, for both males and females, have declined gradually over recent decades, although there has been an increase in the absolute number of registered deaths as a result of population ageing and population growth. The number of new cancer cases has shown an increasing trend, while the age-standardized incidence rate has shown a decreasing trend over recent decades.

Many NCD are closely related to behavioural risk factors, such as overweight and obesity, unhealthy diet, physical inactivity, smoking and consumption of alcohol. A periodic telephone survey in 2009, which interviewed around 2000 people aged 18-64, reported that about two-fifths (38.7%) of those aged 18-64 were overweight/obese. A significantly higher proportion of males (49.2%) than females (29.7%) were classified as overweight/obese, and about four-fifths (79.0%) of the population failed to meet the WHO recommendation of having at least five servings of fruit and vegetables per day (85.2% for males and 73.8% for females). As regards physical activity, around one-fifth (21.0%) of the population were classified as having a low level of physical activity (19.8% for males and 22.0% for females). About one in 12 (8.4%) were binge drinkers (13.8% for males and 3.8% for females). Furthermore, according to the Thematic Household Survey conducted from December 2007 to March 2008, around one in nine (11.8%) people aged 15 and above were daily cigarette smokers (20.5% for males and 3.6% for females).

In terms of communicable diseases, the Prevention and Control of Disease Ordinance provides the legal framework for their management and defines a list of infectious diseases that are of public health importance and are required to be reported to the Director of Health. In 2009, there were 47 infectious diseases on the list. A total of 48 161* cases of notifiable disease were reported in 2009, 190.5%* higher than in 2008. The sharp increase in 2009 was mainly due to a large number of pandemic influenza A (H1N1) 2009 cases. The top three most commonly reported diseases were pandemic influenza A (H1N1) 2009(34 174* cases), chickenpox (6777* cases) and tuberculosis (5348* cases), constituting 96.1%* of all notifications among the 47 listed conditions.

In 2009, there were 5348* tuberculosis notifications, giving a notification rate of 76.4* per 100 000 population. For HIV/AIDS, by the end of 2009, a cumulative total of 4443 HIV infections and 1106 AIDS patients had been reported.

Note: * Provisional figure.

2.2 Outbreaks of communicable diseases

Schools, residential care homes and other community institutions are strongly encouraged to report any suspected communicable disease outbreak to the Department of Health for investigation and early intervention. In 2009, the most commonly reported outbreaks were influenza-like illness, hand-foot-mouth disease and acute gastroenteritis. Throughout the year, 1085* confirmed influenza outbreaks occurred in institutions, affecting 26 016* persons, with a peak from August to October due to pandemic influenza A (H1N1) 2009. There were 133* acute gastroenteritis outbreaks in institutions, confirmed to be caused by norovirus, affecting 1635* persons, and 103* institutional outbreaks of hand-foot-mouth disease or herpangina, affecting 727* persons.

Note: * Provisional figure.

2.3 Leading causes of mortality and morbidity

There were 41 530 registered deaths in 2008, with NCD-related causes predominating. Among the top ten leading causes of death, six were NCD, including cancer, heart disease, stroke, chronic lower respiratory disease, injury and poisoning, and diabetes. They contributed to a total of 27 341 registered deaths (cancer: 12 456; heart disease: 6777; stroke: 3691; chronic lower respiratory disease: 2103; injury and poisoning: 1766; and diabetes: 548) and accounted for 65.8% (cancer: 30.0%; heart disease: 16.3%; stroke: 8.9%; chronic lower respiratory disease: 5.1%; injury and poisoning: 4.3%; and diabetes: 1.3%) of all registered deaths.

In terms of morbidity, there were 1 632 146 episodes of hospital discharge and death in all hospitals in 2008. Similar to the mortality data, a substantial proportion of hospitalizations were due to NCD, including cancer, heart disease, stroke, injury and poisoning, chronic lower respiratory disease and diabetes. In total, they accounted for 21.5% (351 517 episodes) of hospitalizations, while infectious and parasitic diseases accounted for only 2.9% (47 393 episodes).

2.4 Maternal, child and infant diseases

Infant and under-five mortality rates continue to be consistently low, as does the maternal mortality ratio.

Maternal and child health services provided by the Department of Health are delivered through a network of 31 easily accessible maternal and child health centres (MCHCs) located throughout the territory. In 2009, 50% of newborn babies were delivered in public hospitals and 50% in private hospitals. About 90% of babies born to local mothers patronize the MCHCs.

Children are immunized against tuberculosis, hepatitis B, poliomyelitis, diphtheria, tetanus, pertussis, pneumococcal infection, measles, mumps and rubella. A cross-sectional survey conducted in 2006 for children aged two to five years revealed that the immunization coverage rates of all vaccines for local-born children were over 97%. Due to high immunization coverage, diseases such as diphtheria and poliomyelitis have been virtually eradicated, and the incidence of preventable infectious diseases among children is relatively low.

Breast-feeding surveys conducted regularly in MCHCs show that the ever-breast-fed rate increased from 50% for babies born in 1997 to 74% for those born in 2008. The exclusive breast-feeding rate for those over four to six months increased from 6% to 13% in the corresponding period.

2.5 Burden of disease

Apart from mortality and hospitalization data, the prevalence rates for diseases or risk factors can also reflect the disease burden in the community. The Heart Health Survey 2004-05, which involved over 1200 people aged 15-84, showed that 6.9% had diabetes and 33.3% had high blood cholesterol levels.

Another survey, the Population Health Survey 2003-04, which interviewed more than 7000 people aged 15 and above, showed that more than one-quarter (27.2%) of the population had hypertension. Diabetes, high blood cholesterol and hypertension are important risk factors for many NCD, such as heart disease and stroke.

The Population Health Survey 2003-04 also revealed that the prevalence rates for coronary heart disease, chronic obstructive pulmonary disease, cancer and stroke were 1.6%, 1.4%, 1.3% and 1.1%, respectively. As regards injuries, 14.3% of the population reported that they had sustained injuries that were serious enough to curtail their normal activities in the 12 months preceding the survey.

In terms of potential years of life lost (PYLL) at age 75, which provides a good estimate of the overall level of premature deaths in the population, cancer accounted for over two-fifths (43.0%) of total PYLL in 2008. Although injury and poisoning only ranked sixth as the leading cause of death in 2008, it accounted for around one-sixth (15.8%) of the total PYLL. This indicates that injuries and poisonings constitute an important health problem, especially among young people. For heart disease, stroke and chronic lower respiratory disease, the proportions of PYLL were 10.1%, 5.2% and 1.6%, respectively. In total, these five NCD accounted for 75.7% of all PYLL in 2008.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The mission of the Food and Health Bureau is to enhance the well-being of every member of the community and to build a healthy and caring society, seeking to ensure a good quality, equitable, efficient, cost-effective and accessible health care system, and to organize the infrastructure for coordinated health care delivery through an interface of public and private systems.

The Government's goal is to provide a health care system that is able to protect and promote health and to provide quality health care services to citizens at reasonable prices.

3.2 Organization of health services and delivery systems

Primary health care services, which include a range of health-promotion, preventive and curative services, are provided by the Department of Health, the Hospital Authority and the private sector.

Most health-promotion and preventive services are provided by the public sector. For curative services, private practitioners of Western medicine accounted for more than half (55.6%) of consultations in 2008. Most private practitioners are in solo practices and usually work on a fee-for-service basis. The traditional Chinese medicine practitioner is the principal alternative primary care provider outside the mainstream Western medical system. Many patients use both systems in parallel, taking Western medicine to suppress symptoms and Chinese medicine to restore the body to its natural balance.

In contrast to curative primary care services, the public sector is the dominant provider of secondary and tertiary services. Hospital services are subsidized by the Government to a large extent.

The Department of Health provides a wide range of health-promotion and disease-prevention services, covering programmes on maternal and child health, student health, elderly health, dental health and port health. The Department also operates a number of specialized clinics, including 20 methadone clinics, 19 tuberculosis and chest clinics, seven social hygiene clinics, four dermatology clinics, two integrated treatment centres, four clinical genetics clinics, six child-assessment centres, two travel-health centres and other clinical services. The Centre for Health Protection was set up under the Department of Health to strengthen the prevention and control of communicable diseases and other public health hazards.

The Hospital Authority provides medical treatment and rehabilitation services to patients through public hospitals, general outpatient and specialist clinics and outreach services. The Authority was managing a total of 26 872 hospital beds in 38 public hospitals at the end of 2009, which represents around 3.8* public hospital beds per 1000 population. The Hospital Authority also operates 74 general outpatient

clinics throughout the territory, targeted primarily at serving low-income families, patients with chronic diseases and other vulnerable groups.

The private sector plays a complementary role in providing health care, and there were around 3730 private clinics providing primary and specialist medical care in 2009. The Thematic Household Survey, conducted from February 2008 to May 2008, showed that, of a total of 1 806 400 medical consultations (based on the last and up to the last three consultations with doctors made by the persons concerned) during the 30 days before enumeration, 70% (or 1 256 400 consultations) were with private medical practitioners (including practitioners of Western medicine and Chinese medicine). There were 13 private hospitals, operating a total of 3818 hospital beds, at the end of 2009. Their market share in terms of inpatient discharges and deaths on attendance was 21.0%. There were also 37 private nursing homes, providing about 3573 beds, at the end of 2009.

With regard to pharmaceutical services, public hospitals and clinics provide the more essential medicines to patients at a nominal cost. Private hospitals and clinics supply a broader range of medicines, which are paid for by the patients themselves. All medicines available in Hong Kong must first be registered with the Pharmacy and Poisons Board, a statutory body whose membership comprises mainly doctors, academics and pharmacists. All manufacturers of medicines must meet the requirements of the good manufacturing practices (GMP) guidelines promulgated by the Pharmacy and Poisons Board, which are adopted from the GMP guidelines recommended by WHO. Medicines are classified into three broad categories in terms of control of sale: prescription-only medicines, pharmacy medicines and general-sale medicines. There are currently about 20 000 registered medicines in total, of which about 40% are prescription-only medicines, 14% are pharmacy medicines and 46% are general-sale medicines.

Note: * Provisional figure.

3.3 Health policy, planning and regulatory framework

The Government's health care policy is that no one in Hong Kong is deprived of medical care because of lack of means.

The Food and Health Bureau is the policy-making body responsible for health. It oversees the Department of Health and the Hospital Authority. The Department of Health is the Government's health adviser and the agency responsible for executing health care policies and statutory functions. The Hospital Authority is the statutory body responsible for the management of all public hospitals.

3.4 Health care financing

Total health care expenditure in 2005/2006 amounted to 5.1% of GDP, including the public sector (52%) and the private sector (48%). Public expenditure on health reached US$ 4.7 billion. As there are no social security funds, all public finances for health care services come from general government funds.

The health services provided by the public sector are heavily subsidized, with subsidy levels at about 97% of total cost for inpatient services and 84% for general outpatient services in 2008/2009. Health-promotion and disease-prevention activities, such as treatment of tuberculosis and childhood immunization, are provided free of charge.

The private health care sector was financed largely by household out-of-pocket payments (71%) and, to some extent, private insurance (11%) and employer-provided group medical benefits (16%) in 2005/2006.

3.5 Human resources for health

Health care manpower is monitored regularly through surveys to ensure that workforce planning is in line with the needs of the community.

The Hong Kong Government also makes projections on health care manpower demand from time to time. When making manpower projections, the views of major employers from both the public and private sectors are taken into account. Advice is given to the University Grants Committee in relation to

publicly-funded places on health care programmes, which serves as a reference for institutions in formulating their academic plans.

On the regulatory front, various statutory boards and councils, such as the Medical Council, the Chinese Medicine Council, the Dental Council, and the Pharmacy and Poisons Boards, have been established under relevant ordinances to handle the registration, conduct and discipline of their respective health care professionals. Under existing legislation, 12 types of health care professional are required to be registered with their respective boards or councils before being allowed to practise in Hong Kong. In addition, an independent statutory body, the Hong Kong Academy of Medicine, has the authority to approve, assess and accredit specialist training within the medical and dental professions.

The medical and health care professionals registered with respective statutory boards and councils are encouraged to enrol in continuing medical education and/or continuous professional development (CME/CPD) programmes to update their knowledge and promote the development of competencies relevant to their practice. It is a statutory requirement for registered Chinese medicine practitioners to fulfil the CME programmes of the Chinese Medicine Council in order for them to renew their practising certificates. In 2009, there were a total of 6048 Chinese medicine practitioners. Medical practitioners and dentists on the Specialist Register must fulfil the CME/CPD requirements of their respective councils in order to maintain their specialist status.

3.6 Partnerships

Locally, the Government maintains good working relationships and collaborates with various partners, including professional and community associations, in health-promotion activities for the prevention and control of communicable and noncommunicable diseases. For instance, a comprehensive disease notification system is maintained with health care providers and institutions from the public and private sectors. The latest outbreak news and surveillance results are shared and dialogue is maintained among health care providers and professional associations. The Government also partners with the Hospital Authority and voluntary agencies in handling public health emergencies.

On the regional front, close alliances with regional authorities, including the Ministry of Health of the People's Republic of China, the Health Department of Guangdong Province and the Macao Health Bureau, facilitate regular exchanges of information on selected diseases. Bilateral and multilateral meetings, forums and emergency response exercises are held from time to time to strengthen cooperation and communication among regional authorities. Internationally, the Government liaises closely with WHO and engages in collaborative projects with overseas health-protection agencies and academic institutions.

3.7 Challenges to health system strengthening

Over the years, Hong Kong has built an enviable health care system that provides high quality services. However, that system is now facing major challenges due to the ageing population and the need to keep pace with rapid developments in medical technology. The ratio of working-age (between 15 and 64) to elderly populations (65 or above) was 5.9:1 in 2009, and it is estimated that it will be 4.2:1 in 2019 and 2.6:1 in 2029. On the other hand, overall public health expenditure is projected to increase to about US$ 10.0 billion in 2015 and about US$ 16.3 billion in 2025 (at constant 2005 prices). To uphold the principle of no one in Hong Kong being deprived of medical care because of lack of means, the Government of Hong Kong launched a consultation exercise in March 2008 on health care reform and supplementary financing options, aimed at building a consensus to reform the health care system and make it sustainable and more responsive to the increasing needs of the community.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goal 4: Reduce child mortality

Hong Kong's infant mortality rate (IMR) is among the best in the world. In 2009, the provisional figure reached a level as low as 1.7* per 1000 registered live births. That achievement was the result of socioeconomic progress, better education, improvement in nutrition, hygiene and sanitation and the

development of medical and health services. The Maternal and Child Health Centres (MCHCs) under the Department of Health, offer a comprehensive range of health promotion and disease prevention services to children from birth to five years. In addition, the Department of Health is actively committed to promoting, protecting and supporting breast-feeding. The Scientific Committee on Vaccine Preventable Disease (SCVPD) regularly reviews and makes recommendations on local vaccine use.

Goal 5: Improve maternal health

Hong Kong's maternal mortality ratio (MMR) is also among the best in the world. In 2009, the provisional figure was 2.4* per 100 000 registered live births. Hong Kong provides quality and accessible maternal health services through a professional team of health workers in both the public and private sectors. In 2009, about 50% of newborn babies were delivered in public hospitals and 50% in private hospitals. The Department of Health provides pregnant and postnatal women with free and accessible quality antenatal and postnatal care in its 31 Maternal and Child Health Centres (MCHCs).

Goal 6: Combat HIV/AIDS, malaria and other diseases

In 2009, 396 HIV infections and 76 cases of AIDS were reported, giving a cumulative total of 4443 HIV infections and 1106 AIDS patients. Sexual transmission is the predominant route of transmission. Various public health measures have kept the prevalence of HIV infection in drug users at a low level compared with neighbouring cities. Of concern is the rising trend that has been detected in men who have sex with men (MSM) in recent years, despite a slight drop in 2009. In Hong Kong, government, civil society and other stakeholders share responsibility in combating AIDS. A strategic plan is drawn up every five years by the Advisory Council on AIDS to guide, improve and coordinate the HIV programme.

Malaria has been well under control for the past four decades. In the period from 2000 to 2009, the annual number of cases reported ranged between 23 and 54, with a cumulative total of 354 cases recorded. Malaria surveillance and control, including prompt investigation and control targeted at malaria patients and their contacts, laboratory support, vector control, and health promotion, have been in place in the Hong Kong since the 1930s.

The tuberculosis notification rate in Hong Kong has shown an overall downward trend in the past 50 years, with a relatively "stagnant" trend in the past decade. In 2009, a total of 5348* cases of tuberculosis were notified, corresponding to a notification rate of 76.4* per 100 000. The control of tuberculosis relies on the success of the surveillance system, directly observed treatment, short-course (DOTS) and other tuberculosis public health services, quality laboratory support and ongoing evaluation and monitoring.

Note: * Provisional figure.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Statistics on demographic and socioeconomic situation*
Operator	:	Census and Statistics Department
Web address	:	http://www.censtatd.gov.hk/home/index.jsp
Title 2	:	*Statistics on mortality, morbidity, healthcare professionals and services, and communicable diseases*
Operator	:	Department of Health
Web address	:	http://www.dh.gov.hk/eindex.html
	:	
Title 3	:	*Behavioural Risk Factor Survey*
Operator	:	Department of Health
Specification	:	The survey collected information on health-related behaviours of the Hong Kong adult population. Results were obtained from samples of at least 2000 randomly selected land-based, non-institutionalized persons aged 18 to 64 years
Web address	:	http://www.chp.gov.hk/behavioural.asp?lang=en&pid=10&id=280
Title 4	:	*Population Health Survey*
Operator	:	Department of Health
Specification	:	The survey collected information on general health status, the prevalence and incidence of major health conditions, mental health status, health behaviour relating to major causes of mortality and morbidity, preventive health practices, health-promoting behaviours, health service utilization, social and financial

		support, and the quality of life of the population. Results were obtained from over 7000 land-based, non-institutionalized persons in Hong Kong aged 15 and over, representing 5.68 million persons, after applying population weights. The household response rate was 72%.
Web address	:	http://www.chp.gov.hk/
Title 5	:	*Thematic Household Survey*
Specification	:	The series of surveys collected information on the patterns of smoking and doctor consultation of Hong Kong residents. Some 10 000 households within a scientifically selected sample were successfully enumerated, constituting a response rate of at least 75%
Web address	:	http://www.censtatd.gov.hk/products_and_services/products/publications/statistical_report/social_data/
Title 6	:	*Statistics on health expenditure*
Operator	:	Food and Health Bureau
Specification	:	It presents the estimates of domestic health expenditure in Hong Kong between the fiscal years 1989/90 and 2005/06 based on the latest OECD guidelines, with a breakdown by financing source, provider and function over time.
Web address	:	http://www.fhb.gov.hk/statistics/en/dha.htm

6. ADDRESSES

DEPARTMENT OF HEALTH

Office Address	:	21/F Wu Chung House, 213 Queen's Road East, Wan Chai, Hong Kong
Postal Address	:	21/F Wu Chung House, 213 Queen's Road East, Wan Chai, Hong Kong
Official Email Address	:	enquiries@dh.gov.hk
Telephone	:	(852) 29618989
Fax	:	(852) 28360071
Office Hours	:	Mon to Fri: 9am-5:45pm; Sat, Sun & Public Holidays off
Website	:	http://www.dh.gov.hk

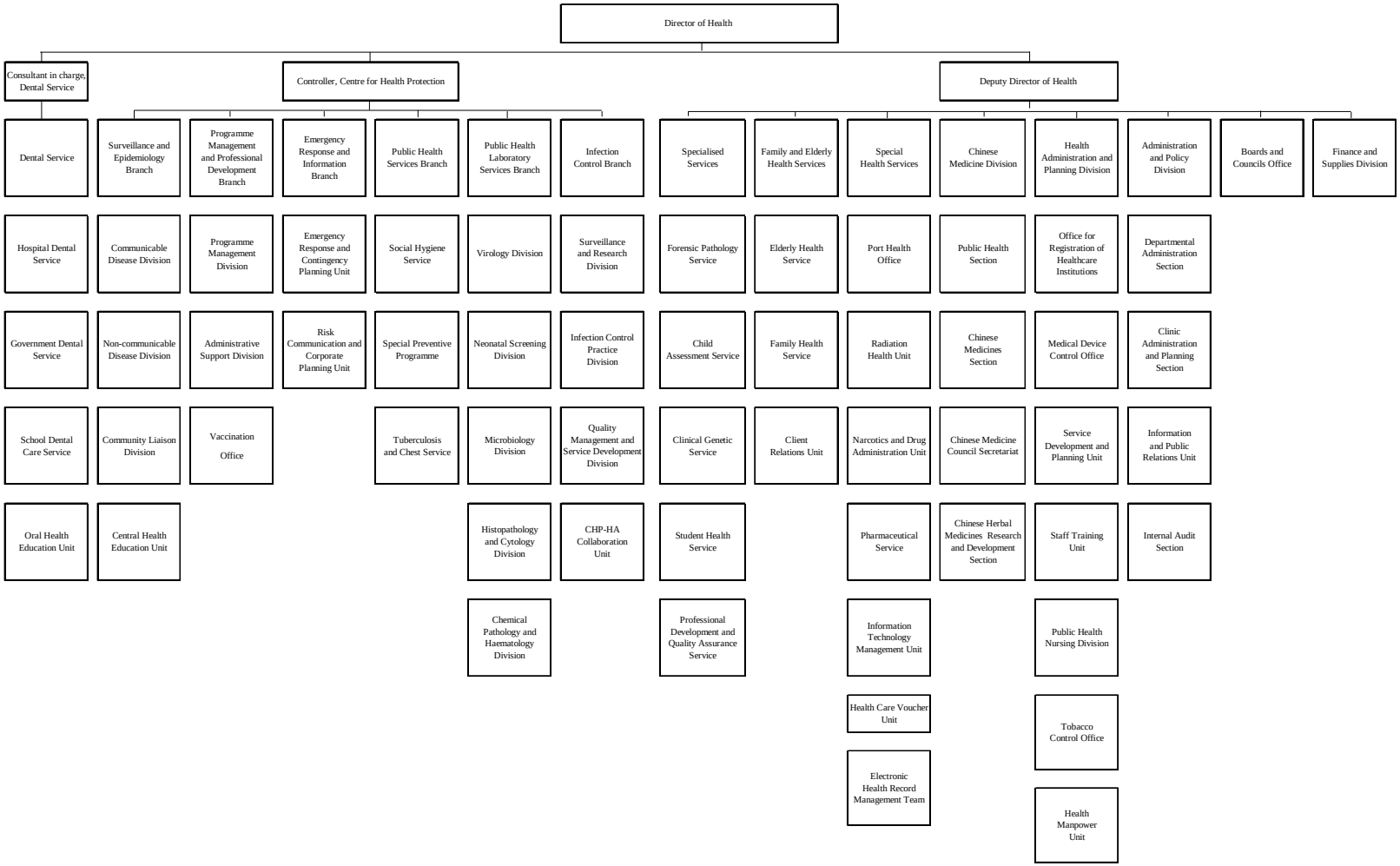
WHO REPRESENTATIVE

There is no WHO Representative in Hong Kong (China). Queries about WHO's programme of collaboration with Hong Kong (China) should be directed to the Director, Programme Management, WHO Regional Office for the Western Pacific.

Office Address	:	Director, Programme Management World Health Organization Regional Office for the Western Pacific
Postal Address	:	United Nations Avenue, P.O. Box 2932, 1000 Manila, Philippines
Official Email Address	:	postmaster@wpro.who.int
Telephone	:	+632 528 8001
Fax	:	+632 521 1036
Office Hours	:	0700 – 1530 M-F
Website	:	http://www.wpro.who.int

7. ORGANIZATIONAL CHART: Department of Health

Organisation Chart of the Department of Health
(Position as at 31.3.2010)



HONG KONG (CHINA)

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	1.10						2009	1
2	Estimated population ('000s)	7003.70		3296.20		3707.50		2009	2
3	Annual population growth rate (%)	0.37		-0.04		0.74		2009	2
4	Percentage of population								
	- 0–4 years	3.27		3.63		2.96		2009	2
	- 5–14 years	9.20		10.07		8.43		2009	2
	- 65 years and above	12.76		12.56		12.94		2009	2
5	Urban population (%)	94.85		…		…		2009	3
6	Crude birth rate (per 1000 population)	11.84 [a]		13.45 [a]		10.41 [a]		2009	2,4
7	Crude death rate (per 1000 population)	5.86 [a,b]		6.93 [a]		4.90 [a]		2009	2,4
8	Rate of natural increase of population (% per annum)	0.60		0.65		0.55		2009p	2
9	Life expectancy (years)								
	- at birth	…		79.81		86.09		2009p	2
	- Healthy Life Expectancy (HALE) at age 60	…		22.64		27.97		2009p	2
10	Total fertility rate (women aged 15–49 years)	1.03						2009p	2
	Socioeconomic indicators								
11	Adult literacy rate (%)	94.76 [c]		97.40 [c]		92.44 [c]		2009	2
12	Per capita GDP at current market prices (US$)	30 087.59						2009p	2,4
13	Rate of growth of per capita GDP (%)	-2.85						2009p	2,4
14	Human development index	0.94						2007	5
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	2695.00		…		…		2009 est	6
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral (ICD10: B15-B17, B19)	221 [d]	136 [d]	85 d	3 [a]	1 a	2 [a]	2009p	2,4
	- Type A (ICD10: B15)	64 [d]	35 [d]	29 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Type B (ICD10: B16)	80 [d]	56 [d]	24 [d]	3 [a]	1 [a]	2 [a]	2009p	2,4
	- Type C (ICD10: B17.1)	3 [d]	2 [d]	1 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Type E (ICD10: B17.2)	74 [d]	43 [d]	31 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Unspecified (ICD10: B19)	0 [d]	0 [d]	0 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	Cholera (ICD10: A00)	0 [d]	0 [d]	0 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	Dengue/DHF (ICD10: A90, ICD10: A91)	43 [d]	31 [d]	12 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4,14
	Encephalitis (ICD10: G04)	…	…	…	10 [a]	4 [a]	6 [a]	2009p	2,4
	Gonorrhoea (ICD10: A54)	1401 [e]	1264 [e]	137 [e]	0 [a]	0 [a]	0 [a]	2009p	2,4
	Leprosy (ICD10: A30)	4 [d]	3 [d]	1 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	Malaria (ICD10: B50-B54)	23 [d]	18 [d]	5 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	Plague (ICD10: A20)	0 [d]	0 [d]	0 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	Syphilis (ICD10: A50-A53)	1024 [e]	574 [e]	450 [e]	3 [a]	2 [a]	1 [a]	2009p	2,4
	Typhoid fever (ICD10: A01.0)	89 [d]	19 [d]	70 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
17	Acute respiratory infections	…	…	…	14 [a]	4 [a]	10 [a]	2008	2,4
	- Among children under 5 years	…	…	…	1 [a]	0 [a]	1 [a]	2008	2,4

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	14 [a]	4 [a]	10 [a]	2008	2,4
	- Among children under 5 years	...	...	...	1 [a]	0 [a]	1 [a]	2008	2,4
19	**Tuberculosis**								
	- All forms	5348 [d]	3344 [d]	2004 [d]	195 [a]	142 [a]	53 [a]	2009p	2,4
	- New pulmonary tuberculosis (smear-positive)	1505 [d]	1012 [d]	493 [d]	...	...	...	2009p	4
20	**Cancers**								
	All cancers (malignant neoplasms only) (ICD10: C00-C97)	24 342	13 031	11 311	12 456 [a]	7517 [a]	4939 [a]	C: 2007 D: 2008	2,4,7
	- Breast (ICD10: C50)	2723	22	2701	515 [a]	7 [a]	508 [a]	C: 2007 D: 2008	2,4,7
	- Colon and rectum (ICD10: C18-C21)	4084	2353	1731	1686 [a]	980 [a]	706 [a]	C: 2007 D: 2008	2,4,7
	- Cervix (ICD10: C53)			399			120 [a]	C: 2007 D: 2008	2,4,7
	- Leukaemia (ICD10: C91-C95)	421	225	196	289 [a]	158 [a]	131 [a]	C: 2007 D: 2008	2,4,7
	- Lip, oral cavity and pharynx (ICD10: C00-C14)	1407	1002	405	529 [a]	395 [a]	134 [a]	C: 2007 D: 2008	2,4,7
	- Liver (ICD10: C22)	1690	1304	386	1499 [a]	1116 [a]	383 [a]	C: 2007 D: 2008	2,4,7
	- Oesophagus (ICD10: C15)	426	332	94	343 [a]	270 [a]	73 [a]	C: 2007 D: 2008	2,4,7
	- Stomach (ICD10: C16)	1007	626	381	625 [a]	391 [a]	234 [a]	C: 2007 D: 2008	2,4,7
	- Trachea, bronchus, and lung (ICD10: C33-C34)	4261	2827	1434	3497 [a]	2302 [a]	1195 [a]	C: 2007 D: 2008	2,4,7
21	**Circulatory**								
	All circulatory system diseases (ICD10: I00-I99)	...	...	...	11 333 [a]	5736 [a]	5597 [a]	2008	2,4
	- Acute myocardial infarction (ICD10: I21-I22)	...	...	...	1939 [a]	1123 [a]	816 [a]	2008	2,4
	- Cerebrovascular diseases (ICD10: I60-I69)	...	...	...	3691 [a]	1843 [a]	1848 [a]	2008	2,4
	- Hypertension (ICD10: I10-I15)	...	...	...	948 [a]	425 [a]	523 [a]	2008	2,4
	- Ischaemic heart disease (ICD10: I20-I25)	...	...	...	4577 [a]	2485 [a]	2092 [a]	2008	2,4
	- Rheumatic fever and rheumatic heart diseases (ICD10: I00-I09)	...	...	...	128 [a]	43 [a]	85 [a]	2008	2,4
22	**Diabetes mellitus (ICD10: E10-E14)**	...	...	...	548 [a]	227 [a]	321 [a]	2008	2,4
23	**Mental disorders (ICD10: F00-F99)**	...	...	...	504 [a]	183 [a]	321 [a]	2008	2,4
24	**Injuries**								
	All types (ICD10: V01-Y89)	...	...	...	1766 [a,f]	1140 [a,f]	626 [a,f]	2008	2,4
	- Drowning (ICD10: W65-W74)	...	...	...	21 [a,f]	17 [a,f]	4 [a,f]	2008	2,4
	- Homicide and violence (ICD10 : X85-Y09)	...	...	...	23 [a,f]	5 [a,f]	18 [a,f]	2008	2,4
	- Occupational injuries	41 900	26 000	15 900	181 [a]	149 [a]	32 [a]	2008	8
	- Road traffic accidents (ICD10: V01-V89)	14 576 [g]	...	...	161 [a,f]	102 [a,f]	59 [a,f]	2008	2,4,9
	- Suicide (ICD10 : X60-X84)	...	...	...	878 [a,f]	535 [a,f]	343 [a,f]	2008	2,4
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the genitourinary system (ICD10: N00-N99)	202 790 [h]	...	...	2906.26 [h]	...	...	2008	2,4,7
	2. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (ICD10: R00-R99)	157 740 [h]	...	...	2260.63 [h]	...	...	2008	2,4,7
	3. Neoplasms (ICD10: C00-D48)	152 847 [h]	...	...	2190.51 [h]	...	...	2008	2,4,7
	4. Factors influencing health status and contact with health services (ICD10: Z00-Z99)	144 827 [h]	...	...	2075.57 [h]	...	...	2008	2,4,7
	5. Diseases of the respiratory system (ICD10: J00-J99)	141 113 [h]	...	...	2022.34 [h]	...	...	2008	2,4,7
	6. Diseases of the digestive system (ICD10: K00-K93)	140 135 [h]	...	...	2008.33 [h]	...	...	2008	2,4,7
	7. Diseases of the circulatory system (ICD10: I00-I99)	134 639 [h]	...	...	1929.56 [h]	...	...	2008	2,4,7
	8. Pregnancy, childbirth and the puerperium (ICD10: O00-O99)	122 858 [h]	...	...	1760.72 [h]	...	...	2008	2,4,7
	9. Injury, poisoning and certain other consequences of external causes (ICD10: S00-T98)	77 602 [h]	...	...	1112.14 [h]	...	...	2008	2,4,7
	10. Diseases of the musculoskeletal system and connective tissue (ICD10: M00-M99)	53 997 [h]	...	...	773.85 [h]	...	...	2008	2,4,7

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms (ICD10: C00-C97)	12 456 [a]	7517 [a]	4939 [a]	178.51 [a]	227.96 [a]	134.20 [a]	2008	2,4
	2. Diseases of heart (ICD10: I00-I09, I11, I13, I20-I51)	6777 [a]	3442 [a]	3335 [a]	97.12 [a]	104.38 [a]	90.62 [a]	2008	2,4
	3. Pneumonia (ICD10: J12-J18)	5486 [a]	2925 [a]	2561 [a]	78.62 [a]	88.70 [a]	69.59 [a]	2008	2,4
	4. Cerebrovascular diseases (ICD10: I60-I69)	3691 [a]	1843 [a]	1848 [a]	52.90 [a]	55.89 [a]	50.21 [a]	2008	2,4
	5. Chronic lower respiratory diseases (ICD10: J40-J47)	2103 [a]	1504 [a]	599 [a]	30.14 [a]	45.61 [a]	16.28 [a]	2008	2,4
	6. External causes of morbidity and mortality (ICD10: V01-Y89)	1766 [a,f]	1140 [a,f]	626 [a,f]	25.31 [a,f]	34.57 [a,f]	17.01 [a,f]	2008	2,4
	7. Nephritis, nephrotic syndrome and nephrosis (ICD10: N00-N07, N17-N19, N25-N27)	1419 [a]	692 [a]	727 [a]	20.34 [a]	20.99 [a]	19.75 [a]	2008	2,4
	8. Septicaemia (ICD10: A40-A41)	797 [a]	404 [a]	393 [a]	11.42 [a]	12.25 [a]	10.68 [a]	2008	2,4
	9. Diabetes mellitus (ICD10: E10-E14)	548 [a]	227 [a]	321 [a]	7.85 [a]	6.88 [a]	8.72 [a]	2008	2,4
	10. Dementia (ICD10: F01-F03)	495 [a]	177 [a]	318 [a]	7.09 [a]	5.37 [a]	8.64 [a]	2008	2,4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					…			
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					…			
29	**Percentage of pregnant women with anaemia**					2.05 [i]		2009	4
30	**Neonatal mortality rate (per 1000 live births)**	0.95 [a]		0.9 [a]		1.01 [a]		2009p	2,4
31	**Percentage of newborn infants weighing less than 2500 g at birth**	5.22 [j]		4.59 [j]		5.94 [j]		2008	2,4
32	**Immunization coverage for infants (%)**								
	- BCG	> 95.00 [k]		…		…		2008	4
	- DTP3	> 95.00 [k]		…		…		2008	4
	- Hepatitis B III	> 95.00 [k]		…		…		2008	4
	- MCV2	> 95.00 [al]		…		…		2008	4
	- POL3	> 95.00 [k]		…		…		2008	4
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			…			0 [a]	2008	2,4
	- Eclampsia			…			0 [a]	2008	2,4
	- Haemorrhage			…			1 [a]	2008	2,4
	- Obstructed labour			…			0 [a]	2008	2,4
	- Sepsis			…			0 [a]	2008	2,4
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0 [d]	0 [d]	0 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Diphtheria	0 [d]	0 [d]	0 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Measles	26 [d]	12 [d]	14 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Mumps	158 [d]	90 [d]	68 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Neonatal tetanus	0 [d]	0 [d]	0 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Pertussis (whooping cough)	15 [d]	9 [d]	6 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Poliomyelitis	0 [d]	0 [d]	0 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Rubella	44 [d]	22 [d]	22 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	- Total Tetanus	1 [d]	0 [d]	1 [d]	0 [a]	0 [a]	0 [a]	2009p	2,4
	Health facilities								
35	**Facilities with HIV testing and counseling services**					…			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	38 [o,q]	26 872 [o,q]	2009	7
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	292 [o,r]	799 [o,r]	2009	4,7
	Private health facilities	- Hospitals	13 [o,s]	3818 [o,s]	2009	4
		- Outpatient clinics	3730 [o]	...	2009	2
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			9201.00 [t]	FY2005/06	2,4,10
	- total expenditure on health as % of GDP			5.10 [u]	FY2005/06	2,4,10
	- per capita total expenditure on health (in US$)			1351.00 [v]	FY2005/06	2,4,10
	Government expenditure on health					
	- amount (in million US$)			4743.00 [w]	FY2005/06	2,4,10
	- general government expenditure on health as % of total expenditure on health			52.00 [x]	FY2005/06	2,4,10
	- general government expenditure on health as % of total general government expenditure			15.10 [y]	FY2005/06	2,4,10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			48.00 [z]	FY2005/06	2,4,10
	- out-of-pocket expenditure on health as % of total expenditure on health			35.00 [aa]	FY2005/06	2,4,10
	Exchange rate in US$ of local currency is: 1 US$ =			7.78	2005	2
38	**Health insurance coverage as % of total population**			41.50 [ab]	Feb-May 2008	2

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	12 424 [ae]	8897 [ae]	3527 [ae]	12 424 [ae]	...	...	...	2009	4
		- Ratio per 1000 population	1.77 [ae]	1.27 [ae]	0.5 [ae]	1.77 [ae]	...	...	...	2009p	2,4
	Dentists	- Number	2126 [ae]	1518 [ae]	608 [ae]	2126 [ae]	...	...	...	2009	4
		- Ratio per 1000 population	0.3 [ae]	0.22 [ae]	0.09 [ae]	0.3 [ae]	...	...	...	2009p	2,4
	Pharmacists	- Number	1878 [ac]	908 [ac]	970 [ac]	1878 [ad]	...	...	...	2009	4
		- Ratio per 1000 population	0.27 [ac]	0.13 [ac]	0.14 [ac]	0.27 [ad]	...	...	...	2009p	2,4
	Nurses	- Number	38 641 [ag]	4450 [ag]	34191 [ag]	38 641 [ag]	...	...	...	2009	4
		- Ratio per 1000 population	5.50 [ag]	0.63 [ag]	4.87 [ag]	5.5 [ag]	...	...	...	2009p	2,4
	Midwives	- Number	4525 [ac]	0	4525 [ac]	4525 [ad]	...	...	...	2009	4
		- Ratio per 1000 population	0.64 [ac]	0.00	0.64 [ac]	0.64 [ad]	...	...	...	2009p	2,4
	Paramedical staff	- Number	10 144 [ah]	5244 [ah]	4900 [ah]	10 144 [ah]	...	...	...	2009	4
		- Ratio per 1000 population	1.44 [ah]	0.75 [ah]	0.7 [ah]	1.44 [ah]	...	...	...	2009p	2,4
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	268 [ai]	...	...	...	...	...	...	2009	11
		Dentists	57 [ai]	...	...	...	...	...	...	2009	11
		Pharmacists	27 [ai]	...	...	...	...	...	...	2009	11

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	641 [ai]	...	...	...	...	...	...	2009	11
		Midwives	67 [aj]	...	...	...	...	...	...	2009	4
		Paramedical staff	280 [ai]	...	...	...	...	...	...	2009	11
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	108	...	...	...	...	...	...	2009	4
		Dentists	17	...	...	...	...	...	...	2009	4
		Pharmacists	9	...	...	...	...	...	...	2009	4
		Nurses	106	...	...	...	...	...	...	2009	4
		Midwives	300	...	...	...	...	...	...	2009	4
		Paramedical staff	115	...	...	...	...	...	...	2009	4
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	1.65 [a]	1.74 [a]	1.53 [a]	2009p	2,4
44	Under-five mortality rate (per 1000 live births)	2.16 [a,b]	2.19 [a]	2.1 [a]	2009p	2,4
45	Proportion of 1 year-old children immunised against measles	>95.00	...	...	2008	4
46	Maternal mortality ratio (per 100 000 live births)	2.41 [a]			2009p	2,4,12
47	Proportion of births attended by skilled health personnel	100.00			2009	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00 [ak]			2009	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00 [l]			2009	4
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	3.83			2008	2,4
50	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	<0.01	...	...	2009	4
54	Percentage of people with advanced HIV infection receiving ART	89.60 [am]	...	...	2008	4
55	Malaria incidence rate per 100 000 population	0.33 [d,m]	0.55 [d,m]	0.13 [d,m]	2009p	2,4
56	Malaria death rate per 100 000 population	0.00 [a]	0.00 [a]	0.00 [a]	2009p	2,4
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	76.36 [d]	101.45 [d]	54.05 [d]	2009p	2,4
60	Tuberculosis death rate per 100 000 population	2.78 [a]	4.31 [a]	1.43 [a]	2009p	2,4
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	87.00	...	...	2008	13
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	66.00	...	...	2007	13
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	...	...	2009	14
64	Proportion of population using an improved sanitation facility	99.00	...	...	2009	6
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
FY	Fiscal year
p	provisional
a	The figure is compiled based on registered deaths and/or registered births.
b	The figure includes unknown sex.
c	The figure refers to the percentage of population aged 15 and above with primary or above education attainment.
d	The figure refers to the cases reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases.
e	The figure refers to the number of new cases seen in public Sexually Transmitted Diseases clinics and those in prisons.
f	According to the ICD 10th revision, when the morbid condition is classifiable under Chapter XIX as "injury, poisoning and certain other consequences of external causes", the codes under Chapter XX for "external causes of morbidity and mortality" should be used as the primary cause of death.
g	The accidents included are those personal injury accidents reported to the Police and do not include damage-only accidents.
h	The figure refers to the number of in-patient discharges including deaths on attendances basis by disease from public hospitals, private hospitals and correctional institutions.
i	The figure refers to the cases who had Hb<10g/dl and attending the maternal and child health centres for ante-natal checkups.
j	The figure excludes those with unknown birth weight.
k	Immunization coverage rates, an official estimate mainly based on the latest survey results of the immunization coverage survey, refer to the percentages of local live births in the year who have received the vaccinations.
l	The figure refers to the cases known to the maternity homes, public and private hospitals.
m	All are imported cases
n	Among which only Haemophilus influenzae type b infection (invasive) is a statutory notifiable disease in Hong Kong.
o	The figure is as at end of the year.
q	The figure includes both general and specialized hospitals.
r	The figure covers the out-patient clinics, health education centres and travel health centres under the Department of Health, general out-patient clinics under the Hospital Authority and the out-patient clinics/hospitals in the correctional institutions.
s	The figure covers the institutions licensed under the Hospitals, Nursing Homes and Maternity Homes Registration Ordinance (Cap.165).
t	The figure refers to the summation of public health expenditure and private health expenditure in the financial year 2005/06.
u	The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2005/06 as percentage of GDP in the FY 2005/06.
v	The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2005/06 per mid-2005 population.
w	The figure refers to the public health expenditure.
x	The figure refers to public health expenditure as percentage of the summation of public health expenditure and private health expenditure in the financial year 2005/06.
y	The figure refers to public health expenditure as percentage of overall public expenditure.
z	The figure refers to private health expenditure as percentage of the summation of public health expenditure and private health expenditure in the financial year 2005/06.
aa	The figure refers to private household out-of-pocket expenditure as percentage of the summation of public health expenditure and private health expenditure in the FY 2005/06
ab	The figure refers to the percentage of the population who were entitled to medical benefits provided by employers/companies or covered by medical insurance purchased by individuals, or had both kinds of medical protection. Medical benefits provided by employers/companies referred to medical benefits provided to employees, irrespective of whether they were currently employed or retired, and their eligible dependants by their employers/companies in the private sector or by the Government in whatever form.
ac	The number of healthcare professionals regardless of whether they are actually working in the profession or not.
ad	Assume all health workforce in Hong Kong, regardless of whether they are actually working in the profession or not, and are in urban area
ae	Figure refers to the number of doctors/dentists, regardless of whether they are actually working in the profession or not, with full registration on the local and overseas lists and are assumed all to be in urban area
ag	Figure refers to the number of registered nurses and enrolled nurses, regardless of whether they are actually working in the profession or not, assumed all to be in urban area
ah	Paramedical staff include Medical Laboratory Technologists, Occupational Therapists, Physiotherapists, Optometrists, Radiographers and Chiropractors, regardless of whether they are actually working in the profession or not, and are assumed all to be in urban area
ai	The figure only covers graduates of full-time sub-degree and undergraduate programmes funded by the University Grants Committee at the end of the graduation year 2009. Graduates may not be engaged in work areas directly related to their discipline of study after graduation.
aj	The figure refers to the number of midwives newly registered in the Midwives Council of Hong Kong.
ak	Nearly all newborns were delivered in health facilities.
al	Under the Hong Kong Childhood Immunisation Programme, the second dose of measles vaccine is given as measles, mumps and rubella vaccine at Primary 1.
am	Revised figure only reflects those attending Department of Health's specialist clinic.

Sources:	
1	Lands Department, Hong Kong Special Administrative Region Government (HKSARG)
2	Census and Statistics Department, HKSARG
3	Planning Department, HKSARG
4	Department of Health, HKSARG
5	Human Development Report 2009. New York, United Nations Development Programme
6	Environmental Protection Department, HKSARG
7	Hospital Authority, HKSARG
8	Labour Department, HKSARG
9	Transport Department, HKSARG
10	Food and Health Bureau, HKSARG
11	University Grants Committee, HKSARG
12	Immigration Department, HKSARG
13	WHO Regional Office for the Western Pacific, data received from technical units
14	Water Supplies Department, HKSARG

JAPAN

1. CONTEXT

1.1 Demographics

As of 1 May 2010, the total population of Japan was estimated to be 127 360 000, comprising 62 010 000 males and 65 340 000 females. With regard to distribution by age group, 13.3% of the population are aged 0-14 years, 63.7% 15-64 years and 23.0% 65 years and over.

The average life expectancy remains the highest in the world. In 2008, it was 86.0 years for women and 79.3 years for men.

In 2008, the crude birth rate was 8.7 per 1000 persons and the crude death rate was 9.1 per 1000 persons.

1.2 Political situation

The Japanese Government, a constitutional monarchy, is based on a parliamentary cabinet system. Executive power is vested in the Cabinet, which consists of the Prime Minister and not more than 17 Ministers of State, who are collectively responsible to the Diet (legislature).

In June 2010, Mr Naoto Kan assumed the office of the 94th Prime Minister of Japan. He is a member of the Democratic Party, which currently holds the largest block of representation in the House of Representatives.

1.3 Socioeconomic situation

In 2008, Japan had the third largest economy in the world in terms of gross domestic product (GDP). GDP per capita in 2008 was US$ 38.559. This economic scale was achieved largely due to high economic growth from 1955 to the late 1960s.

The jobless figure increased by 1.1% year on year from 2008 to 2009, reaching 5.2% on average in 2009. The active ratio of jobs to applicants in the same period increased 0.77%, to 0.45:1.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The health situation in Japan remains one of the best in the Region. The majority of health-related statistics, such as life expectancy and under-five mortality rate, continue to improve. The health disparities within the country are also relatively small compared with those in other industrialized nations.

Due to the increasingly complex social environment created by a high-tech, competitive society, it is said that the stress levels felt by all age groups are rising. There were 30 229 suicides in 2008; the number has remained stable at approximately 30 000 since 1998.

Tuberculosis, infectious and difficult-to-treat diseases, such as HIV infection and new types of influenza, are becoming serious threats to public health in Japan.

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

With the ageing of the population, disease patterns have shifted to lifestyle-related diseases, such as cancer, heart disease, cerebrovascular disease and diabetes. These diseases account for 60% of mortality and this trend is expected to continue.

2.4 Maternal, child and infant diseases

The infant mortality rate was 2.6 per 1000 live births and the maternal mortality ratio was 3.6 per 100 000 live births in 2008.

Activities carried out by municipalities include distribution of the *Maternal and Child Health Handbook*, health care guidance, home visits and health check-ups for pregnant women. They also operate maternal and child health programmes, including parenting classes.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The basic principle governing the delivery of health care services is that all citizens should be able, at any time and place, to receive the care they require, with an affordable personal contribution.

The Ministry of Health, Labour and Welfare announced a health promotion programme, the National Health Promotion Movement in the 21st Century (Healthy Japan 21), in 2000. The movement, unlike traditional programmes, emphasizes 'primary prevention', aiming at early detection and treatment of diseases. Under the campaign, particular areas that are going to be important for the health and medical care of nationals are selected, and concrete numerical targets are set. These targets function as indicators for evaluation of the population's health status. The goal of the programme, which is to be completed in 2012, is to realize a society where all Japanese nationals live healthy and happy lives, free of disease.

- Improving healthy dietary habits: The Ministry of Health, Labour and Welfare has carried out the National Health and Nutrition Survey every year since 1945. The recommended dietary allowances (Dietary Reference Intakes) are revised every five years. In 2009, they underwent their eighth revision. Dietary guidelines for Japanese, the benchmark for dietary improvement, were established in 2000.

- Promoting physical activities and exercise: Healthy Japan 21 encourages people to take physical exercise. In 2006, the Ministry of Health, Labour and Welfare drew up *Exercise Criteria for Health Promotion 2006*, describing the amount of physical activity and exercise needed to prevent lifestyle diseases, with updated evidence.

- Promoting appropriate rest and sleep: The need for relaxation and the part it plays in maintaining and improving health is well recognized. Therefore, 'relaxation and health of the mind' is one of the targets in Healthy Japan 21. In 2003, the Ministry of Health, Labour and Welfare drew up guidelines for good sleep as a tool for achieving the sleep target in Healthy Japan 21.

- Smoking and health: The Ministry of Health, Labour and Welfare publicizes accurate information about smoking and its harm to human health, not only for smokers but also generally. The Ministry tries to prevent juveniles being tempted to smoke through health education, has presented the basic direction on smoke-free policies in public places or offices in order to reduce second-hand smoking, and assists smokers who want to quit smoking through support programmes. Medical insurance covers treatment for nicotine-dependent patients.

3.2 Organization of health services and delivery systems

No available information.

3.3 Health policy, planning and regulatory framework

With increasing financial constraints, the Government is planning to introduce structural reforms in the heath system to increase efficiency while maintaining equity and the quality of services. These reforms are closely associated with the ongoing demographic transition—longer life expectancy and lower birth rate—that has resulted in a rapid increase in the percentage of elderly citizens.

Japanese society is ageing at an unprecedented rate compared with other developed countries. In 2005, Japan's ageing rate reached 22.7%, showing that the country is still ageing at a high speed. According to population projections, the ageing trend will continue and the ageing rate will exceed 35% in 2040. This ageing population will need to pay attention to lifestyle-related diseases. Maintaining healthy lifestyles and the early detection of disease could help to reduce the incidence of the three major killer diseases: malignant neoplasms, cardiovascular diseases and cerebrovascular diseases. The new Health Promotion Law (2002) emphasizes the importance of establishing an environment conducive to healthier lifestyles as a key strategy for the ageing society.

3.4 Health care financing

National expenditure on health has been rising year after year. In 2008, total health expenditure reached US$ 396 010.71 million, about 8.1% of GDP. The rapidly growing number of senior citizens has resulted in a sharp rise in medical costs for the elderly and is a major reason for the upward trend in medical care expenditure. The average per capita total expenditure on health in 2008 was US$ 3101.88.

3.5 Human resources for health

As of 2008, there were 286 699 doctors and 1 295 670 nurses, public health nurses and assistant nurses in Japan. Due to population ageing, along with the growing sophistication and specialization of medical services, among other factors, it is presumed that the demand for health, medical and welfare service personnel will increase in the future.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

The health insurance system in Japan maintains universal coverage and there is free access to all health institutions. While this system has ensured equitable health care delivery across different socioeconomic groups and different areas of the country, it has given rise to an inefficient supply of services. Under the free-access system, patients have a tendency to skip the general practitioner and go directly to hospitals for even relatively common illnesses. At the same time, the current fee-for-service payment scheme tends to invite overtreatment. For example, the average length of a hospital stay in Japan is about five weeks, more than double that in the majority of developed countries.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Summary of vital statistics*
Operator	:	Ministry of Health Labour and Welfare
Features	:	Includes information on health and labour
Web address	:	http://www.mhlw.go.jp/english/index.html
Title 2	:	*Japan in figures; Japan statistical yearbook*
Operator	:	Statistics Bureau, Ministry of Internal Affairs and Communications
Web address	:	http://www.stat.go.jp/english/index.htm

6. ADDRESSES

MINISTRY OF HEALTH, LABOUR AND WELFARE

Office Address	:	l-2-2, Kasumigaseki, Chiyoda-ku, Tokyo 100-8916, Japan
Website	:	http://www.mhlw.go.jp/english/index.html

WHO REPRESENTATIVE

There is no WHO Representative in Japan. Queries about the WHO programme of collaboration with Japan should be directed to Director, Programme Management, WHO Regional Office for the Western Pacific.

Office Address	:	Director, Programme Management, World Health Organization Regional Office for the Western Pacific
Postal Address	:	United Nations Avenue, P.O. Box 2932, 1000, Manila, the Philippines
Official Email Address	:	postmaster@wpro.who.int
Telephone	:	(63 2) 5288001/ 303 1000
Fax	:	(63 2) 526 0279
Office Hours	:	7:00-15:30
Website	:	http://www.wpro.who.int/

JAPAN — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	377.94						2008	1
2	Estimated population ('000s)	127 360.00 [a]	62 010.00 [a]	65 340.00 [a]				2010	2
3	Annual population growth rate (%)	...	...	...					
4	Percentage of population								
	- 0–4 years	4.23	4.45	4.00				2010	2
	- 5–14 years	9.06	9.54	8.61				2010	2
	- 65 years and above	23.00	20.20	25.70				2010	2
5	Urban population (%)	66.60	...	...				2009 est	3
6	Crude birth rate (per 1000 population)	8.70	9.10	8.20				2008	4
7	Crude death rate (per 1000 population)	9.10	9.90	8.30				2008	4
8	Rate of natural increase of population (% per annum)	-0.40 [g]	-0.80 [g]	0.00 [g]				2008	4
9	Life expectancy (years)								
	- at birth	...	79.29	86.05				2008	4
	- Healthy Life Expectancy (HALE) at age 60	...	17.50	21.70				2002 est	5
10	Total fertility rate (women aged 15–49 years)	1.37						2008	4
	Socioeconomic indicators								
11	Adult literacy rate (%)	99.00	...	...				2000 est	6
12	Per capita GDP at current market prices (US$)	38 559.00						2008	7
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	0.96						2007	8
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	260.00	...	...				2002	9
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	...	...	...	5855	2831	3024	2008	4
	- Type A	...	...	...	7	4	3	2008	4
	- Type B	...	...	...	641	405	236	2008	4
	- Type C	...	...	...	4903	2266	2637	2008	4
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	250	140	110	2008	4
	Cholera	45	21	24	...	...	...	2008	4
	Dengue/DHF	92	...	...	...	...	...	2009	10
	Encephalitis	190	96	94	102	50	52	2008	4
	Gonorrhoea	10 218	...	...	0	0	0	2008	4
	Leprosy	2	1	1	...	...	...	2009	10
	Malaria	56	43	13	1	0	1	2008	4
	Plague	...	...	...	...	...	...		
	Syphilis	839	622	217	16	13	3	2008	4
	Typhoid fever	57	33	24	...	...	...	2008	4
17	Acute respiratory infections	...	...	...	222	112	110	2008	4
	- Among children under 5 years	...	...	...	10	8	2	2008	4

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	2182	940	1242	2008	4
	- Among children under 5 years				36	21	15	2008	4
19	**Tuberculosis**								
	- All forms	24 181	...	...	2220	1467	753	2008	C:10, D:4
	- New pulmonary tuberculosis (smear-positive)	8995	...	...	...	...	...	2008	10
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	342 963	206 354	136 609	2008	4
	- Breast	...	...	...	11 890	93	11 797	2008	4
	- Colon and rectum	...	...	...	43 011	23 419	19 592	2008	4
	- Cervix			...			2486	2008	4
	- Leukaemia	...	...	...	7675	4554	3121	2008	4
	- Lip, oral cavity and pharynx	...	...	...	6583	4721	1862	2008	4
	- Liver	...	...	...	33 665	22 332	11 333	2008	4
	- Oesophagus	...	...	...	11 746	9 997	1 749	2008	4
	- Stomach	...	...	...	50 160	32 973	17 187	2008	4
	- Trachea, bronchus, and lung	...	...	...	66 849	48 610	18 239	2008	4
21	**Circulatory**								
	All circulatory system diseases	...	...	...	334 971	160 062	174 909	2008	4
	- Acute myocardial infarction	...	...	...	43 580	23 722	19 858	2008	4
	- Cerebrovascular diseases	...	...	...	127 023	61 121	65 902	2008	4
	- Hypertension	...	...	...	6264	2354	3910	2008	4
	- Ischaemic heart disease	...	...	...	76 582	42 156	34 426	2008	4
	- Rheumatic fever and rheumatic heart diseases	...	...	...	2451	731	1720	2008	4
22	**Diabetes mellitus**	...	...	...	14 462	7618	6844	2008	4
23	**Mental disorders**	...	...	...	6584	2230	4354	2008	4
24	**Injuries**								
	All types	...	...	...	73 523	47 351	26 172	2008	4
	- Drowning	...	...	...	6464	3431	3033	2008	
	- Homicide and violence	...	...	...	546	287	259	2008	4
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	6754	4555	2199	2008	4
	- Suicide	...	...	...	30 229	21 546	8683	2008	4
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Influenza (grippe)	3 068 082	...	...	2408.98 [b]	...	...	2009	4
	2. Chickenpox	202 732	...	...	159.18 [b]	...	...	2009	4
	3. Mumps	104 568	...	...	82.10 [b]	...	...	2009	4
	4. Other venereal diseases	39 073	...	...	30.68 [b]	...	...	2009	4
	5. Tuberculosis (all forms)	26 932	...	...	21.15 [b]	...	...	2009	4
	6. Gonococcal infections	9272	...	...	7.28 [b]	...	...	2009	4
	7. Food poisoning (bacterial)	6700	...	...	5.26 [b]	...	...	2009	4
	8. Pertussis (whooping cough)	5208	...	...	4.09 [b]	...	...	2009	4
	9. Measles	739	...	...	0.58 [b]	...	...	2009	4
	10. Rubella	148	...	...	0.12 [b]	...	...	2009	4

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms	342 963	206 354	136 609	272.30	336.00	211.70	2008	4
	2. Heart disease	181 928	86 139	95 789	144.40	140.20	148.50	2008	4
	3. Cerebrovascular diseases	127 023	61 121	65 902	100.90	99.50	102.10	2008	4
	4. Pneumonia and bronchitis	115 982	61 595	54 387	92.10	100.30	84.30	2008	4
	5. Accidents and adverse effects	38 153	22 801	15 352	30.30	37.10	23.80	2008	4
	6. Senility	35 975	8 751	27 224	28.60	14.20	42.20	2008	4
	7. Suicide	30 229	21 546	8 683	24.00	35.10	13.50	2008	4
	8. Renal failure	22 517	10 429	12 088	17.90	17.00	18.70	2008	4
	9. Diseases of the liver	16 268	10 615	5 653	12.90	17.30	8.80	2008	4
	10. Chronic obstructive pulmonary disease	15 520	11 941	3 579	12.30	19.40	5.50	2008	4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					44.40 [c]		2005 est	11
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					42.90		2007	10
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	1.20		1.30		1.20		2008	4
31	**Percentage of newborn infants weighing less than 2500 g at birth**	9.60		8.50		10.70		2008	4
32	**Immunization coverage for infants (%)**								
	- BCG	94.00		...		...		2009	10
	- DTP3	100.00		...		...		2009	10
	- Hepatitis B III	...		...		...			
	- MCV2	91.80		...		...		2009	10
	- POL3	99.60		...		...		2009	10
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	2	2	0	...	...	...	2009	7, 10
	- Diphtheria	0	0	0	...	...	...	2009	10
	- Measles	741	...	...	...	...	...	2009	10
	- Mumps	104 568	55 967	48 601	...	...	...	2009	7, 10
	- Neonatal tetanus	...	...	...	...	...	...		
	- Pertussis (whooping cough)	5208	2163	3045	...	...	...	2009	7, 10
	- Poliomyelitis	0	0	0	...	...	...	2009	10
	- Rubella	148	98	50	...	...	...	2009	7, 10
	- Total Tetanus	113	68	45	...	...	...	2009	7, 10
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	5928 [d]	468 731 [d]	2008	4
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	7198	1 145 837	2008	4
		- Outpatient clinics	94 751	141 403	2008	4
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			396 010.71	2008p	12
	- total expenditure on health as % of GDP			8.10	2008p	12
	- per capita total expenditure on health (in US$)			3101.88	2008p	12
	Government expenditure on health					
	- amount (in million US$)			320 437.62	2008p	12
	- general government expenditure on health as % of total expenditure on health			80.90	2008p	12
	- general government expenditure on health as % of total general government expenditure			17.90	2008p	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2008p	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			19.10	2008p	12
	- out-of-pocket expenditure on health as % of total expenditure on health			15.00	2008p	12
	Exchange rate in US$ of local currency is: 1 US$ =			103.36	2008p	12
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	286 699	234 702	51 997	...	...	...	...	2008	4
		- Ratio per 1000 population	2.25	1.84	0.41	...	...	...	...	2008	4
	Dentists	- Number	99 426	79 305	20 121	...	...	...	...	2008	4
		- Ratio per 1000 population	0.78	0.62	0.16	...	...	...	...	2008	4
	Pharmacists	- Number	267 751	104 578	163 173	...	...	...	...	2008	4
		- Ratio per 1000 population	2.1	0.82	1.28	...	...	...	...	2008	4
	Nurses	- Number	1 295 670 [e]	68 599 [e]	1 227 071 [e]	...	...	...	...	2008	4
		- Ratio per 1000 population	10.15	0.54	9.61	...	...	...	...	2008	4
	Midwives	- Number	27 789	...	27 789	...	...	...	...	2008	4
		- Ratio per 1000 population	0.22	...	0.22	...	...	...	...	2008	4
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	2.60	2.70	2.50	2008	4
44	Under-five mortality rate (per 1000 live births)	3.40	3.60	3.30	2008	4
45	Proportion of 1 year-old children immunised against measles	94.30	...	...	2009	10
46	Maternal mortality ratio (per 100 000 live births)	3.60			2008	4
47	Proportion of births attended by skilled health personnel	99.95 [f]			2008	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.18 [f]			2008	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.77 [f]			2008	4
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	5.20			2008	4
50	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	0.00	...	...	2009	7
53	Estimated HIV prevalence in adults	0.01	...	...	2009	7
54	Percentage of people with advanced HIV infection receiving ART	95.90	...	...	2009	7
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	12.00	...	...	2008	10
60	Tuberculosis death rate per 100 000 population	1.00	...	...	2008	10
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	87.00	...	...	2008	10
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	46.00	...	...	2007	10
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2008	13
64	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2008	13
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
a	Population as of 1 May 2010.
b	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
c	Figure refers to woman married or in union
d	Figure refers to public health facilities (hospitals and clinics)
e	Figure includes nurses, public nurses and assistant nurses
f	Figure refers to the percentage of live births (except fetal deaths).
g	Rate of natural increase of population=(Live Birth－Death)/Population × 1,000

Sources:	
1	Statistical Handbook of Japan 2008. Statistics Bureau, Ministry of Internal Affairs and Communications, Japan. [http://www.stat.go.jp/english/data/handbook/index.htm].
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3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision [http://esa.un.org/wup2009/unup/]
4	Ministry of Health,Labour and Welfare, Japan［http:www.mhlw.go.jp/english/index.html].
5	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
6	SEAMIC Health Statistics 2002. International Medical Foundation of Japan.
7	Information furnished by the Ministry of Health, Labour and Welfare dated 14 June 2010.
8	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
9	Ministry of the Environment, Japan.
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KIRIBATI

1. CONTEXT

1.1 Demographics

The Republic of Kiribati, located in the Pacific, consists of 32 low-lying atolls and one volcanic island in three main groups, the Gilbert, Phoenix and Line Islands. The country spreads over 3.5. million kilometres of ocean, but has a total land area of only 811 square kilometres.

The 2009 estimated population of Kiribati was 98 989. The average population density is 122 per square kilometre, but this varies widely between islands. Between 1995 and 2000, there was significant in-migration of people from the outer islands to South Tarawa, resulting in an urban growth rate of 5.2%, compared with a national growth rate of 1.7%. In-migration plateaued during 2000-2005, when the overall growth rate in South Tarawa fell to 1.9%. Overcrowding in South Tarawa persists, however, putting stress on the environment and infrastructure. New 'urban' settlements have emerged since 2000, especially in Northern Tarawa and Kiritimati Island. Between 2000-2005, North Tarawa's growth rate was 4.8% and Kirimati Island's 8%, compared with 2.2.% and 1.2 %, respectively, during the period from 1995 to 2000.

The total fertility rate was 3.4 in 2008, representing a decline from the 1990s, when it was reported to be about 4.5. Kiribati has a young population, with 35.5% under 15 years of age and only 3.5 % over 64 years. The sex ratio was 98 males to 100 females in 2009.

There has been a steady improvement in health indicators over the last decade, but people in Kiribati still have a shorter life span than those in most other Pacific islands. In 2008, life expectancy at birth was estimated at 65 for males, 70 for females and 67 for both.

1.2 Political situation

Kiribati has a two-tier system of government at central and local levels. The central Government (*Maneaba ni Maungatabu*) consists of 42 democratically elected members, led by the President. The local level consists of 23 elected and appointed councils, three in urban areas and 20 in the outer islands. Kiribati has enjoyed political stability since the election of the *Boutokaan to Koaua* Party in 2003.

The guiding development document of the Government, the National Development Plan for 2008-2011 sets out the main policy areas, and strategies are operationalized through respective line ministries.

While politically, administration and service delivery is decentralized, line ministries and councils appear to have few decision-making powers and little authority. A project to strengthen governance in the outer islands has recently been launched by the United Nations Development Programme (UNDP).

The Government places considerable importance on its international commitments to health and is a signatory to the Framework Convention on Tobacco Control and the International Health Regulations. At the national level, food safety legislation was approved by Parliament in 2006. Tobacco legislation has been drafted, but has not yet been put before Parliament.

1.3 Socioeconomic situation

Kiribati is categorized as a least-developed country (LDC) because of its low per capita gross national product (GNP), limited human resources and high vulnerability to external forces. During the 1990s, the buoyant global economy, the use of the Australian dollar as domestic currency, access to external assistance and sound fiscal management of the Revenues Equalising Reserve Funds (RERF), derived from previous phosphate deposits, allowed achievement of relative macroeconomic stability.

The Kiribati economy remains relatively resilient, due to government reserve funds, which had a market value of US$ 336 million in 2003, and domestic income from fishing licences (approximately 23%), grants

and loans (approximately 30%), remittances and a narrow domestic production base of marine products and copra (approximately 10%-20%). In 2006, there was a decline in GNP per capita from US$ 1040 in 1999 to US$ 653, largely due to a decline in the number of fishing licences issued.

The 2005 Census found that 64% of people above the age of 15 were "economically active", but only 23% had regular paid employment; 53% of those employed were in public administration, while the remainder were employed mainly as subsistence farmers or fishermen. Subsidies to public entities are thought to reduce opportunities for private job creation. The lack of regular paid employment, particularly in urban settlements, is associated with an increase in youth violence and alcohol abuse.

Kiribati is a signatory to the Convention for the Elimination of All Forms of Discrimination Against Women and there is evidence that gender equality is improving. Since 2007, women have comprised more than 50% of the workforce, and girls outnumber boys in secondary and tertiary education. Women, however, are still underrepresented at all levels of decision-making, and domestic violence, linked to alcohol abuse, is an increasing problem.

In 2006, 65% of the population had access to an improved water source. South Tarawa and Kiritimati Island have public water supply infrastructures, with over 3500 households in South Tarawa and 400 in Kirimati connected to a reticulated, treated water system. The remaining population rely on rainwater supplies and well-water. The protection of the well-water and the water sources from pollution, mainly from nearby sanitation systems, is a constant public health concern.

In 2006, 33% of the population had access to improved sanitation. According to the 2005 Census, approximately 2000 premises are connected to a waterborne sewage system in the main settlements of South Tarawa, but most of the population reported using the beach, sea or bush for toileting facilities. Two solid-waste landfill sights have been developed to dispose of solid waste, although one is facing problems of seawater seepage. A solid-waste collection service is now operating in South Tarawa. Despite these developments, sanitation in South Tarawa is inadequate and the environment unhealthy.

1.4 Risks, vulnerabilities and hazards

The low-lying atolls of Kiribati, rising no higher than three metres above sea-level, make the country very vulnerable to climate change and rises in sea-level. It is estimated (World Bank Regional Economic Report 2000) that, without appropriate adaptation measures, 25%-54% of the land in areas of South Tarawa and 55%-80% in North Tarawa will be inundated by 2050.

The natural environment in urban areas is under pressure due to groundwater depletion, marine-life and sea-water contamination from human and solid waste, over-fishing of the reefs and lagoons, ad hoc construction of seawalls, coastal erosion and illegal beach mining. The country is also facing considerable socioeconomic difficulities due to the ad hoc management of urban growth.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

A number of environmental factors are increasing the risk of communicable diseases in Kiribati. High-density housing and overcrowding in urban areas, such as South Tarawa, is facilitating the transmission of infectious diseases. For instance, tuberculosis incidence in Kiribati has now surpassed that of other Pacific island countries, and most reported cases (70% in 2005) are found in the urban settlement of Betio in South Tarawa. Other health indicators suggest that the health status of people living in South Tarawa is now worse than that of people living in the Outer Islands. In the 2005 Census, for example, the infant mortality rate in South Tarawa was higher than that in the Outer Islands.

Inadequate water supplies, unsafe drinking-water, variable standards of personal hygiene, poor food handling and storage, and poor sanitation are all contributing to the high number of cases of diarrhoeal, respiratory, eye and skin infections. Diarrhoeal diseases and respiratory infections are major causes of mortality among children.

There is a high prevalence of STIs, with a surveillance study in 2004 showing that approximately 15% of pregnant women were infected. HIV was first confirmed in Kiribati in 1991 and the number of people infected continues to rise. At the end of 2006, Kiribati had a cumulative total of 50 HIV/AIDS cases, of whom 24 were known to have died. Since 2006, eight people living with HIV/AIDS have been enrolled in a care and treatment programme. One has since died.

Kiribati achieved leprosy elimination status in 2000, but has since reverted to pre-elimination status.

Data suggest that the prevalence of noncommunicable diseases is increasing. Around 70% of males between the ages of 30 and 54 are regular smokers, compared with less than 50% of the adult female population, while 32% of young males aged 15-19 smoke (2005 census). The gift of tobacco (*Mweaka*) remains closely tied to spiritual beliefs in the outer islands and, in urban areas, a gift of tobacco is still considered polite.

Economic development and modernization has increased reliance on imported, processed food, such as rice and noodles, and on motorized transport. These changes, together with a strong tradition of feasting, have led to overnutrition and reduced activity in adults, increasing the risk of noncommunicable disease. Results from the 2004-2005 STEPs survey showed approximately 20% of the adult population had diabetes, and diseases of the circulatory system are now the second leading cause of mortality.

Kiribati faces a double-edged health problem related to diet and nutrition: overnutrition in adults and undernutrition in children. Although nationally representative nutrition data are scarce, infant mortality and routine health facility data suggest undernutrition and vitamin and mineral deficiencies are major factors contributing to under-five mortality. The STEPs survey in 2004-2005 showed an anaemia prevalence rate of 17% for non-pregnant women and 22% for women aged 15-24. Vitamin A deficiency was highly prevalent in an assessment in 1989. Morbidity due to diarrhoeal disease and pneumonia among children suggests vitamin A deficiency remains a public health problem.

In the late 1990s, the infection rate for chronic hepatitis B was 27.4% among students aged 10-13 years, increasing the burden of chronic liver disease and cancer. The introduction of hepatitis B vaccination in 2002 will reduce this burden of disease in the future.

2.2 Outbreaks of communicable diseases

Anecdotal reports of outbreaks of diarrhoea are common, but few official reports are available. No outbreak of a vaccine-preventable disease has been reported since 2004.

2.3 Leading causes of mortality and morbidity

The causes of mortality and morbidity remained fairly consistent between 2002 and 2009. Acute respiratory infections and diarrhoeal diseases are the two major causes of morbidity and are among the five leading causes of mortality. There was an increase in reported cases of respiratory disease between 2002 and 2009.

There have been increases in mortality from diseases of the circulatory and respiratory systems and from cancers. Perinatal conditions are still a leading cause of mortality among infants.

2.4 Maternal, child and infant diseases

Maternal health is improving. Approximately 90% of all births are now attended by skilled health personnel and the total fertility rate has declined, falling from 4.5 in 1995 to 3.4 in 2008. The maternal mortality ratio, based on hospital records, is now 158 per 100 000 live births (2005 Census Report), a significant reduction from the previously reported ratio and consistent with (1) the reduction in the total fertility rate, and (2) the continued high percentage of women attended by trained staff.

Infant mortality has also improved. The infant mortality rate was estimated at 52 per 1000 live births in the 2005 census, significantly lower than the 67 reported in 1995, but still high compared with many other Pacific island counties. Perinatal conditions, diarrhoeal diseases and pneumonia are the main causes of infant mortality and morbidity. Malnutrition, iron and vitamin A deficiency, and worm infestation among children are contributing factors.

2.5 Burden of disease

Kiribati faces a double burden of disease, with high mortality and morbidity from both communicable and noncommunicable diseases.

Data on the burden of disease caused by injury, disability and mental health are scarce. A recent national survey on disabilities found 3840 people with 4358 disabilities. Physical disabilities accounted for 32% of all disabilities; blindness and vision impairment 27%; deafness and hearing impairment 23%; and intellectual disability, epilepsy or psychiatric illness approximately 17%. Twenty three per cent of disabilities are in the under-20 age group. The number of these disabilities that are due to birth injuries and childhood infections is unknown.

Data on consumption of alcohol and its impact on the burden of disease are also very limited, but alcohol consumption among young people is seen as a "common social problem faced by society". Excessive alcohol consumption is commonly linked to road traffic accidents and domestic violence.

An expanded immunization programme, introduced in the early 1980s, as well as supplementary measles campaigns in 1997 and 1998, have resulted in few reported outbreaks of vaccine-preventable diseases. Kiribati was declared polio-free in 2002.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The strategic objectives set out in the National Development Plan for the period 2008-2011 guide the formulation of the annual operational plans of the Ministry of Health and Medical Services.

The objectives are to: (1) improve health status in priority areas; (2) improve access to and utilization of curative health services that are efficient, effective, responsive to patients needs and delivered to a high standard nationwide; (3) improve the quality, sustainability and coverage of public health services through increased responsiveness, efficiency and effectiveness nationwide; (4) improve, manage and maintain appropriate legislation, plans, policies, protocols, systems and structures within the Ministry of Health and Medical Services; (5) improve the quality of health information and data in terms of accuracy, timeliness and dissemination, for better planning, decision-making, allocation of resources and monitoring and evaluation of performance; and (6) develop a well performing, highly skilled and supported workforce to enhance the delivery of quality health services.

3.2 Organization of health services and delivery systems

Kiribati has a well established, publicly funded, formal health system administered by the central Ministry of Health and Medical Services. A parallel traditional health system exists, provided by traditional healers and offering local medicines, massage and antenatal, childbirth and postnatal care. Most people use both traditional and formal health services, but there is no coordination between the two systems.

A national referral hospital, situated in South Tawara, provides a comprehensive range of secondary curative services, while Kiritimati Island has a hospital providing basic surgical, medical and maternity services. A new hospital has been constructed in North Tabiteuea to serve the Northern District of the Gilbert Islands. In addition, there is a small hospital providing basic medical services in Betio, South Tarawa. These hospitals and one health centre in South Tarawa are the only facilities with medical doctors present. People requiring tertiary curative services are referred overseas for treatment if they fulfil the clinical criteria set out by the Ministry of Health and Medical Services.

Comprehensive primary health care services are offered through a network of 92 health centres and dispensaries. Health centres are headed by a medical assistant—a registered nurse who has undertaken additional training—who also supervises up to eight dispensaries staffed by nurses and nurse aides employed by the Island Council. Six principle Nursing Officers, based in Tarawa, are responsible for the support and oversight of health services in each district and for selected national programmes.

The Ministry of Health and Medical Services faces a number of challenges related to the quality of health service delivery, the availability of supplies and equipment and the maintenance of equipment.

3.3 Health policy, planning and regulatory framework

The Ministry of Health and Medical Services works within a comprehensive framework of policies, plans and legislation, the implementation and enforcement of which is variable. The Government has introduced an annual performance-based planning process that requires all line ministries to develop annual output-based operational plans.

Public health legislation mostly falls under the Environmental Health Ordinance. The Ordinance, which is over 30 years old, primarily covers water and sanitation issues. The Ordinance and other legislation, including the Medicines Act and mental health legislation, are in need of review to meet current public health requirements.

3.4 Health care financing

Kiribati has a publicly funded, publicly provided health system. Government spending on health was US$ 13.45 million in 2008, which was approximately 8.2% of total government expenditure. Most government expenditure is on curative services, pharmaceuticals and staff.

A total of AUS$ 26.9 million (US$ 23 million) in development assistance was approved for health in 2006, including AUS$ 12 million (US$ 10.2 million) to strengthen outer island health services over a period of four years. A further AUS$ 34 741 (US$ 29 738) was approved to extend hospital facilities in the main referral hospital. Public health services are mainly reliant on donor support.

3.5 Human resources for health

Kiribati has an ageing health workforce and relies on retired health staff employed on contract to fill some nursing and medical positions. The current intake of health workforce trainees is unlikely to meet future employment requirements. A total of 238 locally trained nurses and midwives made up 80% of the health workforce in 2004, with doctors making up the next largest group of health workers. The number of doctors increased to 35 with the recruitment of 10 doctors from Cuba in 2006.

Basic nurse training is provided locally through a three-year, hospital-based training programme. Approximately 25 nurses are enrolled in the programme each year. Post-basic training is offered in midwifery and public health. In 2007, about 20 school-leavers were recruited for training as first-level nurses in Australia. These nurses will able to work in Australia and those who are able will be given the opportunity to undertake second-level nursing training. It is anticipated that some of these trained nurses will return to Kiribati and will be available for employment in the health sector in the future.

Locally recruited medical students are usually trained in the Fiji School of Medicine. In 2007, an additional 23 medical students were recruited to undertake medical training in Cuba. Once graduated, doctors in Kiribati receive additional training through short courses and workshops, provided mainly through regional health programmes.

There is a serious shortage of paramedical and support staff. The retirement of a pharmacist in 2006 left only one qualified pharmacist in the country. In 2010, another pharmacist will graduate and is expected back into the system. Most staff employed in laboratory and radiography services, health promotion, environmental health and health information units lack basic qualifications, relying on local in-service training and short courses overseas to learn their skills. There is no pathologist or radiologist employed by the Ministry of Health and Medical Services.

The Ministry of Health and Medical Services has a workforce training plan to guide the awarding of overseas fellowships, but there is no systematic process in place to ensure the ongoing competency of health workers, and no routine clinical supervision or support. Absenteeism and attrition is thought to impact on productivity, and staff motivation is reported to be a human resource management problem.

3.6 Partnerships

The Ministry of Health receives significant technical and financial support from development partners.

WHO provides funding and technical support to: epidemic alert and response; HIV care and treatment; health promotion, including tobacco control; environmental health; essential health technologies and medicines; health information; and health system development. The United Nations Population Fund (UNFPA) supports reproductive health activities and the United Nations Children's Fund (UNICEF) supports the expanded programme on immunization (EPI), nutrition and infant feeding, and implementation of the integrated management of childhood illness (IMCI) strategy. The Secretariat for the Pacific Community (SPC) supports the control of tuberculosis, HIV/STIs, noncommunicable diseases, disease surveillance and pandemic preparedness. Considerable support is also provided by the Australian Agency for International Development, the New Zealand Agency for International Development, and the governments of Cuba and Taiwan (China).

A large outer island project, funded by the European Union (EU), is refurbishing outer island health facilities, providing in-country training courses from the Fiji School of Medicine and developing primary health care capacity in the Outer Islands.

3.7 Challenges to health system strengthening

Kiribati has a well established health system. It faces many of the challenges faced by other Pacific island countries, but its geography, isolation and extremely small population exacerbate these challenges, which include:

- developing logistical systems that ensure adequate essential medicines and medical supplies are available and accessible at all times;
- recruiting, coordinating, rationalizing and ensuring the quality of basic health-worker training and in-service training, be it local or overseas;
- improving staff competency and performance;
- increasing utilization and the responsiveness of curative and public health services to reduce child mortality, improve maternal health, reduce the incidence of NCDs and reduce the transmission of tuberculosis, STIs and HIV;
- ensuring there is sufficient accurate, timely and relevant health information to inform planning, policy development and monitoring of health sector performance;
- ensuring that there is a responsive disease surveillance and response system in place and that reporting meets international requirements;
- managing health sector resources more efficiently to impact on health status, improve planning and donor coordination and strengthen the monitoring of health plans and interventions; and
- updating legislation, regulations and policies.

4. PROGRESS TOWARDS THE HEALTH MDGs

Starting in 2010, the Ministry of Health and Medical Services has taken steps to improve MDG data management. With financial assistance from UNICEF, an MDG database officer has been employed and maternal and child databases installed in wards. Therefore MDG data for 2010 are considered the most reliable.

Moreover, to accelerate progress towards the MDG, the Ministry of Health and Medical Services has embarked on a project aimed at:

- improving service delivery by health workers via breaking the "business as usual" way of doing things;
- re-visiting primary health care ;
- strengthening health systems;
- sourcing additional funds from the Government and/or partners to manage changes in the way business is conducted; and

- sourcing technical assistance, where needed.

Goal 4: Reduce child mortality

Based on a systematic count of deaths of children under five (34) over a four-month period at the beginning of 2010 and using an estimated number of live births per year (2400), a crude rate of 40 under-five deaths per 1000 live births is calculated. That is roughly the same as the 2008 estimate and is likely to remain the same throughout 2010 provided there are no major disease outbreaks. Several initiatives following the WHO/UNICEF child survival strategies, such as IMCI, COC (continuum of care), the introduction of zinc treatment for diarrhoea and vaccines against rotavirus and pneumococcal infections, as well as improved staff capacity with the employment of a paediatrician and the roll-out of water and sanitation projects, will give the opportunity to achieve the MDG target of 30 under-five deaths per 1000 live births per annum within the next five years.

Progress on measles vaccine coverage is on track. However, as the EPI programme relies heavily on funding from development partners (UNICEF, UNFPA, SPC, WHO, the Australian Agency for International Development [AUSAID]) and global health initiatives (Global Fund, GAVI), sustaining progress remains a challenge.

Goal 5: Improve maternal health

Past calculations have positioned Kiribati among those countries with the highest maternal mortality ratios in the Pacific. However, during the first five months of 2010, no obstetric ward or clinic on the outer islands reported a maternal death. This encouraging information, while taken with some caution as the total population of Kiribati is only around 100 000 inhabitants, inspires confidence that the maternal mortality target is achievable, even before 2015.

Kiribati is on track regarding achievement of targeted births attended by skilled staff.

Contraceptive use by married women aged 15-45 years is still low, leaving plenty of opportunity to increase coverage. For the last fours years, the Ministry of Health and Medical Services has not been very active in promoting family planning and it is left to couples/women to request family services. The religious beliefs of most of the population pose a challenge in advocating family planning, but there is a good chance of achieving the target of 50% coverage for contraceptive use (from 28% in 2009) by 2015 building on:

- the renewed partnership with UNFPA;
- establishment of a partnership with the Kiribati Family Health Association (internationally funded NGO)
- breaking of the "business as usual" way of doing things by health workers; and
- renewal of primary health care and strengthening of the health system.

Goal 6: Combat HIV/AIDS, malaria and other diseases

Progress on TB treatment success rates and HIV prevalence is on track. However, sustaining progress will be a challenge as the relevant programmes (HIV and TB) are very dependent on funding from development partners (UNICEF, UNFPA, SPC, WHO, AUSAID) and global health initiatives (Global Fund, GAVI).

Goal 7: Ensure environmental sustainability

While this remains a major challenge for Kiribati, progress is expected. UNICEF is implementing a multi-million dollar health and sanitation project, funded by the EU, in the outer islands and there are ongoing discussions with major partners (including the Asian Development Bank) concerning water and sanitation projects for South Tarawa. These projects will make it possible to increase the proportion of people with access to improved water sources from the current 65% to over 80%. As regards sanitation, the same projects will increase the proportion of people using improved sanitation facilities from the current 33% to over 60%.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Kiribati 2005 Census volume 2 : Analytical report January 2007*
Operator	:	Ministry of Finance and Economic Development
Comments	:	Supported by SPC
Title 2	:	*Kiribati Development Plan: 2008 – 2011*
Operator	:	Ministry of Finance and Economic Development, April 2008
Title 3	:	*Corporate Strategic Plan for the Health Sector 2008 – 2011*
Operator		Ministry of Health and Medical Services, November 2008
Title 4	:	*Monitoring and Evaluation Framework, 2008 – 2011*
Operator		Ministry of Health and Medical Services, December 2007

6. ADDRESSES

MINISTRY OF HEALTH AND MEDICAL SERVICES

Office Address	:	Nawerewere, Tarawa, Kiribati
Postal Address	:	PO Box 268, Bikenibeu (Nawerewere), Tarawa, Kiribati
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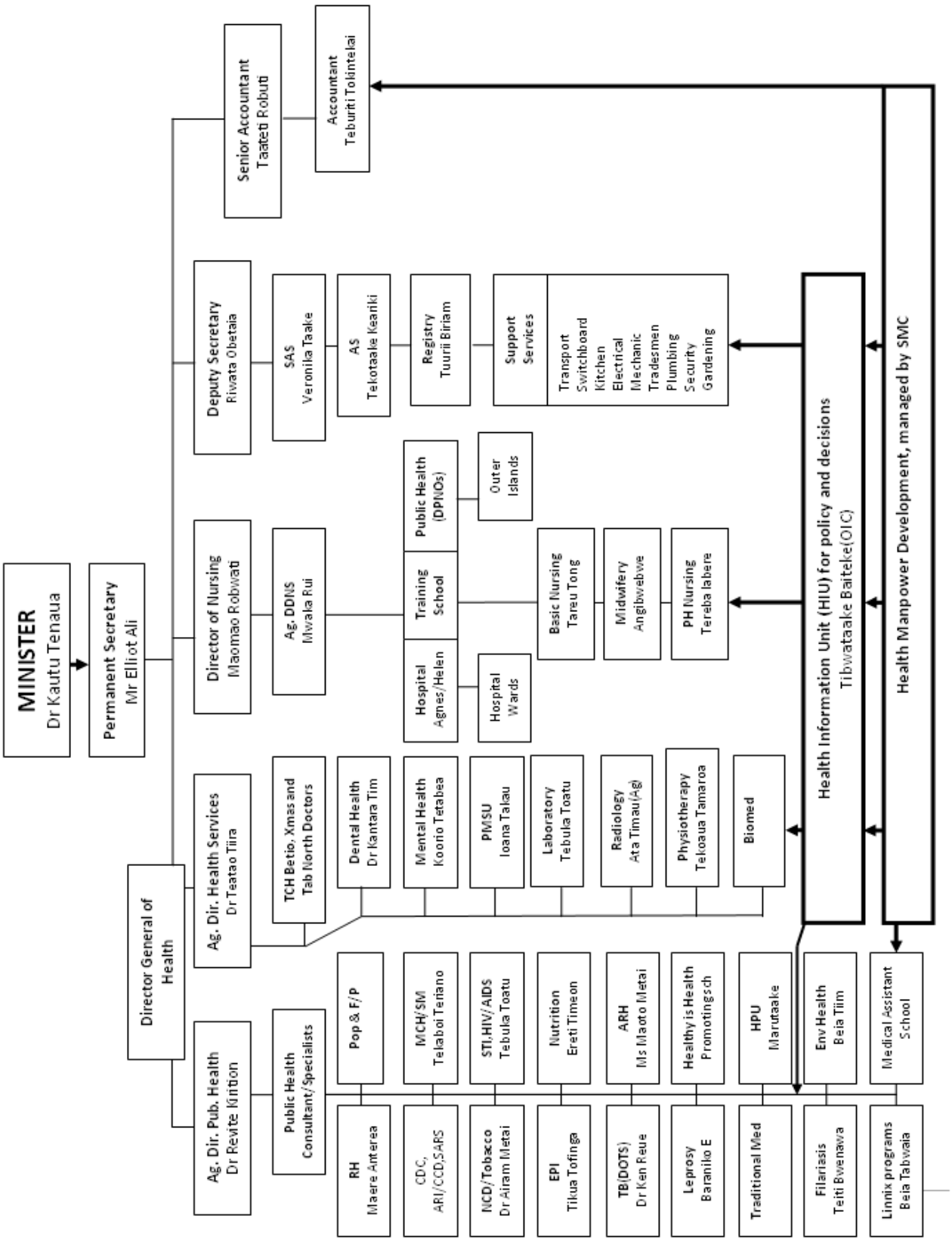
Telephone	:	(686) 28100
Fax	:	(686) 28152
Office Hours	:	08h00 – 12h30 & 13h30 – 16h15

WHO COUNTRY LIAISON OFFICER IN KIRIBATI

Office Address	:	World Health Organization, Bikenibeu , Tarawa, Kiribati
Postal Address	:	PO Box 210, Bikenibeu, Tarawa, Kiribati
Official Email Address	:	who.kir@wpro.who.int
Telephone	:	(686) 28231
Fax	:	(686) 28188
Office Hours	:	08h00-12h30 & 12h30-17h00
Website	:	www.wpro.who.int

7. ORGANIZATIONAL CHART: Ministry of Health



KIRIBATI — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.81						2010	1
2	Estimated population ('000s)	98.99		49.04		49.95		2009 est	2
3	Annual population growth rate (%)	1.80		...		...		2010 est	1
4	Percentage of population								
	- 0–4 years	12.35 [a]		12.20 [a]		12.30 [a]		2009 est	2
	- 5–14 years	23.18 [a]		22.10 [a]		22.20 [a]		2009 est	2
	- 65 years and above	3.46 [a]		4.80 [a]		5.70 [a]		2009 est	2
5	Urban population (%)	43.80		...		...		2009 est	3
6	Crude birth rate (per 1000 population)	27.80		...		...		2010 est	1
7	Crude death rate (per 1000 population)	8.30		...		...		2010 est	1
8	Rate of natural increase of population (% per annum)	1.95 [a]		...		...		2010 est	1
9	Life expectancy (years)								
	- at birth	67.00 [b]		65.00 [b]		70.00 [b]		2008 est	4
	- Healthy Life Expectancy (HALE) at age 60	...		11.50		11.60		2002	5
10	Total fertility rate (women aged 15–49 years)	3.40						2008 est	6
	Socioeconomic indicators								
11	Adult literacy rate (%)	91.00		...		...		2005	7
12	Per capita GDP at current market prices (US$)	1368.91 [c]						2008	8
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	...							
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	1	1	0	...	...	...	2009	9
	- Type B	7	4	3	1	0	1	2009	9
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	51	25	26	9	5	4	2005	9
	Cholera	0	0	0	0	0	0	2005	9
	Dengue/DHF	7	...	...	...	...	...	2009	10
	Encephalitis	0	0	0	0	0	0	2005	9
	Gonorrhoea	379	201	178	0	0	0	2009	9
	Leprosy	96	57	39	0	0	0	2009	10
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	0	0	0	0	0	0	2005	9
17	Acute respiratory infections	34 983	18 079	16 904	14	7	7	2009	9
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	11 594	6336	5258	9	4	5	2009	9
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	335	...	...	...	...	...	2008	10
	- New pulmonary tuberculosis (smear-positive)	147	...	...	...	...	...	2008	10
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	24	12	12	2009	9
	- Breast	6	0	6	2	0	2	2009	9
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			6			5	2009	9
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	3	2	1	2009	9
	- Liver	...	...	...	2	2	0	2009	9
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	...	...	...	1	0	1	2009	9
	- Trachea, bronchus, and lung	...	...	...	3	3	0	2009	9
21	**Circulatory**								
	All circulatory system diseases	...	...	...	70	45	25	2009	9
	- Acute myocardial infarction	...	11	...	6	6	0	2009	9
	- Cerebrovascular diseases	...	...	...	35	16	19	2009	9
	- Hypertension	1136	498	638	4	0	4	2009	9
	- Ischaemic heart disease	...	...	...	4	4	0	2009	9
	- Rheumatic fever and rheumatic heart diseases	...	...	...	4	3	1	2005	9
22	**Diabetes mellitus**	1347	541	806	16	7	9	2009	9
23	**Mental disorders**	104	61	43	1	1	0	2009	9
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	2	2	0	2009	9
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	33	27	6	4	3	1	2009	9
	- Suicide	2	2	0	8	7	1	2009	9
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diarrhoeal diseases	62 723	31 014	31 709	63 363.71 [a]	63 238.94 [a]	63 486.22 [a]	2009	9
	2. Acute respiratory infections	27 660	14 100	13 560	27 942.54 [a]	28 750.53 [a]	27 149.17 [a]	2009	9
	3. Communicabble diseases	11 095	5631	5464	11 208.33 [a]	11 481.86 [a]	10 939.76 [a]	2009	9
	4. Eye diseases	5391	2708	2683	5446.07 [a]	5521.73 [a]	5371.77 [a]	2009	9
	5. Non-communicable diseases	2914	1285	1629	2943.77 [a]	2620.17 [a]	3261.50 [a]	2009	9
	6. Nutrition and related diseases	853	421	432	861.71 [a]	858.44 [a]	864.93 [a]	2009	9
	7. Injury and Posioning	842	407	435	850.60 [a]	829.89 [a]	870.94 [a]	2009	9
	8. Skin diseases	264	132	132.00	266.70 [a]	269.15 [a]	264.28 [a]	2009	9
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Symtoms, signs and ill-defined conditions	85	46	39	85.87 [a]	93.80 [a]	78.08 [a]	2009	9
	2. Disease of the circulatory system	80	31	49	80.82 [a]	63.21 [a]	98.11 [a]	2009	9
	3. Infectious and parasitic system	53	18	35	53.54 [a]	36.70 [a]	70.08 [a]	2009	9
	4. Disease of digestive system	36	26	10	36.37 [a]	53.02 [a]	20.02 [a]	2009	9
	5. Endocrine,nutrional and metabolic	35	16	19	35.36 [a]	32.62 [a]	38.04 [a]	2009	9
	6. Diseases of the respiratory system	27	13	14	27.28 [a]	26.51 [a]	28.03 [a]	2009	9
	7. External causes of mortality	22	17	5	22.22 [a]	34.66 [a]	10.01 [a]	2009	9
	8. Certain conditions originating in the perinatal	20	9	11	20.20 [a]	18.35 [a]	22.02 [a]	2009	9
	9. Neoplasms	13	7	6	13.13 [a]	14.27 [a]	12.01 [a]	2009	9
	10. Diseases of the blood & blood-forming organs	3	2	1	3.03 [a]	4.08 [a]	2.00 [a]	2009	9
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					18.46		2005	11
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					79.00		2009	10
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	...		...		...			
31	**Percentage of newborn infants weighing less than 2500 g at birth**	8.20		7.70		8.60		2005	9
32	**Immunization coverage for infants (%)**								
	- BCG	76.00		...		...		2009	10
	- DTP3	86.00		...		...		2009	10
	- Hepatitis B III	86.00		...		...		2009	10
	- MCV2	35.00		...		...		2009	10
	- POL3	84.00		...		...		2009	10
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			29			...	2009	9
	- Eclampsia			...			...		
	- Haemorrhage			3			1	2009	9
	- Obstructed labour			...			...		
	- Sepsis			7			...	2009	9
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	10
	- Diphtheria	0	0	0	...	...	...	2009	10
	- Measles	0	0	0	...	...	...	2009	10
	- Mumps	0	0	0	...	...	...	2009	10
	- Neonatal tetanus	0	0	0	...	...	...	2009	10
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	10
	- Poliomyelitis	0	0	0	...	...	...	2009	10
	- Rubella	0	0	0	...	...	...	2009	10
	- Total Tetanus	0	0	0	...	...	...	2009	10
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	2	144	2009	9
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	…	…		
		- Primary health care centres	102 [d]	…	2009	9
	Private health facilities	- Hospitals	…	…		
		- Outpatient clinics	…	…		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			15.97 [a]	2008	12
	- total expenditure on health as % of GDP			15.00	2008	12
	- per capita total expenditure on health (in US$)			136.97 [a]	2008	12
	Government expenditure on health					
	- amount (in million US$)			13.45 [a]	2008	12
	- general government expenditure on health as % of total expenditure on health			82.70	2008	12
	- general government expenditure on health as % of total general government expenditure			8.20	2008	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			31.23 [a]	2008	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			17.30	2008	12
	- out-of-pocket expenditure on health as % of total expenditure on health			0.99 [a]	2008	12
	Exchange rate in US$ of local currency is: 1 US$ =			1.19	2008	12
38	**Health insurance coverage as % of total population**			…		

	INDICATORS		DATA							Year	Source
39	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	35	13	17	…	…	…	…	2009	9
		- Ratio per 1000 population	0.35 [a]	0.13	0.17 [a]	…	…	…	…	2009	9
	Dentists	- Number	3	0	3	…	…	…	…	2009	9
		- Ratio per 1000 population	0.03	0.00	0.03	…	…	…	…	2009	9
	Pharmacists	- Number	2	1	1	…	…	…	…	2009	9
		- Ratio per 1000 population	0.02	0.01	0.01	…	…	…	…	2009	9
	Nurses	- Number	329	36	293	…	…	…	…	2009	9
		- Ratio per 1000 population	3.32 [a]	0.36	2.96 [a]	…	…	…	…	2009	9
	Midwives	- Number	48	5	43	…	…	…	…	2009	9
		- Ratio per 1000 population	0.48	0.05	0.43	…	…	…	…	2009	9
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
40	**Annual number of graduates**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	52.00	...	...	2005	7
44	Under-five mortality rate (per 1000 live births)	48.00	...	...	2008 est	13
45	Proportion of 1 year-old children immunised against measles	81.50	...	...	2009	10
46	Maternal mortality ratio (per 100 000 live births)	158.00			2005	5
47	Proportion of births attended by skilled health personnel	89.65 [a]			2005	9
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	4.65 [e]			2005	9
	- Percentage of deliveries in health facilities (as % of total deliveries)	85.00 [e]			2005	9
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	100.00			2005	14
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	110.00	...	...	2008	10
60	Tuberculosis death rate per 100 000 population	25.00	...	...	2008	10
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	74.00	...	...	2008	10
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	93.00	...	...	2007	10
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	65.00	77.00	53.00	2006	15
64	Proportion of population using an improved sanitation facility	33.00	46.00	20.00	2006	15
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
a	Computed by Information, Evidence and Research (IER) Unit of the WHO Regional Office for the Western Pacific
b	Revised data
c	Computed by IER Unit of the WHO Regional Office for the Western Pacific using the exchange rate of AUD 1.19 = US$1 from NHA
d	Figure refers to health centers and dispensaries
e	Best estimated figure

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Lao People's Democratic Republic

1. CONTEXT

1.1 Demographics

The Lao People's Democratic Republic has a population of 5.9 million (2007), a population growth rate of 2.4%, a sparse population density (25 per square kilometre) with large interprovincial variations, and an average household size of 5.9 persons. The topography breaks into lowland areas along the Mekong River that depend predominantly on paddy rice, and highland areas that depend on upland rice and the gathering of non-timber forest products for livelihoods. The population is young, but there are signs of changes in the demographic structure; the percentage of the population under 15 years of age decreased from 43.6% to 38.7% between 1995 and 2007. The nation is rural, with the beginnings of a rural-to-urban shift, as indicated by the increase in urban areas; the estimated percentage of the population living in rural areas decreased from 72.9% to 68% between 2005 and 2009.

The latest census identified 47 distinct ethnic groups. The ethnic Lao comprise 52.5% of the total population and predominate in the lowlands, while ethnic minorities predominate in the highlands, although mixing is common. The highlands have more poverty, worse health indicators and fewer services available. There are many reasons for this situation, including remoteness, lower education levels, less agriculturally productive land and increasing land pressure, and limited rural health care services. Ethnic diversity presents a major challenge in health care delivery and education due to cultural and linguistic barriers. Women have lower literacy rates than men and girls have lower school-completion rates. These gaps are accentuated in the rural and highland areas, where poverty is highest. There is some evidence of decreased treatment-seeking behaviour for women when ill.

Despite recent efforts, statistics are still relatively weak and major capacity strengthening is still necessary in the area of surveillance data, official statistics collection and vital registration. National health indicators have been improving steadily over the past three decades, but despite the efforts of the national authorities, they remain below international standards, being some of the lowest in the Region. The crude death rate declined from 15.1 to 9.1 deaths per 1000 inhabitants between 1995 and 2007, while the total fertility rate (average number of children per woman) fell from 5.6 to 4.2 and the crude birth rate (number of births per 1000 inhabitants) from 41.3 to 33.2. At the same time, life expectancy at birth rose by 10 years in a decade, from 51 years in 1995 to 62.5 in 2007.

1.2 Political situation

The Lao People's Democratic Republic was founded in 1975. The organs of government are the President, the Prime Minister and the National Assembly. The Government operates under the guidance of the Lao Peoples' Revolutionary Party (LPRP) through five-yearly Party Congresses, the Politburo and the Central Committee. The VIIIth Party Congress was held in early 2006. A National Assembly election was held in April 2006, with competition among a group of LPRP-approved candidates and outstanding participation by the population. The National Assembly, as the main legislative organ, comprises 115 members, of which 29 are women; 113 members are LPRP members. The National Assembly elected a new President, Lt. Gen. Choummaly Sayasone, in June 2006. At the same time, a new Prime Minister, Mr Bouasone Bouphavanh, was appointed by the President for a five-year term, with the approval of the Assembly. The rule of law has continuously been strengthened by new laws, including several health sector laws in respect of public health, curative services, food safety, drugs and medical devices. The Government reports to the National Assembly on the implementation of the sixth National Social and Economic Development Plan (NSEDP) (2006-10), which includes national strategies on poverty

eradication. The last report to the National Assembly was made in June 2007. The seventh NSEDP (2011-15) is currently under development.

Until January 2006, the country comprised 16 provinces and one special administrative zone under military administration. In early 2006, the special administration status over Xaysomboune region was released and the concerned district allocated to Xiengkhouang and Vientiane provinces. Currently, the country consists of 17 provinces and the Capital, Vientiane. The security situation is considered stable.

1.3 Socioeconomic situation

The Lao People's Democratic Republic ranked 133rd out of 182 nations on the Human Development Index in 2007. Literacy has improved in the last decade, attaining 73% in the population above 15 years of age in 2005, compared with 60% in 1995. Schooling has also improved for children from 6 to 16 years of age, but boys still have a higher attendance rate than girls: 75% for boys and 68% for girls in 2005 compared with 66% for boys and 56% for girls in 1995.

The official poverty rate fell from 39% in 1997 to 33.5% in 2002. Poverty is higher in remote and highland areas and inversely correlates with road or river access. Based on international purchasing power parity (PPP) standards, in 2006, 71% of the population were living on less than US$ 2 a day and 23% on less than US$ 1 a day. Inequalities remain important, with the share of the national economy of the lowest and the highest quintiles being 7.6% and 45%, respectively. Proxy indicators of poverty, such as access to sanitation and electricity, also point to the vulnerability of the population. The latest Lao Reproductive Health Survey found that, in 2005, 50% of households had no toilets and over 40% had no electricity. Disparities between urban and rural areas are still pronounced. For example, 96% of urban households have access to electricity, while only 33.3% in rural areas have road access.

The World Bank estimated that per capita gross national income was US$ 740 in 2008, with a 7.3% economic growth rate. Revenue collection has been slowly rising for the last two years but remains very low, estimated at 14.6% of 2008 gross domestic product (GDP). The budget deficit has therefore declined and the fiscal space has widened. Major public management reforms are ongoing, but implementation is still below desirable targets. One persisting major issue is the management of customs and taxes. In 2007, collection of taxes and revenues was recentralized by Prime Ministerial decree. However, new budget and state audit laws still need to be fully implemented.

In its official efforts to provide better services to the rural population and eradicate slash-and-burn agriculture and opium cultivation, the Government has strengthened its policy on resettlement of villagers from the highlands to lowland areas closer to roads and essential public facilities. The resettlement policy has brought with it tremendous challenges in delivering social services to resettled communities. International NGOs and, more recently, the World Food Programme have pointed out that the vulnerability of the resettled populations is a major source of concern. The traditional cultivation techniques of highland populations are inadequate to enable them to access subsistence crops and their traditional reliance on non-timber products, combined with increased environmental pressure, has contributed to deterioration in their nutritional and health status. The situation may have been accelerated by the need to resettle villages and populations in areas affected by the building of new hydropower projects and other programmes exploiting natural resources.

1.4 Risks, vulnerabilities and hazards

Locked between China, Myanmar, Thailand and Viet Nam, the Lao People's Democratic Republic is facing major challenges as the country opens up to external influences and, despite its current low prevalence, the HIV/AIDS epidemic is gaining attention in the country. Surveillance in 2004 showed an accelerated rate of transmission among sex workers in two of the 17 provinces. With the recent trend in opening of offshore trade zones with China and Viet Nam, the important investment in casinos throughout the country and the easing of migration formalities, the country faces important challenges with regard to spread of HIV/AIDS and other communicable diseases, including emerging diseases, such as A (H5N1) avian influenza.

The economy continues to rely heavily on natural resources (hydropower, timber and minerals) and concern has been raised by international environmental agencies that biodiversity and resources are being overexploited, particularly timber.

In 1998, the Lao People's Democratic Republic ranked as the third largest illicit opium producer in the world, after Afghanistan and Myanmar, and had one of the highest opium addiction rates. Through its high-level commitment to fighting drug production and abuse, the Government managed, in less than a decade, from 1998 to 2005, to reduce opium cultivation by 93% and opium addiction by 68%. These changes have, however, brought new challenges for the authorities as there is a need for sustainable economic alternatives for highland former opium farmers. In addition, new synthetic drugs have emerged, raising concern for public health, with amphetamine-type stimulants posing the most serious and fastest-growing drug threat in the country.

The Lao People's Democratic Republic ranks among the least-developed countries in the world and, despite a steadily increasing GDP, growth is still slow and inequalities serious. The country is also facing major challenges in addressing transparency and corruption issues; in 2009, it was classified by *Transparency International* as 158th on the Corruption Perception Index of 180 countries. As a comparison, in 2005 it ranked 77th of 158 countries.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Health indicators from the routine health information system are neither robust nor universal. Many of the most reliable indicators are, therefore, from national surveys, most of which were conducted in 2000 and reported in 2001. A national census was conducted in 2005 and official results, published in 2006, showed important improvements in the maternal mortality ratio, the crude death rate, the total fertility rate, the crude birth rate and other macro-indicators. The methodologies used in the calculation of these indicators have, however, been criticized by international development partners, particularly those concerning maternal mortality; the actual numbers may be underestimated. A multiple-indicator cluster survey was conducted in early 2006 and its results published in 2008.

The Lao People's Democratic Republic is a low-HIV-prevalence country, with an estimated adult prevalence rate of 0.2%. At the end of 2007, the official cumulative number of people identified with HIV since 1993 was 2630, of whom 1675 were known to be living with AIDS. Of the reported HIV cases, 55% were male. Based on cumulative HIV case reports, the majority of those infected are between the ages of 20 and 39 years. Of those whose mode of transmission was known, 85% had been infected through heterosexual sexual contact, 3.5% from mother to child, 0.7% through homosexual sexual contact, 0.3% through blood products and 0.2% through use of unsterilized needles (the remainder are unknown). Preliminary results from a second round of second-generation surveillance have shown the HIV-positive seroprevalence rate in female sex workers increasing from 0.9% in 2001 to 2% in 2005. Chlamydial infection and gonorrhoea are common in sex workers, with an estimated combined infection rate of 37.6%. A total of 375 individuals are currently receiving antiretroviral treatment at a single treatment site.

2.2 Outbreaks of communicable diseases

Dengue fever incidence has increased in recent years, with 96.9 cases per 100 000 inhabitants in 2006. In the same year, outbreaks of dengue accounted for a total 6356 cases (5556 cases of dengue fever and 800 cases of dengue hemorrhagic fever/shock syndrome), and six resultant deaths were reported, representing an increase to an incidence of 110.6 cases per 100 000 inhabitants using the 2005 census population projections at mid-year. Dengue appears to be moving peripherally, with cases recorded in smaller population centres in recent years. In 2009, 7214 clinical cases of dengue fever and dengue haemorrhagic fever were reported.

Until early 2007, there were only limited reported outbreaks of avian influenza in poultry and no human cases of infection with the A (H5N1) influenza virus in the country. However, in February 2007, the

Ministry of Agriculture confirmed an outbreak in commercial poultry farms and backyard poultry in the capital city, Vientiane. Since then, other outbreaks in poultry have been reported and confirmed from four other provinces in the north, centre and south of the country. Control activities targeted at poultry were conducted successfully and passive surveillance was reinforced. In early 2008, several new outbreaks in poultry were reported in the northern region bordering China and Myanmar. The first two human cases were confirmed in early 2007, both resulting in death. Public health activities targeting avian influenza have intensified since the first case was confirmed. There is now a health-care-facility-based avian-influenza-surveillance system in place. At the national level, as well as in several provinces, there are alert telephone numbers for reporting suspected human cases. The National Influenza Laboratory (NIL), based at the National Centre for Laboratory and Epidemiology (NCLE) has been operational since the beginning of January 2007.

In December 2007, a cholera outbreak was reported in the south of the country, in Sekong province, with more than 350 cases and three fatalities.

A substantial number of measles outbreaks occurred in 2007, accounting for 1678 cases, mostly in the north of the country. A national measles immunization campaign was conducted in November 2007 for children aged nine months to 15 years, vaccinating more than 2 million children and achieving 96% coverage. The campaign was carried out with the support of WHO and other international partners. Although it is expected that the campaign will lower the incidence of measles for the next two to three years, large outbreaks will occur again unless routine immunization coverage improves or a follow-up campaign is conducted.

In May 2009, when WHO Headquarters declared Pandemic Alertness Level Phase 5 due to an international outbreak of influenza A (H1N1), the country prepared itself, with a focus on enhanced surveillance systems and risk communication. Effective chains of communication have been established between the Lao Government and development partners.

2.3 Leading causes of mortality and morbidity

Malaria is still considered an important contributor to morbidity and mortality, with 70% of the population at risk, although recent efforts to combat the disease (with Global Fund support) have had a positive impact. In 2008, the total number of confirmed malaria cases fell to 17 648, corresponding to an incidence rate of 296 cases per 100 000 population.

Programme data showed 75.5% of those at risk using preventive measures in 2006. A total of 2 702 339 people (population at risk 3.6 million) were being protected with bednets as of the end of 2005. The number of probable and confirmed malaria deaths in hospitals decreased from 187 in 2001 to 14 in 2007, while the annual incidence of confirmed malaria cases per 1000 population decreased from 5.5 in 2003 to 3.25 in 2007. Artemesinin-based combination treatment was introduced in 2004 following increasing malaria-drug resistance.

2.4 Maternal, child and infant diseases

The maternal mortality ratio (MMR) fell from 656 to 405 deaths per 100 000 live births between 1995 and 2005, the infant mortality rate (IMR) from 104 to 70 deaths per 1000 live births, and the under-five mortality rate (U5MR) from 170 to 98 deaths per 1000 live births. However, these numbers are probably underestimates. The IMR varies a great deal between provinces, with the lowest rate in Vientiane Capital (18) and the highest in Sekong (122). While the mortality rate in Vientiane Capital is only 26% of the national rate, Sekong has a mortality rate that is 183% higher than the average for the country. The latest National Health Survey shows that children have a two-week fever incidence rate of 2.9%, an ARI incidence rate of 3%, and a diarrhoea incidence rate of 6.2%.

The preliminary results of the Lao Reproductive Health Survey, disseminated in late 2007, revealed that progress in antenatal care and skilled birth attendance had not been significant in the general population, despite some improvements among younger women. The survey showed that only 71.5% of women were seeking antenatal care, compared with 75.8% in 2000; 18.5% of deliveries were taking place with the participation of a trained birth attendant, compared with 17.4% in 2000; 86% of women were still

delivering at home, compared with 89% in 2000; and only 32% of children aged 12 to 23 months were fully immunized. However, the survey also showed a slow but significant improvement in intermediary health outcomes related to reproductive health: progress was observed in usage of modern contraceptive methods (28.9% in 2000 to 36.6% in 2005) among married women, and the total fertility rate showed a decline (4.88 between 1995 and 1999, to 4.07 between 2002 and 2005). This highlights the improvements in family planning over the period.

2.5 Burden of disease

Tuberculosis prevalence (all forms) was estimated at 260 per 100 000 population in 2008. In the same year, 3079 smear-positive cases were reported. The directly observed treatment, short-course (DOTS) programme reaches 100% of districts. The estimated smear-positive case-detection rate was 67% in 2008 and the treatment success rate was 92% in 2007.

The most recent data show an intestinal helminth prevalence rate of 62% (2002) among schoolchildren. De-worming for children aged 12-59 months has now been established, with child-health days and a national measles campaign reaching more than 500 000 children (>80%) in 2007. There is evidence that schistosomiasis has been re-emerging in southern parts of the country since control programmes have ended.

Road accidents are a growing problem as the volume of traffic and the travelling speed of vehicles due to road improvements increase. Between 2006 and 2007, for instance, fatalities due to road traffic accidents more than doubled nationwide.

Mental health issues, particularly drug abuse, are also a growing concern, although currently poorly reported. Other mental health and neurological diseases issues include management of seizure disorders and psychoses.

Nutrition is a neglected area, although 41% of children are stunted and 48.2% of children and 31.3% of females have haemoglobin levels below 11 g/dl. Universal salt iodization misses at least 7% of children, and vitamin A supplementation in the past has been far from universal. A new bi-annual child-health-day approach has been used recently, however, achieving >80% of the target 600 000+ children aged six to 59 months, for both rounds, in 2007. The rate of exclusive breast-feeding at three months of age is only 28.1%.

The food insecurity situation in the country has also been pointed out as alarming by international partners like the World Food Programme (WFP). In 2006, WFP conducted a comprehensive food security and vulnerability study. The initial conclusions of the study pointed out that …"*the chronic malnutrition in Lao People's Democratic Republic is at an alarmingly high level. Every second child in the rural areas is chronically malnourished, affecting not only their physical development but also their cognitive capacity*"…"*Chronic malnutrition is as high today as it was 10 years ago. 30% of the rural households have either poor or borderline food consumption.*"…"*Sino-Tibetan ethnic groups are the most disadvantaged and food insecure followed by the Hmong-Mien and the Austro-Asiatic.*"

There are very few official national data available on risk factors for noncommunicable diseases (NCD). The national authorities are currently conducting a STEP-wise approach survey to assess national NCD risk factors, with WHO support.

Tobacco and alcohol consumption remains a concern, although no actual figures on consumption and effects on public health are available. However, the Government has taken note of the risks related to their abuse and has made important efforts regarding control of alcohol and tobacco consumption. In 2006, major legal steps were taken: the country ratified the International Framework Convention on Tobacco Control and a series of regulations was passed concerning health warnings on cigarette packs, importation of tobacco and smoke-free areas in the National University. In 2007, a law was drafted for national implementation of the Framework Convention. The 1st National Anti-tobacco Law was endorsed in the Lao National Assembly in December 2009.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The national health priorities are articulated in: (1) the 20-year Health Strategy to the Year 2020 (2000); (2) the Lao Health Master Planning Study (2002); and (3) the National Growth and Poverty Eradication Strategy (NGPES, 2001). The principles and visions of these documents have been included in the current sixth five-year NSEDP (2006-10) as well as the sixth National Health Sector Development Plan (NHSDP) (2006-10), which was shared in English with development partners in November 2008. The sectorwide coordination mechanism for health and other sectors has since been further improved and a draft seventh NHSDP (2011-15) has been developed by the Ministry of Health in consultation with development partners.

The Health Strategy to the Year 2020 was promulgated by the VIIth Party Congress in 2001 and has four basic concepts: full health care service coverage and health care service equity; development of early integrated health care services; demand-based health care services; and self-reliant health services. This then leads to six health-development policies:

- strengthening the ability of providers;
- community-based health promotion and disease prevention;
- hospital improvement and expansion at all levels, including remote areas;
- promotion of traditional medicine, integration of modern and traditional care, rational use of quality and safe food and drugs, and national pharmaceutical product promotion;
- operational health research; and
- effective health administration and management, self-sufficient financial systems, and health insurance.

The health sector is project- and donor-dependent, which has often led to competing and overlapping donor demands. The Minister of Health has called for more integrated approaches, particularly for maternal and child health and immunization; decentralized service delivery methods; improved methods of health care financing; a unified and simplified health information system; and an emphasis on quality improvement in the next five years, rather than quantity improvement, which was emphasized previously.

3.2 Organization of health services and delivery systems

The public health system is predominant, although a private alternative is growing. There are no private hospitals, but there are around 1865 private pharmacies and 254 private clinics, mainly in urban areas. The state system is underutilized, especially in the peripheral areas. In its efforts to increase access through village volunteers and village revolving drug funds, the Government has managed to reach 5226 villages.

There are four administrative strata in the health system: central (Ministry, College of Health Technology and reference/specialized centres); provincial (provincial health offices, provincial and regional hospitals, and auxiliary nursing schools); district (district health offices and district hospitals); and village (health centres) levels.

The main network for provision of health care services remains the public system. In 2005, its health facilities consisted of four central teaching and referral hospitals; five regional hospitals, including one teaching hospital; 13 provincial hospitals; 127 district hospitals; and about 746 health centres. District hospitals are further classified as category A or B, category A meaning that the facilities have surgical capacity, unlike category B. A total of 5081 hospital beds were available in 2005, giving a ratio of 0.9 beds per 1000 inhabitants.

The Government has announced future autonomy for public health facilities. In 2007, the Lao Health Maintenance Organisation was created, which foresees the opening of the first fully private hospital in the country by 2010.

3.3 Health policy, planning and regulatory framework

The National Growth and Poverty Eradication Strategy (NGPES) focuses on poverty and the poorest districts, of which 72 poor, 47 poorest, and 10 for initial activities have been identified. The health priorities in the NGPES are:

- information, education and communication for health;
- expansion of the service network for health promotion of people in rural areas;
- improvement and upgrading of the capacity of health workers from village to post-graduate level, with an emphasis on ethnic minorities, gender balance, and incentives for retaining health workers in areas of shortage;
- promotion of maternal and child health (MCH);
- immunization;
- water supply and environmental health;
- communicable disease control;
- control of sexually transmitted infections, including HIV/AIDS;
- development of village revolving drug funds;
- food and drug safety;
- promotion of traditional medicine, integrated with modern medical treatment; and
- strengthened sustainability, including financing, management, quality assurance and legal framework.

The 20-year NGPES has been operationalized by the sixth NSEDP (2006-10), which was promulgated by the VIIIth Party Congress and the National Assembly in 2006. The NGPES has been fully integrated into the draft sixth NSEDP (2006-10) and serves as its core. The NSEDP 2006-10 was presented to and discussed widely with both internal and external partners, but there remains a large funding gap for implementation in all sectors, including health. Despite the constant fall in the share of health expenditure in the public budget and as a percentage of GDP, the Government has pledged to increase health spending within the framework of it policy dialogue with the Bretton-Woods institutions (World Bank and International Monetary Fund). Currently, the seventh NSEDP (2011-15) is being drafted by the Lao Government in consultation with development partners

A new constitutional article (2004) obligates the Government to improve and extend the health network; improve disease prevention; create conditions so all people receive health care, especially mothers, children and the poor; and legalize private investment in health services.

In August 2007, the 6th National Health Conference (NHC) reviewed the achievements and implementation of the 2001-2005 National Health Plan and provided recommendations for the 2006-2010 five-year national plan. The actual strategy of the Ministry of Health is based on a 'healthy village model' that will include the eight components of primary health care (PHC), as expressed in national PHC policy, and will provide health for all. It is aimed at enabling development from the grassroots level up. The 6th National Health Conference called for: (1) a general increase in funding for health; (2) establishment of the University of Health Sciences under the direct supervision of the Ministry of Health; (3) implementation of the Complex of Hospital-Insituto-Projecto-University (CHIPU); (4) creation of new posts; and (5) increased incentives for health workers in rural areas.

To accelerate progress toward the achievement of Millennium Development Goals 1, 4 and 5, and in support of NHSDP 2006-2010, the following policy and strategy documents have recently been developed and endorsed by the Ministry of Health and other government authorities:

- National Nutrition Policy (2008)
- National Food Safety Policy (2009)
- Skilled Birth Attendance Development Plan 2008-2015 (2008)
- Strategy for Integrated Package of Maternal Neonatal and Child Health Services 2009-2015 (2009)
- Health Information Systems Strategic Plan 2009-15

- Human Resources of Health Master Plan 2009-20
- Draft Health Financing Strategic Plan 2011-15.

3.4 Health care financing

Current estimated per capita health expenditure is US$ 34.1, about 63% coming from households, 16% from donors, and 17% from the Government. Hospitals are highly dependent on user fees for recurrent expenditure. There are nascent health insurances systems for both the formal and non-formal sectors and the civil service scheme is being reformed. Equity funds—third party mechanisms that pay for health services used by the poor—are being expanded.

Total health expenditure made up 4% of GDP in 2008. Donor spending is estimated to have made up 30% of total public sector health spending in 2007. Salaries account for the bulk of domestic public expenditure on health (75.3%).

3.5 Human resources for health

The Lao People's Democratic Republic faces similar challenges to all low-income countries as regards issues of human resources for health (HRH): underfunding of salaries and wages, maldistribution of qualified staff among geographic areas and health system levels, limited numbers of qualified health workers, and low staff productivity.

The country faces a general shortage of qualified health workers. The total health workforce in 2005 numbered 18 017, corresponding to a ratio per 1000 inhabitants of 3.21. That included regular staff (civil servants) under the Ministry of Public Health, as well as contractual staff. It also included the health workers under the two other Ministries that manage non-public health facilities: the Ministry of Defence and the Ministry of Public Security. Around 70% of all health workers are under the Ministry of Health. High- and mid-level medical staff under the Ministry of Health, defined as physicians, nursing staff and midwives with more than two years of formal training, account only for 23% (4123, i.e. 0.74 workers per 1000 inhabitants).

Less than 50% of all health workers are in public health facilities managed by the Ministry of Health. The 8942 regular health workers under the Ministry work in hospitals, health centres and district health offices/hospitals, with district-level facilities accounting for the majority. However, the bulk of the staff at district level are mid- and low-level (88%) health workers, with physicians representing only 6% of district-level staff. Health centres are almost totally served by low-level (81%) and mid-level (18%) staff. There are only eight doctors working in health centres.

Maldistribution of staff, both geographically and by facility level, exacerbates the crisis. There are only 2992 regular high- and mid-level medical staff at health-facility level, corresponding to 0.53 per 1000 inhabitants, far below the recommended WHO target of 2.5. These staff tend to be concentrated in socioeconomically better-off regions to cope with the limitations of their salaries and wages. Rural areas, where living conditions are difficult, are not attractive to newly trained, competent workers.

Compared with international standards, the productivity of health workers could be considered low. This is mainly due to the lack of financial and material incentives available to them; in 2005, the average annual salary for health workers was estimated to be US$ 405. This forces them to rely on coping strategies and secondary occupations to ensure their livelihood. That situation, combined with the limited number of new posts created in recent years (the workforce has grown more slowly than the population in the last decade) is limiting the development of the health system and its response to the needs of the population.

In 2007, with WHO support, a national HRH database was designed and tested, a national conference on HRH was held and the drafting of a framework for the development of HRH in the Lao People's Democratic Republic was initiated.

3.6 Partnerships

The Global Fund has been a major contributor in the country, with more than US$ 45.5 million in grants allocated between 2003 and 2006. The majority of that funding was allocated towards reducing the malaria disease burden (US$ 27.2 million). In total, at the actual approved state of proposals, the Global Fund has made available more than US$ 62 million of the US$ 95 million requested. In 2007, the country applied for grants as part of Round 7 of the Global Fund call for proposals, and two of its proposals were assessed positively by the Fund's Technical Review Panel. The requested funds amount to US$ 25.6 million to fight malaria and US$ 10.9 million to fight tuberculosis. In 2008, the country successfully applied for further support from Round 8 for HIV/AIDS and health systems strengthening, up to a total of US$ 24.6 million.

Since 2002, the Global Alliance for Vaccination and Immunization (GAVI) has given support to immunization services and introduction of new vaccines. GAVI's five-year estimated commitment to the country (2002-2007) currently stands at US$ 7.1 million.

Other major health sector development partners and donors include: the Asian Development Bank, the World Bank, and the governments of Japan, Luxembourg and France. Avian influenza preparation has also benefited from the important support of the European Union and the governments of Australia and the United States of America.

Most United Nations funds and specialized agencies are represented in the country. In 2006, the United Nations Country Team, with the national authorities, finalized the 2007-2011 United Nations Development Assistance Framework (UNDAF), based on the Common Country Assessment conducted in 2005. WHO led the health working group for preparation of the document. The UNDAF will be the leading guideline for actions carried out by the United Nations Country Team in future years.

3.7 Challenges to health system strengthening

Underfinancing of the health sector is placing a major burden on the management and implementation of national policies for prevention and care. The efforts begun in recent decades to improve primary health care and respond to the demands of those populations most in need are still ongoing. In May 2009, the first national workshop on sustainable health financing was organized, with high-ranking national (vice-ministers and vice-governors) and international participants attending and support from WHO and the World Bank. By April 2010, the 1st National Health Financing Strategic Plan (2011-15) will be finalized.

Financial barriers to service access are important, which is not surprising in a country where around 70% of the population live on less than US$ 0.4 a day. Risk-pooling and prepayment have been introduced through social security for the formal sector and health insurance for the public sector. Voluntary community schemes have been piloted and are now part of the national instruments for health care financing. However, all these instruments cover only a small part of the population. A road map to universal coverage still needs to be adopted and implemented, despite major efforts in recent years. For the poor, the Government has decided to pilot health equity funds to replace the former exemption policy, which has proved to be inefficient. The sustainability of such funds remains questionable, however, and their nationwide implementation will require national commitment and external resources.

The main network for health care service provision remains the public system. There were a total of 5081 hospital beds in 2005, or 0.9 beds per 1000 inhabitants. The shortage of health workers is evident when the ratio of health workers per bed is analysed. The situation is exacerbated by the uneven distribution of staff among different types of health facility and the shortage of non-medical staff to implement essential administrative and support tasks. Central hospitals have high ratios of high- and mid-level medical staff (see paragraph 3.5) compared with other types of facility. In central hospitals the ratio of high- and mid-level medical staff per bed is 0.9, which could be considered good if there was not a very high doctor-to-nurse ratio (0.63 at central hospitals), which raises concerns that inefficiency in hospitals may have structural origins.

Health-worker productivity is low in most national hospitals for various reasons. At the moment only one province provides a comprehensive incentive system. Such a system at the national level might ensure

health workers' best performances and attract new staff to remote and difficult regions. Moving towards such an approach would, however, require a significant increase in the health budget and a reorientation of expenditure towards recurrent costs for national and donor funding sources, which would only be possible if transparency and accountability were to be reinforced and clear mechanisms for performance and quality assessment of the provided services established. Such efforts have been initiated by the Ministry of Health, but much still remains to be done.

Coordination among sector donors and partners has improved in recent years, as shown through exercises like avian influenza pandemic and outbreak preparation and response. Following the 2005 Paris Declaration on Aid Effectiveness, donors and partners in the Lao People's Democratic Republic signed the local Vientiane Declaration on Aid Effectiveness (VD) in November 2006. A task force was created to elaborate a country action plan for implementation of this declaration and to ensure harmonization and alignment among the signatories. The country action plan (CAP) was developed and approved by the Government and its partners in early 2007 and a first local survey for the Paris Declaration Monitoring Survey (OECD DAC) was conducted in parallel.

The survey was a challenging process because of the complexity of the task and the scarcity of reliable data, even at individual development-partner level. A significant number of development partners did not participate in the process, putting the collected information in question. The findings of the survey showed that much remained to be done to achieve the objectives of the Paris Declaration. Only 16% of capacity-development interventions in the country were being carried out in a coordinated fashion, compared with the targeted 50%, and only 17% of total overseas development aid (ODA) had been disbursed following national procurement systems and procedures. On bilateral disbursement for the fiscal year 2005/2006, of US$ 223 million, only US$ 14 million was reported to be for the health sector. The multilateral situation was little better, with US$ 22 million of US$ 245 million. The health sector therefore accounted for only 7.6% of the ODA disbursements. In 2007, the former Committee on Planning and Investment was converted into the Ministry for Planning and Investment (MPI) and the Directorate of International Cooperation (DIC) was transferred from the Ministry of Foreign Affairs to this newly created structure. The DIC is now responsible for supervising ODA in all sectors and for monitoring implementation of the CAP.

In order to operationalize the VD in the health sector, the Ministry of Health has been engaged in developing a sectorwide coordination mechanism, according to the CAP. In November 2007, the structure of the new coordination mechanism for the health sector, which includes multiple layers of technical and policy dialogue between development partners and the Government, was presented by the Ministry. The yearly monitoring process of the VD CAP (2008 and 2009) indicates that substantial progress in aid effectiveness has been made in most CAP areas.

Health information from surveillance and surveys still needs to be framed by national policy. WHO, and recently the Health Metrics Network (HMN), have supported the Government in developing a new health information system extending from village to district and provincial levels. The system was discussed widely with major donors and project implementers nationwide, and has been adopted by the World Bank and the Asian Development Bank as a part of their support actions in the south and north of the country. However, nationwide implementation of the system still needs to be carried out and evaluated. Furthermore, other aspects of the health information system still need to be reinforced, such as vital registration and information collection and analysis. Towards that goal, WHO and other development partners facilitated the formulation of the 1st Lao Health Information Strategic Plan (2009-15) using the HMN methodology in late 2008.

Hospital financial management systems are being reinforced as part of the 'good-governance' efforts of the Government and the Ministry of Health, but they also need to be integrated into a broader information system to ensure timely, evidence-based decision-making.

Prevention activities, such as vaccinations, have been the centre of a major focus by the Ministry of Health in recent years. Immunization rates had been falling and corrective actions were needed. The trend has been reversed, but this has brought up certain questions about the adequacy of the health system in providing regular basic services to the population. The traditional outreach approach has been questioned

and the primary barrier to the effective delivery of services is thought to be the absence of routine vaccination services at health centres and district hospitals (fixed sites). Integrating vaccination activities and other essential primary prevention and health care services for mother and child has been advocated as a solution to improve the situation. This is now one of the priorities of the Ministry of Health. A comprehensive package of services and the cost of providing it to the population in a constant and regular way still need to be defined. Several United Nations agencies, including WHO, are working on these issues. However, implementation of the package will also need a change in the current financial-incentive approach, which relies on payment for outreach activities rather than on performance.

4. PROGRESS TOWARDS THE HEALTH MDGs

The Government of the Lao People's Democratic Republic endorsed the Millennium Declaration at the United Nations Millennium Summit in September 2000 and remains strongly committed to the Millennium Development Goals (MDGs) in implementing its National Social and Economic Development Plan. Overall, it appears that the country is well on track for meeting targets such as those on primary-school enrolment and child-mortality reduction. Challenges remain, however, with regard to other targets, such as the reduction of hunger, which need strong and sustained attention from the Government and its development partners. Wide disparities exist between people living in urban and rural areas, uplands and lowlands, and Lao native speakers and ethnic dialect speakers, in terms of their ability to reap the benefits of economic growth and experience improved livelihoods, as well as quality health care and education. The task of including the country's many ethnic groups in national development is complex, and the second MDG Report clearly shows that achievement of the MDGs depends on this.

Goal 1: Eradicate extreme poverty and hunger

Food poverty declined faster than overall poverty between 1992-1993 and 2002-1003, and the average number of months without sufficient rice in villages dropped between 1997-1998 and 2002-2003. However, malnutrition remains a significant concern. Estimates suggest that, despite considerable efforts, 37% of children under five years of age are underweight. Chronic malnutrition, or stunting, also remains a major issue, affecting 40% of children under five, and requires urgent attention by both the Government and the development community. It has been recommended that stunting should be included as an additional MDG indicator for the Lao People's Democratic Republic to ensure constant monitoring and action.

Goal 4: Reduce child mortality

Nationally, the country's child mortality indicators are improving satisfactorily. The under-five mortality rate declined from 170 to 88.6 per 1000 live births, and the infant mortality rate from 104 to 64.4 between 1995 and 2007. At this rate, the 2015 MDG mortality targets seem within reach, although mortality rates are much higher in rural areas, particularly in the most remote districts. However, the progress in mortality indicators is not matched by equally steady progress in immunization of one-year-old children against measles. Until 2009, the proportion of children immunized remained more or less constant, at around a low 59%. While the recent measles immunization campaign reached more than 95% of the target group following a concerted mobilization of high-level political support and resources, the challenge now is to make necessary institutional changes to sustain that success.

Goal 5: Improve maternal health

As revealed by the 1995 and 2005 population censuses, the Lao People's Democratic Republic appears to have progressed in reducing maternal mortality, from 650 deaths per 100 000 live births in 1995 to 405 in 2005. However, irrespective of estimated progress, the maternal mortality ratio (MMR) is one of the highest in the Region, and it is a great challenge for the country to reach the MDG5 target given the current low levels of investment in maternal health. Reduction in maternal mortality is dependent upon a number of complex factors, and assessing progress on maternal mortality requires a review of these factors. Equally, the MMR does not measure maternal health, for behind every woman who dies from complications during pregnancy or childbirth, 20 women survive but suffer from ill health or disability. Serious investment will be required if the Lao People's Democratic Republic is to achieve this target.

Goal 6: Combat HIV/AIDS, malaria and other diseases

HIV prevalence in the general population in the Lao People's Democratic Republic remains low, but varies considerably between risk groups and locations. While knowledge of disease transmission is high, a large gap still exists between knowledge and desired behaviour. Correct and consistent used of condoms is low, and levels of sexually transmitted infections continue to be high among service women.[1] Because the country is surrounded by others with high HIV prevalence rates and is experiencing an increase in mobility of its working-age population within and across its borders, the threat of an expanding HIV epidemic in the country remains real.

A large proportion of the Lao population is exposed to malaria, with an increase in the morbidity rate in the early 1990s. Since then, there has been an appreciable drop, which may be due largely to the increase in number of people sleeping under insecticide-treated bednets. Death rates from malaria fell from 9 per 100 000 in 1990 to 0.2 in 2008. Even so, a lot of ground remains to be covered to meet the MDG target. At the same time, considerable progress has been made in tuberculosis case detection and cure, and the related MDG target seems to have been achieved by 2005.

Goal 7: Ensure environmental sustainability

In line with its NSEDP targets, the Lao People's Democratic Republic has made good progress on expanding access to safe water and sanitation over the last decade. The proportion of people with access to safe drinking-water and basic sanitation increased significantly during the period from 1990 to 2007. Access to safe drinking-water is more widespread than access to basic sanitation, although performance across provinces is varied. Access in rural areas is determined by location: more remote provinces and those with fewer roads are likely to have lower coverage. Safe water access is worse during the dry season because of the lack of rainwater, and access for poor households is about 10 to 15 percentage points below that for non-poor households.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Population Census 2005
Operator	:	National Statistics Centre
Specification	:	Includes the latest available official demographic data for Lao PDR
Web address	:	http://www.nsc.gov.la/PopulationCensus2005.htm
Title 2	:	Lao Info 4.1
Operator	:	National Statistics Centre
Specification	:	Povides a key statistical tool for monitoring the Millennium Development Goals (MDGs)
Web address	:	http://www.nsc.gov.la/Lao_Info.htm
Title 3	:	World Bank country website
Specification	:	Includes most recent links and documents produced by the World Bank on Lao PDR
Web address	:	www.worldbank.org/lao
Title 4	:	Asian Development Bank country website
Features	:	Includes most recent links and documents produced by the ADB on Lao PDR
Web address	:	http://www.adb.org/LaoPDR/
Title 5	:	Sixth National Socio Economic Development Plan (2006-2010)
Operator	:	Committee for Planning and Investment
Title 6	:	United Nations Common Country Assessment for the Lao People's Democratic Republic 2005
Operator	:	Government of Lao PDR and the United Nations System
Web address	:	http://www.undplao.org/

[1] "Service women" is an overall term used for women who sell sex, either for money or for in-kind benefits. They work in small bars and nightclubs or can be contacted by clients via other means.

Title 7	:	Lao Reproductive Health Survey 2005
Operator	:	National Statistics Centre and UNFPA
Features	:	Includes the latest available data on reproductive health in Lao PDR
Web address	:	http://www.nsc.gov.la/
Title 8	:	Nam Saat Central Web Site
Operator	:	Nam Saat Central, MoH
Features	:	Includes a repository of the main national regulations and legislation
Specification	:	Website from the National Centre for Environmental Health and Water Supply
Web address	:	http://www.nsc.gov.la/
Title 9	:	National Round Table Process website
Operator	:	Department for International Cooperation, Ministry of Planning and Investment; United Nations Development Programme
Features	:	Includes a repository of the main national regulations and legislation
Specification	:	Website from the National Centre for Environmental Health and Water Supply
Web address	:	http://www.nsc.gov.la/

6. ADDRESSES

MINISTRY OF HEALTH

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WHO REPRESENTATIVE IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

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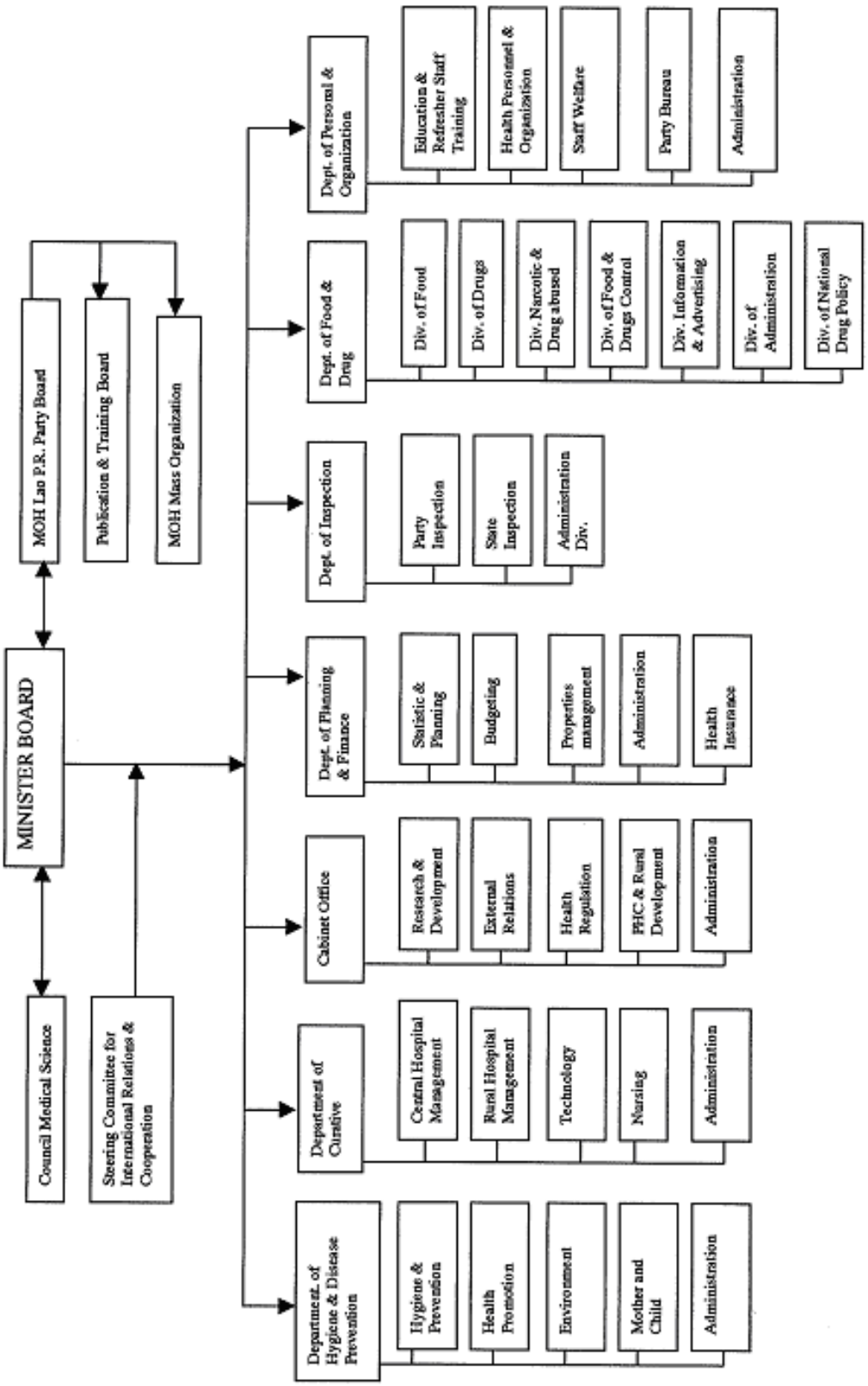
Fax	:	(856) 21 353 905
Office Hours	:	08:00 a.m. – 05:00 p.m.

7. ORGANIZATIONAL CHART: Ministry of Health



LAO PEOPLE'S DEMOCRATIC REPUBLIC

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	236.80							1
2	Estimated population ('000s)	5874.00	2929.00	2945.00				2007 est	1
3	Annual population growth rate (%)	2.10	...	...				1995-2005	2
4	Percentage of population								
	- 0–4 years	13.20	13.40	13.00				2007 est	1
	- 5–14 years	25.50	26.00	25.10				2007 est	1
	- 65 years and above	3.80	3.60	4.10				2007 est	1
5	Urban population (%)	32.00						2009 est	3
6	Crude birth rate (per 1000 population)	32.60	...	...				2007p	1
7	Crude death rate (per 1000 population)	9.10	...	...				2007p	1
8	Rate of natural increase of population (% per annum)	2.35 [a]	...	...				2007p	1
9	Life expectancy (years)								
	- at birth	62.50	...	...				2007p	1
	- Healthy Life Expectancy (HALE) at age 60	...	...	...					
10	Total fertility rate (women aged 15–49 years)	4.20						2007p	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	73.00	...	...				2005	2
12	Per capita GDP at current market prices (US$)	740.00 [j]						2008	4
13	Rate of growth of per capita GDP (%)	7.30						2008	4
14	Human development index	0.62						2007	5
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	...	...	...					
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	632	...	...	0	0	0	2002	6
	- Type A	10	...	...	0	0	0	2002	6
	- Type B	61	...	...	0	0	0	2002	6
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	966	...	...	0	0	0	2008	7
	Cholera	1272	...	...	...	...	...	2002	6
	Dengue/DHF	7214	...	...	12	...	...	2009	6
	Encephalitis	12	...	...	0	0	0	2008	7
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	101	83	18	...	...	...	2009	6
	Malaria	17 648 [c]	...	...	13	...	...	2008	6
	Plague	0	0	0	0	0	0	2008	7
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	1698	...	...	0	...	...	2008	7
17	Acute respiratory infections	2601	...	...	1	...	...	2008	7
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	8979	...	...	7	...	...	2008	7
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	4048	...	...	...	...	...	2008	6
	- New pulmonary tuberculosis (smear-positive)	3079	...	...	...	...	...	2008	6
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	...	...	...	...	...	...		
23	**Mental disorders**	...	...	...	...	...	...		
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**								
	1. Malaria	104 434	...	...	4083.17	...	...	2000	8
	2. Pnuemonia	18 096	...	...	728.00	...	...	2000	8
	3. Gastritis	17 132	...	...	690.00	...	...	2000	8
	4. Influenza	12 987	...	...	523.00	...	...	2000	8
	5. Diarrhoea	12 334	...	...	496.49	...	...	2000	8
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malaria	996	...	...	40.09	...	...	2000	8
	2. Pneumonia	83	...	...	3.34	...	...	2000	8
	3. Diarrhoea	34	...	...	1.36	...	...	2000	8
	4. Heart failure	34	...	...	1.36	...	...	2000	8
	5. Injury	33	...	...	1.32	...	...	2000	8
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					36.60 [e]		2005	9
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					31.00		2009	6
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	26.00		...		...		2005	4
31	**Percentage of newborn infants weighing less than 2500 g at birth**	...		...		...			
32	**Immunization coverage for infants (%)**								
	- BCG	67.00		...		...		2009	6
	- DTP3	67.00		...		...		2009	6
	- Hepatitis B III	67.00		...		...		2009	6
	- MCV2	...		...		...			
	- POL3	67.00		...		...		2009	6
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	0	0	0	...	...	...	2009	6
	- Measles	78	...	...	...	...	...	2009	6
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	8	...	...	...	...	...	2009	6
	- Pertussis (whooping cough)	12	...	...	...	...	...	2009	6
	- Poliomyelitis	0	0	0	...	...	...	2009	6
	- Rubella	124	...	...	...	...	...	2009	6
	- Total Tetanus	15	...	...	...	...	...	2009	6
	Health facilities								
35	**Facilities with HIV testing and counseling services**					91		2008	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	22 [f]	2555	2005	10
		- Specialized hospitals	3 [g]	160	2005	11
		- District/first-level referral hospitals	127	2366	2005	11
		- Primary health care centres	746	1658	2005	11
	Private health facilities	- Hospitals	0	0	2005	11
		- Outpatient clinics	254	...	2008	12
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			211.63	2008p	13
	- total expenditure on health as % of GDP			4.00	2008p	13
	- per capita total expenditure on health (in US$)			34.11	2008p	13
	Government expenditure on health					
	- amount (in million US$)			36.90	2008p	13
	- general government expenditure on health as % of total expenditure on health			17.40	2008p	13
	- general government expenditure on health as % of total general government expenditure			3.70	2008p	13
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			91.77	2008p	13
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			82.60	2008p	13
	- out-of-pocket expenditure on health as % of total expenditure on health			62.85	2008p	13
	Exchange rate in US$ of local currency is: 1 US$ =			8744.06	2008p	13
38	**Health insurance coverage as % of total population**			9.00	2008	14

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	1283	...	...	...	...	...	...	2005	10
		- Ratio per 1000 population	0.23	...	...	...	...	...	...	2005	10
	Dentists	- Number	83	...	...	...	...	...	...	2005	10
		- Ratio per 1000 population	0.02	...	...	...	...	...	...	2005	10
	Pharmacists	- Number	276	...	...	...	...	...	...	2005	10
		- Ratio per 1000 population	0.05	...	...	...	...	...	...	2005	10
	Nurses	- Number	5 291 [h]	...	...	...	...	...	...	2005	10
		- Ratio per 1000 population	0.93	...	...	...	...	...	...	2005	10
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	53	...	...	...	...	...	...	2005	10

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	30 [i]	...	...	...	...	...	...	2005	10
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	37.10	...	...	2006	8
43	Infant mortality rate (per 1000 live births)	64.40	...	...	2007 est	1
44	Under-five mortality rate (per 1000 live births)	88.60	...	...	2007 est	1
45	Proportion of 1 year-old children immunised against measles	59.00	...	...	2009	6
46	Maternal mortality ratio (per 100 000 live births)	405.00			2005	2
47	Proportion of births attended by skilled health personnel	18.50			2005	9
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	7.50			2005	9
	- Percentage of deliveries in health facilities (as % of total deliveries)	11.00			2005	9
48	Contraceptive prevalence rate	38.40	...	...	2005	9
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	28.50			2005	9
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	0.20	...	...	2007	6, 15
54	Percentage of people with advanced HIV infection receiving ART	100.00	100.00	100.00	2007	15
55	Malaria incidence rate per 100 000 population	295.96 [c]	...	...	2008	6
56	Malaria death rate per 100 000 population	0.22 [c]	...	...	2008	6
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	85.00	...	...	2008	16
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	260.00	...	...	2008	6
60	Tuberculosis death rate per 100 000 population	32.00	...	...	2008	6
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	67.00	...	...	2008	6
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	92.00	...	...	2007	6
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	57.00	72.00	51.00	2008	17
64	Proportion of population using an improved sanitation facility	53.00	86.00	38.00	2008	17
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...	...	

Notes:	
…	Data not available
est	Estimate
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific.
b	Figure refers to Atlas method
c	Revised data
d	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO
e	Figure refers to married women
f	Refers to tertiary hospitals (central, regional and provincial)
g	Refers to specialized hospitals at central level
h	Includes medical assistants
i	Includes only nurses trained at university. Due to a reformulation of the curricula there has not been any graduate from the nursing schools for the past two years
j	Figure refers to Gross national income (GNI)

Sources:	
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MACAO (CHINA)

1. CONTEXT

1.1 Demographics

With an annual growth rate of -1.3%, Macao (China) had a year-end estimated population of 542 200 in 2009, 51.8% female and 48.2% male; 12.7% of the population were aged 0-14 years and 7.7% were 65 years and above. The average population density was 18 400 per square kilometre, with the entire population city-dwellers.

In 2009, there were 4764 live births, up by 1.0% compared with 2008, while mortality decreased by 5.2% to 1664. The natural growth rate for the same year was 5.7 ‰, with a crude birth rate of 8.8 and a crude death rate of 3.1 per 1000 population. The infant mortality rate was 2.1 per 1000 live births and the under-five mortality rate was 2.7 per 1000 live births, while the total fertility rate was 1.0 birth per woman (aged 15-49), with no recorded maternal mortality. Life expectancy at birth for males was 79.4 years in 2006-2009, and 85.2 years for females.

Besides natural increases, migration flow is another important factor in determining population growth. In 2009, an estimated net inflow of 9200 persons was recorded, including Chinese immigrants with "one-way exit permits" from Mainland China, persons authorized to reside in Macao and non-resident workers.

1.2 Political situation

Macao became a Special Administrative Region of the People's Republic of China on 20 December 1999. The constitutional document, the Basic Law of the Macao Special Administrative Region, came into force on the same day. It stipulates the system to be practised in Macao, and lays down the political and administrative framework for 50 years from 1999.

Under the Basic Law, Macao is entitled to a high degree of autonomy in all areas except defence and foreign affairs. The principles of "One country, two systems", "Macao people governing Macao" and "a high degree of autonomy" have passed their initial tests with flying colours, and are now broadly recognized in Macao and infused into its social and political culture.

Fernando Chui Sai On is currently serving his third term as Chief Executive of Macao. The Chief Executive's cabinet comprises five policy secretaries. He is advised by an Executive Council that has 11 members. The Legislative Assembly is a 29-member body comprising 12 directly elected members, 10 appointed members representing functional constituencies, and seven members appointed by the Chief Executive.

1.3 Socioeconomic situation

With the support of Mainland China, the economy of Macao has remained positive. The gross domestic product (GDP) growth rate for 2009 was 1.3% in real terms, but per capita GDP (US$) in nominal terms dropped by 1.1% year on year. Prosperity in the gaming sector and a rise in employment earnings have stimulated private consumption expenditure. However, while the export of services has been bolstered by gaming services, the cancellation of the global textile and garment quota system and the weak economy in the United States of America and the Euro Zone have resulted in a significant fall in exports of goods.

The health expenditure share of GDP was 1.9% in 2008, as in 2007, with government expenditure accounting for 66.9%.

Macao has maintained sound economic and trade relations with more than 120 countries and regions, particularly with the United States of America, the European Union and Portuguese-speaking countries.

In 2009, the total labour force was estimated to be 329 200, of which 317 500 were employed, giving an unemployment rate of 3.6%, up by 0.6% compared with 2008; the underemployment rate rose by 0.3% to 1.9% year on year.

1.4 Risks, vulnerabilities and hazards

Macao is occasionally hit by tropical storms, tropical cyclones and typhoons during summer and autumn, causing traffic disruption and, on occasions, major floods and landslips, but seldom casualties.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Having gone through the process of a demographic and epidemiological transition, the population of Macao enjoys a fairly low mortality rate and a long life expectancy. They also enjoy a high standard of health, as reflected in the general decline in the incidence of communicable diseases and the increase in life expectancy, as well as the improvement in health indices. Noncommunicable diseases are the main causes of morbidity and mortality. However, like other developed areas, the threat from re-emerging and newly emerging infectious diseases continues. The HIV/AIDS incidence rate is slowly increasing.

2.2 Outbreaks of communicable diseases

Outbreaks of influenza, enterovirus infection and norovirus gastroenteritis in schools and residential institutes occur from time to time. In 2009, Macao faced the A (H1N1) influenza pandemic, with an incidence rate of 64.0 per 10 000 laboratory-diagnosed cases. As of 31 December 2009, 3502 laboratory-confirmed cases of A (H1N1) influenza had been reported, with two deaths.

2.3 Leading causes of mortality and morbidity

Among the 1664 deaths in 2009, 33.1% were attributable to neoplasms, 26.5% to diseases of the circulatory system and 13.6% to diseases of the respiratory system.

Since 2001, cancer has been the leading cause of death, claiming more than 500 deaths every year. In 2009, cancers of the colorectum, bronchus and lung, breast, prostate, and liver were the five most common, contributing 13.5%, 11.9%, 10.8%, 8.6%, 6.6% of all new cancer cases, respectively. The top five leading cancer deaths were cancers of the bronchus and lung, liver, colon, nasopharynx and stomach, contributing 25.8%, 12.7%, 7.3%, 6.9% and 5.3% of all cancer deaths.

In terms of causes of morbidity, the three most common notifiable diseases in 2009 were influenza A H1N1 (41.0%), enterovirus infection (19.7%) and seasonal influenza (18.8%). The incidence rate for tuberculosis in 2009 was 53.5 per 10 000 population, with a treatment success of 92.9% using a standardized therapeutic regimen. The proportion of tuberculosis cases of the lung detected under DOTS was 104 per 100 000.

The Population Health Survey 2006 described the prevalence of major health conditions and the general health status of the population, as well as behaviour related to major causes of mortality and morbidity. Among other finds, it showed that the risk factors related to noncommunicable diseases were the major prevalent causes of morbidity. The prevalence of dyslipidemia was 24.3%, that of diabetes was 27% and the adjusted rate for hypertension was 28.8% (44.5% of people with high blood pressure were newly discovered).

Morbidity and mortality from most vaccine-preventable communicable diseases have remained very low for many years. There is no risk of malaria, but small clusters of dengue fever occur occasionally. The hepatitis B carrier rate among adults is around 11.5%, but is less than 1% among vaccinated children. HIV/AIDS prevalence remains low, estimated at less than 0.1% (4.32 cases per 100 000 inhabitants).

2.4 Maternal, child and infant diseases

Maternal, child and infant care services are available in all highly accessible health centres, all of them equipped with prenatal ultrasound examination equipment. More than 95% of pregnant women receive prenatal care and almost 100% deliver in hospital. No maternal death was recorded during the period from 1992 to 2009. Diarrhoea among infants and children is common, but is not usually life-threatening.

2.5 Burden of disease

A study in 2001 indicated injury and intoxication and cancer as the leading causes of potential years of life lost (PYLL).

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

In line with the Government's policy of building a quality society, a long-term objective of Macao's health authorities is to enhance the quality of medical and health care, thus safeguarding and improving the public's health.

The Health Bureau is tasked with coordinating the activities of public and private organizations in the domain of public health and assuring the health of citizens through specialized and primary health care services, as well as disease-prevention and health-promotion activities.

3.2 Organization of health services and delivery systems

Medical and health service providers in Macao are classified as either governmental or nongovernmental. The former mainly include government health centres that provide primary health care, as well as the Conde S. Januário Hospital, which provides specialist medical services. Nongovernmental providers include medical entities subsidized by the Government and other institutions, such as Kiang Wu Hospital, the University Hospital, the Workers' Clinic and Tung Sin Tong Clinic, as well as various private clinics and laboratories.

The departments of Conde S. Januário Hospital include Inpatient, Outpatient, Emergency, Surgery, Intensive Care, Coronary Intensive Care, Burns Service, Physiotherapy and Rehabilitation Medicine, Haemodialysis and Peritoneal Dialysis, Medical Imaging, Laboratory, and Haematological Oncology. The 73 types of service offered by the Outpatient Department include anaesthesiology, cardiology, chest clinic, surgery, plastic and reconstructive surgery, dermatology, stomatology, gynaecology and obstetrics, haematological oncology, physiotherapy and rehabilitation, internal medicine, general medicine, nephrology, neurosurgery, ophthalmology, orthopaedics, otorhinolaryngology, paediatrics, psychiatry and urology.

With regard to the private sector, two nongovernmental hospitals play complementary roles in providing health care services. Founded in 1871, Kiang Wu Hospital has three departments: Emergency, Outpatient and Inpatient. It is a modern general hospital that integrates treatment, prevention, teaching and research. The University Hospital, sharing a close and collaborating relationship with the Macau University of Science and Technology, was established on 25 March 2006. It integrates clinical services, teaching and scientific research, and is Macao's first hospital dedicated to both Chinese and Western medicine.

To realise the objective of "Health for all", Macao's health authorities have established a primary health care network with health centres as the operational units offering all residents easy access to primary health care services in their own neighbourhoods. There are six health centres and two health stations distributed throughout the various districts of Macao. Two of the health centres, the Fai Chi Kei Health Centre and Areia Preta Health Centre also have traditional Chinese medicine clinics. By the end of 2009, the primary health care network had provided services to 530 139 outpatients during that year. Most outpatients had attended the adult health care, child health care and women health care clinics, which accounted for 62.3%, 11.2% and 13.3%, respectively, of total outpatient visits.

3.3 Health policy, planning and regulatory framework

"A sound health care system and putting prevention first" is the Government's policy. In recent years, it has focused particularly on enhancing prevention and control capacity in the areas of emergency rescue response and public health.

The Health Bureau is a public entity, endowed with administrative, financial and patrimonial autonomy, under the supervision of the Secretary for Social Affairs and Culture. The Bureau's task is to assure the health of citizens, prevent disease, provide health care and rehabilitation services, train professional health workers, supervise and support entities in the health sector, and provide forensic services.

3.4 Health care financing

The health system is financed mainly by the Macao Government, which attaches great importance to the resources allocated to medical and health care. In 2008, it spent US$ 271.2 million on related services, up by 10.8% from the US$ 244.7 million in 2007.

The medical services provided by health centres and the Tung Sin Tong Clinic are basically free of charge. All legal residents of Macao, regardless of their ages or occupations, are entitled to free services at health centres and supplementary check-ups at Conde S. Januário Hospital by referral from health centres. Non-residents pay for such services according to rates established by the Health Bureau.

3.5 Human resources for health

The shortage of nurses is a continuing obstacle for Macao in enhancing public health care. With an increasingly ageing population, there is a more pressing need to train nursing staff. To address the issue, in 2008 the Secretary for Social Affairs and Culture commissioned the Kiang Wu Nursing College of Macau to conduct a study for development of a ten-year plan for Macao's community nursing manpower, following the commissioning of the ten-year plan for Macao's nursing manpower in 2005. The aim was to look into the current state of community nursing manpower and to formulate long-term human resources plans catering to future medical development.

Meanwhile, to attract new recruits and retain existing nursing staff through improved remuneration packages, the Executive Council approved a Bill on the Rank and Grade System for Nurses in 2009. The entry point for nurses was raised from the original 340 points to 430 points on the salary scale, with the salary increases for each rank ranging from 16% to 41%.

3.6 Partnerships

The Macao Government has never spared any effort in monitoring food safety, and has constantly strengthened cooperation with neighbouring regions. As early as April 2004, Macao signed the Cooperation Agreement on Inspection and Quarantine and Food Safety with the State General Administration of Quality Supervision, Inspection and Quarantine. Following the signing of the Framework Agreement on Exchanges Concerning Food Safety between Guangdong and Macao in December 2007, cooperation between the two regions was put into practice. Moreover, Macao has continued to maintain close ties, communications, collaboration and interaction with quarantine departments in Hong Kong (China) and other neighbouring regions. It strives to enhance inspections and quarantine related to food hygiene through various channels.

In 2008, the Macao Government joined with the Hong Kong Hospital Authority and the Hong Kong College of Emergency Medicine to launch training programmes for specialists in emergency medicine, with the aim of improving the technical skills of local medical personnel.

In addition, to continue bilateral cooperation and collaboration in medical services and training with Singapore, Macao signed the Memorandum of Understanding in the Area of Health with the Ministry of Health of Singapore in December 2008; the Memorandum intends to promote deeper collaboration in medical research, closer exchange of medical information and strengthening of training and continuing education for medical personnel.

3.7 Challenges to health system strengthening

The health authorities continue to follow their policies and plans to create a favourable environment and conditions for medical consultation and to ensure that Macao residents receive a satisfying and convenient community health care service, hence strengthening public health and improving the quality of life of the population. However, factors such as the increasing population and population ageing, as well as the rising demand for medical services, are serious concerns for the Government of Macao.

Statistics from the Conde de S. Januário Hospital indicate that hospital admissions increased by 37% from 12 910 in 2000 to 17 689 in 2009, while outpatient and emergency consultations rose by 85.3% and 57.1%, respectively. In 2009, the bed occupancy rate stood at 82.9%, with patients staying in hospital for an average of 8.7 days.

In 2008, in response to the demand for medical services, the Macao Government implemented multifaceted improvement measures. The first phase of the extension of the emergency ward in Conde S. Januario Hospital was completed and opened for use in June. The number of observation beds in the emergency ward was doubled, from 12 to 25.

To meet the growing demand for medical consultations in recent years, the Areia Preta Health Centre and Fai Chi Kei Health Centre extended their service hours, with effect from August 2008. The health centre for civil servants was established to provide public officers with basic medical check-ups and medical consultation services.

4. PROGRESS TOWARDS THE HEALTH MDGs

The MDGs are supported in Macao by a public health care system integrating primary health care, specialized health care and social responses for better health for all. Five key elements to achieving the MDG targets are being successfully developed by: (1) reducing social disparities in health (residents' universal coverage in six health centres, a public hospital and private health units); (2) organizing health services around people's needs and expectations; (3) integrating health into all sectors (e.g. Healthy City Project); (4) developing a collaborative policy dialogue (among public institutions and NGOs); and (5) encouraging the participation of the population in health promotion and disease prevention.

In responding to the MDGs, Macao has followed the approach of making the determinants of health a guiding principle for the implementation of measures, including objective indicators for monitoring the social determinants of health, across relevant areas of work. Addressing those social determinants of health to reduce health inequities is an objective of all areas of the Government's work, with special priority given to public health programmes.

Goal 4: Reduce child mortality

Almost 99% of all child deaths are attributable to neonatal causes. In the last three decades (1969-2009), child mortality among those under five years of age has declined to 3-4 per 1000. Reaching the MDG on reducing child health requires universal coverage with key interventions, namely reinforcement of care for newborn babies and maternal care; increasing breast-feeding rates and improving infant nutrition policies; carrying out HPV immunization and maintaining immunization coverage at around 90%-99% among children; and prevention and case management of infectious diseases.

Immunization is one of the most cost-effective health investments, with accessible coverage of almost 100% of infants and children in Macao. To respond to the outbreak of pandemic influenza A(H1N1), immunization strategies were developed in 2009 for vulnerable populations, with target groups defined as mainly children, pregnant women and elderly people.

Goal 5: Improve maternal health

Maternal mortality has been falling since 1960 and there has been no record of a maternal death for the last two decades (1989-2010).

In addition, a range of interventions before, during and after pregnancy ensure all births are attended in hospital. Primary health care services in articulation with hospital obstetric services place strong emphasis

on the achievement of sexual and reproductive health, supported by antenatal and neonatal surveillance and family planning programmes.

Goal 6: Combat HIV/AIDS, malaria, TB, other diseases

Macao is devoting considerable efforts to preventing HIV infection: developing partnership programmes on changing behaviour to reduce HIV risks; increasing access to prevention commodities; supporting programmes for prevention of mother-to-child transmission; promoting safe blood supplies; and assessing new prevention technologies and ways to expand the availability of treatment as well as access to and uptake of HIV testing and counselling so that people can learn their HIV status.

There were an estimated 53.7 per 100 000 new cases of TB in 2009 and an estimated 4.6 per 100 000 deaths, making this disease one of the major causes of morbidity in Macao. The Macao Government, in collaboration with the Stop TB Partnership, is working to combat the epidemic through the Stop TB Strategy, pursuing high-quality DOTS expansion and enhancement; addressing TB-HIV coinfection and multidrug-resistant TB among vulnerable populations; contributing to health system strengthening based on primary health care and supported by a specialized TB centre; engaging all care providers from primary health care, hospitals and private health care.

Prevention of dengue fever includes use of long-lasting insecticide-treated nets; prevention with periodic indoor mosquito spraying; and early detection and surveillance of new cases.

Goal 8: Develop a global partnership for development

In the public sector, the primary health care system provides generic medicines to all residents free of charge. The cost of treatment for infectious diseases and several chronic diseases (cancer, renal failure) is totally supported by the Government.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Health statistics*
Operator	:	Statistics and Census Service
Specification	:	Contains analyses and tables in relation to health care of Macao
Web address	:	http://www.dsec.gov.mo/Statistic/Social/HealthStatistics.aspx?lang=en-US
Title 2	:	*Yearbook of statistics*
Operator	:	Statistics and Census Service
Specification	:	Includes latest general information
Web address	:	http://www.dsec.gov.mo/Statistic/General/YearbookOfStatistics.aspx
Title 3	:	*Macao yearbook 2009*
Operator	:	Government Information Bureau
Specification	:	Outlines major events, progresses and changes on a yearly basis
Web address	:	http://yearbook.gcs.gov.mo

6. ADDRESSES

HEALTH BUREAU

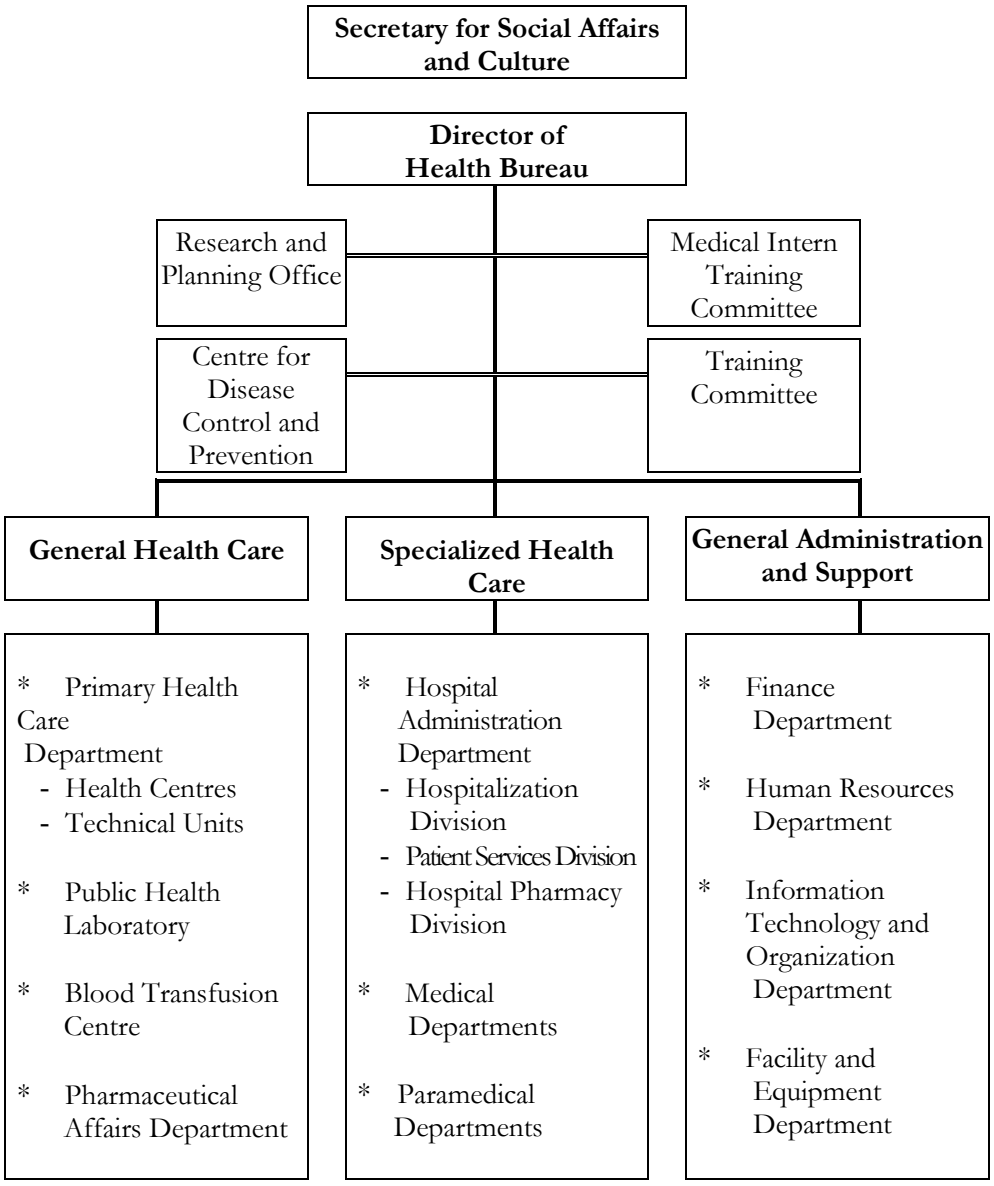
Office Address	:	Estrada do Visconde de S. Januário, Macau
Postal Address	:	Caixa Postal 3002 – Macau
Official Email Address	:	info@ssm.gov.mo
Telephone	:	(853) 28313731
Fax	:	(853) 28713105

WHO REPRESENTATIVE

There is no WHO Representative in Macao (China). Queries about the WHO programme of collaboration with Macao (China) should be directed to:

Office Address	:	Director, Programme Management World Health Organization Regional Office for the Western Pacific United Nations Avenue P.O. Box 2932, 1000 Manila, Philippines
Postal Address	:	P.O. Box 2932, 1000 Manila, Philippines
Official Email Address	:	postmaster@wpro.who.int
Telephone	:	(632) 528 8001 (632) 3031000
Fax	:	(632) 5260279
Office Hours	:	7:00–15:30
Website	:	http://www.wpro.who.int

7. ORGANIZATIONAL CHART: Health Bureau



MACAO (CHINA) — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	0.03						2009	1
2	Estimated population ('000s)	542.20 [a]	261.34 [a]	280.86 [a]				2009	1
3	Annual population growth rate (%)	-1.30	-3.10	0.50				2009	1
4	Percentage of population								
	- 0–4 years	3.90	4.30	3.60				2009	1
	- 5–14 years	8.80	9.50	8.20				2009	1
	- 65 years and above	7.70	7.20	8.20				2009	1
5	Urban population (%)	100.00	...	...				2009 est	2
6	Crude birth rate (per 1000 population)	8.80	...	...				2009	1
7	Crude death rate (per 1000 population)	3.10	...	...				2009	1
8	Rate of natural increase of population (% per annum)	0.57	...	...				2009	1
9	Life expectancy (years)								
	- at birth	82.40	79.40	85.20				2006-09p	1
	- Healthy Life Expectancy (HALE) at age 60	...	...	...					
10	Total fertility rate (women aged 15–49 years)	0.99	...	...				2009	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	95.20 [b]	97.60 [b]	93.00 [b]				2009	1
12	Per capita GDP at current market prices (US$)	38 968.34	...	...				2009	1
13	Rate of growth of per capita GDP (%)	2.70	...	...				2009	1
14	Human development index	0.94						2007	1
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	211 796.61 [c]	...	...				2009	1
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A (B15.0-9)	9	5	4	0	0	0	2009	3
	- Type B (B16.1-9)	22	18	4	0	0	0	2009	3
	- Type C (B17.1)	6	3	3	0	0	0	2009	3
	- Type E(B17.2)	10	6	4	0	0	0	2009	3
	- Unspecified (B17.8)	0	0	0	0	0	0	2009	3
	Cholera (A00)	0	0	0	0	0	0	2009	3
	Dengue/DHF (A90, A91)	4	1	3	0	0	0	2009	3
	Encephalitis (A85.0-A87)	1	0	1	0	0	0	2009	3
	Gonorrhoea (A54_Gonococcal infections)	9	8	1	0	0	0	2009	3
	Leprosy (A30)	0	0	0	0	0	0	2009	3, 4
	Malaria (B50-B54)	0	0	0	0	0	0	2009	3
	Plague (A20)	0	0	0	0	0	0	2009	3
	Syphilis (A50-A53)	73	44	29	0	0	0	2009	3
	Typhoid fever (A01.0)	1	0	1	0	0	0	2009	3
17	Acute respiratory infections (J20-J22)	...	...	...	4	2	2	2009	1
	- Among children under 5 years	...	...	...	0	0	0	2009	1

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms (A15-A19)	291	188	103	25	18	7	2009	3
	- New pulmonary tuberculosis (smear-positive)	117	81	36	3	3	0	2009	3
20	**Cancers**								
	All cancers (malignant neoplasms only) (C00-C97)	...	...	...	551	330	221	2009	1
	- Breast (C50)	...	...	...	24	0	24	2009	1
	- Colon and rectum (C18,C20)	...	...	...	56	26	30	2009	1
	- Cervix (C53)			...			6	2009	1
	- Leukaemia (C91-C95)	...	...	...	11	8	3	2009	1
	- Lip, oral cavity and pharynx (C00-C14)	...	...	...	41	37	4	2009	1
	- Liver (C22)	...	...	...	70	50	20	2009	1
	- Oesophagus (C15)	...	...	...	18	12	6	2009	1
	- Stomach (C16)	...	...	...	38	23	15	2009	1
	- Trachea, bronchus, and lung (C33-C34)	...	...	...	143	90	53	2009	1
21	**Circulatory**								
	All circulatory system diseases (I00-I99)	...	...	...	441	210	231	2009	1
	- Acute myocardial infarction (I21-I22)	...	...	...	31	18	13	2009	1
	- Cerebrovascular diseases (I60-I69)	...	...	...	51	25	26	2009	1
	- Hypertension (I10, I12)	...	...	...	168	79	89	2009	1
	- Ischaemic heart disease (I20-I25)	...	...	...	96	43	53	2009	1
	- Rheumatic fever and rheumatic heart diseases (I00-I09)	...	...	...	4	3	1	2009	1
22	**Diabetes mellitus (E10-E14)**	...	...	...	78	41	37	2009	1
23	**Mental disorders (F00-F99)**	...	...	...	7	2	5	2009	1
24	**Injuries**								
	All types (V01-Y98)	...	...	...	112	63	49	2009	1
	- Drowning (V90, V92, W65-W74, X71, X92, Y21)	...	...	...	16	8	8	2009	1
	- Homicide and violence (X85-Y09)	...	...	...	6	1	5	2009	1
	- Occupational injuries (Y96)	...	...	...	0	0	0	2009	1
	- Road traffic accidents (V01-V89)	...	...	...	13	6	7	2009	1
	- Suicide (X60-X84)	...	...	...	60	37	23	2009	1
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1.								
	2.								
	3.								
	4.								
	5.								
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Essential (primary) hypertension (I10)	166	78	88	30.51	29.41	31.54	2009	1
	2. Malignant neoplasm of bronchus and lung (C34)	142	89	53	26.10	33.56	19.00	2009	1
	3. Pneumonia, organism unspecified (J18)	109	63	46	20.03	23.76	16.49	2009	1
	4. Malignant neoplasm of liver and intrahepatic bile ducts (C22)	70	50	20	12.87	18.85	7.17	2009	1
	5. Non-insulin-dependent diabetes mellitus (E11)	56	29	27	10.29	10.94	9.68	2009	1
	6. Chronic ischaemic heart disease (I25)	55	17	38	10.11	6.41	13.62	2009	1
	7. Hypertensive heart disease (I11)	49	22	27	9.01	8.30	9.68	2009	1
	8. Other chronic obstructive pulmonary disease (J44)	47	35	12	8.64	13.20	4.30	2009	1
	9. Malignant neoplasm of colon (C18)	40	16	24	7.35	6.03	8.60	2009	1
	10. Malignant neoplasm of stomach (C16)	38	23	15	6.98	8.67	5.38	2009	1
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					…			
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					…			
29	**Percentage of pregnant women with anaemia**					…			
30	**Neonatal mortality rate (per 1000 live births)**	1.70		1.60		1.80		2009	1
31	**Percentage of newborn infants weighing less than 2500 g at birth**	7.20		6.60		7.80		2009	1
32	**Immunization coverage for infants (%)**								
	- BCG	99.80		…		…		2009	3,4
	- DTP3	91.80		…		…		2009	3,4
	- Hepatitis B III	92.00		…		…		2009	3,4
	- MCV2	88.10		…		…		2009	3,4
	- POL3	91.80		…		…		2009	3,4
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			…			0	2009	1
	- Eclampsia			…			0	2009	1
	- Haemorrhage			…			0	2009	1
	- Obstructed labour			…			0	2009	1
	- Sepsis			…			0	2009	1
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	1,4
	- Diphtheria	0	0	0	0	0	0	2009	1,4
	- Measles	0	0	0	0	0	0	2009	1,4
	- Mumps	71	49	22	0	0	0	2009	1,4
	- Neonatal tetanus	0	0	0	0	0	0	2009	1,4
	- Pertussis (whooping cough)	0	0	0	0	0	0	2009	1,4
	- Poliomyelitis	0	0	0	0	0	0	2009	1,4
	- Rubella	16	6	10	0	0	0	2009	1,4
	- Total Tetanus	0	0	0	0	0	0	2009	1,4
	Health facilities								
35	**Facilities with HIV testing and counseling services**					…			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	609	2009	3
		- Specialized hospitals	0	0	2009	3
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	8 [d]	0	2009	3
	Private health facilities	- Hospitals	2	685	2009	3
		- Outpatient clinics	658	...	2009	3
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			405.22	2008	1
	- total expenditure on health as % of GDP			1.87	2008	1
	- per capita total expenditure on health (in US$)			738.20	2008	1
	Government expenditure on health					
	- amount (in million US$)			271.15	2008	1
	- general government expenditure on health as % of total expenditure on health			66.91	2008	1
	- general government expenditure on health as % of total general government expenditure			8.22	2008	1
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			33.09	2008	1
	- out-of-pocket expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			8.02	2008	5
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	1765 [e]	1042 [e]	723 [e]	1765 [e]	NA	366 [e]	1399 [e]	2009	3
		- Ratio per 1000 population	3.26 [e]	1.92 [e]	1.33 [e]	3.26 [e]	NA	0.68 [e]	2.58 [e]	2009	1, 3
	Dentists	- Number	194 [f]	133 [f]	61 [f]	194 [f]	NA	16 [f]	178 [f]	2009	3
		- Ratio per 1000 population	0.36 [f]	0.25 [f]	0.11 [f]	0.36 [f]	NA	0.03 [f]	0.33 [f]	2009	1, 3
	Pharmacists	- Number	237	91	146	237	NA	...	...	2009	1, 3
		- Ratio per 1000 population	0.44	0.17	0.27	0.44	NA	...	...	2009	1, 3
	Nurses	- Number	1491	96	1395	1491	NA	861	630	2009	3
		- Ratio per 1000 population	2.75	0.18	2.57	2.75	NA	1.59	1.16	2009	1, 3
	Midwives	- Number	...	....	...	...	NA	...	...		
		- Ratio per 1000 population	...	....	...	...	NA	...	...		
	Paramedical staff	- Number	1497	513	984	1497	NA	...	...	2008	1
		- Ratio per 1000 population	2.76	0.95	1.81	2.76	NA	...	...	2008	1
	Community health workers	- Number	1036	358	678	1036	NA	...	...	2008	1
		- Ratio per 1000 population	1.91	0.66	1.25	1.91	NA	...	...	2008	1
40	**Annual number of graduates**	Physicians	...	...	...	...	NA	...	...		
		Dentists	...	...	...	...	NA	...	...		
		Pharmacists	...	...	...	...	NA	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	....	...	...	...	...	...		
		Community health workers	...	....	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	....	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	....	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	....	...	...	...	...	...		
		Community health workers	...	....	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	2.10	2.40	1.80	2009	1
44	Under-five mortality rate (per 1000 live births)	2.70	2.80	2.60	2009	1
45	Proportion of 1 year-old children immunised against measles	88.10	...	...	2009	3
46	Maternal mortality ratio (per 100 000 live births)	0.00			2009	1
47	Proportion of births attended by skilled health personnel	100.00			2009	1
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00			2009	1
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00			2009	1
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	3.30			2009	1
50	Antenatal care coverage - At least one visit	99.30 [g]			2009	3
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	<0.10 [h]	...	...	2009	1, 3
53	Estimated HIV prevalence in adults	<0.10 [i]	...	...	2009	1, 3
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	0.00	0.00	0.00	2009	1, 3
56	Malaria death rate per 100 000 population	0.00	0.00	0.00	2009	1, 3
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	123.80	168.10	82.60	2009	3
60	Tuberculosis death rate per 100 000 population	4.60	6.90	2.50	2009	3
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	104.00	...	...	2007	3
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	92.90	93.80	96.80	2008	3
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	...	...	2009	1
64	Proportion of population using an improved sanitation facility	100.00	...	...	2009	1
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
p	Provisional
…	Data not available
..	Not applicable
a	End-year estimate
b	Refers to land-based non-institutionalized population
c	Figure includes 8428.51 metric tons of general solid waste, 254.1 metric tons of pathological solid waste and 203 114 m3 liquid effluent from hospital
d	Figure includes six health centres and two health stations
e	Figure refers to general practitioners and practicitioners of Chinese medicine
f	Including odontologists
g	Figure refers to services provided by public health facilities
h	Estimated figure is 0.0011% and refers to Macao population
i	Estimated figure is 0.0053% and refers to Macao population
j	Figure is in nominal terms

Sources:	
1	Statistics and Census Service, Macao SAR.
2	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision [http://esa.un.org/wup2009/unup/]
3	Health Bureau, Macao SAR.
4	WHO Regional Office for the Western Pacific, data received from the technical units.
5	Macao Monetary Authority.

MALAYSIA

1. CONTEXT

1.1 Demographics

In 2008, the population of Malaysia was estimated to be 28 310 000. Covering an area of 329 960 square kilometres, the population density is 84 persons per square kilometre. Malaysia is a multiracial country consisting of Malays, Chinese, Indians, Ibans, Kadazans and other ethnic groups. In 2008, an estimated 1 907 800 non-Malaysians were living in the country. It has a young population, with 9 002 580 (31.8%) below the age of 15 years, while those aged 15-64 years account for 17 621 589 (63.6 %) and those 65 years or older for about 1 302 260 (4.6 %).

Life expectancy at birth for both genders has increased over the years, rising from 56 years for males and 58 for females in 1957 to 71.6 years for males and 76.4 years for females in 2008. Over the same period, the crude death rate fell from 12.4 per 1000 population to 4.7. The crude birth rate in 2008 was 17.8 per 1000 population and the crude rate of natural increase was 13.1 per 1000 population.

1.2 Political situation

Malaysia practises parliamentary democracy based on the federal system of government. The country is a constitutional monarchy with three branches of government: the legislative, judiciary and executive. Under the Federal Constitution, the states of Perlis, Kedah, Pulau Pinang, Perak, Selangor, Negeri Sembilan, Melaka, Johor, Pahang, Terengganu, Kelantan, Sarawak and Sabah agreed to the concept of the formation of Malaysia, whereby the powers of state governments are defined by the Federal Constitution.

The constitutional monarch is the Yang Di-Pertuan Agung (Paramount Ruler), who is elected from among and by the sultans (hereditary rulers) of the nine states for a five-year term. The Yang Di-Pertuan Agung is empowered to safeguard the customs and traditions of the Malays. Islam, the official religion of the country, is safeguarded by Yang Di-Pertuan Agung and the sultans of the respective states. The monarch is also the Commander-in-Chief of the Federation's Armed Forces. Since early 2007, the Yang Di-Pertuan Agung has been Sultan Mizan Zainal Abidin, the Sultan of Terengganu.

The head of government is the Prime Minister, who appoints the Cabinet from among the members of Parliament with the consent of the Yang Di-Pertuan Agung. The current Prime Minister is Y.A.B Dato' Seri Mohd Najib Tun Razak .

1.3 Socioeconomic situation

Malaysia's 50 years of nationhood is marked by significant socioeconomic progress and development. On independence, the nation was highly reliant on tin and rubber, with more than half the population living in poverty. Today, the country has a broad-based and diversified economy, and is the 19th largest trading nation in the world, with trade in excess of RM 1 trillion. The country continues to enjoy political stability, with a multi-ethnic and united population. At the same time, per capita income has increased to RM 22 345 (US$ 6725.98) and the incidence of poverty has been reduced to less than 6.0%.

The 2007 Budget was formulated as a building block towards achieving the targets set in the 9th Malaysia Plan and onwards to realize Vision 2020. The National Mission articulates five key development policy thrusts: to move the economy up the value chain; to raise the capacity for knowledge and innovation and nurture 'first class mentality' to address persistent socioeconomic inequalities constructively and productively; to improve the standard and sustainability of the quality of life; and to strengthen institutional and implementation capacity. Therefore, the 2007 Budget was formulated with the theme 'Implementing the National Mission towards Achieving the National Vision ' to translate the National Mission into programmes and projects to sustain economic growth.

In 2007, total expenditure was expected to increase by 14.8% to RM 164 743 million (US$ 49 574.67 million), the increased spending being based on better revenue performance from both tax and non-tax

sources, which were expected to contribute RM 96 196 million (US$ 28 945.79 million) and RM 45 593 million (US$ 13 718.97 million), respectively, to total revenue. With increased expenditure matched by higher revenue, the Government will further consolidate the fiscal deficit at 3.2% of nominal gross domestic product (GDP), the deficit to be secured by striking a balance between long-term economic growth and fiscal sustainability.

The manufacturing sector is expected to pick up gradually and expand by 3.1%, following the anticipated recovery in global electronics demand. On the demand side, growth is expected to be driven by resilient public and private sector expenditure, following stronger consumer sentiment, business confidence and higher government spending. Nominal gross national product (GNP) was estimated to increase by 9.4% to RM 607 212 million (US$ 182 710.20 million) in 2007, with per capita income increasing by 7.2% to RM 22 345 (US$ 6725.98) (2006: 9.9%, RM 20 841 [US$ 6271.06]). In terms of purchasing power parity (PPP), per capita income was expected to increase by 13.9% to reach US$ 13 289 in 2007 (2006: 13.00%; US$ 11 663).

The total labour force in the fourth quarter of 2007 was 10 999 000 and the unemployment rate (percentage total labour force) was 3%.

The Malaysian economy was expected to register robust growth in 2008, with real GDP expanding by between 6% and 6.5%. This translates to 6.8% growth in nominal per capita income, rising from RM 22 345 in 2007 to RM 23 864 in 2008 or, in PPP terms, from US$ 13 289 to US$ 14 206. With an unemployment rate of 3.3%, the economy is expected to continue to operate under full employment and, in tandem with the Government's efforts to ensure fiscal sustainability, the fiscal deficit is expected to continue to decline to 3.1% of GDP. Malaysia's balance of payments position is expected to remain strong, with the current account recording a surplus for the eleventh consecutive year. A current account surplus, amounting to 13% of GDP, is expected to emanate from the goods and travel account. These developments augur well for all Malaysians and should keep the nation on track towards realizing Vision 2020.

1.4 Risks, vulnerabilities and hazards

As a whole, Malaysia did not face any major catastrophes in 2008, except for a few incidences of flash flooding and landslides that affected certain parts of the country during heavy downpours.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Malaysia is at an epidemiological transition stage, with communicable and noncommunicable diseases both presenting as disease burdens. The top five diseases are dominated by noncommunicable diseaseas, as in most developed nations. However, some communicable diseases persist along with the rising incidence of noncommunicable disease. Mental illness has also become an increasing problem.

The 2000 Burden of Disease Study showed that the top 30 out of the 111 disease groups made up 83% of the total country's disease burden. New epidemics are associated with lifestyle and health-risk conditions, such as ischaemic heart disease, mental illness, cerebrovascular disease/ stroke, trauma/road traffic injuries, cancer, asthma/COPD, obesity, diabetes mellitus, and sexually transmitted diseases, including HIV/AIDS. In addition, there is a growing threat from emerging and re-emerging infections. These are due partly to changing lifestyles and socioeconomic development, environmental degradation and pollution. Today's population is at risk from an increasingly polluted environment.

In 2008, the top five notifiable diseases were dengue fever, tuberculosis, food poisoning, hand food and mouth disease (HFMD) and HIV/AIDS. The incidence rates were 167.8 per 100 000 population for dengue fever, 63.1 per 100 000 for tuberculosis, 62.5 per 100 000 for food poisoning, 56.1 per 100 000 for HFMD, and 16.7 per 100 000 for HIV/AIDS.

Malaysia has been classified by WHO as an intermediate-TB-burden country. In the last 20 years, the tuberculosis incidence rate has stagnated, except for a slight increase in 1999. In 2008, 17 144 new cases were registered and the incidence rate (all forms) was 100 per 100 000 population.

From 1986 until the end of 2007, a cumulative total of 80 966 HIV infections and 13 636 AIDS cases were reported, with 10 337 AIDS-related deaths. A total of 4577 new HIV infections, 1132 news AIDS cases and 1182 AIDS-related deaths were reported in 2007. Case analysis shows that 89.8% of the new cases in 2007 were in the 20-49 age group. The Ministry of Health has introduced a harm-reduction strategy as a new initiative to curb the spread of HIV among drug users. This strategy consists of two components: the Needle and Syringe Exchange Programme and drug-substitution therapy.

With the introduction of various national vaccination programmes, a significant decrease was observed in the incidence of specific vaccine-preventable diseases, such as pertussis, which has an incidence rate of 0.04 per 100 000 population. In 2008, the incidence rate for diptheria was 0.01 per 100 000 population.

The underlying causes of the noncommunicable disease (NCD) epidemic are demographic changes and an increase in the level of population risk factors resulting from social and economic development. In 2005, an NCD survey was conducted to establish a surveillance baseline to provide information to determine the extent of NCD risk factors in the country. The survey collected a broad range of information on the sociodemographic status and NCD risk factors of people aged 25-64 years. The following prevalence rates were revealed: 25.7% had raised blood pressure; 11.0% had raised blood glucose; 53.5% had high cholesterol levels; 31.6% were overweight; 16.3% were obese; 48.6% had central or abdominal obesity; 25.5% were current smokers; 60.1% were physically inactive; 72.8% did not meet dietary guidelines for vegetable and fruit intake; 12.2% consumed alcohol; and 18.1%, 29.7%, 28.4%, 13.8% and 7.0%, had one, two, three, four and more than four NCD risk factors, respectively.

In 2007, 1 361 781 foreign workers were screened. Of these, 41 342 (3.03%) were certified as unsuitable to work in Malaysia. The number was slightly lower than in 2006 (45 368). Tuberculosis was the most common disease found, with 16 240 cases (39.2%); followed by hepatitis B, with 10 957 cases (26.5%); sexually transmitted diseases, with 2830 cases (6.8%); and HIV/AIDS, with 686 cases (1.6%).

From the second report of the National Cancer Registry, compiled in 2003, it was found that the crude cancer rate for males was 97.4 per 100 000 population and 127.6 per 100 000 population for females. The age-standardized incidence rate for all cancers in 2003 was 134.3 per 100 000 males and 154.2 per 100 000 females. The male-to-female ratio for cancer incidence was 1:1.3. Cancer was occuring at all ages, with the median age at diagnosis in males being 59 years, and 53 years for females. In 2003, the five most common cancers in children (0-14 years old) were leukaemia, cancers of the brain, lymphoma, and cancers of the connective tissue and kidney. In young adults (15-49 years old), the most common cancers were leukaemia, lymphoma, and cancers of the nasopharynx, lung, colon and rectum in men, and cancers of the breast, cervix, ovary, uterus, thyroid gland and leukaemia in women. In older subjects (50 years old and above), cancers of the lung (13.8%), colon, rectum, nasopharynx, prostate and stomach were predominant among men, while cancers of the breast (31.0%), cervix, colon, uterus, lung and rectum occurred most commonly in women.

2.2 Outbreaks of communicable diseases

In 2009, 41 486 cases of dengue were reported. The dengue incidence rate was 146.6 per 100 000 population, compared with 179.2 per 100 000 population in 2007. Selangor had the highest incidence rate, followed by Kuala Lumpur, Sarawak and Penang.

There has been a recent increase in the number of episodes of food poisoning reported from various states, with the majority of outbreaks occurring in schools. The major factor contributing to the outbreaks is unsafe food-handling practices, which accounts for more than 50%. A committee within the Ministry of Education has been set up to overcome the problem.

2.3 Leading causes of mortality and morbidity

The 10 top causes of admission to Ministry of Health hospitals in 2007 were normal deliveries, which constituted 14% of total admissions; complications of pregnancy, childbirth and the puerperium (12.8%); accidents (8.4%); diseases of the respiratory system (8.0%); diseases of the circulatory system (7%); certain conditions originating in the perinatal period (6.8%); diseases of the digestive system(5.4%); ill-defined conditions (symptoms and signs) (3.6%); diseases of the urinary system (3.5%); and malignant neoplasms (3.2%).

The 10 most common causes of death in Ministry of Health hospitals in 2008 were heart disease and disease of the pulmonary system (16.5%); septicaemia (13.2%); malignant neoplasms (11.2%); pneumonia (9.3%); cerebrovascular diseases (8.6%); diseases of the digestive system (5.2%); accidents (5.0%); certain conditions originating in the perinatal period (4%); nephritis, nephrotic syndrome and nephrosis (3.8%); and ill-defined conditions (2.6%).

2.4 Maternal, child and infant diseases

Socioeconomic development, together with efforts to promote health, have resulted in a decline in maternal mortality. The total fertility rate among Malaysian women is also declining and was estimated to be 2.3 per woman aged 15 to 49 years in 2008. Urbanization, late marriage and increased access to education and health care services, as well as more employment opportunities and family planning programmes, have contributed significantly to the decline in fertility.

The national maternal mortality ratio showed a reduction from 280 per 100 000 live birth in 1957 to 30 per 100 000 live birth in 2007. There has also been gradual improvement in the infant mortality rate (from 13.1 per 1000 live births in 1990 to 6.4 in 2008), the perinatal mortality rate (from 13.0 per 1000 births in 1990 to 7.4 per 1000 births in 2008) and the toddler mortality rate (from 0.9 per 1000 population aged 1-4 years in 1990 to 0.4 per 1000 population aged 1-4 years in 2008).

2.5 Burden of disease

The 2000 Burden of Disease Study showed that the total burden of disease and injury in Malaysia was 2.8 million years, with more than two-thirds due to noncommunicable diseases. Men contributed to most of the burden (57%). More than half of the total burden was contributed by premature death, at 64% in men and 57% in women.

The absolute number of years of life lost (YLL) in males peaks in those less than five years of age, then drops to a minimum in the 5-14 age group, before rising sharply in the 15-29 age group, reaching a maximum in the 45-59 age group and then declining gradually. A similar pattern can be seen in women: from 0-14 years, gradually increasing from 15 years onwards, reaching a maximum in the 45-59 age group and declining gradually thereafter.

The top 20 leading causes of disability-adjusted life years (DALYs) account for 63% in men and 64% in women. Ischemic heart disease (IHD) is the leading cause (9.8%), followed by cardiovascular disease (CVD) (6.4%), road traffic accidents (5.7%) and septicaemia (4.5%). IHD and CVD account for 10% and 7% of the total burden of disease in the 30-59 age group and 21% and 12% of total burden of disease in the 60+ age group, respectively

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health's Vision for Health is of a nation working together for better health. The Mission of the Ministry is to build partnerships for health to facilitate and support the people to attain their full potential in health and to motivate them to appreciate health as a valuable asset and take positive action to improve further and sustain their health status to enjoy a better quality of life.

3.2 Organization of health services and delivery systems

The Malaysian population is served by both public and private health sectors, which complement each other. While the Ministry of Health continues to play a pivotal role as the main provider of health services, there is a need to harness the collective involvement of all stakeholders in health to improve the health of the nation. With growth, development and maturity, it is expected that greater demands will be made on the health system. In response, health care delivery by the public and private sectors must be sustainable and affordable to their clientele, as well as responsive to public expectations. Quality, efficiency and integration in all health matters must be the byword of all health care providers. To enable the nation to deliver and meet heightened expectations, greater commitment and cooperation between the public and private sectors is required.

3.3 Health policy, planning and regulatory framework

Health planning in the Ministry of Health began in 1956 with the inception of the first Five-Year Malaya Plan (1956-1960). Since then, health planning has been carried out on five-yearly cycles. Each five-year Plan provides the direction for health and health-related agencies to address the health needs of the population.

The need for a national health policy was identified at the mid-term review of the 6th Malaysia Plan. The idea was proposed to enhance integration among health and health-related agencies towards achieving desired national objectives, the Vision for Health and ultimately help to realize Vision 2020. Since then, several draft 'national health policy' documents have been developed. In 2005, a national health policy framework was formulated and a draft entitled, the Malaysian National Health Policy Edition 1, 2007 (MNHP) was prepared. That draft delineated three main policy goals or objectives to be met over the years up to 2020 in the areas of: population health; national capacity building for health; and national capacity building towards competitiveness in the health market.

As health is a shared responsibility, it is imperative that views from all relevant stakeholders in health be considered. A meeting on the Malaysian National Health Policy, held in 2007 to discuss the proposed MNHP draft, saw active participation of members of 93 organizations from both the public and private sectors, including nongovernmental organizations. The proposed MNHP draft was amended, taking into consideration the input and recommendations of the participating organizations. The final draft was approved by the Planning and Policy Committee of the Ministry of Health, subsequently endorsed by the Minister of Health and submitted to the Cabinet for approval.

3.4 Health care financing

Since the 8th Malaysia Plan, the Ministry of Health and the Economic Planning Unit (EPU) have renewed their efforts to develop a national health care financing mechanism (NHFM). The need for such a mechanism was further emphasized in the 9th Malaysia Plan 2006-2010. The mid-term review noted that the ever-increasing demand for better health services and changing disease pattern were contributing to escalating health care costs. Accordingly, the Government plans to examine options to meet the rising cost of health care to ensure that services remain accessible, affordable and relevant to the people's needs. These efforts will contribute towards achieving better health for all. The NHFM project team will continue to work on development of the NHFM design.

The Malaysia National Health Accounts (MNHA) Unit, established in 2005, continues to gather and analyse health expenditure data using an internationally accepted framework. The second report on national health expenditure for the years 1997–2006 was published in 2008 and has been distributed to the main stakeholders of the health system, particularly the main data sources for MNHA. In 2008, data showed that private health expenditure, at RM17.8 billion (US$ 5.3 billion), had overtaken public health expenditure, at RM14.0 billion (US$ 4.2 billion). The main source of financing for private health expenditure was out-of-pocket payments (73.2%) followed by private health insurance (14.4%).

3.5 Human resources for health

The optimal utilization of available resources for delivery of health services requires, among others, enhancement of human capital, consolidation of physical facilities and services, strengthening of primary

health care, greater integration in health, improvement of quality, and enhancement of the stewardship and governance role of the Ministry of Health. There is a need to formulate and implement strategic human resource planning and management mechanisms in terms of capacity and capability building. Research shows that investment in health-promotion and disease-prevention services is more efficient and effective in improving health status than investment solely in curative treatment. Therefore, in the 9th Malaysia Plan, priority in human resource allocation was given to health promotion and prevention activities, with an increased number and category of personnel allocated to various fields. However, the quality and expertise of specialists in curative treatment cannot be ignored and must be improved in accordance with the needs of the population. Issues regarding the shortage and maldistribution of human resources, the 'brain drain' and career development have been given special emphasis.

Presently, the Ministry of Health has more than 140 000 posts, with 149 service schemes, making it the third largest government agency. However, a large number of those posts remain empty, with an avereage of 3.2% being filled annually. Relatively rapid facility expansion that is out of step with the human resource planning process may have contributed to the vacancies. The introduction of compulsory service for the three main professionals, namely doctors, dentists and pharmacists, has had a significant impact in reducing the number of vacant posts. Better remuneration and promotion prospects have also made public service more attractive.

3.6 Partnerships

The health system consists of various stakeholders: the Ministry of Health, local government, the academic community, professional organizations, the private sector and others. The Ministry works very closely with all these stakeholders to strengthen its health priority areas. Effective collaboration and coordination minimizes the gaps between agencies.

Considering the marked improvement in the health status of the nation and the existing issues and challenges, it is inevitable that great commitment and effort will be required to achieve better health. Therefore, in view of the limited resources and the current urgency, the thrust of the 9th Malaysia Plan is more focused towards achieving better health through consolidation of services than the 8th Plan, which was geared towards greater integration in health and the promotion of partnerships.

3.7 Challenges to health system strengthening

The numerous issues and challenges faced by the nation have created a need for change and reform. The main challenges are increasing demand and changing disease patterns, leading to increasing health care costs. A more educated and affluent public with easy access to information, coupled with demographic changes and rapid advances in medical technology, has led to rising consumer demand for better health care and expensive new technology. Prioritization is vital if significant changes are to be achieved.

Changes in the disease burden and disease pattern due to lifestyle are among the challenges facing the nation. Others include the need to enhance human capital; research and development, including research into vaccines and biotechnology; and crisis and disaster management. The threats versus the opportunities of globalization, the liberalization of health, the harnessing of health technology and ICT, the strengthening of the health management information system, intersectoral coordination and collaboration and maximization of the role of the private sector and nongovernmental organizations are also important challenges that need to be addressed.

Realizing these issues and challenges, and to ensure that national health care provision meets required international standards, the Ministry of Health strongly advocates the implementation of various quality assurance initiatives. Guided by the Vision for Health, the Mission of the Ministry of Health and Vision 2020, Malaysia is striving towards achieving a healthy and developed nation. At the onset of the 8th Malaysia Plan, the Government presented its national vision, outlining the country's priorities for the next 10 years. It is essential that new knowledge, new technology and innovations are implemented appropriately and effectively. Currently, the 9th Plan has as its theme the achievement of better health through consolidation of services. To achieve this, six major goals have been set to ensure more efficient and equitable health. These are: to prevent and reduce the disease burden; to enhance the health care

delivery system; to optimize resources; to enhance research and development; to manage crises and disasters effectively; and to strengthen the health information management system.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goals 4 and 5: Reduce child mortality, and Improve maternal health

Malaysia is fulfilling its promise to address the targets outlined in the Millennium Development Goals. Achievements thus far include a marked decline in under-five mortality rate, from 16.8 per 1000 live births in 1990 to 8.1 in 2007; a reduction in the infant mortality rate reduced from 13.0 to 6.3 per 1000 live births over the same period; and a decline in the maternal mortality ratio from 40 maternal deaths per 100 000 live births in 2001 to 30 in 2007. The coverage for primary immunization is above 90% of the target population, and measles coverage, given in combination with mumps and rubella at one year, reached 94.3% in 2008. Malaysia has thus made important progress towards the MDG 4 and MDG 5 targets, but a lot more needs to be done, including: improving service provision especially referral, feedback and retrieval systems; and increasing the coverage of maternal and child health services to marginalized groups such as aborigines, the urban poor, immigrants and unmarried women.

Goal 6: Combat HIV/AIDS, malaria and other diseases

There has been a steady decline in the number of reported new HIV cases in Malaysia. From 6756 cases in 2002, the number decreased to 6120 in 2005 and 4549 in 2007. There are clear indications that sexual transmission in becoming a major factor in the future of the country's epidemic. Compared with 10 years ago, when the IDU route accounted for 74.7% of all new reported HIV infections, this proportion had declined to 55.2% of all new infections in 2009. Increasingly, new reported infections are being attributed to sexual transmission, namely unprotected sexual intercourse by both heterosexuals and men having sex with men. Malaysia is continuing to strengthen and consolidate its efforts in working towards achieving MDG6, as can be observed in the launching of the new National Strategic Plan (NSP) on HIV and AIDS for the period 2006 to 2010. This NSP was developed and drafted with the involvement of key partners, including civil society, non-health government agencies, universities and international organizations. The NSP focuses on leadership; capacity building; reducing vulnerability among injecting drug users and their partners; reducing vulnerability among women, youths, children and young people, as well as among marginalized groups; and scaling up treatment, care and support. The Government's commitment to a harm-reduction approach is well observed through its allocation of MYR 300 million (US$ 90 million).

Malaysia is committed to the WHO Strategic Plan to Stop TB in the Western Pacific Region and has achieved the target of detecting 70% of estimated cases. However, the country has yet to achieve the target success rate of 85%. Tuberculosis remains a public health challenge, with around 16 000–17 000 new cases reported annually. Malaysia is working towards developing a five-year national strategic plan (NSP) for TB control 2010-2015, adapted from the WHO Plan.

Malaysia has been successful in controlling malaria in most endemic areas. From 2000 to 2007, malaria incidence showed a decreasing trend and, in 2007, the incidence was 20.1 per 100 000 population. Although the country has achieved the MDG target for malaria, the Ministry of Health is fully committed to further reducing the number of cases and eventually eliminating it. Preparation are underway for implementation of the National Strategic Plan for the Elimination of Malaria (2010-2020,) with the aim of achieving malaria elimination status by 2020.

Goal 8: Develop a global partnership for development

One of the indicators in MDG 8 on global partnership has health relevance—it hopes to provide access to affordable essential drugs in developing countries, through cooperation with pharmaceutical companies. The Ministry of Health Malaysia has succeeded in putting the required mechanisms (parallel importing and compulsory licensing) in place to allow the purchase of affordable generic drugs for non-commercial, government use.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Social statistics bulletin*
Operator	:	Department of Statistics, Malaysia
Specification	:	Includes Information on population, socioeconomic indicators
Web address	:	www.statistics.gov.my
Title 2	:	*Economic report 2007/2008*
Operator	:	Treasury department Ministry of Finance, Malaysia
Specification	:	Chapter 1, Economic Management and Outlook
Web address	:	www.treasury.gov.my
Title 3	:	*Country Health Plan, 9th Malaysia Plan 2006-2010*
Operator	:	Planning and Development Division, MOH
Specification	:	Framework of 9th Malaysia Plan, National Health Priorities, Programme and activities
Title 4	:	Draft of *Disease Control Division annual report 2007 (Malay version)*
Operator	:	Disease Control Division, Ministry of Health
Specification	:	Report on communicable and non communicable disease report, outbreaks of diseases
Web address	:	www.dph.gov.my
Title 5	:	Drafts on women's health for report on health status of the nation
Operator	:	Family Health Division, Ministry of Health
Title 6	:	*Burden of disease, Malaysia*
Operator	:	Public Health Institute
Specification	:	Findings on Borden of Disease study base on 2000 data
Title 7	:	*Second report of the National Cancer Registry, Cancer incidence in Malaysia, 2003*
Operator	:	Clinical Research Centre (CRC)
Specification	:	Findings on the incidence of Cancer in Malaysia
Web address	:	http://www.crc.gov.my

6. ADDRESSES

MINISTRY OF HEALTH

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Office Hours	:	7.30 am – 5.30 pm
Website	:	http://www.moh.gov.my/

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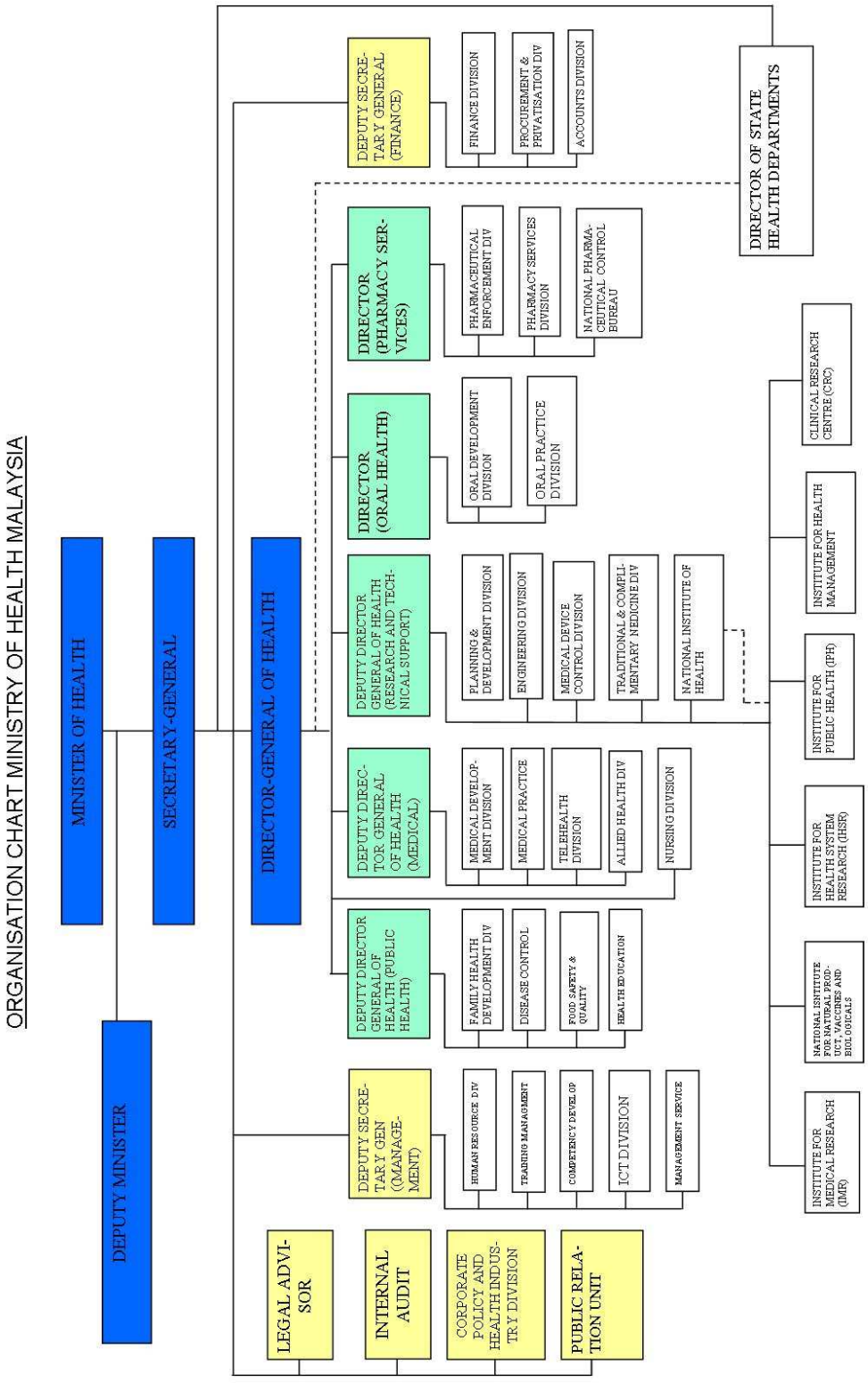
7. ORGANIZATIONAL CHART: Ministry of Health



MALAYSIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	329.96						2009	1
2	Estimated population ('000s)	28 310.00	...	...				2009	2
3	Annual population growth rate (%)	2.10	...	...				2009p	3
4	Percentage of population								
	- 0–4 years	...	...	...					
	- 5–14 years	31.80 [a]	...	...				2009	2
	- 65 years and above	4.60	...	...				2009	2
5	Urban population (%)	71.30	...	...				2009 est	4
6	Crude birth rate (per 1000 population)	17.80	...	...				2008p	2
7	Crude death rate (per 1000 population)	4.70	...	...				2008p	2
8	Rate of natural increase of population (% per annum)	1.31	...	...				2008p	2
9	Life expectancy (years)								
	- at birth	...	71.56	76.40				2008p	3,5
	- Healthy Life Expectancy (HALE) at age 60	...	10.90	12.00				2002 est	6
10	Total fertility rate (women aged 15–49 years)	2.30						2008p	3
	Socioeconomic indicators								
11	Adult literacy rate (%)	92.10	94.70	89.50				2008	7
12	Per capita GDP at current market prices (US$)	7188.24						2009p	2
13	Rate of growth of per capita GDP (%)	4.60						2008	5
14	Human development index	0.83						2007	8
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	...	...	...					
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	40	...	...	0	0	0	2009	9
	- Type B	602	...	...	5	...	...	2009	9
	- Type C	1049	...	...	18	...	...	2009	9
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	276	...	...	2	...	...	2009	9
	Dengue/DHF	41 486	...	...	88	...	...	2009	9
	Encephalitis	49	...	...	1	...	...	2009	9
	Gonorrhoea	912	...	...	0	0	0	2009	9
	Leprosy	187	...	...	0	0	0	2009	9
	Malaria	7010	...	...	26	...	...	2009	9
	Plague	0	0	0	0	0	0	2009	9
	Syphilis	886	...	...	1	...	...	2009	9
	Typhoid fever	303	...	...	1	...	...	2009	9
17	Acute respiratory infections	64 315	35 328	28 987	4286	2534	1752	2008	10
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	17 144	...	...	...	...	...	2008	11
	- New pulmonary tuberculosis (smear-positive)	10 441	...	...	...	...	...	2008	11
20	**Cancers**								
	All cancers (malignant neoplasms only)	65 416	30 510	34 906	5150	2753	2397	2008	10
	- Breast	8632	82	8550	554	6	548	2008	10
	- Colon and rectum	9748	5548	4200	485	285	200	2008	10
	- Cervix			3196			142	2008	10
	- Leukaemia	5922	3335	2587	299	215	84	2008	10
	- Lip, oral cavity and pharynx	4707	3354	1353	304	164	140	2008	10
	- Liver	2140	1537	603	359	276	83	2008	10
	- Oesophagus	720	428	292	81	54	27	2008	10
	- Stomach	1561	998	563	201	121	80	2008	10
	- Trachea, bronchus, and lung	5959	4143	1816	947	670	277	2008	10
21	**Circulatory**								
	All circulatory system diseases	144 900	83 530	61 370	11 890	7087	4803	2008	10
	- Acute myocardial infarction	11427	8701	2726	1817	1203	614	2008	10
	- Cerebrovascular diseases	24 056	13 823	10 233	3974	2239	1735	2008	10
	- Hypertension	32 303	14 529	17 774	197	110	87	2008	10
	- Ischaemic heart disease	46 503	31 700	14 803	4578	2920	1658	2008	10
	- Rheumatic fever and rheumatic heart diseases	3391	1723	1668	89	45	44	2008	10
22	**Diabetes mellitus**	43 048	19 811	23 237	440	220	220	2008	10
23	**Mental disorders**	26 446	17 419	9027	0	0	0	2008	10
24	**Injuries**								
	All types	193 918	136 747	57 171	2 544	2021	523	2008	10
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	6747	4610	2137	56	53	3	2008	10
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	87 373	66 760	20 613	1576	1311	265	2008	10
	- Suicide	3055	1145	1910	88	66	22	2008	10
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Normal delivery (single spontaneous delivery)	290 059 [c]			1095.65 [c]			2008	10
	2. Complications of pregnancy, childbirth and the puerperium	264 606 [c]			999.51 [c]			2008	10
	3. Accidents (accidental injury)	174 074 [c]	125 872 [c]	48 202 [c]	657.54 [c]	936.14 [c]	369.99 [c]	2008	10
	4. Diseases of the respiratory system	166 759 [c]	92 752 [c]	74 007 [c]	629.90 [c]	689.82 [c]	568.07 [c]	2008	10
	5. Diseases of the circulatory system	144 900 [c]	83 530 [c]	61 370 [c]	547.34 [c]	621.23 [c]	471.07 [c]	2008	10
	6. Certain conditions originating in the perinatal period	140 580 [c]	75 222 [c]	65 358 [c]	531.02 [c]	559.44 [c]	501.68 [c]	2008	10
	7. Diseases of the digestive system	111 345 [c]	65 572 [c]	45 773 [c]	420.59 [c]	487.67 [c]	351.35 [c]	2008	10
	8. Ill-defined conditions (symptoms and signs)	75 136 [c]	40 699 [c]	34 437 [c]	283.81 [c]	302.69 [c]	264.33 [c]	2008	10
	9. Diseases of the urinary system	72 351 [c]	35 885 [c]	36 466 [c]	273.29 [c]	266.88 [c]	279.91 [c]	2008	10
	10. Malignant neoplasms	65 416 [c]	30 510 [c]	34 906 [c]	247.10 [c]	226.91 [c]	267.93 [c]	2008	10

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart diseases and diseases of pulmonary circulation	7597 [d]	4631 [d]	2966 [d]	28.70 [d]	34.44 [d]	22.77 [d]	2008	10
	2. Septicaemia	6053 [d]	3412 [d]	2641 [d]	22.86 [d]	25.38 [d]	20.27 [d]	2008	10
	3. Malignant neoplasms	5150 [d]	2753 [d]	2397 [d]	19.45 [d]	20.47 [d]	18.40 [d]	2008	10
	4. Pneumonia	4262 [d]	2518 [d]	1744 [d]	16.10 [d]	18.73 [d]	13.39 [d]	2008	10
	5. Cerebrovascular diseases	3974 [d]	2239 [d]	1735 [d]	15.01 [d]	16.65 [d]	13.32 [d]	2008	10
	6. Diseases of the digestive system	2379 [d]	1619 [d]	760 [d]	8.99 [d]	12.04 [d]	5.83 [d]	2008	10
	7. Accident	2299 [d]	1836 [d]	463 [d]	8.68 [d]	13.65 [d]	3.55 [d]	2008	10
	8. Certain conditions originating in the perinatal period	1825 [d]	1051 [d]	774 [d]	6.89 [d]	7.82 [d]	5.94 [d]	2008	10
	9. Nephritis, ephritic syndrome and nephrosis	1729 [d]	998 [d]	731 [d]	6.53 [d]	7.42 [d]	5.61 [d]	2008	10
	10. Ill defined conditions	1210 [d]	753 [d]	457 [d]	4.57 [d]	5.60 [d]	3.51 [d]	2008	10
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					1.14		2009	12
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					77.00		2009	11
29	**Percentage of pregnant women with anaemia**					21.27		2009	12
30	**Neonatal mortality rate (per 1000 live births)**	3.80		4.00		3.50		2007	3
31	**Percentage of newborn infants weighing less than 2500 g at birth**	10.50		...		...		2007p	13
32	**Immunization coverage for infants (%)**								
	- BCG	98.00		...		...		2009	11
	- DTP3	95.00		...		...		2009	11
	- Hepatitis B III	95.00		...		...		2009	11
	- MCV2	95.00		...		...		2009	11
	- POL3	95.00		...		...		2009	11
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			38 583			8	2008	10
	- Eclampsia			640			3	2008	10
	- Haemorrhage			7607			2	2008	10
	- Obstructed labour			1283			0	2008	10
	- Sepsis			172			3	2008	10
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	0	0	0	...	...	...	2009	11
	- Measles	57	...	...	...	...	...	2009	11
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	4	...	...	...	...	...	2009	11
	- Pertussis (whooping cough)	36	...	...	...	...	...	2009	11
	- Poliomyelitis	0	0	0	...	...	...	2009	11
	- Rubella	...	...	...	...	...	...		
	- Total Tetanus	14	...	...	...	...	...	2009	11
	Health facilities								
35	**Facilities with HIV testing and counseling services**						1095	2008	11

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	14	12 968	2009	1
		- Specialized hospitals	6	4974	2009	1
		- District/first-level referral hospitals	116	20 837	2009	1
		- Primary health care centres	2852	0	2009	1
	Private health facilities	- Hospitals	237	12 619	2009	1
		- Outpatient clinics	6672	0	2009	1
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			9541.61	2008p	14
	- total expenditure on health as % of GDP			4.30	2008p	14
	- per capita total expenditure on health (in US$)			353.21	2008p	14
	Government expenditure on health					
	- amount (in million US$)			4206.59	2008p	14
	- general government expenditure on health as % of total expenditure on health			44.10	2008p	14
	- general government expenditure on health as % of total general government expenditure			6.90	2008p	14
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2008p	14
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			55.90	2008p	14
	- out-of-pocket expenditure on health as % of total expenditure on health			40.94	2008p	14
	Exchange rate in US$ of local currency is: 1 US$ =			3.34	2008p	14
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	31 273	...	...	...	...	20 929	10 344	2009	1
		- Ratio per 1000 population	1.10	...	...	...	...	0.74	0.37	2009	1
	Dentists	- Number	3974	...	...	...	...	2163	1811	2009	1
		- Ratio per 1000 population	0.14	...	...	...	...	0.08	0.06	2009	1
	Pharmacists	- Number	6751	...	...	...	...	3840	2911	2009	1
		- Ratio per 1000 population	0.24	...	...	...	...	0.14	0.10	2009	1
	Nurses	- Number	59 375	...	...	...	...	45 060	14 315	2009	1
		- Ratio per 1000 population	2.10	...	...	...	...	1.59	0.51	2009	1
	Midwives	- Number	20 127	...	...	...	...	18 815	1312	2009	1
		- Ratio per 1000 population	0.71	...	...	...	...	0.66	0.05	2009	1
	Paramedical staff	- Number	...	...	...	...	...	7389	...	2009	1
		- Ratio per 1000 population	...	...	...	...	...	0.26	...	2009	1
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	7.70	...	...	2006	12
43	Infant mortality rate (per 1000 live births)	6.40	...	...	2008p	2
44	Under-five mortality rate (per 1000 live births)	7.90 [e]	8.50 [e]	7.30 [e]	2007	3
45	Proportion of 1 year-old children immunised against measles	95.00	...	...	2009	11
46	Maternal mortality ratio (per 100 000 live births)	30.00			2007	3
47	Proportion of births attended by skilled health personnel	100.00			2009	12
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.39			2009	12
	- Percentage of deliveries in health facilities (as % of total deliveries)	98.61			2009	12
48	Contraceptive prevalence rate	1.36	...	...	2008	12
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	90.71			2009	12
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	0.10	...	...	2006-07	11
53	Estimated HIV prevalence in adults	0.30	...	...	2007	11
54	Percentage of people with advanced HIV infection receiving ART	35.00	...	....	2007	11
55	Malaria incidence rate per 100 000 population	24.80	...	...	2009	9
56	Malaria death rate per 100 000 population	0.10	...	...	2009	9
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	120.00	...	...	2008	11
60	Tuberculosis death rate per 100 000 population	15.00	...	...	2008	11
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	76.00	...	...	2008	11
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	72.00	...	...	2007	11
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	99.00	2008	15
64	Proportion of population using an improved sanitation facility	96.00	96.00	95.00	2008	15
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure refers to percentage of < 15 years
b	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using US$ exchange rate for 2008
c	Figure refers to leading causes of hospitalization in Ministry of Health (MOH) hospitals
d	Figure refers to leading causes of mortality in Ministry of Health (MOH) hospitals
e	Revised data

Sources:	
1	Health Facts 2009 (draft), Health Informatics Centre, Ministry of Health, Malaysia.
2	Key Statistics, Department of Statistics Malaysia. [http://www.statistics.gov.my/portal/index.php?lang=en]
3	Vital Statistics Malaysia 2008, 2009, Department of Statistics.
4	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision, http://esa.un.org/wup2009/unup/, Tuesday, June 01, 2010; 10:28:05 PM
5	Statistics Handbook, Malaysia 2009, Department of Statistics.
6	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
7	Department of Statistics, Malaysia [http://www.statistics.gov.my].
8	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
9	Disease Control Division, Ministry of Health, Malaysia.
10	HIMS Subsystem Report, Medical Care, Health Informatics Centre (HIC), Planning & Development Division, Ministry of Health, Malaysia.
11	WHO Regional Office for the Western Pacific, data received from the technical units.
12	HIMS Subystem Report, Family Planning, Health Informatics Centre (HIC), Planning & Development Division, Ministry of Health, Malaysia.
13	Health Facts 2007, Ministry of Health, Malaysia.
14	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
15	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

MARSHALL ISLANDS

1. CONTEXT

1.1 Demographics

The Republic of the Marshall Islands covers an area of 181 square kilometres and comprises 29 atolls and five major islands that form two parallel groups: the Ratak (sunrise) chain and the Ralik (sunset) chain. The Marshallese are of Micronesian origin. The matrilineal culture revolves around a complex system of clans and lineages tied to land ownership.

In the area of gender equality in primary and secondary education, the Marshall Islands is essentially on target to meet the Millennium Development Goals, with enrolment rates indicating a roughly 50:50 female-to-male ratio. However, at both primary and secondary levels, female drop-out rates are higher than male, resulting in a higher proportion of males completing Grades 6, 8 and 12 than females. General consensus suggests that the increasing drop-out rates for females versus males are due to the following:

- the rise in teenage pregnancy rates;
- sociocultural expectations requiring females to be at home to help their parents take care of younger children and other family members;
- the high mobility of parents and families between islands, resulting in students being unable to complete the school year (both male and female); and
- cultural and familial expectations of young women requiring them to assist in events such as funerals, resulting in many students missing school for lengthy periods of time, often more than once during the school year (unable to catch up, many students will simply drop out of school.).

The Marshall Islands is fortunate not to have extreme poverty and hunger. However, current surveys and socioeconomic indicators suggest that poverty and hardship are on the rise, giving rise to concern as to whether the country has been developing, implementing and monitoring poverty-reduction strategies and programmes appropriately.

1.2 Political situation

The legislative branch of the Government consists of the *Nitijela* (Parliament), with an advisory council of high chiefs. The *Nitijela* has 33 members from 24 districts, elected for concurrent four-year terms. Members are called Senators. The President is elected by the *Nitijela* from among its members and the President appoints his cabinet members from the *Nitijela*. The Republic of the Marshall Islands has four court systems: the Supreme Court, the High Court, district and community courts, and the traditional-rights courts. Trial is by jury or judge. The jurisdiction of the traditional-rights court is limited to cases involving titles or land rights, or other disputes arising from customary law and traditional practices.

Citizens of the Marshall Islands live with a relatively new democratic political system combined with a hierarchical traditional culture.

1.3 Socioeconomic situation

Government assistance from the United States of America is the mainstay of this small island economy. Agricultural production, primarily subsistence, is concentrated on small farms, the most important commercial crops being coconuts and breadfruit. Small-scale industry is limited to handicrafts, tuna processing and copra. The tourist industry, now a small source of foreign exchange employing less than 10% of the labour force, remains the best hope for future added income. The islands have few natural resources, and imports far exceed exports. Under the terms of the Amended Compact of Free Association, the United States will provide millions of dollars per year to the Marshall Islands (RMI) until 2023, at which time a Trust Fund made up of United States and RMI contributions will begin perpetual annual payouts. Government downsizing, drought, a drop in construction, the decline in tourism, and less

income from the renewal of fishing licenses have held gross domestic product (GDP) growth to an average of 1% over the past decade.

1.4 Risks, vulnerabilities and hazards

The country is affected by rising sea levels, desertification, pollution from ships, coral reef erosion and infrequent typhoons. The Department of Defence of the United States of America conducted a series of nuclear tests in the Republic of the Marshall Islands in the 1940s and 1950s. Among the most famous and devastating of these tests was the Bravo test, conducted in March 1954 at Bikini Atoll. This test devastated Bikini Atoll and resulted in its population having to disperse to remote atolls and islands due to the resulting levels of radiation. Residents of Rongelap, Utrik and Enewetak were similarly affected due to the wind dispersal of the cloud of radiation. Most of the population remains dispersed today.

The United States Government, through the Compact of Free Association, sought to provide reparation including the provision of health care services by creating the 177 Health Care Plan (HCP) for citizens of the Marshall Islands affected by these tests and later including their descendants. In September 2003, however, the First Compact of Free Association ended and the source of funding became an issue. While the 177 HCP was not a clearly defined entity in the succeeding compact, the Congress of the United States has been able to fund the programme from other sources on the basis of a yearly grant. In 2009, the 177 Health Care Plan received US$ 985 000.0 in funding.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

High population growth and crowded conditions in urban areas have caused the re-emergence and/or rise of certain communicable diseases, such as tuberculosis and leprosy. In addition, exposure to modern culture has brought about a rise in levels of adult obesity, noncommunicable disease, teenage pregnancy, suicide, alcoholism and tobacco use.

The Government focuses on training native Marshallese health professionals, strengthening community health care programmes, upgrading the quality of health care services, and improving the dissemination of health care information to its citizens. Other health-related issues include the need to reduce population growth, urban population density and malnutrition, and to strengthen the capacity of the health sector. Recent initiatives have included training basketball players in reproductive health issues so they can lead advocacy programmes.

2.2 Outbreaks of communicable diseases

Communicable diseases continue to be a major cause of morbidity and mortality in the Marshall Islands. An epidemiologic investigation revealed a total of 10 cases of multidrug-resistant tuberculosis (MDR TB) between 2004 and 2009, indicating a serious problem with this emerging infectious disease. A multi-faceted approach has been taken to combat the problem, involving multiple government, nongovernmental and international partners.

A case of pandemic influenza A (H1N1) 2009 was recorded in the Marshall Islands, but the disease has thus far not caused a considerable degree of morbidity or mortality. However, preparedness and response may be a significant challenge to the health care system.

2.3 Leading causes of mortality and morbidity

The latest available data (1999-2004) on major causes of morbidity and mortality still refer to communicable diseases, but cancer and other noncommunicable diseases are anecdotally emerging as the leading causes of disease and death. The Marshall Islands has a very high leprosy prevalence rate (6.4 per 10 000 population)[1].

[1] Source: http://www.wpro.who.int/media_centre/fact_sheets/fs_20070129.htm (accessed June 9th 2009)

2.4 Maternal, child and infant diseases

The Ministry of Health continues to provide health services to all ages in Majuro Atoll, Kwajalein Atoll and Outer Islands. Prenatal clinics are available in urban and rural centres, with health assistants providing prenatal services in the Outer Islands. The National Immunization Programme, under the Ministry of Health, works very hard to immunize all children of the Marshall Islands.

Septicaemia, asphyxia and prematurity are reported as major causes of mortality among children less than 12 months of age, whereas severe malnutrition, drowning and pneumonia accounted for the majority of child deaths in 2009. No data are available on the prevalence of childhood diseases.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The overarching principle guiding the activities of the Ministry of Health can be found in its mission statement: "To provide high quality, effective, affordable and efficient health services to all peoples of the Marshall Islands, through a primary health care programme to improve health status and build the capacity of each community, family and individual to care for their own health. To the maximum extent possible, the Ministry of Health pursues these goals using the national facilities, staff and resources of the Republic of the Marshall Islands."

3.2 Organization of health services and delivery systems

Medical and health services in the Marshall Islands are delivered in three distinct settings: two hospitals—in the urban areas of Majuro and Ebeye—and 61 health centres.

3.3 Health policy, planning and regulatory framework

In April 2000, the Ministry of Health and Environment (the title changed to the Ministry of Health in 2002) prepared a pivotal document to guide health policies: the *Fifteen Year Strategic Plan 2001-2015*. The document encompasses the *Fifteen Year Plan 2001 to 2015*, the *Strategic Five Year Plan 2001 to 2005* and the *Operational Plan 2001 to 2005*.

The national health priorities remain the same as in 2004 and are to:

- develop and strengthen the capabilities of indigenous personnel;
- institutionalize primary health care strategies, decentralize health care, promote community-based health care and take steps to make community-based health care systems as self-reliant as possible;
- strengthen and develop the health information system;
- secure a sustainable financial base from the Government, the community and the private sector for health care delivery;
- reduce the transmission of sexually transmitted diseases and develop HIV/AIDS/STI prevention programmes;
- reduce population growth and urban densities;
- address and manage the causes and effects of malnutrition;
- address, prevent and manage the rising number of cases of diabetes and their health and social impact;
- coordinate and strengthen the provision of health education; and
- coordinate all aspects of the health care delivery system through the National Health Services Board of the Ministry of Health.

3.4 Health care financing

In 2007, total health expenditure amounted to US$ 22 million, 97.4% from the Government and only 2.6% from the private sector. Government expenditure on health represented 14.6% of the nation's total government expenditure. In line with its mission statement, the Ministry of Health continues to explore avenues to provide the best quality health care possible to the population despite its meagre funding and limited human and capital resources. A significant proportion of health services are funded under external aid or grant programmes, including United States Federal Health Grants and grants under the Compact of Free Association between the Marshall Islands and the United States of America.

3.5 Human resources for health

In 2008, the health work force comprised 38 physicians, 7 dentists, 2 pharmacists, and 172 nurses.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

The reliability of data, staff turnover and migration, and donors' multiple reporting requirements are current challenges.

One of the barriers to delivering health services in the Outer Islands is the unpredictable flights of Air Marshall Islands. Outreach teams visiting the Outer Islands bring all primary health care services, such as immunization clinics, diabetes clinics, TB and leprosy clinics, prenatal services, and health promotion services.

4. PROGRESS TOWARDS THE HEALTH MDGs

In 2009, the Ministry of Health, with a statistician from the United Nations Development Programme (UNDP), carried out an analysis of the country's MDG status. The resulting documents are currently being reviewed by the relevant programmes.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Fifteen Year Strategic Plan 2001-2015*
Operator	:	Ministry of Health and Environment, April 2000
Title 2	:	*Ministry of Health annual report 2004-"Health is a shared responsibility"*
Operator	:	Ministry of Health and Environment
Title 3	:	*Ministry of Health statistical abstract 1999-2001*
Operator	:	Ministry of Health and Environment
Title 4	:	*Statistical yearbook 2003.*
Operator	:	Economic Policy Planning and Statistics Office
Title 5	:	Economic Policy, Planning and Statistics Office (EPPSO) interview
Web address	:	http://www.spc.int/prism
Title 6	:	*CIA world fact book*
Web address	:	http://www.cia.gov

6. ADDRESSES

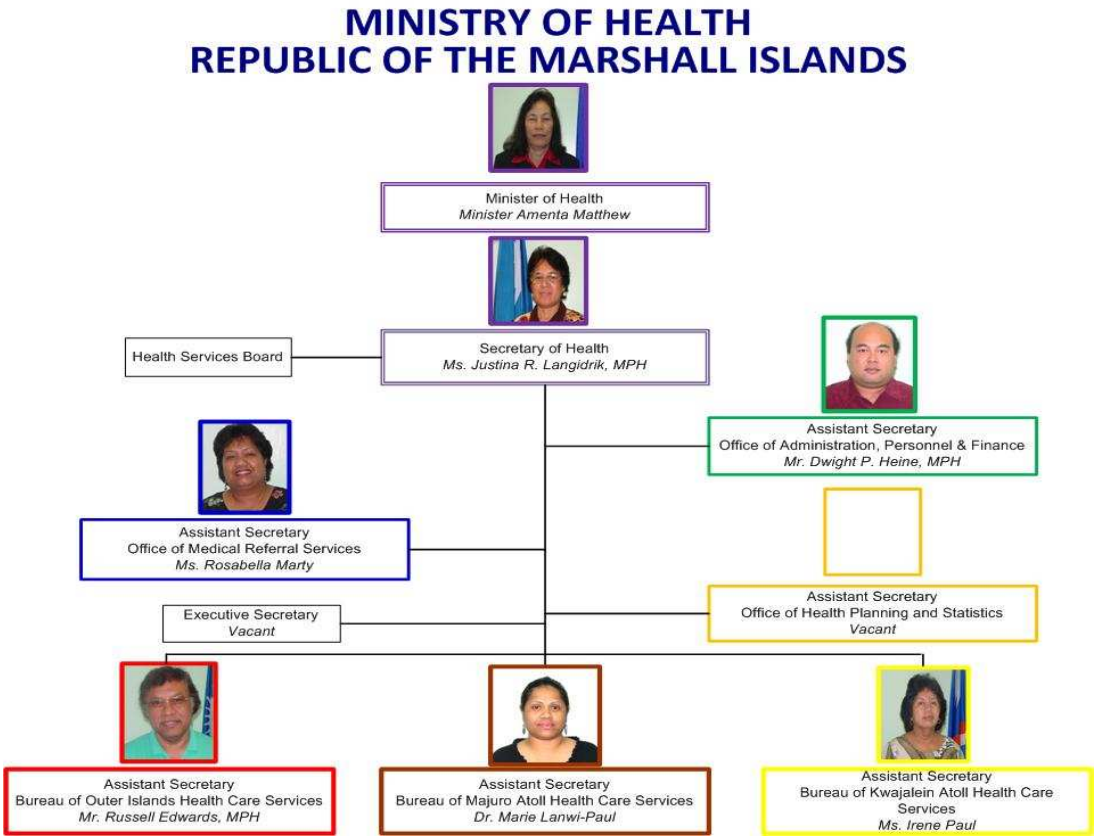
MINISTRY OF HEALTH

Postal Address	:	P.O. Box 16, Majuro, Marshall Islands
Official Email Address	:	rmimohe@ntamar.net
Telephone	:	+ (692) 625 7246/5660/5661
Fax	:	+ (692) 625 3432/4543/4372
Office Hours	:	8:00 – 12:00 and 13:00 – 17:00

WHO COUNTRY LIAISON OFFICE FOR NORTHERN MICRONESIA

Office Address	:	The Federated States of Micronesia National Government Department of Health and Social Affairs 1/F Mogethin Building Palikir, Pohnpei
Postal Address	:	P.O. Box PS70 Palikir, Pohnpei FM 96941 Federated States of Micronesia
Telephone	:	(619) 320-2619
Fax	:	(619) 320-5263
Office Hours	:	0800 – 1700 Mon. – Fri.

7. ORGANIZATIONAL CHART: Ministry of Health



MARSHALL ISLANDS

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	0.18			2009	1
2	**Estimated population ('000s)**	54.07	27.74	26.32	2009	2
3	**Annual population growth rate (%)**	1.00	...	...	2009	2
4	**Percentage of population**					
	- 0–4 years	14.82	14.89	14.74	2009	2
	- 5–14 years	26.95	27.15	26.74	2009	2
	- 65 years and above	2.21	1.98	2.44	2009	2
5	**Urban population (%)**	71.40	...	...	2009 est	3
6	**Crude birth rate (per 1000 population)**	32.60	...	...	2009 est	4
7	**Crude death rate (per 1000 population)**	6.00	...	...	2009 est	4
8	**Rate of natural increase of population (% per annum)**	2.66 [a]	...	...	2009 est	4
9	**Life expectancy (years)**					
	- at birth	...	67.00	70.60	2004	5
	- Healthy Life Expectancy (HALE) at age 60	...	9.80	10.70	2002	6
10	**Total fertility rate (women aged 15–49 years)**	4.40			2006	2
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	...	...	...		
12	**Per capita GDP at current market prices (US$)**	2851.00			2007	1
13	**Rate of growth of per capita GDP (%)**	...				
14	**Human development index**	...				
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Health care waste generation (metric tons per year)**	...	...	...		

	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
16	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	12	...	...	...	...	...	2002	4
	- Type B	77	...	...	7	2	5	2009	4
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	0	0	0	0	0	0	2005	7
	Dengue/DHF	0	0	0	0	0	0	2009	7
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	107	...	...	...	...	...	2009	4
	Leprosy	44	28	16	...	...	...	2009	7
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	486	...	...	...	...	...	2009	4
	Typhoid fever	29	...	...	...	...	...	2009	4
17	**Acute respiratory infections**	3703	...	...	...	...	...	2002	4
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	1954	...	...	...	...	...	2002	4
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	125	...	...	8	...	...	2008	7
	- New pulmonary tuberculosis (smear-positive)	28	...	...	...	...	...	2008	7
20	**Cancers**								
	All cancers (malignant neoplasms only)	52	22	30	38	19	19	2009	4
	- Breast	5	0	5	5	0	5	2009	4
	- Colon and rectum	2	2	0	2	2	0	2009	4
	- Cervix			14			3	2009	4
	- Leukaemia	2	0	2	0	0	0	2009	4
	- Lip, oral cavity and pharynx	1	1	0	2	0	2	2009	4
	- Liver	3	2	1	3	2	1	2009	4
	- Oesophagus	...	...	...	0	0	0	2009	4
	- Stomach	0	0	0	0	0	0	2009	4
	- Trachea, bronchus, and lung	6	6	0	8	6	2	2009	4
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	21	18	3	2009	4
	- Cerebrovascular diseases	...	...	...	22	9	13	2009	4
	- Hypertension	...	...	...	26	21	5	2008	4
	- Ischaemic heart disease	...	...	...	1	1	0	2008	4
	- Rheumatic fever and rheumatic heart diseases	...	...	...	1	1	0	2008	4
22	**Diabetes mellitus**	252	...	...	62	34	28	2009	4
23	**Mental disorders**	55	...	...	...	...	...	2009	4
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	9	6	3	7	2	5	2009	4
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	138	86	52	1	1	0	2009	4
	- Suicide	30	...	...	16	...	...	2009	4
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Influenza	5170	...	...	8444.95 [b]	...	...	2004	5
	2. Conjunctivities	2632	...	...	4299.25 [b]	...	...	2004	5
	3. Gastroenteritis	2041	...	...	3333.88 [b]	...	...	2004	5
	4. Diarrhoea, Infantile	1640	...	...	2678.86 [b]	...	...	2004	5
	5. Scabies	778	...	...	1270.82 [b]	...	...	2004	5
	6. Chicken pox	426	...	...	695.85 [b]	...	...	2004	5
	7. Amoebiasis	312	...	...	509.64 [b]	...	...	2004	5
	8. Fish poisoning	251	...	...	410.00 [b]	...	...	2004	5
	9. Syphilis	172	...	...	280.95 [b]	...	...	2004	5
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diabetes Related Disease	62	34	28	114.68	122.56	106.37	2009	4
	2. Cancer (All Types)	38	19	19	70.29	68.49	72.18	2009	4
	3. Septicemia	27	10	17	49.94	97.33	64.58	2009	4
	4. Heart Disease/Failure	19	15	4	35.14	54.07	15.20	2009	4
	5. Suicide	16	...	...	29.59	...	...	2009	4
	6. Myocardial Infarction	14	13	1	25.89	46.86	3.80	2009	4
	7. Tuberculosis	9	7	2	16.65	25.23	7.60	2009	4
	8. Cardiopulmonary Arrest	7	7	0	12.95	25.23	0.00	2009	4
	9. Premature	7	3	4	12.95	10.81	15.2	2009	4
	10. Drowning/Hepatitis B	7	2/5	5/2	12.95	7.21/ 18.03	18.99/ 7.6	2009	4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					14.54		2009	4
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					73.68		2009	4
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	15.00		17.00		14.00		2009	4
31	**Percentage of newborn infants weighing less than 2500 g at birth**	15.40		...		...		2009	4
32	**Immunization coverage for infants (%)**								
	- BCG	98.37		...		...		2009	4
	- DTP3	96.03		...		...		2009	4
	- Hepatitis B III	99.77		...		...		2009	4
	- MCV2	65.52						2009	4
	- POL3	100.00		...		...		2009	4
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			0	2009	4
	- Eclampsia			...			1	2009	4
	- Haemorrhage			...			2	2009	4
	- Obstructed labour			...			0	2009	4
	- Sepsis			...			0	2009	4
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	4
	- Diphtheria	0	0	0	...	...	...	2009	4
	- Measles	0	0	0	...	...	...	2009	4,7
	- Mumps	0	0	0	...	...	...	2009	4
	- Neonatal tetanus	0	0	0	...	...	...	2009	4
	- Pertussis (whooping cough)	2	1	1	1	1	0	2009	4
	- Poliomyelitis	0	0	0	...	...	...	2009	4,7
	- Rubella	0	0	0	...	...	...	2009	4
	- Total Tetanus	0	0	0	...	...	...	2009	4
	Health facilities								
35	**Facilities with HIV testing and counseling services**						2	2009	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	2	146	2009	4
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	61	...	2009	4
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	1	...	2009	4
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			21.00	2008p	8
	- total expenditure on health as % of GDP			13.40	2008p	8
	- per capita total expenditure on health (in US$)			351.00	2008p	8
	Government expenditure on health					
	- amount (in million US$)			21.00	2008p	8
	- general government expenditure on health as % of total expenditure on health			97.20	2008p	8
	- general government expenditure on health as % of total general government expenditure			14.60	2008p	8
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			71.80 [a]	2008p	8
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			2.80	2008p	8
	- out-of-pocket expenditure on health as % of total expenditure on health			2.80 [a]	2008p	8
	Exchange rate in US$ of local currency is: 1 US$ =			1.00	2008p	8
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	38	...	...	...	...	...	...	2008	4
		- Ratio per 1000 population	0.71	...	...	...	...	...	...	2008	4
	Dentists	- Number	7	...	...	...	...	...	...	2008	4
		- Ratio per 1000 population	0.13	...	...	...	...	...	...	2008	4
	Pharmacists	- Number	2	...	...	...	...	...	...	2008	4
		- Ratio per 1000 population	0.04	...	...	...	...	...	...	2008	4
	Nurses	- Number	172	...	...	...	...	...	...	2008	4
		- Ratio per 1000 population	3.23	...	...	...	...	...	...	2008	4
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	34.00	...	...	2009	4
44	Under-five mortality rate (per 1000 live births)	46.00	...	...	2009	4
45	Proportion of 1 year-old children immunised against measles	78.11	...	...	2009	4
46	Maternal mortality ratio (per 100 000 live births)	324.15			2009	4
47	Proportion of births attended by skilled health personnel	98.70			2009	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	5.35			2009	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	93.44			2009	4
48	Contraceptive prevalence rate	15.00	...	...	2009	4
49	Adolescent birth rate	63.50			2009	4
50	Antenatal care coverage - At least one visit	2.00 [c]			2004-07p	9
	- At least four visits	77.10 [c]			2004-07p	9
51	Unmet need for family planning	2.36	...	...	2009	4
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	0.03	0.02	0.02	2009	4
54	Percentage of people with advanced HIV infection receiving ART	50.00	50.00	50.00	2009	10
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	59.00	...	...	2008	7
60	Tuberculosis death rate per 100 000 population	14.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	46.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	96.00	...	...	2007	7
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	94.00	92.00	99.00	2008	11
64	Proportion of population using an improved sanitation facility	73.00	83.00	53.00	2008	11
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific ousing the projected population for 2004 (61220)
c	Figure applies to births in the last three years

Sources:	
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MICRONESIA, FEDERATED STATES OF

1. CONTEXT

1.1 Demographics

The Federated States of Micronesia contains 607 volcanic islands and atolls scattered over 1 million square miles of the Pacific Ocean. The land area totals 704.6 square kilometres with 7192 square kilometres of lagoon area.

There are four states in the federation: Chuuk, Kosrae, Pohnpei and Yap. From east to west, Kosrae has 111.9 square kilometres of land, Pohnpei contains 345.5 square kilometres among six islands, and Chuuk includes six major island groups with a total land area of 127.4 square kilometres. Chuuk proper is a complex of 98 islands (14 mountainous volcanic islands and 24 outer low islands and atolls). Yap state includes Yap proper and 15 outer islands, with a total land area of 118.9 square kilometres.

In 2009, the estimated population of the Federated States of Micronesia was 107 973, 37% of whom were below 15 years old, while 4% were 65 years and over. The average age of the population is estimated to be 18.9 years, and for every 100 females, there are about 101 males. It is estimated that despite migration, primarily to the United States of America and its territories, the population has increased by 0.9% since 2000. Approximately 49% of the population lives in Chuuk state, 32% in Pohnpei, 11% in Yap and 8% in Kosrae, with almost 23% living in urban areas.

1.2 Political situation

The Federated States of Micronesia is a constitutional federation of four states: Chuuk, Kosrae, Pohnpei, and Yap. The capital is located in Palikir, Pohnpei. The constitution provides for three separate branches of government at the national level: executive, legislative and judicial. It has a Declaration of Rights, similar to the Bill of Rights of the United States of America, specifying basic human rights standards consistent with international norms.

The Congress is unicameral and has 14 senators, one from each state, elected for a four-year term and 10 who serve two-year terms, whose seats are apportioned by population. There are no formal political parties. The President and Vice-President are elected to four-year terms by the Congress. Elections were last held in March 2007 and in May 2007. Congress elected Emmanuel Mori as president and Alik L. Alik as Vice-President.

The Division of Health is part of the Department of Health and Social Affairs. The Secretary of the Department of Health and Social Affairs is a cabinet-level position, nominated by the President and requiring congressional confirmation.

1.3 Socioeconomic situation

Economic activity consists primarily of subsistence farming and fishing. Primary farm products include black pepper, tropical fruits and vegetables, coconuts, cassava, betel nuts, sweet potatoes, pigs and chicken. The islands have few mineral deposits worth exploiting, except for high-grade phosphate. The potential for a tourist industry exists, but the remote location, lack of adequate facilities, and limited air connections hinder development.

In November 2002, the country experienced a further reduction in future revenues from the Compact of Free Association, the agreement with the United States of America by which Micronesia received US$ 1.3

billion in financial and technical assistance over a 15-year period until 2001. Under the new compact, the country will receive approximately US$ 92 million a year until 2023, including contributions to a jointly managed trust fund. A Joint Economic Management Committee (JEMCO), consisting of representatives of both countries, has been established to manage this compact assistance. Additional funding from the United States totalled US$ 57 million in 2004.

Employment declined from 16 119 in 2000 to 15 897 in 2005. Pohnpei had the highest number of employees, at 7060, and Kosrae had the lowest, at 1366. The three largest employers were the private sector, state government, and government agencies. Around 43% were in the public sector, 19.8% in wholesale trade and repair and 7% in education. The unemployment rate is 16% and the average real wage is US$ 6037.

The country has a severe trade deficit. In 2005, total imports were valued at US$ 117.5 million and exports were valued at only US$ 1.3 million (exclusive of long-liner and purse seiner catches). The tourism sector is small, with only 13 415 tourists reported for 2005. Private remittances are also limited, especially compared with other Pacific island countries.

The gross domestic product (GDP) for 2008 was estimated to be US$ 304 million, with nominal GDP per capita estimated to be US$ 2223.

1.4 Risks, vulnerabilities and hazards

The country's medium-term economic outlook appears fragile due, not only to the reduction in assistance from the United States of America, but also to the slow growth of the private sector. Geographical isolation and a poorly developed infrastructure remain major impediments to long-term growth.

While telecommunication costs have fallen, Internet access is still expensive and most residential Internet access is provided via dial-up accounts. This lack of affordable broadband Internet access is a significant barrier to business growth and to improving education.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The overall health situation remained unchanged between 2000 and 2009, with the population showing continuing susceptibility to both communicable and noncommunicable diseases. Noncommunicable diseases have been on the rise and have taken their toll on the population in the past 24 years. Citizens of the Federated States of Micronesia, however, continue to enjoy a level of health care which is high in comparison with the rest of the Pacific region. Micronesian doctors are taking the place of United States doctors in the health system as a result of such programs as the, now defunct, Medical Officer Training Programme in Pohnpei.

2.2 Outbreaks of communicable diseases

The number of vaccine-preventable diseases has declined considerably. However, waterborne and foodborne diseases are major causes of hospital admission. Strategies need to be developed to improve the coverage of immunization and other health programmes that address disease. The highest immunization coverage (84.1%) was in 1992 and was the result of heavy campaigning at that time due to outbreaks of measles and a hepatitis B immunization campaign. There have been sporadic outbreaks of zika virus, dengue fever and hepatitis A in recent years, and multidrug-resistant (MDR) tuberculosis has been detected. Leprosy is still highly prevalent and the country failed to reach the elimination target in 2000. There have been no major outbreaks of sexually transmitted infections, including HIV/AIDS. The Federated States of Micronesia, however, is fertile ground for these conditions as behaviours leading to acquiring such infections exist. Some cases of influenza A (H1N1) have been reported, but have not constituted an outbreak. No cholera outbreak has been reported for the last five years. A strategic plan is needed to continue improving health services, public health surveillance and information systems.

2.3 Leading causes of mortality and morbidity

The reporting of mortality and morbidity in the Federated States of Micronesia is still problematic due mainly to late reporting and the lack of a standardized reporting system. The problem with mortality data concerns late filing of death certificates for mortality coding. This function is performed at the national level by the health information system. However, current information (2009) collected from the four states with respect to mortality and morbidity indicate that the leading causes of mortality are heart disease, diabetes mellitus, chronic obstructive pulmonary disease, cerebrovascular accidents and unknown (R99) types of death. As for morbidity, the following conditions top the list: essential (primary) hypertension, diarrhoea/gastroenteritis, diabetes mellitus, skin disorders and urinary tract infections. The 10 leading causes of both outpatient visits and inpatient care, in all four states, are listed in Table 1 below:

Table 1. FSM 2009 morbidity – 10 leading causes (outpatient and inpatient) by body system

Outpatient visits, by system	Inpatient care, by system
Diseases of the respiratory system	Diseases of the respiratory system
Certain infectious and parasitic diseases	Diseases of the circulatory system
Diseases of the skin and subcutaneous tissue	Endocrine, nutrition and metabolic diseases
Diseases of the musculoskeletal system and connective tissue	Certain infectious and parasitic diseases
Diseases of the circulatory system	Pregnancy, childbirth and the puerperium
Diseases of the digestive system	Diseases of the genitourinary system
Endocrine, nutrition and metabolic diseases	Diseases of the digestive system
Diseases of the genitourinary system	Diseases of the skin and subcutaneous tissue
Diseases of the ear and mastoid process	Diseases of the musculoskeletal system and connective tissue
Symptoms, signs and abnormal clinical and laboratory findings, NEC	Certain conditions originating in the perinatal period

2.4 Maternal, child and infant diseases

National health statistics indicate that the leading causes of death in recent years among infants and young children were prematurity, newborn sepsis, respiratory infections, undernutrition and multiple congenital anomalies, including congenital heart disease. With the addition of diarrhoeal diseases, these health problems are also the leading causes of child morbidity, measured by outpatient visits and hospitalizations. Among older children, teenagers and young adults, injuries have become the predominant cause of death. Among unintentional injuries, the number of water-associated deaths is about equal to motor-vehicle-related deaths.

Prenatal care is slowly improving in the State centres and is being expanded to remote areas. Death and illness due to diarrhoea and acute respiratory infections still account for a large proportion of infant mortality and morbidity. In 2006, the country started implementing the integrated management of childhood illness (IMCI) strategy as a way to strengthen the skills and capacity of health care workers, particularly those attending to maternal and child health, to reduce childhood illness. The maternal death rate cannot be calculated due to underreporting or missing data. However, the maternal mortality ratio is currently estimated at 0 per 100 000 live births. Child and infant diseases continue to be seen mostly in the form of respiratory diseases, diarrhoeal conditions and nutritional disorders. The estimated infant mortality rate (IMR) for 2009 was 13.5 per 1000 live births.

2.5 Burden of disease

Although certain infectious and parasitic diseases are prevalent in the Federated States of Micronesia, the disease burden also includes chronic and noncommunicable diseases. Diabetes and endocrine, nutritional and metabolic diseases are major health problems. Contributing factors are believed to be changes in diet, lack of exercise, gender, age, occupation and, in some cases, drug abuse.

Intentional (violence) injury and the high suicide rate are particularly notable and are thought to be due to the burden of cultural and economic dislocation, particularly among young adult males. Suicide rates for

young adult males in the Micronesia region are among the highest in the world. Alcohol is often a contributing factor in violent incidents.

Among adults, heart disease and stroke have become the leading causes of death, with rates for adults aged 25 to 55 years double those for their counterparts in the United States of America. This suggests that a combination of lifestyle (high fat/sodium/calorie diet, lack of exercise, and tobacco and alcohol use) and genetics has created an unusual burden on the population that otherwise would follow a disease pattern similar to other developing countries.

Indeed, the fact that these high rates of noncommunicable disease exist in the Federated States of Micronesia in the face of the continued high incidence of tuberculosis, leprosy, rheumatic fever, rheumatic heart disease, etc., indicates that, in a situation similar to other Pacific island countries, the country has not completed an epidemiological transition, but rather, is in the unenviable position of being doubly afflicted by the disease patterns of both a developing and a developed country.

The leprosy prevalence rate of 40 per 10 000 populations is among the highest in the Pacific.

Since the first case was detected in 1989, a total of 37 HIV infections and/or AIDS cases have been reported in the country, with the number of confirmed HIV infections slowly increasing; only two cases of infection were reported between 1989 and 1997, three were confirmed in 1998 and 1999, six in 2000, three each year from 2001 to 2003, two in 2004, three in 2005, none in 2006, three in 2007, one in 2008, and one in 2009. As in many developing countries, many factors influence the reporting of HIV/AIDS and thus figures may deviate somewhat from actual counts. By the end of 2009, of the cumulative total of 37 confirmed HIV patients, 28 had died from AIDS-related illnesses and three had left the country. Thus, there were six known PLWH (people living with HIV/AIDS), all adults, residing in the Federated States of Micronesia. Five of these persons are on treatment, two males and three females.

One case of malaria was reported in 2009. In general, the mosquito vector is absent in the environment. However, a few nationals have been infected when travelling to malaria-endemic countries.

Like many developing countries, the Federated States of Micronesia has a high prevalence of tuberculosis (TB). In 2009, the TB incidence rate was 157 per 100 000 population and the prevalence rate was 168 per 100 000 and rising. In response to the situation, a national plan for the prevention and control/elimination of tuberculosis was developed and adapted in 1989, with revision in 1990. In 1992, however, full implementation commenced. In 1995, the plan was reviewed and revised, with assistance from WHO. In 2009, the plan was revisited and a revision is now being drafted.

The TB situation is similar to that in other developing countries. The disease continues to increase and remains a major cause of preventable morbidity and mortality. A shortage of skilled staff, medication and funding have resulted in generally inadequate treatment for most cases that are identified. Few people complete a full course of treatment, close contacts are evaluated in only two States, and only a few people have started on and/or finished a course of preventive therapy with isoniazid (INH). Laboratory confirmation of suspected TB cases by culture was almost impossible in the past, but that situation has changed dramatically in the past six years. Although training and human resource needs are considered critical, capacity-building of physician assistants (community health assistants) has been improving.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The mission of the Department of Health and Social Affairs is to promote and protect the health status and the social welfare of citizens and residents in the Federated States of Micronesia. The vision is a healthy island nation. The Division of Health has established five health-related strategic goals with the objective of improving the health services. These are:

- improvement of primary health care services;
- improvement of secondary health care services;
- prioritization of health promotion and services for major health problems;

- development of a sustainable health care financing mechanism; and
- improvement of capacity and accountability systems.

A total of 10 outcome measures were developed and used during the period from 2003 to 2005 to indicate progress in meeting these goals. In 2005, however, modifications were proposed involving the addition of four new measures. These modifications also known as the 14 Health Indicators and endorsed by all four state directors, the Secretary, the Assistant Secretary and programme managers, remain in effect until 2010, and will be reviewed and modified in 2011.

The proposed outcome measures involve increasing access to health services, improving immunization coverage, improving the availability of essential drugs, increasing the functionality of biomedical equipment, reducing the length of the average hospital stay, reducing infant mortality, reducing mental illness, increasing the number of individuals enrolled in a health insurance plan, reducing off-island medical referral costs, increasing the number of children under seven years receiving protective sealant, reducing the incidence of diarrhoeal disease, reducing the incidence of diabetic hospitalization, and implementing a functioning quality assurance system in all States. Baseline data have been collected in each of these areas and specific goals have been established to measure progress.

3.2 Organization of health services and delivery systems

Each State government in the Federated States of Micronesia maintains its own health services. Although similar in many aspects, each system is also unique autonomously. Each State maintains a centrally located hospital that provides a minimum range of primary- and secondary-level services, including both preventive and curative services. There are six private health clinics in the Federated States of Micronesia and one private hospital. Health services are highly subsidized by the State governments except in the private clinics.

The Division of Health of the Department of Health, Education and Social Affairs does not have a direct role in the provision of health services. The Department of Health Services in each State has primary responsibility for curative, preventive and public health services. This responsibility includes the main hospital, peripheral health centres, and dispensaries (primary health centres). Only residents of urban centres have direct access to the main hospital in each State. Transportation issues between islands often prevent residents who live on the outer islands from accessing these hospitals.

Dispensaries (similar to health clinics) are located in municipalities and outlying islands and are part of the state health department. Their location is based on population, need and political considerations. Local mayors and the dispensary supervisors are responsible for day-to-day operations. Diagnosis and treatment of common ailments are the primary services provided, with more advanced cases being referred to central hospitals.

The Secretary of the Department of Health and Social Affairs is responsible for the oversight of all health programmes and ensures compliance with all laws and executive directives. Major mandates are coordination, monitoring, technical assistance and capacity-building. In addition, the Department:

- provides overall supervision of the division;
- sets priorities within financial, manpower and material constraints as approved by the Secretary;
- conducts annual programme and staff performance audits and evaluations;
- enforces Department and national policies;
- improves accountability within the Division of Health;
- implements Federated States of Micronesia health strategies and the Strategic Development Plan in accordance with the Secretary's directives;
- works to increase external funding to support implementation of health strategies;
- develops and implements property inventory systems; and
- coordinates financial support and assistance to the States.

Table 2. Health facilities in the Federated States of Micronesia

Facility Type	FSM Total	Kosrae	Pohnpei	Chuuk	Yap
I. Total health facilities in country	**122**	**6**	**19**	**71**	**26**
Hospitals	5	1	2	1	1
Community health centres	5	0	1	0	4
Dispensaries	92	0	9	64	19
Aid posts	6	5	0	0	1
Health clinics	6	0	3	3	0
Pharmacies	6	0	2	3	1
Dental clinics	2	0	2	0	0
II. Government-owned health facilities	**107**	**6**	**11**	**65**	**25**
Hospitals	4	1	1	1	1
Licensed beds	326	35	116	125	50
Operating beds	312	45	92	125	42
Occupancy rate	65.5	83	62	58	59
Health centres (CHC)	5	0	1	0	4
Dispensaries	92	0	9	64	19
Aid posts	6	5	0	0	1
III. Privately-owned health facilities	**15**	**0**	**8**	**6**	**1**
Hospital	1	0	1	0	0
Licensed beds	36	0	36	0	0
Operating beds	36	0	36	0	0
Private health clinics	6	0	3	0	0
Private pharmacies	6	0	2	3	1
Private dental clinics	2	0	2	3	0

The State-based delivery system is an effective way of administering health. Given the geographical dispersal, remote nature and cultural diversity of the many island communities, the system has the best chance of developing more responsive and effective services to meet the needs of the community. In this environment of politically independent states, there are constraints on implementation of national policies.

3.3 Health policy, planning and regulatory framework

The Division of Health of the Department of Health and Social Affairs provides health planning, donor coordination, and technical and training assistance. It coordinates and manages the preventative medicine and public health programmes funded by the United States Department of Health and Human Services. While the Division of Health does not have a direct role in the provision of health services, it has significant influence in the provision of health services as a result of its managerial responsibilities. Most state departments of health services have very limited planning and programming capabilities. This area needs support and improvement.

3.4 Health care financing

Total expenditure on health goods and services and capital formation in the Federated States of Micronesia in 2008 was estimated as US$ 32.7 million (see Table 3). This represents an increase of US$ 2.1 million over the preceding year, equivalent to an annual growth of 6.7% in nominal terms and 4.6% in real terms.

Table 3: Total health expenditure, current and constant prices (2008), and annual growth rates, 2005 to 2008

	Amount (US$ '000)		Growth rate over previous year (%)	
Fiscal year	**Current**	**Constant[(a)]**	**Current**	**Constant**
2005	30,307	33,159		
2006	29,912	31,347	-1.3	-5.5
2007	30,674	31,284	2.5	-0.2
2008	32,739	32,739	6.7	4.6
Average annual growth rate			2.6	-0.4

(a) Constant price health expenditures are expressed in terms of 2008 prices
Source: FSM Health Accounts Database

The ratio of the country's health expenditure to gross domestic product (health to GDP ratio) provides an indication of the proportion of overall economic activity contributed by the health sector. Total health expenditure grew at an average annual rate of 2.6%, while GDP grew at a lower rate of 1.1% between 2005 and 2008 (Table 4). Consequently, the trend in the ratio of health spending to GDP increased slightly from 13.1% to 13.6% (see Table 4).

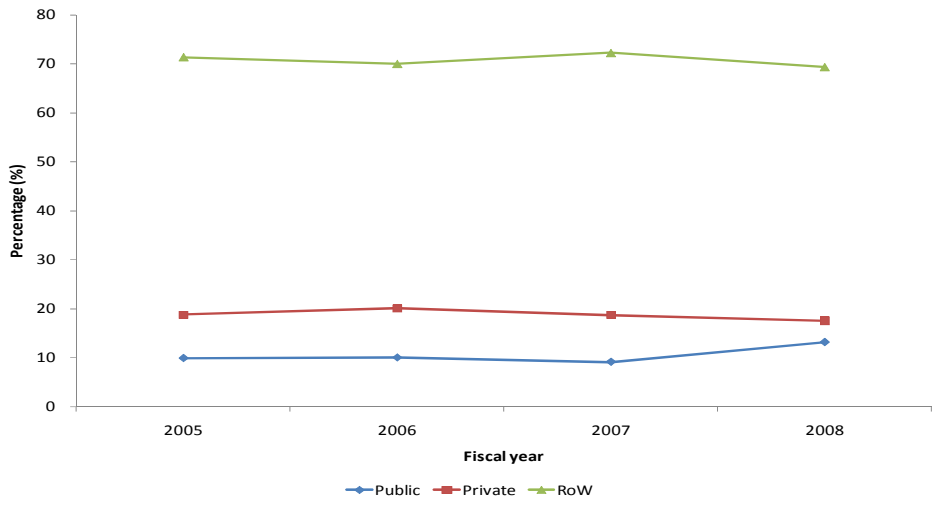
Table 4: Total health expenditure, GDP, annual growth rates and ratio of health spending to GDP, 2005 to 2008

	Total health expenditure		GDP		Ratio of
Fiscal year	**Amount (US$ '000)**	**Nominal growth rate (%)**	**Amount (US$ '000)**	**Nominal growth rate (%)**	**health expenditure to GDP (%)**
2005	30 307		232 200		13.1
2006	29 912	-1.3	236 900	2.0	12.6
2007	30 674	2.5	235 900	-0.4	13.0
2008	32 739	6.7	240 140	1.8	13.6
Average annual growth rate		2.6		1.1	

Source: FSM Health Accounts Database

In 2008, local financing of health expenditure was US$ 10.0 million, compared with US$ 22.7 million from rest of the world (RoW) funds. Of the local funds, US$ 4.3 million was government funds, while US$ 5.7 million was from private sources. Relative shares of public, private and RoW financing were largely stable during the period from 2005 to 2008 (see Figure 1). External donor funds dominated total health financing, with about 30% of the total made up of public and private funds.

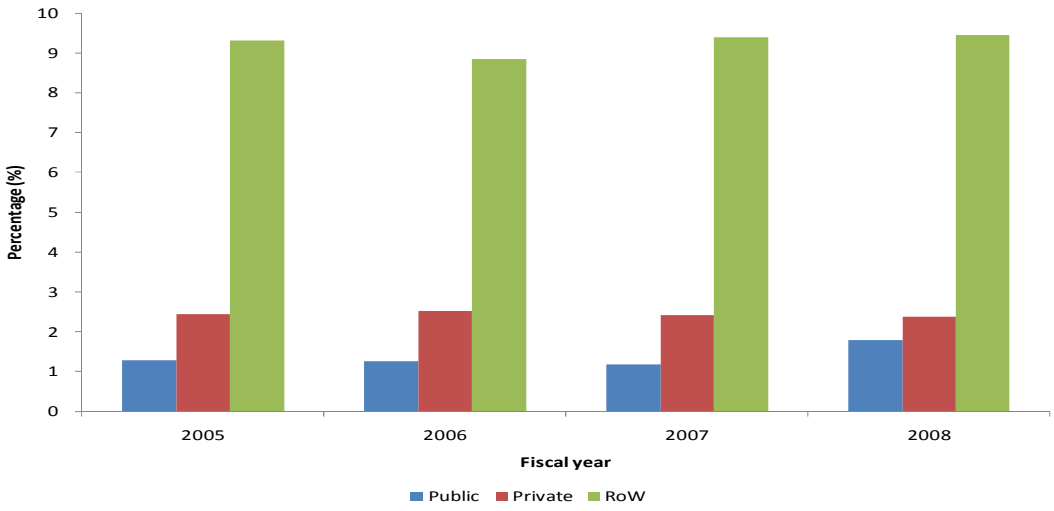
Figure 1: Share of public, private and RoW funding (%), 2005 to 2008



Source: FSM NHA

Public sector financing of health surged from 1.2-1.3% of GDP in 2005-2007 to 1.8% by 2008, whereas private sector financing stayed at 2.4%-2.5% of GDP over the same period. Meanwhile, external financing ranged from 8.8% to 9.5% of GDP (see Figure 2).

Figure 2: Public, private and RoW spending as a share of GDP (%)



3.5 Human resources for health

Human resources is a critical area in the health care setting nationally as many of the current workforce will be retiring in five to 10 years and their replacement is not imminent. Development of the health workforce remains a government priority. The need has been partially met through overseas fellowship training and by the several dozen graduates of the Pacific Basin Medical Officer Training Programme from 1991 to 1996, but serious constraints remain. These include the lack of a nursing school and gaps in speciality training for both nurses and physicians. However, the Government, especially the Department of Health and Social Affairs is very concerned about the shortages of health personnel manning the state hospitals and community health facilities and, in collaboration with the College of Micronesia, has started a certificate course in public health and is planning to establish a nursing school. In addition, Yap state has established a partnership with Palau Community College for the training of nurses. At present most doctors, nurses and allied health workers pursue their education in institutions like the Fiji School of Medicine, the Republic of the Marshall Islands Nursing School and the University of Guam.

Government health services also lack specialized allied health professional workers, particularly hospital administrators, epidemiologists, medical record administrators, pharmacists, laboratory technicians, radiologists and environmentalists. Due to limited resources, medical and nursing fellowships have been prioritized, based on the States' requests.

Four Pacific Open Learning Health Network (POLHN) Centres have been established, one in each of the four States, and are providing access to online courses and resources. A full-time Coordinator is being hired to provide support for local health professionals in accessing and participating in online courses and continuing education.

3.6 Partnerships

Apart from the usual hospital-based health care, community participation in health promotion and disease prevention is critical to successful partnership in the Federated States of Micronesia. Local civil societies, nongovernment organizations (NGOs) and church groups have played key roles in increasing public awareness on important health issues. The national Department of Health and Social Affairs is working in partnership with the four state departments of health services on policy direction, coordination, monitoring and technical assistance.

External partnerships with the United States Federal Government through various health agencies (Centers for Disease Control and Prevention, Health Resources and Services Administration, Department of Interior) largely take the form of funding assistance for programme activities in public health and preventive health services. With the exception of funding through the Amended Compact, infrastructure and capacity development have been on an ad-hoc basis.

The loan funded by the Asian Development Bank (ADB), Basic Social Services, has ended. The project was set up to assist the Government in providing capacities in health and education. Activities included training in primary health care and medical coding. Capacity-building in continuous quality initiative training is still seen as a priority for health personnel to stay abreast of new developments in health care delivery services. Partnership with the Department of Education is also essential for scholarships to prospective students in health careers.

As a Member State, the Federated States of Micronesia is also in partnerships with United Nations agencies, such as WHO, the United Nations Children's Fund (UNICEF), and the United Nations Development Programme (UNDP), as well as other regional organizations, such as the Secretariat of the Pacific Community (SPC) and the Pacific Island Health Officers Association (PIHOA). In partnerships with all these international and regional health organization the goal is to improve the health status of small-island communities.

3.7 Challenges to health system strengthening

Strengthening primary health care services is among the many challenges facing the Department of Health and Social Affairs, and enhancing local health departments with specialized medical services continues to be a priority. At present, and for years to come, there are 10 key health system issues confronting the Federated States of Micronesia. These are:

- improving health status;
- setting clear priorities to ensure the most efficient use of resources;
- addressing the shortage of staff (health workers due to retirement and out-migration)
- establishing new health system funding and financial management approaches;
- building managerial capacity;
- testing innovative approaches in every aspect of the system to increase quality, including improving both access for, and responsiveness to and for the community;
- introducing cost-effective new technologies;
- focusing on functions that constitute public goods;
- establishing national policies, measurable outputs, and standards to be met, including their monitoring and regulation; and developing the private health sector
- improving primary health care services, including community environmental health conditions in the remote areas and outer islands (accessing Internet, using solar power to acquire health information and sharing of health data through satellite links).

4. PROGRESS TOWARDS THE HEALTH MDGs

The Department of Health and Social Affairs is represented on the Federated States of Micronesia National Task Force for the Millennium Development Goals. Progress toward achieving the MDGs is outlined in a separate comprehensive Task Force report that will be produced shortly to be reviewed by all interested parties. However, current status (2009) of progress towards the MDGs is outlined in Table 5.

Table 5. The Federated States of Micronesia Millennium Development Goal status

MDG 4. Reduce child mortality		
4A. Between 1990 and 2015, reduce the under-five child mortality by two-thirds.*	On-track	Strong support
MDG 5. Improve maternal health		
5A. Between 1990 and 2015, reduce the maternal mortality ratio by three-quarters (75%).*	On-track	Strong support
5B. By 2015, achieve universal access to reproductive health care services.	On-track	Strong support
MDG 6. Combat HIV/AIDS, malaria, tuberculosis, and other diseases		
6A. By 2015 have halted and begun to reverse the spread of HIV/AIDS.	On-track to achieve	Strong support
6B. By 2010 achieve universal access to treatment for HIV/AIDS for all who need it.	Achieved	Strong support
6C1. By 2015 have halted and begun to reverse the spread of malaria.	Not Applicable to the Federated States of Micronesia	
6C2. By 2015 have halted and begun to reverse the spread of tuberculosis	Off-track	Strong support
6C3. By 2015 to have halted and begun to reverse the prevalence of non-communicable diseases.	Off-track	Strong support

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : National Health Statistics Office, Department of Health and Social Affairs, 16 April 2009

Title 2 : Federated States of Micronesia Statistics Division, Department of Economic Affairs
Web address : http://www.spc.int/prism/

Title 3 : *2000 Population and Housing Census report*. Division of Statistics, Department of Economic Affairs, May 2002

Title 4 : Secretariat of the Pacific Community (SPC)
Web address : http://www.spc.int

6. ADDRESSES

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WHO COUNTRY LIAISON OFFICE FOR NORTHERN MICRONESIA

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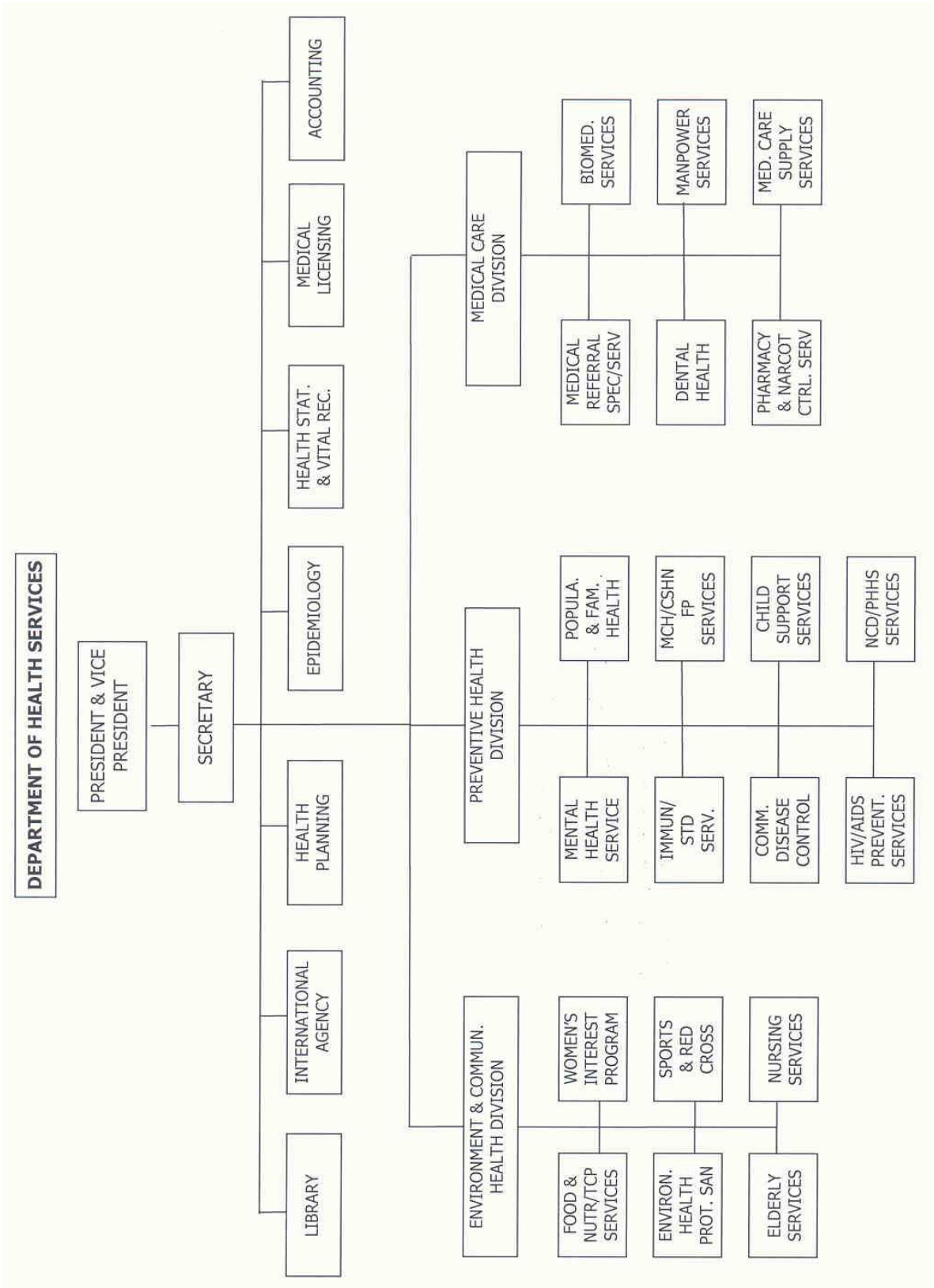
Palikir, Pohnpei FM 96941
Federated States of Micronesia
Telephone : (619) 320-2619
Fax : (619) 320-5263
Office Hours : 0800 – 1700 Mon. – Fri.

7. ORGANIZATIONAL CHART: Department of Health



MICRONESIA, FEDERATED STATES OF

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	**Total**		**Male**		**Female**			
1	**Area (1 000 km2)**	0.70						2010	1
2	**Estimated population ('000s)**	107.97		54.28		53.70		2009 est	2
3	**Annual population growth rate (%)**	0.25		...		...		2009 est	3
4	**Percentage of population**								
	- 0–4 years	12.64 [a]		12.88 [a]		12.40 [a]		2009 est	2
	- 5–14 years	23.95 [a]		24.38 [a]		23.52 [a]		2009 est	2
	- 65 years and above	4.00 [a]		3.61 [a]		4.39 [a]		2009 est	2
5	**Urban population (%)**	22.60		...		...		2009 est	4
6	**Crude birth rate (per 1000 population)**	19.90		...		...		2009 est	3
7	**Crude death rate (per 1000 population)**	3.80		...		...		2009 est	3
8	**Rate of natural increase of population (% per annum)**	1.61 [a]		...		...		2009 est	3
9	**Life expectancy (years)**								
	- at birth	68.50		67.70		69.30		2005-10est	5
	- Healthy Life Expectancy (HALE) at age 60	9.76		10.90		11.50		2002 est	6
10	**Total fertility rate (women aged 15–49 years)**	3.90						2009	3
	Socioeconomic indicators								
11	**Adult literacy rate (%)**	92.40		92.90		91.90		2009	3
12	**Per capita GDP at current market prices (US$)**	2 223.00		...		...		2008	3
13	**Rate of growth of per capita GDP (%)**	1.10						2008	3
14	**Human development index**	...							
	Environmental indicators	**Total**		**Urban**		**Rural**			
15	**Health care waste generation (metric tons per year)**	...		...		...			
	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
16	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	1	0	1	0	0	0	2009	7
	- Type B	2	2	0	0	0	0	2009	7
	- Type C	1	0	1	0	0	0	2009	7
	- Type E	0	0	0	0	0	0	2009	3
	- Unspecified	1	0	1	0	0	0	2009	7
	Cholera	0	0	0	0	0	0	2009	3
	Dengue/DHF	37	...	...	0	0	0	2009	C: 8, D: 3
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	20	9	11	0	0	0	2009	9
	Leprosy	122	76	46	0	0	0	2009	C: 8, D: 3
	Malaria	1	1	0	0	0	0	2009	3
	Plague	5	3	2	0	0	0	2009	3
	Syphilis	7	2	5	0	0	0	2009	9
	Typhoid fever	36	14	22	0	0	0	2009	3
17	**Acute respiratory infections**	13420	6102	7318	0	0	0	2009	9
	- Among children under 5 years	4599	2479	2120	1	0	1	2009	9

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	7186	3420	3766	2	2	0	2009	9
	- Among children under 5 years	2373	1312	1061	...	...	...	2009	9
19	**Tuberculosis**								
	- All forms	206	101	105	5	5	0	2009	3
	- New pulmonary tuberculosis (smear-positive)	56	26	30	...	...	...	2009	3
20	**Cancers**								
	All cancers (malignant neoplasms only)	125	29	96	40	23	17	2009	9
	- Breast	22	1	21	5	0	5	2009	9
	- Colon and rectum	24	12	12	3	1	2	2009	9
	- Cervix			54			2	2009	9
	- Leukaemia	4	1	3	2	1	1	2009	9
	- Lip, oral cavity and pharynx	1	1	0	1	1	0	2009	9
	- Liver	1	1	0	13	12	1	2009	9
	- Oesophagus	1	1	0	1	1	0	2009	9
	- Stomach	5	3	2	2	0	2	2009	9
	- Trachea, bronchus, and lung	14	10	4	11	7	4	2009	9
21	**Circulatory**								
	All circulatory system diseases	9022	4180	4842	74	36	38	2009	9
	- Acute myocardial infarction	52	37	15	43	27	16	2009	9
	- Cerebrovascular diseases	147	84	63	1	1	0	2009	9
	- Hypertension	7304	3363	3941	16	5	11	2009	9
	- Ischaemic heart disease	924	483	441	10	2	8	2005	9
	- Rheumatic fever and rheumatic heart diseases	595	213	382	2	1	1	2009	9
22	**Diabetes mellitus**	8 451	4685	3766	89	41	48	2009	9
23	**Mental disorders**	644	355	289	1	0	1	2009	9
24	**Injuries**								
	All types	98	45	53	14	2	12	2009	9
	- Drowning	1	0	1	5	0	5	2009	9
	- Homicide and violence	5	2	3	1	0	1	2009	9
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	90	43	47	4	1	3	2009	9
	- Suicide	9	7	2	9	7	2	2009	9
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Essential (primary) hypertension	921	380	541	852.99	700.14	1007.49	2009	7
	2. Diarrhoea/ Gastroenteritis	859	432	427	795.57	795.95	795.19	2009	7
	3. Diabetes Melitus	643	266	377	595.52	490.10	702.07	2009	7
	4. Skin Disorder	625	355	270	578.85	654.08	502.81	2009	7
	5. Urinary Tract Infection	603	428	175	558.47	788.58	325.90	2009	7
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Myocardial Infarction	42	27	15	38.90 [a]	49.75	27.93	2009	7
	2. Diabetes Melitus	30	15	15	27.78	27.64	27.93	2009	7
	3. Chronic Obstructive Pulmonary Disease	22	16	6	20.38	29.48	11.17	2009	7
	4. Cerebro Vascular Accident	15	10	5	13.89	18.42	9.31	2009	7
	5. Other ill-defined and unspecified causes of mortality	15	11	4	13.89	20.27	7.45	2009	7
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					66.00		2009	3
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
29	**Percentage of pregnant women with anaemia**					26.60		2009	10
30	**Neonatal mortality rate (per 1000 live births)**	9.30		...		...		2009	3
31	**Percentage of newborn infants weighing less than 2500 g at birth**	11.10		...		...		2009	10
32	**Immunization coverage for infants (%)**								
	- BCG	75.00		...		...		2009	8
	- DTP3	91.00		...		...		2009	8
	- Hepatitis B III	89.00		...		...		2009	8
	- MCV2	82.00		...		...		2009	8
	- POL3	88.00		...		...		2009	8
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			89			0	2009	9
	- Eclampsia			2			0	2009	9
	- Haemorrhage			187			0	2009	9
	- Obstructed labour			2			0	2009	9
	- Sepsis			4			0	2009	9
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	3,8
	- Diphtheria	0	0	0	0	0	0	2009	3,8
	- Measles	0	0	0	0	0	0	2009	3,8
	- Mumps	17	8	9	1	0	1	2009	3
	- Neonatal tetanus	0	0	0	0	0	0	2009	3,8
	- Pertussis (whooping cough)	0	0	0	0	0	0	2009	3,8
	- Poliomyelitis	0	0	0	0	0	0	2009	3,8
	- Rubella	0	0	0	0	0	0	2009	3,8
	- Total Tetanus	0	0	0	0	0	0	2009	3,8
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	...	...		
		- Specialized hospitals	0	0	2009	11
		- District/first-level referral hospitals	4	312	2009	11
		- Primary health care centres	5	0	2009	11
	Private health facilities	- Hospitals	1	36	2009	11
		- Outpatient clinics	6	...	2009	11
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			32.70	2008p	3
	- total expenditure on health as % of GDP			13.60	2008p	3
	- per capita total expenditure on health (in US$)			304.00	2008p	3
	Government expenditure on health					
	- amount (in million US$)			29.99	2008p	3
	- general government expenditure on health as % of total expenditure on health			97.90	2008p	3
	- general government expenditure on health as % of total general government expenditure			18.80	2008p	3
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			75.57	2008p	3
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			4.20	2008p	3
	- out-of-pocket expenditure on health as % of total expenditure on health			4.20	2008p	3
	Exchange rate in US$ of local currency is: 1 US$ =			1.00	2008p	3
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	63	...	...	...	...	...	...	2009	7
		- Ratio per 1000 population	0.58 [a]	...	...	...	...	...	...	2009	7
	Dentists	- Number	13	...	...	...	...	...	...	2009	7
		- Ratio per 1000 population	0.12 [a]	...	...	...	...	...	...	2009	7
	Pharmacists	- Number	14	...	...	...	...	...	...	2009	7
		- Ratio per 1000 population	0.13 [a]	...	...	...	...	...	...	2009	7
	Nurses	- Number	229	...	...	...	...	...	...	2009	7
		- Ratio per 1000 population	2.12 [a]	...	...	...	...	...	...	2009	7
	Midwives	- Number	20	...	...	...	...	...	...	2009	7
		- Ratio per 1000 population	0.19 [a]	...	...	...	...	...	...	2009	7
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	1	...	...	...	...	...	...	2009	3
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	0	...	...	...	...	...	...	2009	9
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	13.50 [b]	...	...	2009	3
44	Under-five mortality rate (per 1000 live births)	39.00	...	...	2009	3
45	Proportion of 1 year-old children immunised against measles	86.00	...	...	2009	8
46	Maternal mortality ratio (per 100 000 live births)	0.00			2009	7
47	Proportion of births attended by skilled health personnel	100.00 [a]			2009	12
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	20.00			2009	12
	- Percentage of deliveries in health facilities (as % of total deliveries)	80.00			2009	12
48	Contraceptive prevalence rate	55.00	...	...	2009	13
49	Adolescent birth rate	22.00			2009	3
50	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	31.00	...	...	2009	3
53	Estimated HIV prevalence in adults	34.60	...	...	2009	3
54	Percentage of people with advanced HIV infection receiving ART	8.30	...	...	2009	3
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	168.00	...	...	2009 est	3
60	Tuberculosis death rate per 100 000 population	15.00	...	...	2009	3
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	85.00	...	...	2008	8
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	20.00	...	...	2008	3
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	...	95.00	...	2008	14
64	Proportion of population using an improved sanitation facility	25.00	61.00	14.00	2006	15
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
est	Estimate
NA	Not applicable
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Hospital-reported infant deaths

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MONGOLIA

1. CONTEXT

1.1 Demographics

Mongolia is the fifth largest country in Asia, covering a total area of 1.6 million square kilometres. In 2009, the population reached 2.7 million, giving an overall population density of 1.7 persons per square kilometre, and making it the least densely populated country in the world.

The population structure reveals that 27.6% are under the age of 15 years, 68.4% between 15-64 years of age and only 4.0% are aged 65 years and above. Of the total population, 63.2% live in urban areas. Males comprise 48.9% of the total population. The adult literacy rate is reported to be 97.8%.

Since 1990, Mongolia has been undergoing a demographic transition defined by reductions in the fertility and death rates. The population growth rate decreased from 2.7% in 1990 to 1.17% in 2003-2006, and reached 1.96% in 2009, increasing by 0.3%-0.8% between 2007 and 2009 compared with the rate in the previous three years.

The crude birth rate per 1000 population fell by half between 1990 and 2003, from 35.3 to 18. It then remained fairly stable before increasing to 23.7 in 2008 and 25.30 in 2009. The total fertility rate fell by half during the period from 2000-2003 compared with the rate of 4.3 in 1990. The rate remained stable at 1.9 from 2004-2006 then, because of the increased number of births in 2007-2009, increased to 2.3 in 2007 and 2.7 in 2009.

Due to increased urbanization and socioeconomic development in recent years, migration from rural to urban and suburban areas has been increasing. In 2009, 36.7% of the population were residing in rural areas, a decrease from 38.6% in 2008.

1.2 Political situation

Mongolia is a democratic parliamentary country. The centralized governmental structure is divided into three branches: the executive, which is the Government, chaired by the Prime Minister; the legislative, represented at the national level by the Ikh Khural (the Parliament); and the judicial, led by the Supreme Court.

The President of Mongolia is a figurehead for the country and is directly elected for a four-year term. Political parties that have seats in Parliament are eligible to nominate their candidates to the Presidential election. Although most political power is held by the Prime Minister and Parliament, the President is Commander-in-Chief of the armed forces and heads the National Security Council, as well as appointing all the judges, the Prosecutor General, the Deputy Prosecutor General and ambassadors. The last parliamentary election was held in 2008. Presidential elections take place once every four years; the last was held in mid-May 2009, when the Democratic Party candidate was elected as the fourth President of Mongolia.

1.3 Socioeconomic situation

The Mongolian Statistical Yearbook shows total budget revenue and grants have been rising in recent years, increasing 2.6 times in 2008 compared with 2005. There was a budget surplus amounting to 2.6% of gross domestic product (GDP) in 2005, 3.3% in 2006, and 2.9% in 2007. However, the overall budget deficit as a percentage of GDP was 5.0% in 2008, based on preliminary estimations.

The preliminary GDP figure for 2008, 6130.3 billion *tugriks* (US$ 4577 million) at current prices, shows an increase of 8.9% or 294.6 billion *tugriks* (US$220 million) compared with the previous year. This increase was achieved mainly due to 7.5% growth in the number of livestock, a 21.0% increase in the agriculture sector, 4.7% in manufacturing, and 15.9% in the service sector, compared with 2007.

The *Mongolian Statistical Yearbook 2008* indicates that, according to the World Bank Atlas method, the preliminary estimate for per capita GDP in 2008 reached US$ 1649, an increase of US$ 355 compared with 2007, while the monthly average income per household increased by 37.9% compared with 2007, reaching 363 300 *tugriks* (US$272.13). Based on Household Socio Economic Survey results for 2002-2003, the poverty headcount reached 35.2%, decreasing by 0.9 percentage points, the poverty gap decreased by 09.9 points, and poverty severity decreased by 0.7 points.

The main indicator of labour-market development and the economic activity among the population is the labour-force participation rate. The rate has decreased slightly in the last few years. It reached 64.2% in 2007, a 0.2% decline from 2004 and 2006, and a 0.7% rise from 2005. In 2008, the number of people registered as unemployed was 29 800, a 0.4% fall from 2007, and a 9.1% drop from 2005 and 2006. The male and female shares of the economically active population and employed population are close, while more females are registered as unemployed.

1.4 Risks, vulnerabilities and hazards

Mongolia has a unique geographical structure, with steppes, semi-deserts and deserts, high mountain ranges and dry, lake-dotted basins. The climatic conditions are predominantly reflected by its desert steppe, with diverse soil and vegetation patterns, by its range of natural biological features, and by its geomorphological structure. The climate is defined as semi-arid continental, with dry and very dry and cool-to-warm ranges. The average altitude is 1580 metres above sea level and the average rainfall is 203 millimetres per year. A surface water inventory conducted in 2007 revealed that 852 rivers and streams out of 5128 had dried up.

The country is prone to natural hazards, including drought, flood, steppe and forest fires, and human and animal epidemic diseases. Mongolia's large herder population has a greater chance of contacting zoonotic diseases; the livestock population was 43 million in 2009. As the Mongolian economy is heavily reliant on herding and agriculture, harsh winters and periodic droughts, not only have adverse effects on livestock and agriculture, but also on the health status of the disaster-affected population.

The annual report of the National Emergency Management Agency indicates that, in 2009, a total of 120 steppe and forest fires were registered, causing losses amounting to 563.6 million *tugriks* (US$ 422 million). In the same year, 31 natural hazards, such as storms, flood, heavy rains and thunderstorms occurred, resulting in the deaths of 53 people and 333 463 head of livestock.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Since the beginning of the 1990s, the morbidity and mortality patterns have shown rapid epidemiological transition. Cardiovascular diseases, cancer and injuries and poisonings have increased, while deaths from communicable and respiratory diseases have declined. The end of the 1990s saw injuries and poisonings exceed respiratory diseases as a cause of death.

The first and second Mongolian STEPS Survey on the Prevalence of Non-Communicable Disease Risk Factors, carried out by the Ministry of Health in 2005 and 2009, respectively, revealed that risk factors contributing to noncommunicable diseases, including smoking, alcohol consumption, overweight and obesity, are still prevalent among the population.

2.2 Outbreaks of communicable diseases

In 2009, 38 859 cases of infectious disease were registered, with an incidence rate of 146.1 per 10 000 population, a decrease from 164.7 in 2008. Sexually transmitted infections (43.8%), viral hepatitis (17.7%), tuberculosis (10.8%) and respiratory infections (10.0%) are the most common infections.

The HIV epidemic in Mongolia is classified by WHO as low-prevalence. Although HIV/AIDS prevalence is low, however, the country is at high risk of an epidemic due to its relatively young population, the steady increase in cases of STI in recent years, increased population migration, and

growing HIV/AIDS epidemics in neighbouring countries, China and Russia. The number of registered cases has been increasing in recent years; 92% of reported HIV/AIDS cases have been registered in the last five years. The first HIV infection was reported in 1992 and by 2009 62 HIV/AIDS cases had been reported, of which 13 were registered in 2009.

A National Committee on HIV/AIDS Prevention, chaired by the Deputy Prime Minister, has been established, and will contribute to MDG achievements by ensuring integrated coordination and management of HIV/AIDS prevention measures and facilitating intersectoral collaboration.

Mongolia is among the seven countries in the WHO Western Pacific Region with the highest tuberculosis (TB) incidence. The TB incidence rate per 100 000 population increased by 1.5 times in 2000 (125) and by 2-2.3 times in 2004-2006 compared with the rate (79) in 1990. Since 2007, the rate has decreased to 159 in 2008 and 156 in 2009. New TB cases, which comprise 10.8% of all reported communicable diseases, reached 15.9 per 10 000 population in 2009, the same level as in 2008. The country has succeeded in reducing the TB case fatality rate as a result of directly observed treatment, short-course (DOTS) implementation since the 1990s, with the proportion of TB cases cured under DOTS increasing from 80.0% in 2000 to 84.2% in 2009. The TB mortality rate has decreased in recent years. In 1992-1995, on average, the number of deaths was 121; in 2004-2009, the number was estimated at 80.

The first case of infection with the pandemic influenza A (H1N1) 2009 virus was registered in October 2009. Since then, a total of 1240 cases and 28 related deaths have been registered by laboratory examinations, as of the end of 2009, 53.1% among males. Most cases (651) were registered in Ulaanbaatar, the capital city.

2.3 Leading causes of mortality and morbidity

Mongolia has been experiencing a gradual epidemiological transition in morbidity and mortality patterns since 1990. Consequently, lifestyle- and behaviour-dependent diseases, such as circulatory system diseases, cancer and injuries, have become the leading causes of morbidity and mortality. Common risk factors associated with unhealthy lifestyle behaviours, such as smoking, alcohol abuse, unhealthy diet and lack of physical activity, are becoming highly prevalent and are major causes of premature death in the productive age group.

As of 2009, the leading causes of morbidity per 10 000 population were diseases of the respiratory (1027.7), digestive (900.5), genito-urinary (756.3), and circulatory (679.4) systems, and injuries and poisonings (416.9). The rates for these diseases, and injuries and poisonings, have increased year by year in recent years, with 2009 rates 1.5-2.0 times higher than in 2000. When the incidence of the five leading causes of population morbidity are stratified by place of residence, urban vs rural, overall morbidity for respiratory, digestive and genito-urinary diseases can be seen to be higher in rural settings, while the incidence rates for injuries and cardiovascular diseases are higher in urban areas.

Diseases of the circulatory system, neoplasms and injuries have remained the leading causes of mortality since 2000. In 2009, the leading causes of mortality per 10 000 population were diseases of the circulatory system (21.7), neoplasms (11.89), injuries and poisonings (8.71), diseases of digestive system (4.84), and diseases of the respiratory system (2.77). The gender-specific mortality rates are 69.11 per 10 000 for males and 45.99 per 10 000 for females. The health statistics for 2009 shows cardiovascular diseases (38.0%), cancer (20.8%) and injuries and poisonings (15.2%) accounted for 74% of all the registered deaths.

Each year, 5500-6000 people (one in every three deaths) die due to circulatory system disease, which remains the first leading cause of mortality among the population. The gender-specific mortality rates are 24.19 per 10 000 for males and 18.76 per 10 000 for females.

Neoplasms have remained the second leading cause of mortality for the past 10 years. Among males, the leading types of cancer are of the liver, stomach, lung and oesophagus. Among females they are of the liver, cervix, stomach and oesophagus.

Mortality due to injuries and poisonings has increased sharply in recent years and was ranked the fifth leading cause of mortality in 1990, before moving to fourth place in 1994. It has been ranked third since 2000. The mortality rate per 10 000 population rose from 7.6 in 2000 to 9.33 in 2008 then, for the first time in 10 years, decreased to 8.71 in 2009. By age group, mortality is higher among males aged 20-24 years.

2.4 Maternal, child and infant diseases

The national maternal mortality ratio (MMR) per 100 000 live births for 1990-2000 was considered high compared with regional and developed countries (170 per 100 000 in 1996) but, by 2006, it had fallen to 69.7. However, due to the dramatic increase in the number of births in 2007, from 47 361 to 55 634, the MMR per 100 000 live births increased to 89.6. In 2008, the ratio reached 49.0, a decrease of 40.6 compared with 2007. However, in 2009, the maternal mortality ratio increased to 81.4 to compare with 2008 owing to 17 deaths from pregnancy complications caused by the pandemic influenza A (H1N1) 2009 virus. The number of births also increased in 2009 to 68 544, an increase of 5457 compared with 2008.

Of the maternal deaths registered in 2009, 33.9% were due to pregnancy-related complications, 7.1% to delivery complications and 14.3 to post-delivery complications. Pregnancy-related and other health problems accounted for 44.6% of maternal mortality. Among the deaths, 82.0% were women aged 20-34 and the remainder were 35 and above years.

The under-five mortality rate per 1000 live births decreased almost fourfold from 87.5 in 1990 to 23.6 in 2009. In addition, the infant mortality rate per 1000 live births decreased to 20.2 in 2009 from 63.4 in 1990. However, under-five and infant mortality rates per 1000 live births increased by 0.2% and 0.6%, respectively, in 2009 compared with 2008. The three leading causes of infant mortality were perinatal disorders (52.4%), diseases of the respiratory system (19.2%), and congenital malformations/disorders and chromosome disorders (11.2%).

According to the 2007 short programme review for child health, the proportion of child deaths due to acute respiratory infection and diarrhoea has fallen, while the proportions due to neonatal causes and injuries have increased. Neonatal deaths represent 62% of infant deaths, and 80% of newborn deaths occur in the first week of life. Prevalence rates for wasting, underweight and stunting have generally fallen since 2000; stunting rates have decreased less rapidly, with 26.2% of children still stunted in 2004. Prevalence rates for iodine and iron deficiency have fallen in the last two to three years, but remain a problem, with 22% of children under five years of age being anaemic.

2.5 Burden of disease

As mentioned before, Mongolia has been experiencing an epidemiological transition over the last decade. The prevalence of lifestyle-related chronic diseases is increasing and has become a public health issue. Currently, circulatory diseases, cancer, injuries and accidents are the leading causes of mortality.

Liver cancer stands out as one of the most common causes of morbidity and mortality that require special attention. Hepatitis B and V viruses are the most common causes of chronic liver disease and hepatocellular carcinoma in the country. The high intake of alcohol accelerates the course of chronic disease from these two viruses, leading to the development of chronic hepatitis and liver cancer at a much younger age than is seen in other countries.

Respiratory and gastrointestinal diseases still dominate the morbidity pattern. Morbidity due to infectious diseases like HIV/AIDS, STI, TB, viral hepatitis and zoonotic diseases, which are related primarily to risk factors such as behaviour, lifestyle choices and living conditions, are showing a tendency to increase.

In the last few years, an increasing number of deaths have been caused by suicide, homicide and traffic accidents. The suicide rate is four times higher among men than women and the homicide rate 4.4 times higher, and men are 3.8 times more likely than women to die as a result of traffic accidents.

The First Mongolian STEPS Survey on the Prevalence of NCD Risk Factors, conducted in 2005, showed that the surveyed population were exposed to many risk factors leading to noncommunicable diseases.

The overall prevalence of current smokers was 28.0%, of which 24.2% were daily smokers and 3.4% non-daily smokers. The Survey also showed that, over the preceding 12 months, about 60.8% (±0.02) of the population (65.1% of males and 56.2% of females) had been drinking occasionally, 5.0% had consumed alcohol in moderation (8.8% of males and 1.0% of females) and only 0.7 (±0.04)% had been drinking frequently (1.1% of males and 0.2% of females). In addition, about 23% of the surveyed population reported low levels of physical activity.

According to preliminary data from the 2009 Second Mongolian STEPS Survey on the Prevalence of NCD Risk Factors, 27.5% of the population now smoke, 62.7% have high blood pressure, 58.5% consume alcohol, 53.6% are overweight or obese, and 40.5% have raised levels of cholesterol. In addition, around 70% of Mongolians drink salted tea and the average daily intake of salt (15.1 grams) is more than twice that recommended by WHO.

In an effort to combat the increasing burden of disease due to chronic and noncommunicable diseases, as reflected in the five leading causes of morbidity and mortality, the Government launched a national programme on prevention and control of noncommunicable diseases for 2006-2015, and has also begun implementing a health project supported by the Millennium Challenge Account. The objectives of the project are the prevention and early detection of noncommunicable diseases; provision of effective, affordable and long-time treatment of noncommunicable diseases following international best practices in the field; and improvement of the quality and accessibility of health care for noncommunicable diseases and injuries.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is the Government's central administrative body responsible for health policy formulation, planning, regulation and supervision, and for ensuring implementation of health-related activities and standards by its implementing institutions and agencies.

The vision of the Ministry of Health is to strive to ensure the availability, accessibility, affordability and equity of quality health care services for all Mongolians. Health care will be provided through a needs-based health system which will specifically address the health issues affecting vulnerable groups (particularly the poor), and regulate and enhance the health sector's human resource capacity. The ultimate goal of the Ministry is to promote social and economic development through poverty alleviation.

The Ministry's mission is to build favourable living conditions for people by upgrading the quality of health care, public health services and health care preventive actions to international standards.

Within the scope of its mission, the Ministry of Health aims to fulfil the following strategic objectives:

- To develop health laws, policies, long and midterm strategies and programmes, and provide policy guidelines;
- to ensure leadership of public administration and human resources management and create effective, accountable and transparent work conditions;
- to administer and coordinate public health policy implementation to support health-promoting settings;
- to administer and coordinate health care and services policy implementation;
- to provide financial management for the health sector;
- to carry out monitoring and evaluation of the implementation and output of health laws, policies, programmes and projects, and provide information for clients;
- to administer and coordinate pharmaceutical and medical supplies policy implementation; and
- to develop and coordinate international cooperation in line with health sector policies, priorities and strategies.

3.2 Organization of health services and delivery systems

The health care system is characterized by three levels of care and its prevailing principle is to deliver an equitable, accessible and quality health care service to every person. Primary health care is provided mainly by family group practices in Ulaabaatar, the capital city, in *aimag* centres, and in *soum* and inter-*soum* hospitals in *aimag*s. Secondary care takes place in district general hospitals in Ulaanbaatar and in *aimag* general hospitals. Tertiary care is provided in major hospitals and specialized centres in Ulaanbaatar.

By 2009, 16 specialized hospitals, 4 regional diagnostic and treatment centres, 17 *aimag* general hospitals, 12 district general hospitals, 6 rural general hospitals, 35 inter-*soum* hospitals, 277 *soum* hospitals, 18 village hospitals, 226 family group practices and 1082 private hospitals and clinics were delivering health care and services to the population.

3.3 Health policy, planning and regulatory framework

Numerous laws, policies and national public health programmes are being implemented in the health sector. The State Public Health Policy, approved in November 2001, is an important policy document that clearly defines policy principles, directions and implementation mechanisms. With the support of the Government of Japan, the Ministry of Health has developed the Health Sector Master Plan, a long-term policy framework for 2006-2015, which represents the Ministry's first comprehensive documentation of its future direction and incorporates the Government's commitment to the Millennium Development Goals.

The Mid-Term Implementation Framework of the Health Sector Master Plan for the period of 2007-2010 was approved by Health Minister's Order #43 of 2007. Seven key areas and 24 strategies have been incorporated to facilitate the delivery of socially responsive, equitable, accessible and quality services to all. The overall outcomes to be achieved by 2015 include increased life expectancy; a reduction in the infant mortality rate; a reduced child mortality rate; a reduced maternal mortality ratio; improved nutritional status, particularly micronutrient status among children and women; improved access to safe drinking water and basic sanitation; prevention of HIV/AIDS; sustainable population growth; reduced household health expenditure, especially among the poor; a more effective, efficient and decentralized health system; and an increase in the number of client-centred and user-friendly health facilities and institutions.

In 2009, policy documents, including the Hospital Waste Management Strategy, the National Strategy on Deafness and Hearing Impairment Prevention and Control, the E-Health Development Strategy, the National Strategy on Tuberculosis Prevention, and the National Strategy on Security and Sustainable Supply of Reproductive Health Drugs and Supplies, were approved.

3.4 Health care financing

Statistics for 2000-2008 show that there has been an increase in health expenditure in recent years, with total health expenditure increasing by 4.7 times in 2008 compared with 2000. In 2009, however, health expenditure decreased by a factor of 2.4 compared with 2008. Health expenditure as a percentage of GDP remained stable at 3.3% in 2005-2006 and increased from 3.4% in 2007 to 3.8% in 2009.

An overview of the health sector budget for the period from 2000 to 2009 by its main sources reveals the Government (75.3%) and the Health Insurance Fund (22.0 %) as the major contributors, followed by revenues from fees for services and supplementary activities (2.7%). Due to the economic crisis, the percentage of health financing from the government budget decreased by 3.7%, while the percentage from the Health Insurance Fund increased by 4.0%.

Health insurance coverage (introduced in 1994) reached 77.6% of the population in 2009, a decrease of 5.6% from the 83.2% in the previous year. Health Insurance Fund income and expenditure have been increasing, year by year, since 2000. As of 2009, over 83.43% of Health Insurance Fund expenditure was on inpatient care, 11.07% on outpatient care, and the remaining 5.5 % on discounted drugs, sanatoriums and other costs.

In 2009, the health expenditure breakdown by level of care was: 21.7% to tertiary care, 31.7% to secondary care and 23.6% to primary health care.

3.5 Human resources for health

Despite government efforts to protect the health of the population, improve health care services, enhance health systems, create a favourable legal environment, increase the efficiency of public financing and improve the social protection of health workers, many challenging human resource issues remain. In particular, there is a shortage of health professionals in rural areas owing to great discrepancies in distribution. Rural health facilities, particularly *soum* and *intersoum* hospitals, are experiencing shortages of doctors and other health professionals. As of 2009, there were 2.57 physicians per 1000 population in urban areas, while there were 2.75 physicians per 1000 in rural areas, and four *soums* had no medical doctors. In addition, the continued overproduction of physicians has resulted in a high physician-nurse ratio of 1:1.26, which is very distorted compared with international standards.

Most health sector human resource issues require the involvement and cooperation of multiple sectors. In that regard, a high level Intersectoral Coordinating Committee on Health Sector Human Resources, comprising representatives of the Government, ministries and international donors, has been established with a view to improving political commitment and donor support and funding to coordinate the implementation of health sector human resource policies and strategies at the national level. Priority areas and a strategy for action for the Committee have been approved by the Prime Minister and the Committee Chairman. Within the action plan, priority actions have been identified, including, among others, introducing a separate and independent labour-norm- and performance-based salary system for health professionals, varying according to differences in responsibility and geographical location; developing multiple-choice incentive packages to encourage specialists to work in rural, remote areas; and revising and renewing the accreditation criteria for medical training institutions.

3.6 Partnerships

The Government has begun implementing a health project supported by the Millennium Challenge Account. The project aims to decrease mortality and morbidity due to noncommunicable diseases and injuries and to increase the length and quality of life of Mongolians by decreasing behavioural risk factors among the population; supporting prevention and early detection of arterial hypertension, myocardial infarction, stroke, diabetes, cervical and breast cancer; and improving the quality and accessibility of NCD care.

3.7 Challenges to health system strengthening

The Government Plan of Action for 2008-2012 aims to expand the inter-hospital network and telemedicine diagnosis and treatment. General hospitals and specialized centres (15 health organizations) in Ulaanbaatar have been connected to an inter-hospital network that will serve as a basis for the expansion of the network to *aimag* and district hospitals. The use of e-medical records for patients is considered to be one of the important advantages of the network, which will help in ensuring timely, quality and accessible health services to the population and create a population health database. To ensure the network between health organizations functions well, certain issues need to be resolved in the coming years, including training and capacity building of information technology specialists; supply of equipment and devices to health organizations; use of e-hospital software for e-medical records and patient databases; expansion of network into *aimags*; and the legal framework for confidentiality and security of patient records.

Information technology contributes greatly to the health sector in terms of upgrading health service quality, providing patient-friendly health services, easing the workloads of health professionals, and improving the efficiency and quality of health information. In recent years, there has been an intensive programme to introduce the latest information and communication technologies into the health sector to keep up with current e-health development. Unfortunately, because of a lack of proper coordination, and standardization, instead of making things simpler and easier, some efforts have led to additional workload and have made matters more complicated. As a developing country, donor support is required to develop

e-health, and a number of projects are under implementation. There is a rising need to define priority action areas to develop e-health, as well as rational and efficient resource allocation.

On the basis of the above-mentioned needs, the Ministry of Health has developed the E-Health Strategy for 2010-2014, which will play a central role in defining the direction for the renewal and development of e-health; defining its structure and content; defining the direction for use of information communication and technology; and providing coordination for implementation. The E-Health Strategy has defined priority action areas for e-health in the field of developing the health workforce, improving the quality of health care services through the use of telemedicine and other e-health applications; developing e-information systems and an infrastructure for e-health; creating an enabling environment for e-health; and promoting health education for the population

4. PROGRESS TOWARDS THE HEALTH MDGs

In order to ensure the successful implementation of the Millennium Development Goals, the Parliament of Mongolia defined and approved its own Mongolian-specific "Millennium Development Goals" (MDGs) and "Millennium Development Goals-based Comprehensive National Development Policy".

Goal 4: Reduce child mortality

The Mongolian Government is implementing the National Programme for Child Development and Protection (2002-2010), which outlines the core policies for overcoming challenges in child health and reducing the under-five mortality rate. Specifically, the programme addresses priority issues such as:

- establishing a human resource system that enables health professionals to work in rural areas of the country;
- implementing the WHO Integrated Management of Childhood Illnesses (IMCI) strategy;
- equipping medical professionals that provide primary health care services to children and infants with additional professional training and skills;
- creating a system to monitor micronutrient and vitamin deficiency in children; and
- improving neonatal and fetal diagnostic and treatment services.

The infant mortality rate in Mongolia per 1000 live births dropped from 63.4 in 1990 to 20.2 in 2009, while the under-five mortality rate per 1000 live births dropped from 87.5 to 23.6 over the same period. As a result of the implementation of programmes and projects on safe motherhood, maternal and child health, IMCI, prevention from micronutrients and vitamin deficiency and immunization, under-five mortality as a result of preventable diseases has decreased significantly. However, the mortality rate among children under five from rural areas and poor families remains comparatively high.

Goal 5: Improve maternal health

The Government is currently implementing the State Policy on Population Development, the Third National Reproductive Health Programme, and the second generation of the Strategy to Reduce Maternal Mortality. These policies and strategies aim to:

- improve the quality of health care services to 'at-risk' pregnant women;
- improve the diagnostic capacity for pregnancy-related risks and the referral system;
- establish maternal rest homes for pregnant women;
- improve the coverage and delivery of health care services to women living in rural areas;
- maintain the readiness of health care providers to render emergency medical services whenever required; and
- upgrade the health education of the general population.

As a result of these policies and strategies, the maternal mortality ratio (MMR) in Mongolia has shown a steady decline since the 1990s. For example, in 2008 it was 49.0 per 100 000 live births, which reflects a four times decrease compared with 1990 (199.0). However, in 2009, the MMR experienced a dramatic increase (81.4 per 100 000 live births) due to 17 deaths from pregnancy complications caused by the

pandemic H1N1 2009 virus.

Currently, 20% of all maternal mortality is caused by Type I delays, where pregnant women and their family members lack the health education to take care of themselves and to follow doctors' advice. Approximately 4% to 5% of mortality further occurs because of Type II delays, which are primarily caused by failure to reach medical facilities in time due to long distances, lack of communication or lack of transportation.

In order to reduce the MMR, the Government aims to reduce the number of referrals to specialized centres by strengthening the maternity departments and wards of the regional diagnostic and treatment centres and *aimag* general hospitals, as well as the gate-keeping functions of these health facilities. The Government needs to focus on strengthening the capacity of local general hospitals, *inter-soum* hospitals, and health facilities in rural areas with high birth rates. In addition, there is a need to improve the medical management and personnel skills in these facilities to provide comprehensive, accessible and quality maternal health care services, and to introduce medical approaches of an international standard in the medical technology and laboratory capacity of these facilities that are applicable to national specifics.

Goal 6: Combat HIV/AIDS, malaria and other diseases

The Government is committed to increasing its efforts to improve HIV/AIDS prevention activities and to limit prevalence by 2015. The first HIV infection was reported in 1992, and, by 2009, 62 HIV/AIDS cases had been reported, of which 13 were registered in 2009. Of the registered cases, 80.0% were male. Ten people have died of AIDS-related conditions.

Although the prevalence rate for HIV/AIDS is less than 0.02%, the number of registered cases has been increasing in recent years; 92% of all reported HIV/AIDS cases were registered in the last five years. The main mode of transmission among the reported cases is unprotected sex between men and unprotected commercial sex.

In addition, the prevalence of STI remains high, sustaining the risk of a further increase in HIV/AIDS. Mongolia has been implementing policies to: decrease the risk of direct blood infection through a nationwide programme for blood product safety and by improving access to information, informative advertisements and necessary training in the field of HIV/AIDS prevention; improve the quality control system and quality of diagnosis and expand the parallel surveillance of HIV/AIDS and STI; increase the necessary financing for the prevention, surveillance, and control of HIV/AIDS and STI-related activities; and include the ambulatory treatment of people with STI in health care insurance.

The Government is committed to decreasing the prevalence of tuberculosis (TB) by 2015. As TB accounts for 10.8% of all registered cases of infectious disease, Mongolia is among the seven countries in the WHO Western Pacific Region with the highest TB incidence. Compared with the incidence rate (79 per 100 000 population) in the 1990s, TB rates increased by 1.5 times by 2000 (125) and by 2-2.3 times by 2004-2006. Since 2007, the TB incidence rates have declined, with 159 per 100 000 population in 2008 and 156 in 2009.

The country has succeeded in reducing the TB case fatality rate as a result of directly observed treatment, short-course (DOTS) implementation since the 1990s, with the proportion of TB cases cured under DOTS increasing from 80.0% in 2000 to 84.2% in 2009. The number of people dying from TB has decreased in recent years: in 1992-1995, on average, the number of TB-related deaths was 121, while in 2000-2003 there were 75 deaths, and an estimated 80 in 2004-2009. However, despite the fact that TB diagnosis and treatment of have improved and the number of TB-related deaths has been decreasing, TB incidence is on the rise, making attainment of the MDG target by 2015 a challenge.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Health Sector Strategic Master Plan 2005*
Operator	:	Ministry of Health
Specification	:	Contains analyses, tables and graphs depicting the patterns of health care spending in the country

Title 2	:	*Health indicators book 2009*
Operator	:	Government Implementing Agency- Department of Health
Specification	:	Describes trends in population mortality and morbidity, provides health statistics and financial indicators
Web address	:	http://doh.gov.mn
Title 3	:	*Mongolian Steps Survey on the Prevalence of Non-Communicable Disease Risk Factors, 2009*
Operator	:	Ministry of Health
Specification	:	The national representative survey on the prevalence of NCD risk factors, supported by WHO./unpublished/
Web address	:	http://www.moh.mn/
Title 4	:	*Statistical year book 2008*
Operator	:	National Statistics Office
Specification	:	Includes information on the social and economic indicators of the country.
Title 5	:	*Memorandum of understanding on health sector human resource development in Mongolia*
Operator	:	Ministry of Health, 2006
Specification	:	Health and non-health sectors, including education, social welfare, justice and economy, as well as international organizations, have agreed to collaborate on health sector human resource development issue to collectively fulfil action strategies
Title 6	:	*Priority areas and strategy for action for the Intersectoral Coordinating Committee on Health Sector Human Resource Development*
Operator	:	Ministry of Health, 2007
Specification	:	Plan of action in human resources development in the health sector approved by the Prime Minister of Mongolia and Chairman of the Committee
Title 7	:	*Report on population's morbidity and mortality state as of 2009*
Operator	:	Ministry of Health
Specification	:	A report prepared for the National Security Council and includes population's morbidity and mortality in the year of 2008
Title 8	:	*Introduction to the Ministry of Health, Mongolia*
Operator	:	Ministry of Health, 2007
Specification	:	The brochure, published in Ulaanbaatar in 2007, includes information regarding the mission and functions of Ministry of Health, departmental duties and organizational structure, as well as listing principal health policy documents etc.
Title 9	:	*Approval of strategic objectives, structural changes and organizational structure of Ministries*
Operator	:	Cabinet Secretariat of Mongolia, 2008
Specification	:	Resolution of the Government of Mongolia which approved strategic objectives, organizational structures and functions as well as staff of Ministries
Title 10	:	*Annual report of the National Emergency Management Agency for 2009*
Operator	:	National Emergency Management Agency
Features	:	Unpublished report
Specification	:	The report provides information on the numbers and types of emergencies that occurred, losses due to emergency situations and responses taken
Title 11	:	*Report of the Short Programme Review for Child Health*
Operator	:	WHO, 2007
Features	:	Meeting report
Specification	:	The report was prepared by the WHO Regional Office for the Western Pacific for Governments of Member States in the Region and for those who participated in the Short Programme Review for Child Health, held in Mongolia in 2007
Title 12	:	Progress towards MDG Goals
Operator	:	Ministry of Health
Features	:	Unpublished speech of Health Minister at the 63rd WHA
Specification	:	The report prepared for hearing at WHA
Title 13	:	Brief introduction of the Health project, Millennium Challenge Account-Mongolia
Operator	:	Ministry of Health
Features	:	Unpublished briefing
Specification	:	The report prepared for hearing at Session of the Parliament of Mongolia

6. ADDRESSES

MINISTRY OF HEALTH

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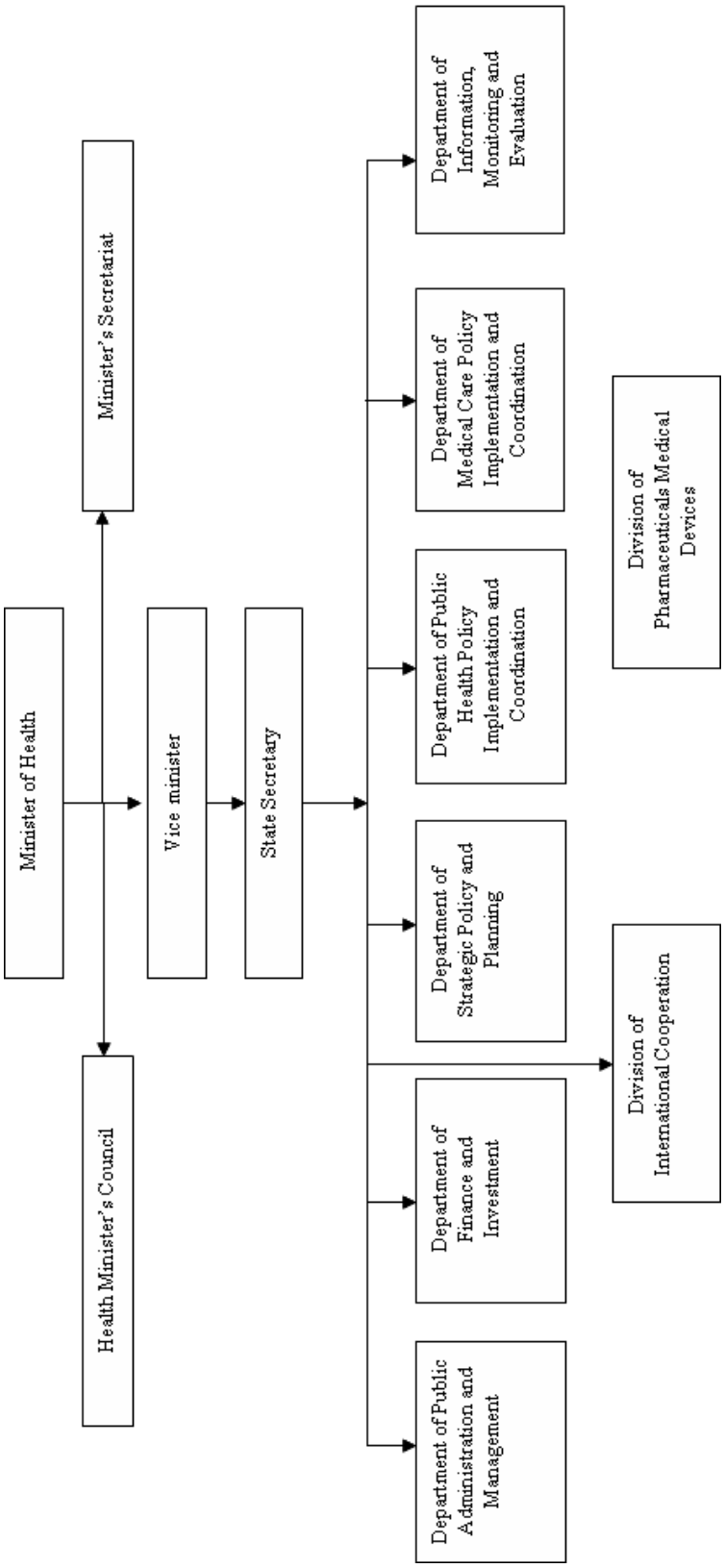
7. ORGANIZATIONAL CHART: Ministry of Health



MONGOLIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	1567.00						2009	1
2	Estimated population ('000s)	2735.78	1337.67	1398.10				2009	1
3	Annual population growth rate (%)	1.96	…	…				2009	1
4	Percentage of population								
	- 0–4 years	9.69	10.09	9.31				2009	1
	- 5–14 years	17.93	18.67	17.22				2009	1
	- 65 years and above	4.06	3.60	4.50				2009	1
5	Urban population (%)	63.23	…	…				2009	1
6	Crude birth rate (per 1000 population)	25.30	…	…				2009	1
7	Crude death rate (per 1000 population)	5.73	…	…				2009	1
8	Rate of natural increase of population (% per annum)	1.96	…	…				2009	1
9	Life expectancy (years)								
	- at birth	67.96	64.33	71.79				2009	1
	- Healthy Life Expectancy (HALE) at age 60	…	…	…					
10	Total fertility rate (women aged 15–49 years)	2.70						2009	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	97.80	98.00	97.50				2007	1
12	Per capita GDP at current market prices (US$)	1649.00 [a]						2008	1
13	Rate of growth of per capita GDP (%)	31.06						2008	1
14	Human development index	0.73						2007	2
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	…	…	…					
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	6865	3781	3084	20	10	10	2009	3
	- Type A	5884	3236	2648	7	2	5	2009	3
	- Type B	748	429	319	13	8	5	2009	3
	- Type C	128	44	84	0	0	0	2009	3
	- Type E	….	….	…	…	…	…	2009	3
	- Unspecified	105	72	33	0	0	0	2009	3
	Cholera	0	0	0	0	0	0	2009	3
	Dengue/DHF	0	0	0	0	0	0	2009	4
	Encephalitis	52	35	17	0	0	0	2009	3
	Gonorrhoea	6350	2838	3512	0	0	0	2009	3
	Leprosy	0	0	0	…	…	…	2009	4
	Malaria	3	3	0	0	0	0	2009	3
	Plague	1	1	0	0	0	0	2009	3
	Syphilis	4912	1656	3256	0	0	0	2009	3
	Typhoid fever	7	5	2	0	0	0	2009	3
17	Acute respiratory infections	194 099	92 314	101 785	461	255	206	2009	5
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	26 271	13 127	13 144	62	30	32	2009	5
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	4286	2177	2109	222	134	88	2009	3
	- New pulmonary tuberculosis (smear-positive)	3153	1665	1488	162	94	68	2009	3
20	**Cancers**								
	All cancers (malignant neoplasms only)	4122	2207	1915	3145	1821	1324	2009	6
	- Breast	82	2	80	37	1	36	2009	6
	- Colon and rectum	105	61	44	80	51	29	2009	6
	- Cervix			265			106	2009	6
	- Leukaemia	37	20	17	25	12	13	2009	6
	- Lip, oral cavity and pharynx	60	41	19	35	22	13	2009	6
	- Liver	1674	962	712	1410	822	588	2009	6
	- Oesophagus	293	160	133	266	156	110	2009	6
	- Stomach	637	421	216	488	318	170	2009	6
	- Trachea, bronchus, and lung	346	266	80	295	239	56	2009	6
21	**Circulatory**								
	All circulatory system diseases	184 104	69 875	114 229	5892	3202	2690	2009	5
	- Acute myocardial infarction	1781	881	900	830	566	264	2009	5
	- Cerebrovascular diseases	17 082	5412	11 670	2344	1228	1116	2009	5
	- Hypertension	72 672	25 663	47 009	374	196	178	2009	5
	- Ischaemic heart disease	41 265	17 510	23 755	1532	803	729	2009	5
	- Rheumatic fever and rheumatic heart diseases	24 102	6799	17 303	69	35	34	2009	5
22	**Diabetes mellitus**	8444	4027	4417	60	32	28	2009	5
23	**Mental disorders**	27 210	13 354	13 856	33	18	15	2009	5
24	**Injuries**								
	All types	112 968	72 146	40 822	2361	1855	506	2009	5
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	264	213	51	2009	5
	- Occupational injuries	...	...	...	50	38	12	2009	5
	- Road traffic accidents	...	...	...	427	335	92	2009	5
	- Suicide	...	...	...	434	349	85	2009	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the respiratory system	278 478	130 682	147 796	10 277.26	9871.89	10 664.46	2009	5
	2. Diseases of the digestive system	244 006	98 723	145 283	9005.07	7457.66	10 483.13	2009	5
	3. Diseases of the genitourinary system	204 957	46 718	158 239	7563.96	3529.14	11 417.99	2009	5
	4. Diseases of the circulatory system	184 104	69 875	114 229	6794.38	5278.45	8242.38	2009	5
	5. Injuries, poisoning and other consequences of external causes	112 968	72 146	40 822	4169.10	5450.00	2945.58	2009	5
	6. Diseases of the nervous system	98 841	41080	57 761	3647.74	3103.24	4167.84	2009	5
	7. Diseases of the skin and subcutaneous tissues	86 362	37 975	48 387	3187.20	2868.68	3491.44	2009	5
	8. Diseases of the eye and adnexa	57 168	22 178	34 990	2109.79	1675.36	2524.76	2009	5
	9. Infectious and parasitic diseases	44 658	19 189	25 469	1648.11	1449.56	1837.76	2009	5
	10. Mental and behavioural disorders	27 210	13 354	13 856	1004.19	1008.78	999.80	2009	5

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	5892	3202	2690	217.44	241.88	194.10	2009	5
	2. Tumours and neoplasms	3222	1847	1375	118.91	139.52	99.22	2009	5
	3. Injuries, poisoning and other consequences of external causes	2361	1855	506	87.13	140.13	36.51	2009	5
	4. Diseases of the digestive system	1312	708	604	48.42	53.48	43.58	2009	5
	5. Diseases of the respiratory system	752	428	324	27.75	32.33	23.38	2009	5
	6. Certain conditions originating in the perinatal period	727	430	297	26.83	32.48	21.43	2009	5
	7. Diseases of the genitourinary system	286 [b]	163	126	10.55	12.31	9.09	2009	5
	8. Infectious and parasitic diseases	265	160	105	9.78	12.09	7.58	2009	5
	9. Diseases of the nervous system	234	130	104	8.64	9.82	7.50	2009	5
	10. Congenital malformations, deformations and chromosomal abnormalities	201	107	94	7.42	8.08	6.78	2009	5
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					53.20		2009	5
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					…			
29	**Percentage of pregnant women with anaemia**					7.90		2009	5
30	**Neonatal mortality rate (per 1000 live births)**	9.96		11.50		8.30		2009	5
31	**Percentage of newborn infants weighing less than 2500 g at birth**	4.20		3.90		4.50		2009	5
32	**Immunization coverage for infants (%)**								
	- BCG	97.80		…		…		2009	4
	- DTP3	94.80		…		…		2009	4
	- Hepatitis B III	97.00		…		…		2009	4
	- MCV2	97.30		…		…		2009	4
	- POL3	95.80		…		…		2009	4
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			12 602			0	2009	5
	- Eclampsia			9223			8	2009	5
	- Haemorrhage			1967			2	2009	5
	- Obstructed labour			6217			0	2009	5
	- Sepsis			101			2	2009	5
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	3
	- Diphtheria	0	0	0	0	0	0	2009	3, 4
	- Measles	8	…	…	…	…	…	2009	4
	- Mumps	1990	1086	904	0	0	0	2009	3, 4
	- Neonatal tetanus	0	0	0	0	0	0	2009	3, 4
	- Pertussis (whooping cough)	0	0	0	0	0	0	2009	3, 4
	- Poliomyelitis	0	0	0	0	0	0	2009	3, 4
	- Rubella	3	…	…	…	…	…	2009	4
	- Total Tetanus	3	2	1	2	2	0	2009	3, 4
	Health facilities								
35	**Facilities with HIV testing and counseling services**					57		2009	3

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	39	4326	2009	5
		- Specialized hospitals	16	4005	2009	5
		- District/first-level referral hospitals	330	5367	2009	5
		- Primary health care centres	226	0	2009	5
	Private health facilities	- Hospitals	160	2422	2009	5
		- Outpatient clinics	922	0	2009	5
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			200.54	2008p	7
	- total expenditure on health as % of GDP			3.80	2008p	7
	- per capita total expenditure on health (in US$)			75.93	2008p	7
	Government expenditure on health					
	- amount (in million US$)			157.84	2008p	7
	- general government expenditure on health as % of total expenditure on health			78.70	2008p	7
	- general government expenditure on health as % of total general government expenditure			9.10	2008p	7
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			9.18	2008p	7
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			21.30	2008p	7
	- out-of-pocket expenditure on health as % of total expenditure on health			17.96	2008p	7
	Exchange rate in US$ of local currency is: 1 US$ =			1165.66	2008p	7
38	**Health insurance coverage as % of total population**			77.60	2009	5

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	7140	1432	5708	4328	2812	5744	1396	2009	5
		- Ratio per 1000 population	2.61	0.52	2.09	2.57	2.75	2.10	0.51	2009	5
	Dentists	- Number	528	...	...	387	141	198	330	2009	5
		- Ratio per 1000 population	0.19	...	...	0.23	0.14	0.07	0.12	2009	5
	Pharmacists	- Number	1088	56	1032	889	199	182	906	2009	5
		- Ratio per 1000 population	0.40	0.02	0.38	0.53	0.19	0.07	0.33	2009	5
	Nurses	- Number	9017	178	8839	4777	4240	8 159	858	2009	5
		- Ratio per 1000 population	3.30	0.07	3.23	2.83	4.14	2.98	0.31	2009	5
	Midwives	- Number	668	9	659	130	538	649	19	2009	5
		- Ratio per 1000 population	0.24	0.00	0.24	0.08	0.53	0.24	0.01	2009	5
	Paramedical staff	- Number	1219	114	1105	607	612	984	235	2009	5
		- Ratio per 1000 population	0.45	0.04	0.40	0.36	0.60	0.36	0.09	2009	5
	Community health workers	- Number	328	80	248	140	188	328	0	2009	5
		- Ratio per 1000 population	0.12	0.03	0.09	0.08	0.18	0.12	0	2009	5
40	**Annual number of graduates**	Physicians	559	160	399	...	...	414	145	2009	8
		Dentists	108	14	94	...	...	84	24	2009	8
		Pharmacists	234	18	216	...	...	115	119	2009	8

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	475	12	463	...	...	324	151	2009	8
		Midwives	161	10	151	...	...	161	0	2009	8
		Paramedical staff	331	56	275	...	...	331	0	2009	8
		Community health workers	20	7	13	...	...	20	0	2009	8
41	Workforce losses/ Attrition	Physicians	234	...	...	...	...	...	...	2009	5
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	15	...	...	...	...	...	...	2009	5
		Nurses	336	...	...	...	...	...	...	2009	5
		Midwives	12	...	...	...	...	...	...	2009	5
		Paramedical staff	157	...	...	...	...	...	...	2009	5
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	6.30	5.90	6.60	2007	1
43	Infant mortality rate (per 1000 live births)	20.16	22.56	17.6	2009	5
44	Under-five mortality rate (per 1000 live births)	23.65	25.90	21.24	2009	5
45	Proportion of 1 year-old children immunised against measles	93.80	...	...	2009	4
46	Maternal mortality ratio (per 100 000 live births)	81.40			2009	5
47	Proportion of births attended by skilled health personnel	99.80			2009	5
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.40			2009	5
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.60			2009	5
48	Contraceptive prevalence rate	53.20	...	...	2009	5
49	Adolescent birth rate	6.10			2009	5
50	Antenatal care coverage - At least one visit	...				
	- At least four visits	84.10 [c]			2009	5
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	0.00	0.00	0.00	2009	3
53	Estimated HIV prevalence in adults	<0.02	0.00	0.00	2009	3
54	Percentage of people with advanced HIV infection receiving ART	76.92	69.23	100.00	2009	3
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	70.20	...	...	2009	3
60	Tuberculosis death rate per 100 000 population	2.80	3.60	2.10	2009	3
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	74.10	...	...	2009	3
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	84.00	...	...	2009	3
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	76.00	97.00	49.00	2008	9
64	Proportion of population using an improved sanitation facility	50.00	64.00	32.00	2008	9
65	Proportion of population with access to affordable essential drugs on a sustainable basis	80.00	...	...	2009	10

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Preliminary estimate at 2005 constant prices using World Bank atlas method and the 2008 absolute mean exchange rate
b	Totals may not tally due to some reported cases/ deaths without gender breakdown
c	Figure refers to pregnant women with antenatal care for at least six times during pregnancy

Sources:	
1	Mongolia Statistical Yearbook 2009. National Statistics Office of Mongolia
2	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
3	Statistical Report 2009, National Center for Communicable Disease
4	WHO Regional Office for the Western Pacific, data received from technical units
5	Health Indicators 2009. Department of Health-Governmet Implementing Agency, MOH
6	Statistical Report 2009, National Center for Cancer
7	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
8	Statistical Report 2009. Ministry of Education
9	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]
10	Ministry of Health, Mongolia

NAURU

1. CONTEXT

1.1 Demographics

The population of Nauru was estimated to be 9771 in 2009, with about 35.9% below 15 years of age and around 1.3% 65 years and above.

1.2 Political situation

The 18-member Parliament is elected every three years. The Parliament elects a President from among its members, who appoints a Cabinet of five or six people. The President is both head of state and head of government. On 18 April 2008, President Stephen declared a state of emergency and dissolved Parliament. This action was prompted by a stalemate in Parliament over the Speaker's introduction of a Bill to ban Members of Parliament from holding dual citizenship. The election held in April 2008 saw the incumbent president, President Stephen, re-elected. In April 2010, national elections saw the same 18 parliamentarians returned to office in an evenly divided stalemate, which leaves President Marcus Stephen to retain his leadership position. Since becoming independent in 1968, Nauru has seen more than 36 changes of government.

1.3 Socioeconomic situation

Until recently, Nauru was a self-reliant country. Traditionally, revenues of this tiny island have come from exports of phosphate. At the height of phosphate mining activities, the country's gross domestic product (GDP) was one of the highest in the Pacific and living standards were comparable with those of high-income countries. However, phosphate reserves are expected to be exhausted at some point and the drastic decline in phosphate revenue has been followed, first by a decrease in disposable income, and then by dependence on aid.

The rehabilitation of mined land and the replacement of income from phosphate are serious long-term challenges. In anticipation of the exhaustion of Nauru's phosphate deposits, substantial amounts of phosphate income were invested in trust funds to help cushion the transition and provide for the country's economic future. As a result of heavy spending from the trust funds, however, the Government is facing bankruptcy and, to cut costs, has frozen wages and reduced overstaffed public service departments.

There are few resources other than phosphate. The central plateau has limited agricultural value, but some 202-243 hectares, mainly around the coastal belt, are available for cultivation. Coconut, banana and papaya are the main fruit crops and small quantities of vegetables are also grown. However, cultivated crops are for home consumption only and, apart from fish, most food is imported from Australia, including water. There are frequent disruptions of supplies of food, fuel, equipment and materials.

In 2001, a group of Afghani refugees rescued at sea was transferred to a camp on Nauru in exchange for a multimillion dollar aid package from Australia. Use of Nauru's isolated location and its offshore processing centre was discontinued in February 2008 following a change in Australia's policy of holding asylum seekers on Nauru. Already heavily dependent on foreign support, mainly from Australia and Taiwan (China), Nauru has expressed a need for extra support now that Australia's offshore processing centre has been closed.

Day-to-day difficulties in handling cash transactions (in Australian dollars) have been a major impediment to government activities. Nauru has been without banking services since the Bank of Nauru collapsed earlier this decade.

1.4 Risks, vulnerabilities and hazards

Nauru is particularly vulnerable due to its isolation, with overdependence on the national air carrier and its single aircraft. The lack of a safe harbour for berthing of ships hinders marine transportation links beyond container freight and phosphate carriers.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

As a result of an effective public health programme focusing on water and sanitation, there have been no recent infectious disease outbreaks, but noncommunicable diseases, such as diabetes, hypertension, heart disease and cancer, have become leading causes of morbidity and mortality, and obesity rates are very high. The 2007 STEPS survey reported a diabetes prevalence rate of 16.2% among the 15-64 age group. Diabetes increases in prevalence with age and was found to be 24.1% in the 35-44 age group, 37.4 % among 45-55 year-olds and 45 % in the 55-64 age group.

2.2 Outbreaks of communicable diseases

See Section 2.1.

2.3 Leading causes of mortality and morbidity

See Section 2.1.

2.4 Maternal, child and infant diseases

According to the preliminary report of the 2007 Nauru Demographic and Health Survey (NDHS), almost all pregnant women (94.5%) reported having consulted with a health professional—doctor, nurse or midwife—at least once for antenatal care for the most recent pregnancy in the five-year period before the survey. Ninety-seven per cent of births are delivered by a health professional.

Based on the 2007 NDHS, the infant mortality rate was 37.9 per 1000 live births and the under-five mortality rate was 37.9 per 1000 live births.

Only 5% of Nauruan children are underweight (2007), with boys slightly more likely to be underweight than girls. Almost a quarter (24%) of Nauruan children are stunted and 1% are wasted.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Nauru Ministry of Health endorses the statement in the preamble to the WHO constitution that: "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition." In support of this, the Ministry acknowledges that it is the right of every citizen of the Republic of Nauru, irrespective of race, sex, colour, creed or socioeconomic status, to have access to a national health system that provides a quality, affordable health service, the principle function of which is to promote and maintain the health and well-being of the citizens of Nauru to the maximum extent possible with available resources.

The mission statement for the health system is:

> "To cater for the health needs of Nauru and to enhance the quality of life of the People of Nauru through appropriate and effective health care; and to reform and improve the health

infrastructure through a well structured, co-ordinated long term policy of:

- recruitment;
- capacity building; and
- purchasing and maintenance of equipment and facilities."

The mission statement for curative services reads:

> "With a clear understanding of the health needs of the people and a full appreciation of the Nauruan culture, we shall provide an appropriate, accessible and affective health service that applies judicious use of all available resources to ensure the health of all patients on Nauru is enhanced; and provide a range of improved and efficient health services through a combination of:
>
> - educational programmes;
> - screening procedures;
> - registration of disease; and
> - establishment of emergency protocols and provision of services to meet the needs of all Nauruans."

The mission statement for public health services states:

> "We shall implement and sustain a range of public health policies and programmes that will enhance the quality of life for the people of Nauru by targeted risk-factor reduction and promotion of a healthy island lifestyle, and set in place a developed and legislated Healthy National Policy that promotes community awareness and participation to induce healthy choices that are early, easy, exciting and everywhere."

Values:

> "Customer focus:
> We aim to provide quality health care, respecting the dignity of all people.
>
> Equity:
> We strive to be fair in all our dealings: irrespective of ethnicity, religion, political affiliation, disability, gender and age.
>
> Quality:
> We seek a high quality outcome in all facets of our activities.
>
> Integrity:
> We are committed to the achievement of the highest ethical standards in all that we do."

3.2 Organization of health services and delivery systems

Nauru General Hospital (NGH) and the National Phosphate Corporation (NPC) Hospital amalgamated in July 1999 to become the Republic of Nauru Hospital. The Hospital has five doctors and employs a full complement of nursing and clinical support staff.

3.3 Health policy, planning and regulatory framework

Like many developing countries, Nauru has committed to a range of Millennium Development Goals (MDGs). These MDGs were included as high-level outcomes in the Ministry of Health's Operational Plan 2007. The Operational Plan aims to complement the major goal of the Nauru National Sustainable Development Strategy 2005-2025 (NNSDS): "A future where individual, community, business and government partnerships contribute to a sustainable quality of life for all Nauruans".

The health-specific goals of the NNSDS include the provision of effective preventative health services to reduce lifestyle-related illness. The recent Nauru NCD Risk Factors STEPS Report further highlighted that Nauru has the poorest health indicators for NCDs (cardiovascular disease, diabetes, cancer and respiratory diseases) in the Pacific region. The Ministry of Health responded by developing the Nauru NCD Action Plan, which details specific activities to reverse the declining health of the population and implement strategies that are known to be effective and have relevance and acceptability to the people.

As a signatory to United Nations conventions and treaties, the Government of Nauru has obligations to meet certain requirements that encompass the principles espoused in conventions such as the WHO Constitution, the Framework Convention on Tobacco Control, the International Convention on Population Development, Women Plan of Action and the Convention on the Rights of the Child.

It is a priority for the Ministry of Health to improve the reliability of the current health information system. In the absence of a robust system, the development of the Ministry's Operational Plan 2007 relied on the resources of the Nauru Bureau of Statistics, the data contained in the Nauru NCD Risk Factors Steps Report and information contained in the Health Status and Health System Report 2003.

The primary health care approach to acute respiratory infections and diarrhoeal diseases is to be strengthened and the expanded programme of immunization will extend its coverage of target diseases.

3.4 Health care financing

Over the last two financial years, the Ministry of Health has embarked on a greatly improved system of budget development. The health budget is prepared by senior staff in accordance with the NSDS guidelines by early May, refined and then presented to the Finance Department. Subsequently, the Secretary for Health is required to attend Cabinet to speak to the budget and answer any relevant questions that may arise. As part of the financial management reform process, departmental heads now receive a monthly financial statement detailing current expenditure and projected year-end results against allocated budgets.

In 2008, total health expenditure was estimated at US$ 7.6 million or 15.2% of GDP. Government expenditure on health was US$ 5 million or 71.0% of total health expenditure.

3.5 Human resources for health

The Government plans to make available a balanced supply of health care providers, including physicians, nurses and other specialized staff and community health workers. Currently 50% of professional staff are expatriates on contract, but investment in training of Nauruan nationals is well under way.

3.6 Partnerships

The Ministry of Health has partnerships with WHO, the Secretariat of the Pacific Community (SPC), the United Nations Children's Fund (UNICEF), the University of the South Pacific, the Global Fund and the Australian Agency for International Development (AusAID). Visiting medical specialists have included a team from the AusAID-funded PIPS programme, a mobile medical team from Taiwan (China), and Cuban and Israeli specialists.

3.7 Challenges to health system strengthening

The Ministry of Health acknowledges that peoples' lifestyles and the conditions in which they live, work and play strongly influence their health. The many social determinants of health are experienced differently by men and women, and these gender-based differences need to be recognised as the Ministry seeks to increase the health status of the population. A comprehensive integrated approach to addressing social determinants of good health for men and women requires the mainstreaming of gender concerns into the day-to-day operations of the Ministry. This will ensure that the basic right of every citizen, irrespective of sex, to have access to a national health system that provides a high quality of care appropriate to their needs is respected.

While the Ministry of Health cannot address all of these issues alone, it acknowledges the need to develop health outcomes and health improvements that are measured through improved health status of the population. Both health protection and promotion are now recognized as essential components when developing health outcome measures, with a move away from evaluating services based on activities alone. The Ministry's commitment to the principles and philosophy of primary health care is based on the belief that success in achieving and maintaining health is not the responsibility of hospitals and the medical and/or curative model of care alone, but will come from a health-system-wide approach, working with all government departments, the nongovernmental sector and civil society.

4. PROGRESS TOWARDS THE HEALTH MDGs

The report of the Nauru Demographic and Health Survey 2007 includes a section listing the indicators required for monitoring progress towards achieving the Millennium Development Goals. There has been progress in some areas, such as the tuberculosis prevalence rate, which decreased from 44 per 100 000 population in 1990 to 10 per 100 000 population in 2008. However, for some indicators, such as infant and under-five mortality rates, and access to safe, improved drinking-water and improved sanitation, the new DHS data show less favourable statistics, probably correcting an overoptimistic earlier account.

One of the issues in relation to MDG indicators is the definition of an improved drinking-water source and improved sanitation facilities. Another challenge is to have better reporting systems. With better reporting, infant and under-five mortality rates would possibly be higher. Hence, there is a need to continue health system strengthening to establish a better health information system. In addition, there is a need to maintain water quality surveys to support finding alternative or safer water sources and better sanitation facilities.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : Nauru Bureau of Statistics
Web address : http://www.spc.int/prism/country/nr/stats

Title 2 : *Nauru Demographic and Health Survey 2007 (Final report)*
Operator : Bureau of Statistics Nauru, Secretariat of the Pacific Community, Macro International Inc.
Web address : http://www.spc.int/sdp/index.php?option=com_docman&task=doc_view&gid=185

Title 3 : Republic of Nauru hospital data

Title 4 : *Nauru NCD Risk Factors STEPS Report*
Web address : http://www.spc.int/prism/country/nr/stats/Publication/Surveys/Nauru_NCD_rpt.pdf

Title 5 : *Demographic Profile of the Republic of Nauru, 1992-2002*
Operator : Bureau of Statistics Nauru, Secretariat of the Pacific Community
Web address : http://www.spc.int/prism/country/nr/stats/Publication/Census/NR_Demog%20profile_FINAL-92-02.pdf

6. ADDRESSES

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NAURU — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.02						2010	1
2	Estimated population ('000s)	9.77 [a]		4.96 [a]		4.81 [a]		2009 est	2
3	Annual population growth rate (%)	2.10		...		...		2010 est	1
4	Percentage of population								
	- 0–4 years	12.87 [b]		12.73 [b]		13.02 [b]		2009 est	2
	- 5–14 years	23.05 [b]		23.47 [b]		22.61 [b]		2009 est	2
	- 65 years and above	1.25 [b]		1.16 [b]		1.33 [b]		2009 est	2
5	Urban population (%)	100.00		...		...		2009 est	3
6	Crude birth rate (per 1000 population)	13.10		12.90		13.40		2008 est	4
7	Crude death rate (per 1000 population)	6.70		7.50		5.90		2008 est	4
8	Rate of natural increase of population (% per annum)	0.64		0.54		0.75		2008 est	4
9	Life expectancy (years)								
	- at birth	55.40		52.50		58.20		2008	5
	- Healthy Life Expectancy (HALE) at age 60	...		8.70		10.50		2002	4
10	Total fertility rate (women aged 15–49 years)	4.00						2008	5
	Socioeconomic indicators								
11	Adult literacy rate (%)	...		95.90		99.30		2007	6
12	Per capita GDP at current market prices (US$)	2 071.00						2006-07	7
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	...							
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	0	0	0	0	0	0	2008	8
	- Type B	613	165	448	0	0	0	2008	8
	- Type C	0	0	0	0	0	0	2008	8
	- Type E	0	0	0	0	0	0	2008	8
	- Unspecified	0	0	0	0	0	0	2008	8
	Cholera	0	0	0	0	0	0	2008	8,9
	Dengue/DHF	0	0	0	0	0	0	2009	9
	Encephalitis	0	0	0	0	0	0	2008	8
	Gonorrhoea	268	96	172	0	0	0	2008	8
	Leprosy	3	2	1	...	...	...	2009	9
	Malaria	0	0	0	0	0	0	2008	8,9
	Plague	0	0	0	0	0	0	2008	8
	Syphilis	622	164	458	0	0	0	2008	8
	Typhoid fever	0	0	0	0	0	0	2008	8
17	Acute respiratory infections	669	340	329	5	3	2	2008	8
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	602 [c]	321	276	0	0	0	2008	8
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	5	...	...	...	...	...	2008	9
	- New pulmonary tuberculosis (smear-positive)	2	...	...	...	...	...	2008	9
20	**Cancers**								
	All cancers (malignant neoplasms only)	11	3	8	4	2	2	2008	8
	- Breast	3	0	3	1	0	1	2008	8
	- Colon and rectum	0	0	0	0	0	0	2008	8
	- Cervix			3			1	2008	8
	- Leukaemia	0	0	0	0	0	0	2008	8
	- Lip, oral cavity and pharynx	0	0	0	0	0	0	2008	8
	- Liver	2	1	1	0	0	0	2008	8
	- Oesophagus	0	0	0	0	0	0	2008	8
	- Stomach	2	1	1	1	1	0	2008	8
	- Trachea, bronchus, and lung	1	1	0	1	1	0	2008	8
21	**Circulatory**								
	All circulatory system diseases	0	0	0	29	21	8	2008	8
	- Acute myocardial infarction	0	0	0	5	3	2	2008	8
	- Cerebrovascular diseases	5	2	3	0	0	0	2008	8
	- Hypertension	220	124	96	2	0	2	2008	8
	- Ischaemic heart disease	5	5	0	0	0	0	2008	8
	- Rheumatic fever and rheumatic heart diseases	84	32	52	0	0	0	2008	8
22	**Diabetes mellitus**	22	9	13	4	1	3	2008	8
23	**Mental disorders**	0	0	0	0	0	0	2008	8
24	**Injuries**								
	All types	0	0	0	0	0	0	2008	8
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	2	2	0	0	0	0	2008	8
	- Occupational injuries	1	1	0	0	0	0	2008	8
	- Road traffic accidents	4	2	2	0	0	0	2008	8
	- Suicide	0	0	0	0	0	0	2008	8
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Pregnancy, childbirth and the pueperium	376	0	376	4086.96 [b]	...	...	2008	8
	2. Endocrine, nutritional and metabolic diseases	89	49	40	967.39 [b]	...	...	2008	8
	3. Diseases of the skin and subcutaneous tissue	72	35	37	782.61 [b]	...	...	2008	8
	4. Disease of the respiratory system	54	25	29	586.96 [b]	...	...	2008	8
	5. Certain conditions originating in the perinatal period	48	8	40	521.74 [b]	...	...	2008	8
	6. Diseases of the digestive system	31	21	10	336.96 [b]	...	...	2008	8
	7. Diseases of the genitourinary system	30	15	15	326.09 [b]	...	...	2008	8
	8. Diseases of the circulatory system	27	15	12	293.48 [b]	...	...	2008	8
	9. Infectious and parasitic diseases	22	12	10	239.13 [b]	...	...	2008	8
	10. Diseases of the musculosketal system and connective tissue	15	10	5	163.04 [b]	...	...	2008	8

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	36	23	13	391.30 [b]	...	...	2008	10
	2. Endocrine, nutritional and metabolic diseases	9	7	2	97.83 [b]	...	...	2008	10
	3. Diseases of the respiratory system	6	2	4	65.22 [b]	...	...	2008	10
	4. Certain conditions originating in the perinatal period	6	3	3	65.22 [b]	...	...	2008	10
	5. Pregnancy, childbirth and puerperium	5	3	2	54.35 [b]	...	...	2008	10
	6. Neoplasms	4	2	2	43.48 [b]	...	...	2008	10
	7. Diseases of the genitourinary system	3	2	1	32.61 [b]	...	...	2008	10
	8. Symptoms, signs and abnormal clinical and laboratory	1	1	0	10.87 [b]	...	...	2008	10
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					25.10		2007	6
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					34.00		2008	9
29	**Percentage of pregnant women with anaemia**					20.00		2008	10
30	**Neonatal mortality rate (per 1000 live births)**	26.80		...		...		2003-07	6
31	**Percentage of newborn infants weighing less than 2500 g at birth**	27.00		...		...		2007	6
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2009	9
	- DTP3	100.00		...		...		2009	9
	- Hepatitis B III	100.00		...		...		2009	9
	- MCV2	92.00		...		...		2009	9
	- POL3	100.00		...		...		2009	9
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			5			0	2008	10
	- Eclampsia			2			0	2008	10
	- Haemorrhage			0			0	2008	10
	- Obstructed labour			3			0	2008	10
	- Sepsis			2			0	2008	10
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	9
	- Diphtheria	0	0	0	0	0	0	2009	9
	- Measles	0	0	0	0	0	0	2009	9
	- Mumps	0	0	0	0	0	0	2009	9
	- Neonatal tetanus	0	0	0	0	0	0	2009	9
	- Pertussis (whooping cough)	0	0	0	0	0	0	2009	9
	- Poliomyelitis	0	0	0	0	0	0	2009	9
	- Rubella	0	0	0	0	0	0	2009	9
	- Total Tetanus	0	0	0	0	0	0	2009	9
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	51	2007	11
		- Specialized hospitals	0	0	2007	11
		- District/first-level referral hospitals	0	0	2007	11
		- Primary health care centres	0	0	2007	11
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			7.56 [b]	2008p	12
	- total expenditure on health as % of GDP			15.20	2008p	12
	- per capita total expenditure on health (in US$)			707.00	2008p	12
	Government expenditure on health					
	- amount (in million US$)			5.04 [b]	2008p	12
	- general government expenditure on health as % of total expenditure on health			71.00	2008p	12
	- general government expenditure on health as % of total general government expenditure			32.10	2008p	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			82.50 [b]	2008p	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			29.00	2008p	12
	- out-of-pocket expenditure on health as % of total expenditure on health			24.48 [b]	2008p	12
	Exchange rate in US$ of local currency is: 1 US$ =			1.19	2008p	12
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	10	8	2	...	...	...	...	2008	10
		- Ratio per 1000 population	1.00	0.80	0.20	...	...	...	...	2008	10
	Dentists	- Number	1	1	0	...	...	...	...	2008	10
		- Ratio per 1000 population	0.10	0.10	0.00	...	...	...	...	2008	10
	Pharmacists	- Number	1	0	1	...	...	...	...	2008	10
		- Ratio per 1000 population	0.10	0.00	0.10	...	...	...	...	2008	10
	Nurses	- Number	64 [f]	2	62 [f]	...	...	...	...	2008	10
		- Ratio per 1000 population	6.40	0.20	6.20	...	...	...	...	2008	10
	Midwives	- Number	5 [d]	0 [d]	5 [d]	...	...	...	...	2008	10
		- Ratio per 1000 population	0.50	0.00	0.50	...	...	...	...	2008	10
	Paramedical staff	- Number	19	11	8	...	...	...	...	2008	10
		- Ratio per 1000 population	1.90	1.10	0.80	...	...	...	...	2008	10
	Community health workers	- Number	14	2	12	...	...	...	...	2008	10
		- Ratio per 1000 population	1.40	0.20	1.20	...	...	...	...	2008	10
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	3	0	3	...	...	...	...	2008	10
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	4.80	...	...	2007	6
43	Infant mortality rate (per 1000 live births)	37.90	...	...	2003-07	6
44	Under-five mortality rate (per 1000 live births)	37.90	...	...	2003-07	6
45	Proportion of 1 year-old children immunised against measles	100.00	...	...	2009	9
46	Maternal mortality ratio (per 100 000 live births)	300.00			2002	13
47	Proportion of births attended by skilled health personnel	97.40 [e]			2007	6
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
48	Contraceptive prevalence rate	35.60	...	...	2007	6
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	53.50 [e]			2007	6
	- At least four visits	40.20 [e]			2007	6
51	Unmet need for family planning	23.50	...	...	2007	6
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	10.00	...	...	2008	9
60	Tuberculosis death rate per 100 000 population	1.00	...	...	2008	9
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	351.00	...	...	2008	9
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	100.00	...	...	2007	9
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	90.00	90.00	...	2008	14
64	Proportion of population using an improved sanitation facility	50.00	50.00	...	2008	14
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Estimated mid-year population.
b	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
c	Totals may not tally due to some reported cases with no gender breakdown
d	Figure was included in the number of nurses.
e	Revised figure
f	Figure includes five midwives

Sources:	
1	Pacific Island Populations - Estimates and projections of demographic indicators for selected years, Updated April 2010. Secretariat of the Pacific Community (SPC), Statistics and Demography Programme. Accessed on June 2010.
2	Population 2000-2015 by 1 and 5 year age groups, February 2010. Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme. [http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158]
3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision [ttp://esa.un.org/wup2009/unup/].
4	Pacific island populations- estimates and projections 2005-2015, Secretariat of the Pacific Community, Noumea, 2006. [http://www.spc.int/demog/en/index.html]
5	Nauru Bureau of Statistics. [http://www.spc.int/prism/country/nr/stats/Statistics/Economics/GDP/gdp_sum.htm]
6	Nauru Demographic and Health Survey 2007. Bureau of Statistics Nauru, Secretariat for the Pacific Community, Noumea, New Caledonia, Macro International Inc. Calverton, Maryland, U.S.A., April 2008.
7	2010 Pocket Statistical Summary. Secretariat of the Pacific Community (SPC), Statistics and Demography Programme (SDP). Accessed on June 2010 at http://www.spc.int/prism/
8	RON Hospital inpatient record study from Jan to Dec 2008 (data from Health Planning Officer)
9	WHO Regional Office for the Western Pacific, data received from the technical units.
10	Republic of Nauru (RON) Hospital data from Jan - Dec 2008 (data from Health Planning Officer)
11	Republic of Nauru (RON) Hospital data (data from Health Planning Officer)
12	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
13	Nauru population profile. A guide for planners and policy makers. Noumea, Secretariat of the Pacific Community.
14	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

NEW CALEDONIA

1. CONTEXT

1.1 Demographics

New Caledonia is an archipelago consisting of a main island, the Grande Terre, and several smaller islands (the Belep archipelago, the Loyalty Islands, the Ile des Pins, the Chesterfield Islands and the Bellona Reefs). Noumea, located on the main island, is the capital.

According to the national census in 2004, the population of New Caledonia was 230 789 inhabitants; the estimated population in 2009 was 245 500. The population is made up of 42.5% Melanesians, 37.1% Europeans, 8.4% Wallisians, 3.8% Polynesians, 3.6% Indonesians, 1.6% Vietnamese and 3% other nationalities. In 2008, the crude birth rate was 16.2 per 1000 population, the crude death rate was 4.7 per 1000 population and the rate of natural increase was 11.9 per 1000 population. The total fertility rate was 2.2, and the infant mortality rate was 6.1 per 1000 live births. The proportion of the population under 20 years of age, estimated at 35.5%, is decreasing gradually, in contrast with the over-65 population, which is increasing and is currently estimated at 6.2% of the population.

City-dwellers were estimated to make up 64.4% of the population by 2007. Life expectancy at birth is 75.9 years: 71.8 years for males and 80.3 years for females (2007 estimates). There is a high level of adult literacy, estimated to be 91% of the total population (male 92%, female 90%).

1.2 Political situation

New Caledonia was an overseas territory of France until the signing of the Noumea Accords in May 1998 and their subsequent approved by the French National Assembly and Senate. It then became a self-governing French overseas country and was granted a new status, with more internal autonomy. Administratively, the archipelago is divided into three provinces (South Province, North Province and Loyalty Islands Province) and has a three-tiered system of administration: metropolitan France (represented by the High Commissioner); the Territorial Congress; and the provincial assemblies. The Noumea Accords diminished the hopes of those involved in the pro-independence movement, as the earliest possible date for independence for the country is now 2014. The Government of France has been represented by High Commissioner Yves Dassonville since 9 November 2007. The President of the New Caledonian Government is elected by the members of the Territorial Congress. The last election was held on 7 August 2007, when Harold Martin was elected.

1.3 Socioeconomic situation

The mainstays of New Caledonia's booming economy are mining, cattle, shrimp farming, fishing, forestry agriculture and tourism. New Caledonia has about 25% of the world's known nickel resources. In addition to nickel, substantial financial support from France (equal to more than 25% of gross domestic product [GDP]) and tourism are key to the economy. Substantial new investment in the nickel industry, combined with the recovery of the global nickel market, suggests a bright economic outlook for the next few years. Only a small amount of the country's land is suitable for cultivation, and food accounts for about 20% of imports.

In 2007, the estimated GDP was 768.1 billion F.CFP (US$9.4 billion), with a GDP per capita of 3 167 000 F.CFP (US$38 300.10).

The major exports are coffee, prawns, holoturies or bêche de mer, trochus, scallops and tuna. The country has an Exclusive Economic Zone of 1 740 000 square kilometres.

1.4 Risks, vulnerabilities and hazards

New Caledonia is vulnerable to natural hazards, with cyclones common from November to March. Erosion caused by mining exploitation and forest fires are among the environmental issues facing the country.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Communicable diseases remain a public health problem. Common infections include: acute respiratory tract infections, including pneumonia; diarrhoeal diseases; sexually transmitted infections, including HIV; and rheumatic heart disease.

In 2009, 1419 acute respiratory infections (including pneumonia), 216 ear infections, 1059 influenza cases, 162 cases of diarrhoeal diseases, 63 new cases of tuberculosis (the incidence is 25.7/100 000) and 7 new cases of leprosy were reported. The prevalence of rheumatic heart disease was estimated to be 7.5 per 1000 population.

Sexually transmitted infections (STI) are highly prevalent. Second generation surveillance carried out in 2006 demonstrated that, of 152 women tested in antenatal care, 23.7 % were infected with chlamydia, 7.9 % with gonorrhoea and 3.3% with syphilis. In 2009, 803 STI cases were notified, of which 25.4% were chlamydial infections, 10% were gonorrhoea, and 5.9% were syphilis. In 2008, 15 new seropositive HIV infections were registered, bringing the cumulative number to 331. A total of 118 AIDS cases have been reported, with 71 AIDS-related deaths since 1986.

Dengue and leptospirosis are endemic in the country, with 8410 and 162 cases, respectively, in 2009.

Noncommunicable diseases constitute a major disease burden, with cardiovascular diseases, diabetes mellitus and cancers being the most common. In 2008, the most common conditions requiring long-term treatment included cardiovascular conditions (21 878 cases; 45.1%), diabetes mellitus (8712 cases; 18 %), and psychosis (3991 cases; 8.2 %). A further 4488 malignant cancers (9.2 %), 4316 cases of chronic respiratory failure (8.9 %) and 1090 cases of renal failure (2.3%) were in treatment.

2.2 Outbreaks of communicable diseases

In 2009, a dengue outbreak was notified by the health authorities. A total of 8410 cases were reported, of whom 5652 were confirmed by polymerase chain reaction (PCR) by December 31, 2009.

2.3 Leading causes of mortality and morbidity

The leading causes of mortality during 2008 included: tumours (327 cases); diseases of the circulatory system (293 cases); traumatic injuries and poisonings (157 cases); diseases of the respiratory system (83 cases; infectious and parasitic diseases (48 cases); diseases of the digestive system (40 cases); diseases of the nervous system (25 cases); endocrine, nutritional and metabolic diseases (24 cases); diseases of the genitourinary system (23 cases); and perinatal conditions (11 cases).

2.4 Maternal, child and infant diseases

New Caledonia has a well-functioning mother and child health programme. In 2008, it was estimated that 45.6% of the female population (one in every three women) had access to contraception and 155 women per 1000 had used medical abortion as a mean of contraception in 2005. The use of medical abortion as a means of contraception had risen to 22.2 per 1000 in 2008. In the same year, 24 715 Pap smears were performed and 3943 deliveries took place, of which 18.6 % were by Caesarian section. No maternal death was registered in 2008. Of the 4044 births registered in 2008, 9.3 % were premature, 9.1 % were low weight at birth and 538 died before the age of one year.

In 2009, vaccination coverage was 98% for BCG, 100% for DPT3, 100% for POL3, 99% for measles (MCV1), and 98% for hepatitis B III.

2.5 Burden of disease

Chronic health conditions that require long-term hospitalization constitute a major burden on the health system. At the same time, some communicable diseases, such as STI, HIV infections and acute respiratory infections, remain major public health issues for the country.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Government has endorsed the 'Health for All' principle, and primary health care is one of the priorities set by health offices of all three provinces. The main elements of the health strategy are:

- qualitative and quantitative improvements in health care;
- prevention of communicable diseases through immunization; and
- improvement of health status, housing and the environment by means of health education.

3.2 Organization of health services and delivery systems

At the provincial level, public health care services are provided by 26 medico-social constituencies, managed by the Directions Provinciales des Affaires Sanitaires et Sociales de l'interieur et des Iles. Of these, seven are medico-social centres that have a total of 46 hospital beds. They deliver integrated health care. The remaining 19 are medical centres, which cover in total: 14 nursing stations, 55 consultation rooms and 22 dental care stations. There are four specialized medical centres based in Noumea (the Multi-Specialty Centre, the Mother and Child Health Centre, the School Health Centre and the Family Planning Centre).

At the territorial level, there are five public hospitals (Centre Hospitalier Territorial (CHT) Gaston Bourret – CHT Magenta, CH Noumea (CHN), CHT Raoul Follereau and CHT Col de la Pirogue) and three private hospitals (Clinique Baie Des Citrons (BDC) – Clinique Anse-Vata and Clinique Magnin).

The significant improvement in the health status of the population in recent years can be attributed to the economic growth of New Caledonia as well as to the quality of health care coverage. The whole population has access to health services.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

In 2006, health expenditure amounted to 62 563.88 million F CFP (US$ 668.71 million), with 9.66% of GDP being spent on health. Per capita expenditure on health was 264 509 F CFP (US$ 2826.64). Various public mechanisms fund social welfare programmes, including national insurance, family allowances, industrial programmes and a pension scheme. Consequently, all citizens are comprehensively covered for their health and welfare needs. However, it requires a constant effort to balance the distribution of the available resources equally among the population.

3.5 Human resources for health

As of 1 September 2009, there were 542 practising medical doctors, 53.2% of whom were specialists and 46.8% of whom were practising general medicine. This represents a density of 221 doctors/100 000 inhabitants. There were also 1103 nurses (441.2/100 000 inhabitants), 120 dentists (49/100 000 inhabitants), 106 midwives (163/100 000 inhabitants) and 141 pharmacists (58/100 000 inhabitants).

3.6 Partnerships

In addition to its direct link with the French Government, la Direction des Affaires Sanitaires et Sociales works closely with its partners. The Secretariat of the Pacific Community (SPC) and WHO are the main

development partners in the health sector. New Caledonia is committed to implementing various global health initiatives, such as the International Health Regulations and the Stop TB Programme.

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

No recent information available.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : Institut Territorial de la Statistique et des Etudes Economiques
Web address : http://www.isee.nc/

Title 2 : *New Caledonia Health Profile. Key Features 2007*
Operator : La Direction des Affaires Sanitaires et Sociales
Web address : http://www.dass.gouv.nc/static/publications/chiffre.htm

Title 3 : *Demographic tables for the Western Pacific 2005-2010*
Operator : World Health Organisation, Regional Office fore the Western Pacific
Web address : http://www.wpro.who.int/information_sources/databases/regional_statistics/rstat_demographics.htm

Title 4 : *World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision*
Operator : Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat
Web address : http://esa.un.org/unup

Title 5 : *La Situation Sanitaire pour l'année 2008*
Operator : La Direction des Affaires Sanitaires et Sociales
Web address : http://www.dass.gouv.nc/static/publications/chiffre.htm

Title 6 : *Rapport conjoint OMS/UNICEF de notification des activités de vaccination pour la période janvier-décembre 2007*
Operator : WHO Office for South Pacific

Title 7 : *WHO Report 2008. Global Tuberculosis Control. Surveillance, Planning, Financing*
Operator : World Health Organization

Title 8 : *Population 2000-2015 by 1 and 5 year age groups, February 2010.*
Operator : Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme.
Web address : http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158

6. ADDRESSES

DIRECTION DES AFFAIRES SANITAIRES ET SOCIALES DE NOUVELLE-CALÉDONIE

Office Address : DASS – NC, 5 rue Gallieni – Centre ville 98800 Noumea – Nlle- Caledonie
Postal Address : BP N4 – 98851 Noumea – Nlle-Calédonie
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Office Hours : 7h30-11h30 ; 12h15-16h00
Website : http://www.dass.gouv.nc

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

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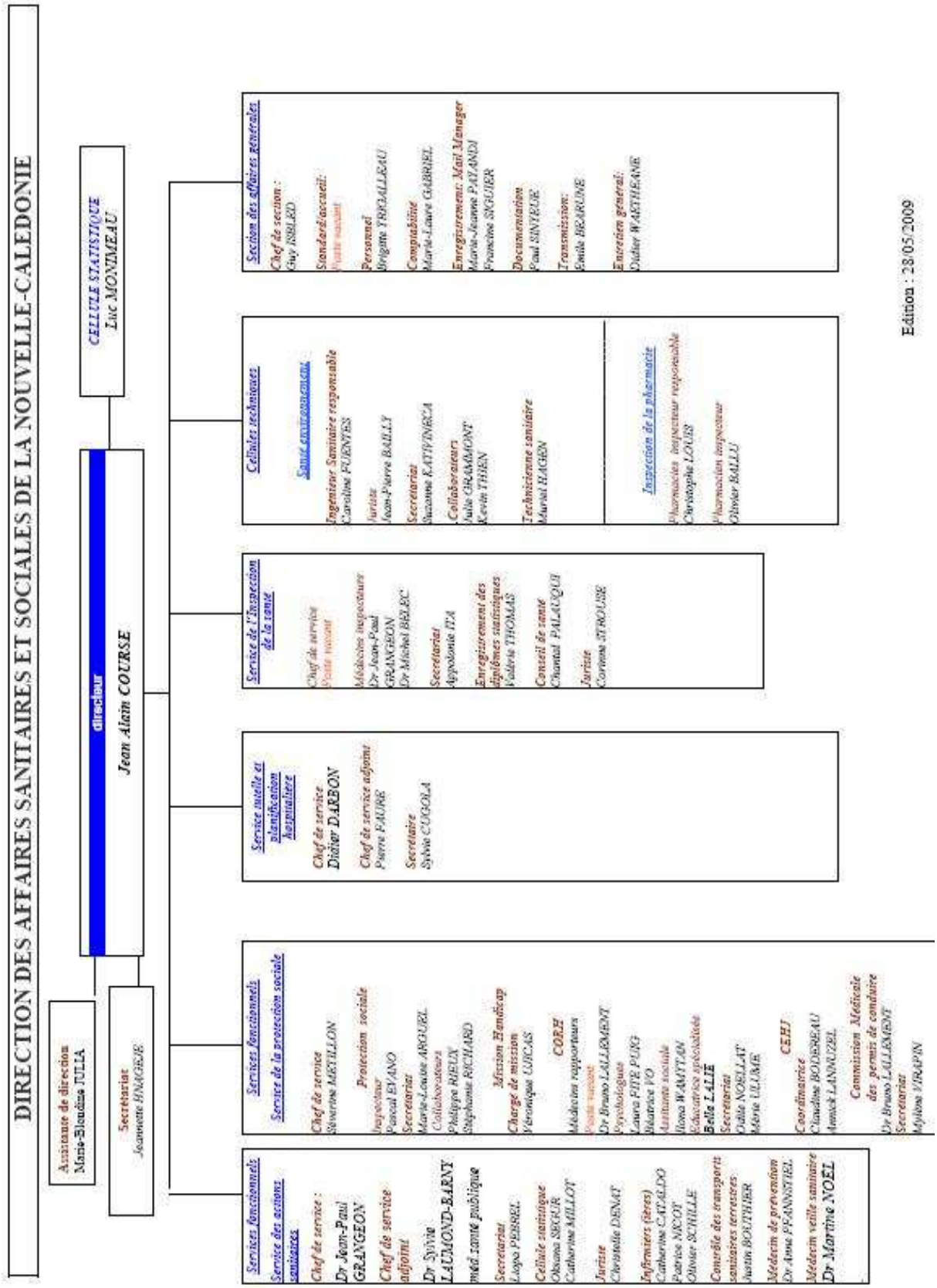
Telephone : (679) 3234 100
Fax : (679) 3234 177; 3234 177
Office hours : 0800 – 1700
Website : http://www.wpro.who.int/southpacific

7. ORGANIZATIONAL CHART: Direction Des Affaires Sanitaires et Sociales de Nouvelle-Caledonie



NEW CALEDONIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	18.58						2008	1
2	Estimated population ('000s)	245.50	…	…				2009p	1
3	Annual population growth rate (%)	2.50	…	…				2006	2
4	Percentage of population								
	- 0–4 years	8.40	8.50	8.20				2008 est	3
	- 5–14 years	18.40	18.60	18.40				2008 est	3
	- 65 years and above	6.20	5.60	7.00				2008 est	3
5	Urban population (%)	64.40	…	…				2007 est	4
6	Crude birth rate (per 1000 population)	16.20 [a]	…	…				2008p	1
7	Crude death rate (per 1000 population)	4.70	…	…				2008p	1
8	Rate of natural increase of population (% per annum)	1.15	…	…				2008p	1
9	Life expectancy (years)								
	- at birth	75.90	71.80	80.30				2007	2
	- Healthy Life Expectancy (HALE) at age 60	…	…	…				…	
10	Total fertility rate (women aged 15–49 years)	2.20						2005	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	91.00	92.00	90.00				2007	1
12	Per capita GDP at current market prices (US$)	38 300.14 [a,b]						2007 est	5
13	Rate of growth of per capita GDP (%)	…							
14	Human development index	…							
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	…	…	…					
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	922	…	…	…	…	…	2005	6
	- Type B	33	7	26	…	…	…	2009	2
	- Type C	2	0	2	…	…	…	2009	2
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	…	…	…	…	…	…		
	Dengue/DHF	8410	…	…	…	…	…	2009	2
	Encephalitis	…	…	…	…	…	…		
	Gonorrhoea	77	…	…	…	…	…	2009	2
	Leprosy	7	5	2	…	…	…	2009	2
	Malaria	2	…	…	…	…	…	2008	2
	Plague	…	…	…	…	…	…		
	Syphilis	46 [c]	12	33	…	…	…	2009	2
	Typhoid fever	…	…	…	…	…	…		
17	Acute respiratory infections	1419	…	…	…	…	…	2009	2
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	162	...	...	...	...	...	2009	2
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	63	34	29	....	....	....	2009	2
	- New pulmonary tuberculosis (smear-positive)	18	9	9	...	....	....	2009	2
20	**Cancers**								
	All cancers (malignant neoplasms only)	703	392	311	...	...	...	2007	2
	- Breast	89	...	89	...	...	...	2007	2
	- Colon and rectum	56	32	24	...	...	...	2007	2
	- Cervix			18 [d]			...	2007	2
	- Leukaemia	47	25	22	...	...	...	2007	2
	- Lip, oral cavity and pharynx	22	18	4	...	...	...	2007	2
	- Liver	12	8	4	...	...	...	2007	2
	- Oesophagus	9	8	1	...	...	...	2007	2
	- Stomach	19	14	5	...	...	...	2007	2
	- Trachea, bronchus, and lung	92	69	23	...	...	...	2007	2
21	**Circulatory**								
	All circulatory system diseases	21 878	...	...	...	...	...	2008	2
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	8 712	...	...	...	...	...	2008	2
23	**Mental disorders**	3991	...	...	...	...	...	2008	2
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	4968	...	...	...	...	...	2008	2
	- Road traffic accidents	557	...	...	...	...	...	2008	2
	- Suicide	39	34	5	...	...	...	2008	2
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Obstetric conditions	2572	...	...	1069.93	...	...	2006	8
	2. Orthopedic and rheumatogical conditions	1570	...	...	653.11	...	...	2006	8
	3. Digestive conditions	1340	...	...	557.43	...	...	2006	8
	4. Respiratory conditions	927	...	...	385.62	...	...	2006	8
	5. Neurological conditions	870	...	...	361.91	...	...	2006	8
	6. Cutaneous and sub-cutaneous conditions (incl operation linked with obesity)	867	...	...	360.66	...	...	2006	8
	7. Heart conditions	739	...	...	307.42	...	...	2006	8
	8. Opthalmic conditions	370	...	...	153.92	...	...	2006	8
	9. Chemotherapy, radiotherapy, blood transfusion	355	...	...	147.68	...	...	2006	8
	10. Uro-nephrological conditions	323	...	...	134.36	...	...	2006	8

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Tumors	327	189	138	133.79 [e]	...	...	2008	2
	2. Diseases of the circulatory system	293	165	128	119.88 [e]	...	...	2008	2
	3.Traumatic injuries and poisoning	157	125	32	64.24 [e]	...	...	2008	2
	4. Diseases of the respiratory system	83	52	31	33.96 [e]	...	...	2008	2
	5. Infectious and parasitic diseases	48	26	22	19.64 [e]	...	...	2008	2
	6. Diseases of the digestive system	40	24	16	16.37 [e]	...	...	2008	2
	7. Diseases of the nervous system	25	15	10	10.23 [e]	...	...	2008	2
	8. Endocrinic, nutritional and metabolic diseases	24	10	14	9.82 [e]	...	...	2008	2
	9. Diseases of the genito-urinary system	23	14	9	9.41 [e]	...	...	2008	2
	10. Perinatal conditions	11	9	2	4.50 [e]	...	...	2008	2
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					37.50		2007	9
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	2.50		...		...		2005	6
31	**Percentage of newborn infants weighing less than 2500 g at birth**	9.10		...		...		2008	6
32	**Immunization coverage for infants (%)**								
	- BCG	98.00		...		...		2008	7
	- DTP3	100.00		...		...		2008	7
	- Hepatitis B III	97.80		...		...		2008	7
	- MCV2	...		...		...			
	- POL3	100.00		...		...		2008	7
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			953			0	2008	2
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	7
	- Diphtheria	0	0	0	...	...	...	2009	7
	- Measles	0	0	0	...	...	...	2009	7
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	0	0	0	...	...	...	2009	7
	- Pertussis (whooping cough)	1	0	1	...	...	...	2009	8
	- Poliomyelitis	0	0	0	...	...	...	2009	7
	- Rubella	...	...	...	...	...	...		
	- Total Tetanus	0	0	0	...	...	...	2009	7
	Health facilities								
35	**Facilities with HIV testing and counseling services**					75		2009	2

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	5	...	2008	2
		- Specialized hospitals	4	184 [f]	2005	6
		- District/first-level referral hospitals	7	46	2006	8
		- Primary health care centres	19	...	2006	8
	Private health facilities	- Hospitals	3	...	2006	8
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			...		
	- total expenditure on health as % of GDP			9.66	2006	2
	- per capita total expenditure on health (in US$)			3226.11 [b,e]	2006	2
	Government expenditure on health					
	- amount (in million US$)			62.50	2006	2
	- general government expenditure on health as % of total expenditure on health			...		
	- general government expenditure on health as % of total general government expenditure			...		
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	- out-of-pocket expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			87.40	2009	1
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	542	...	...	...	...	...	...	2009	2
		- Ratio per 1000 population	2.22 [e]	...	...	...	...	...	...	2009	2
	Dentists	- Number	120	...	...	...	...	...	...	2009	2
		- Ratio per 1000 population	0.49 [e]	...	...	...	...	...	...	2009	2
	Pharmacists	- Number	141	...	...	...	...	...	...	2008	2
		- Ratio per 1000 population	0.58 [e]	...	...	...	...	...	...	2008	2
	Nurses	- Number	1103	...	...	...	...	...	...	2009	2
		- Ratio per 1000 population	4.51 [e]	...	...	...	...	...	...	2009	2
	Midwives	- Number	106	...	...	...	...	...	...	2008	2
		- Ratio per 1000 population	0.43 [e]	...	...	...	...	...	...	2008	2
	Paramedical staff	- Number	...	...	...	...	...	...	....		
		- Ratio per 1000 population	...	...	...	...	...	...	....		
	Community health workers	- Number	...	...	...	...	...	...	....		
		- Ratio per 1000 population	...	...	...	...	...	...	....		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	...	...	...		
44	Under-five mortality rate (per 1000 live births)	9.06	...	...	2002	10
45	Proportion of 1 year-old children immunised against measles	98.60	...	...	2008	7
46	Maternal mortality ratio (per 100 000 live births)	0.00			2008	2
47	Proportion of births attended by skilled health personnel	91.97			2005	11
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	4.37			2005	11
	- Percentage of deliveries in health facilities (as % of total deliveries)	87.60			2005	11
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	0.00	...	...	2009	2
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	0.00	...	...	2006	7
56	Malaria death rate per 100 000 population	0.00	...	...	2006	7
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	0.00	...	...	2006	7
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	0.00	...	...	2006	7
59	Tuberculosis prevalence rate per 100 000 population	10.00	...	...	2008	7
60	Tuberculosis death rate per 100 000 population	1.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	87.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	77.00	...	...	2007	7
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	...	...	...		
64	Proportion of population using an improved sanitation facility	...	...	...		
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised data
b	Figure was converted using exchange rate for 2007 F.CFP 81.99 per US$
c	Totals may not tally due to some reported cases with no gender breakdown
d	Figure refer to cancer of female genital organs
e	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
f	Figure refers to 108 beds for psychiatric cases and 76 beds for geriatric cases

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NEW ZEALAND

1. CONTEXT

1.1 Demographics

New Zealand had a population of 4 143 279 at the time of the 2006 census. There were 1 965 621 male and 2 062 328 female residents counted, around 104 women for every 100 men. The estimated resident population as of 31 December 2009 was 4 318 060. The median age was 35.5 years for men and 37.5 years for women. In common with many other developed countries, New Zealand's population is ageing.

At total population level, the country's health continues to improve, and impressive longevity gains have been recorded: life expectancy at birth in 2006 was 82.4 years for females and 78.4 years for males. These levels for 2006–2008 represent longevity gains of 1.1 years for females and 1.9 years for males since 2000–2002. Since 1975–1977, life expectancy at birth has increased by 6.8 years for females and 9.2 years for males as a result of reductions in mortality rates for all age groups. However, Māori life expectancy at birth in 2006 was approximately eight years less than that for non-Māori for both genders, at 70.4 years for Māori males and 75.1 years for Māori females

The 2006 census results showed that the ethnic make-up of New Zealand had changed rapidly since 2001:

- Asian ethnic groups had grown the fastest, increasing almost 50% from 238 176 people in 2001 to 354 552 in 2006.
- Those identifying with Pacific peoples' ethnic groups had the second-largest increase, up almost 15% since 2001, to 265 974 people.
- The indigenous Māori ethnic group had increased by just over 7% to total 565 329 people. One in seven people identified with the Māori ethnic group.
- 'New Zealander' was a separate category for the first time in 2006; it was previously counted in the European category. Of those who identified themselves as New Zealanders, 12.9% also identified with at least one other ethnic group. New Zealander was the third-largest ethnic group, with 429 429 people or 11% of those who stated their ethnicity. It is considered that the vast majority of those who identify as New Zealander are also European.
- European remained the largest of the major ethnic groups, totaling 2 609 592 people (67.6%).

1.2 Political situation

A national general election is held every three years under a mixed member proportional representation system. There are approximately 120 seats in Parliament and there is no upper house. The centre-right New Zealand National Party was elected in November 2008, resulting in a change of government for the first time in nine years.

1.3 Socioeconomic situation

Due to the troubled international economy, New Zealand's economy contracted by 1.6% from December 2008 to December 2009. There has, however, been recent evidence of growth in economic activity, with gross domestic product (GDP) increasing by 0.8% in the December 2009 quarter. The strongest driver of this increase was manufacturing activity, up 4.5%, after seven consecutive quarters of decline. Wholesale trade activity was also up 2.7%, after seven consecutive quarters of decline. In the March 2010 quarter, the unemployment rate was 6%.

New Zealand was ranked 22nd out of 30 OECD countries for GDP per person in 2007 and 22nd out of 29 countries for gross national income per person in 2006. Between 1986 and 2007, real GDP per person (using US$ purchasing power parity [PPP] for the year 2000) grew by 32% in New Zealand compared with an OECD average of 51%.

In terms of income inequality, in 2008 the equivalized, disposable income of a household at the 80th percentile was 2.6 times higher than that of a household at the 20th percentile, with Māori and Pacific people particularly overrepresented in the lower 20th percentile. The most recent OECD comparison available (from 2004) gives New Zealand a score of 34, indicating higher income inequality than the OECD median of 31 and a ranking of 23rd equal out of 30 countries.

1.4 Risks, vulnerabilities and hazards

Vulnerabilities and hazards derive from the geographical configuration of a relatively small island country in the Pacific Ocean. Biological hazards, such as pandemic influenza A (H1N1), pose an imminent risk.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Ischaemic heart disease, cerebrovascular disease and other forms of heart disease comprised the major cause of mortality in 2006, accounting for 35% of all deaths, followed by cancer, accounting for 29%.

Between 1996-1999 and 200-2004 absolute inequality in all-cause mortality decreased, more so for Māori than for Pacific ethnic groups. This appears to have arrested a widening gap in inequality evident from the early 1990s. A substantial proportion of the decline in mortality for all ethnic groups over this period can be attributed to a progressive reduction (improvements in smoking, diet and control of blood cholesterol and blood pressure) in the incidence and case fatality rates for cardiovascular disease (CVD), coronary heart disease and stroke, in particular. At the same time, the contribution of cancer to ethnic mortality inequality increased.

In terms of health risk factors influenced by individual behaviour, tobacco consumption declined significantly during the period from 1976 to 1992, leveled off from 1992 to 1996, and has subsequently fallen further. Smoking remains a major contributor to inequalities in health. People living in more deprived areas have higher rates of smoking than people living in less deprived areas. Smoking rates among both Māori and Pacific people declined between 2002-2003 and 2006-2007, but the prevalence of smoking remains high among Māori (40.4%) and Pacific people (26.0%) compared with the total population (19.9%).

Obesity is one of the most important modifiable risk factors for a number of important diseases such as type 2 diabetes, ischaemic heart disease and stroke. Obesity and overweight are major health issues affecting over half the adult population and just under one-third of New Zealand children. Māori are more likely to be obese than non-Māori, with 41.1% of Māori adults and 24.6% of non-Māori adults (over 15 years) being obese in 2006 -2007. Similar trends are seen for children, with 12.6% of Māori children and 7.1% of non-Māori children obese in 2006-2007.

2.2 Outbreaks of communicable diseases

Compared with other developed countries, a relatively high incidence of waterborne diseases, including campylobacteriosis, giardiasis and cryptosporidiosis, is reported.

The Ministry of Health has acknowledged capability and capacity in the leadership and coordination of health sector activity during possible emergency events, such as outbreaks of severe acute respiratory syndrome (SARS), highly pathogenic H5N1 avian influenza and pandemic influenza A(H1N1). The National Influenza Pandemic Preparedness Plan serves as a valuable model for the Pacific region. The information in the Plan is the outcome of work undertaken by intersectoral working groups covering health, biosecurity, law and order, emergency services, civil defense emergency management, welfare, education, border response, the economy, external response (international) infrastructure and workplaces.

The Ministry of Health is responsible for planning the national response to health service emergencies of all kinds, including outbreaks of communicable disease. The National Health Emergency Plan (NHEP) 2008 describes the larger context within which the Ministry of Health and all health services will function

during any national health-related emergency, including the country's responsibilities under international agreements and regulations.

2.3 Leading causes of mortality and morbidity

Chronic or long-term conditions are the leading cause of preventable morbidity, mortality and unequal health outcomes. They include diabetes and cardiovascular diseases, cancer, respiratory conditions, mental health conditions, such as anxiety and depression, and arthritis.

Together, cardiovascular diseases and diabetes account for a significant burden of chronic illness and premature death. About 10500 New Zealanders die from cardiovascular diseases each year, accounting for 40% of all deaths, and there are 7000 new stroke 'events' every year. Over 7000 people are newly diagnosed with diabetes each year and 4.5% of the population live with diabetes.

The major causes of death (rate per 100 000) in 2006 were: malignant neoplasms (191.0); ischaemic heart diseases (141.2); cerebrovascular diseases (63.8); chronic lower respiratory diseases (40.6); other forms of heart disease (27.4); diabetes mellitus (20.5); organic, including symptomatic, mental disorders (18.3); intentional self-harm (12.6); diseases of arteries, arterioles and capillaries (12.4); and other degenerative diseases of the nervous system (12.0).

2.4 Maternal, child and infant diseases

In 2008, based on provisional figures, there were 61 090 hospital deliveries, of which 66.0% were normal deliveries, 24.3% were Caesarean sections, 8.5% were assisted deliveries (forceps and/or vacuum extraction) and 0.5 % were breech deliveries. In the same year, 99.0% (60 499) of total hospital births were liveborn babies and 0.8% (476) were stillbirths.

The infant mortality rate continues to decrease, standing at 4.8 per 1000 live births in 2007, down from 5.7 in 1999 and 18.4 in 1969. The rate has fallen in association with a reduction in infectious diseases (and respiratory diseases), which were previously the main causes of infant death in the country.

The number of neonatal deaths remains relatively small, accounting for 165 infant deaths in the first 28 days of life in 2007 or a rate of 2.5 per 1000 live births. Europeans have markedly lower early neonatal deaths (deaths in the first week of life) rates than all other ethnicities. The perinatal death rate (fetal deaths after 20 weeks' gestation or 400 g birth weight, plus early neonatal deaths) for Pacific babies was the highest in 2006 (11.1 perinatal deaths per 1000 total births) compared with a rate of 8.4 for Māori and 8.9 for other ethnic groups.

The major causes of infant mortality are sudden infant death syndrome (SIDS), congenital abnormalities and perinatal conditions (such as prematurity, perinatal infections and low birth weight). The SIDS death rate of 0.8 per 1000 live births in 2004 was 61.9% lower than in 1994. This rate is the lowest recorded since SIDS became a separate category in the International Classification of Diseases in 1979.

There were 63 950 live births registered in New Zealand in the year to March 2010, down from 64 160 in the previous year. The birth rate was 2.2 births per woman. In the same year, women aged 30–34 years had the highest fertility rate (126 births per 1000 women). The median age of women giving birth is now 30 years, and the median age of women giving birth to their first child is 28 years. A delayed fertility pattern is noticeable among women of European and Asian ethnic groups, but there is also some evidence of delayed child-bearing among Pacific women.

In terms of child health, asthma is the most common chronic health condition in both Māori and non-Māori New Zealand children. In the 2006/2007 New Zealand Health Survey, 20.3% of Māori and 13.1 % of non-Māori children were currently taking medication for asthma. Other common health conditions for children were eczema (14.1%) and all types of allergies (6.2%).

2.5 Burden of disease

Within the scope of health and disability services, unequal health outcomes can largely be attributed to the disproportionate burden imposed by chronic or long-term conditions, especially cardiovascular diseases (CVD) and type 2 diabetes, in Māori and Pacific peoples and those on low incomes.

Modern sedentary lifestyles and high-energy diets, combined with the effects of an ageing population and improvements in the management of acute CVD, have resulted in an increase in the number of people living with such diseases. Although mortality due to CVD has decreased significantly in the last 25 years, they are still a leading cause of death and a major source of disparity in health between Māori and non-Māori people. For the first time, however, there are initial indications that the present decline in CVD risks may be starting to plateau, possibly due to the increasing prevalence of obesity and type 2 diabetes.

The prevalence of obese adults has been increasing since 1989. In 2006/2007, 26% of females and just under 25% of males were obese. Childhood obesity remained stable from 2002 to 2006/2007, at around 9% of all 5-14 year-olds. Obesity is not evenly distributed throughout the population and is related to age, ethnicity and socioeconomic position. Pacific adults and children are at least 2.5 times more likely to be obese than all adults and children in the population, while Māori adults are 1.7 times and Māori children 1.4 times more likely to be obese than all adults and children in the population.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is a policy advisor to the Minister of Health, an agent of the Minister for monitoring and overseeing District Health Boards (DHBs), a funder of DHBs and national services (such as national screening services), and a provider of regulatory and other functions (e.g. public health).

The overall strategic objective of the Ministry of Health is "better, sooner, more convenient" services, thereby contributing to the Government's goal of all New Zealanders leading longer, healthier and more independent lives. The immediate term strategic priorities feeding into this overarching objective are outlined in the Ministry's Statement of Intent:

(1) Providing greater value for money.

(2) Increasing clinical leadership.

(3) Reducing waiting times for elective services, emergency departments and cancer treatment.

(4) Devolving more services to primary and community settings.

(5) Making the system more adaptable and resilient to deal with the challenges ahead.

3.2 Organization of health services and delivery systems

The New Zealand Public Health and Disability Act 2000 established DHBs. Governed by boards of directors that include locally elected members and ministerial appointees, the 20 DHBs are responsible for planning, funding and delivering most publicly funded health services to New Zealanders. DHBs' provider arms encompass hospital care, specialty care, community nursing and other functions.

Primary health care is provided by primary health organizations (PHOs), which contract with DHBs for the bulk of their funding. The first PHOs were introduced in 2002 as the cornerstone for implementation of the Primary Health Care Strategy. There are now 4.2 million people enrolled in over 70 PHOs (more than 96% of the New Zealand public), spanning the vast majority of general practitioners and practice nurses. Governed by non-profit boards of directors, PHOs contract with DHBs to offer a range of preventive and curative services, as well as an increasing array of population health services. All New Zealanders enrolled with PHOs can avail themselves of low or reduced-cost primary care services, including office-based general practice care and pharmaceuticals (maximum of NZ$ 3.00 copayment).

Much health care is delivered by nongovernmental organizations (NGOs). These include providers with national contracts, such as the Royal New Zealand Plunket Society, which provides child health services, and providers that contract with their local DHB, such as community-based NGOs providing services to people with experience of mental illness. There are also approximately 275 Māori health and disability providers that are Māori-owned and Māori-governed.

3.3 Health policy, planning and regulatory framework

The New Zealand Health Strategy and the New Zealand Disability Strategy sit alongside each other and together set the country's health and independence goals. Additional key strategies include *He Korowai Oranga* (the Māori Health Strategy), the aim of which is to support Māori families to achieve their maximum health and well-being, and the Primary Health Care Strategy, which aim to strengthen the comprehensiveness and integration of primary health care services throughout the country.

A wide range of health information is collected nationally and held in various collections maintained by the New Zealand Health Information Service (NZHIS), and is used for a variety of analytical and research purposes at the national, regional and local levels. Uses of the data include: monitoring contracts with providers, forecasting and setting of annual budgets, analysis of health needs, policy formation, assessment of policy effectiveness, performance monitoring and review, reporting and ad hoc queries, monitoring of health care strategies, and research into service provision.

Key national data collections include:

- The National Health Index is the cornerstone of health information. It was established to provide a mechanism for uniquely identifying every health care user by assigning each a unique number (known as the NHI number).
- The National Minimum Dataset uses a single, integrated collection of secondary and tertiary hospital health discharge data.
- The Cancer Registry is a population-based tumour register of all primary malignant diseases, active since 1948.
- The Mortality Register contains coded causes of death for New Zealanders who die in New Zealand and is based on the legal death certificate, or coroner's report, and autopsy reports. A complete data set of each year's mortality data is sent to the WHO each year to be used in international comparisons of mortality statistics.
- The Mental Health Information National Collection contains information on specialist mental health and alcohol and drug services. This collection contains comprehensive information from DHBs and approximately 10% of NGOs.
- The National Booking Reporting System provides information, by health specialty and booking status, on how many patients are waiting for treatment, their assigned priority, their booking status and also how long they have had to wait before receiving treatment
- The National Non-admitted Patient Collection (NNPAC) provides national consistent data on non-admitted patient (outpatient and emergency department) activity.
- The principal purpose of the Health Practitioner Index (HPI) is to uniquely identify health practitioners and to hold that information in a central, national database for use by the New Zealand health and disability sector.
- The Sector Services is a business unit within the Ministry of Health's Information Directorate that provides information and reports relating to health claims, provider payments and entitlements.

A full listing of national data collections and their content can be viewed on the NZHIS website at http://www.nzhis.govt.nz/.

3.4 Health care financing

Public sector funding is the major source of financing for health and disability support services. Approximately 78% of total health expenditure is paid for by government funds. Of total health expenditure, 67% is from Vote Health, which pays for core health services such as hospitals, primary care, public health care, mental health care, addiction services, and care for older people. Most of the remaining public funds (10%) are from the ACC (Accident Compensation Corporation), which pays for accident and injury prevention and treatment. Private insurance pays for less than 6% of total health expenditure, while out-of-pocket spending accounts for between 15% and 17%. These levels have remained roughly the same for the past 20 years.

Total Vote Health expenditure amounted to NZ$ 12 716 million (US$ 9146 million) in 2009/2010, while DHB appropriations totalled NZ$ 9700 million (US$ 6977 million). Most DHB funding is allocated using a population-based funding formula that gives each DHB the same opportunity, in terms of resources, to respond to its population's needs.

New Zealand has historically had a system of cost-sharing for doctors' visits and prescription drugs. The Commonwealth Fund 2007 International Health Policy Survey showed 12% of New Zealanders faced no out-of-pocket medical costs in 2007, while 10% faced more than US$ 1000 in out-of-pocket payments.

3.5 Human resources for health

Global demand for qualified health workers is projected to increase, and competition for workers in the health sector labour market will be vigorous. New Zealand will need to retain local graduates and attract suitable numbers of trained workers from overseas.

The health and disability workforce delivers services to over four million people and comprises over 160 000 health workers. Of these 160 000 health workers, 88 000 are registered practitioners under statutory regulation. The remaining unregulated workforce includes those providing care and support in both residential and home-based settings, community health promoters, some technicians, service and food workers, and administrators.

DHBs are the largest health sector employers and directly employ approximately 65 000 health workers to provide publicly funded health services. Others work in residential or community settings in the private sector and in NGOs. In some cases, these NGOs are funded for particular services by the Ministry of Health or DHBs. Some health workers, primarily doctors, may work in both the public and the private sectors.

New Zealand's health and disability workforce can be characterized by:

- an ageing workforce with, for example, 80% of dental therapists and 77% of midwives aged over 40 years;
- an increasing trend towards specialization and sub-specialization among doctors;
- an increasing reliance on overseas-trained doctors (43%) and nurses (23%) compared with other developed countries;
- supply pressures in some professions, particularly midwives, junior doctors and some medical specialties, including general practitioners;
- supply pressures in some rural areas of New Zealand;
- an underrepresentation of Māori and Pacific peoples in the health professions; and
- significant wage settlements in recent years for most clinical workforce groups (particularly senior doctors and nurses) employed by DHBs, reflecting government policy and funding decisions in

relation to gender and state sector and economy-wide pay equity, and the need to maintain a competitive position in an international labour market for medical and nursing staff.

Increasing health service demand is predicted due to the interplay of factors including an ageing population and resultant growth in chronic diseases and the associated increased complexity of need; expansion of the scope of the health system arising from new medical technologies; and increased public expectation of what the health system can deliver. New Zealand is developing a stronger and more coordinated national approach to strategic workforce planning to assure a workforce that can deliver the services needed. Key priority areas for workforce planning and development include:

- retaining more of New Zealand's skilled health professionals by ensuring they are fully engaged and satisfied in their employment, and that their expertise is being used in the best way to treat patients;
- boosting the workforce in areas and specialties that are hard to staff, focusing particularly on rural and provincial areas, and on the workforce needed to support and deliver elective services;
- moving New Zealand towards self-sufficiency in health workforce training; and
- understanding likely future gaps in workforce and skills across critical services, and identifying the actions needed to fill them.

3.6 Partnerships

New Zealand is one of the three dominant development partners in the South Pacific, together with Australia and the European Union, with collaboration and partnerships at both the bilateral and multilateral levels.

Based on the Pacific Leaders' vision, the Pacific Plan was adopted by Pacific Islands Forum countries in November 2005 as a blueprint for strengthening regional cooperation and integration. It covers the most significant common development challenges the Pacific island countries face and is seen to be, not just regionally, but also nationally owned. Health is embodied in the Pacific Plan under strategic objective No. 6. – Improved Health.

3.7 Challenges to health system strengthening

Rising public expenditures, workforce shortages, an ageing population, new technologies, persistent inequalities and a growth in long-term conditions are the main pressures on the New Zealand health system.

There are clear signs that the health system is contributing positively to the health of New Zealanders, such as increasing life expectancy, lower infant death rates (28% in the last decade), declining death rates from cardiovascular disease (10% between 2000 and 2004), and a reduced the gap between Māori and non-Māori mortality rates (approximately 15% between 1996−1999 and 2001−2004). These results have been achieved by a system that, overall, compares well from an efficiency standpoint with comparable countries.

Adjusting for cost-of-living differences using US$ PPP, New Zealand was spending US$ 2510 per capita on health in 2007, compared with the OECD average of US$ 2984, which is about the level of health spending expected across OECD countries given New Zealand's per capita income as measured by GDP. To use another measure of health expenditure, by 2007 New Zealand was spending 9.2% of GDP on health, slightly higher than the OECD average of 8.9. A very recent health system efficiency analysis, using 2007 data, showed that New Zealanders are living longer lives than would be predicted from GDP when compared with other OECD countries, achieving 1.7 more years of life expectancy than expected from GDP, while spending only slightly more (US$ 189 PPP) on health than expected from GDP. New Zealand also performs especially well on the international stage for controlling growth in pharmaceutical spending per capita, which on average is two times less than Canada and 2.5 times less than Australia. However, further productivity gains are needed to keep moving the country in the right direction in terms

of improved systems outcomes, with proportionately smaller increases in the level of government health spending in the near future.

While progress is being made in reducing inequalities in health outcomes between population groups, some remain. Māori and Pacific peoples have poorer health than non- Māori and non-Pacific people, and people with low socioeconomic status have poorer health than those with higher socioeconomic status. Five-year cancer survival rates, cardiovascular disease mortality and diabetes diagnosis show marked disadvantages for Māori compared with non- Māori people, while Māori and Pacific women and women living in deprived areas are less likely to receive cervical or breast cancer screening.

The causes of inequality are complex. The health and disability sector needs to continue to provide services that act to reduce inequalities between groups and to work across sectors to address the unequal distribution of the social determinants of health.

4. PROGRESS TOWARDS THE HEALTH MDGs

The New Zealand Ministry of Health advises that New Zealand is performing well against the health-related MDGs. In terms of some specific health-related MDG indicators:

- New Zealand is already achieving 100% compliance in the case, for example, of the proportion of births attended by skilled health personnel, and the proportion of the population using improved drinking-water sources and sanitation facilities.
- Some health-related MDGs are less relevant to New Zealand than to other countries because of relatively few cases each year. For example, New Zealand has very few malaria notifications due to it being an imported disease, and very few maternal deaths each year
- There are data gaps for New Zealand for some of the indicators, such as contraceptive prevalence.
- New Zealand is on track to meet the MDG 4 target of a two-thirds reduction between 1990 and 2015 in the under-five mortality rate.

Although the country does not have specific MDG-targeted programmes, it does have a range of programmes focusing on issues covered in the health-related MDGs, such as HIV/AIDS, tuberculosis and maternal and child health. In the area of childhood immunizations, in particular, New Zealand has introduced a health target that requires district health boards to increase coverage so that 95% of children are fully immunized at two years of age by July 2012. More information on these programmes and initiatives, as well as the health targets, can be found on the Ministry of Health's website at www.moh.govt.nz.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Health and Independence Report 2009*
Operator	:	Ministry of Health, New Zealand
Web address	:	http://www.moh.govt.nz/moh.nsf/indexmh/health-independence-report09
Title 2	:	*A Portrait of Health: Key Results of the 2006/07 New Zealand Health Survey*
Operator		New Zealand Ministry of Health
Web address	:	http://www.moh.govt.nz/moh.nsf
Title 3	:	New Zealand Health Information Service (NZHIS)
Operator	:	Ministry of Health, New Zealand
Features	:	The New Zealand Health Information Service (NZHIS) is a group within the New Zealand Ministry of Health responsible for the collection and dissemination of health-related data.
Web address	:	http://www.nzhis.govt.nz/

Title 4		The Social Report, 2009
Operator		Ministry of Social Development
Web Address		http://www.socialreport.msd.govt.nz/
Title 5		Tatau Kahukura: Māori Health Chart Book 2010
Operator		The Ministry of Health
Web Address		www.moh.govt.nz
Title 6	:	*Statistics New Zealand*
Comments	:	Provides, among others, the 2006 Census data
Web address	:	http://www.stats.govt.nz/default.htm
Title 7	:	*Statement of Intent 2010–2013*
Operator	:	Ministry of Health, New Zealand
Web address	:	http://www.moh.govt.nz/soi

6. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	1-3 The Terrace, P.O. Box 5013, Wellington 6011, New Zealand
Telephone	:	04 - 496-2000
Fax	:	04 - 496-2340
Website	:	http://www.moh.govt.nz

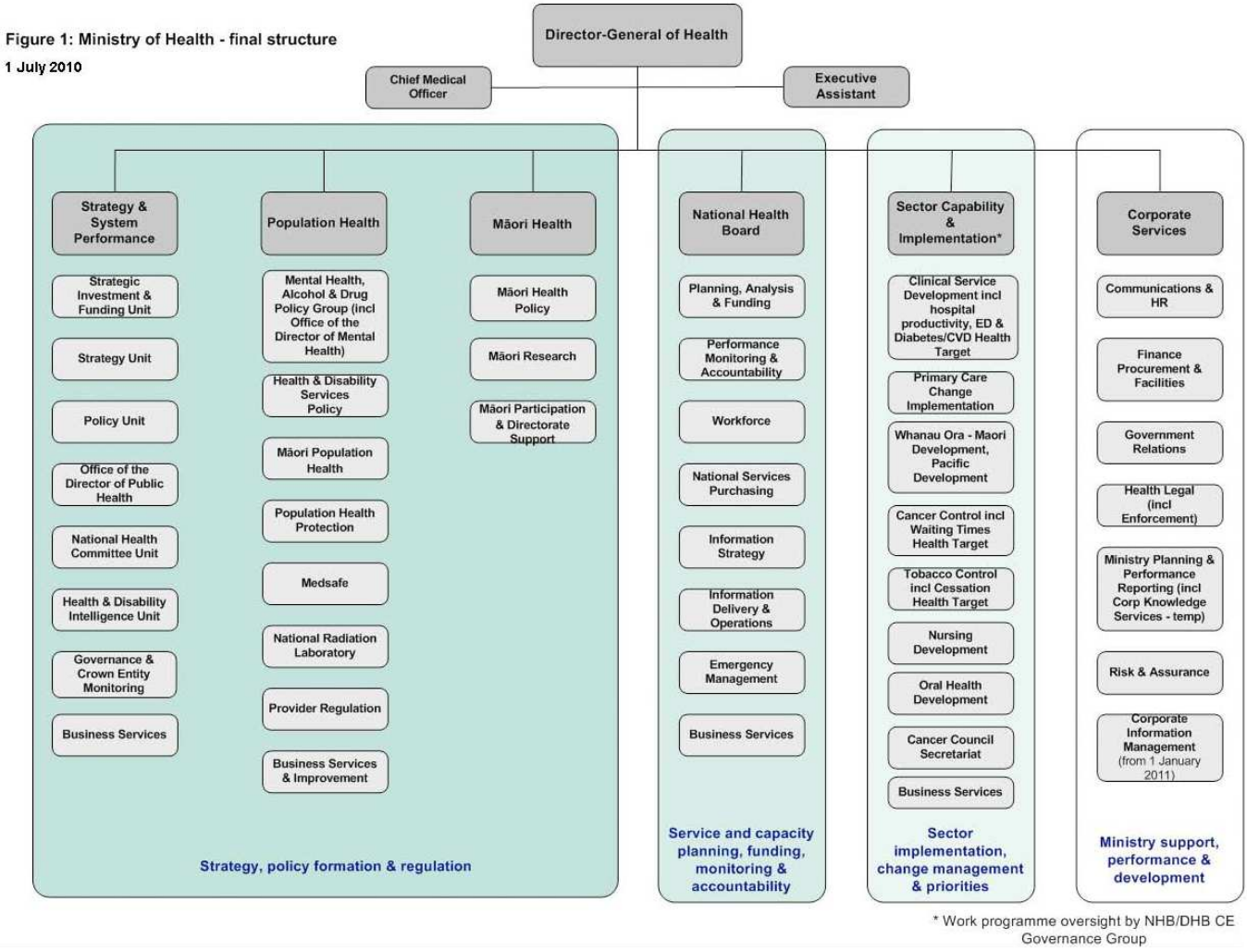
WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4, Provident Plaza One, Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

7. ORGANIZATIONAL CHART: Ministry of Health

Figure 1: Ministry of Health - final structure

1 July 2010



* Work programme oversight by NHB/DHB CE Governance Group

NEW ZEALAND — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male	Female				
1	Area (1 000 km2)	270.69 [a]						2006	1
2	Estimated population ('000s)	4318.06 [b]		2118.60 [b]	2199.46 [b]			2009	1
3	Annual population growth rate (%)	1.18 [c]		1.17 [c]	1.19 [c]			1991-2009	1
4	Percentage of population								
	- 0–4 years	7.08 [b]		7.41 [b]	6.76 [b]			2009	1
	- 5–14 years	13.56 [b]		14.16 [b]	12.98 [b]			2009	1
	- 65 years and above	12.80 [b]		11.83 [b]	13.73 [b]			2009	1
5	Urban population (%)	86.10 [a]		...	...			2009	1
6	Crude birth rate (per 1000 population)	14.48		...	...			2009	1
7	Crude death rate (per 1000 population)	6.71		...	...			2009	1
8	Rate of natural increase of population (% per annum)	0.77 [d]		...	...			2009	1
9	Life expectancy (years)								
	- at birth	80.40		78.40	82.40			2008p	1
	- Healthy Life Expectancy (HALE) at age 60	...		16.00	18.20			2002	3
10	Total fertility rate (women aged 15–49 years)	2.12 [e]						2009	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	86.00 [f]		...	...			2006	4
12	Per capita GDP at current market prices (US$)	30 026.04						2008	5
13	Rate of growth of per capita GDP (%)	719.75 [k]						1996-2009	6
14	Human development index	0.95						2007	7
	Environmental indicators	Total		Urban	Rural				
15	Health care waste generation (metric tons per year)	...		...	...				
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases								
	Hepatitis viral								
	- Type A	44	26	18	0	0	0	2009	9
	- Type B	55	42	13	0	0	0	2009	9
	- Type C	32 [g]	12	19	0	0	0	2009	9
	- Type E	...	...	...	...	...	...		
	- Unspecified	2	1	1	0	0	0	2009	9
	Cholera	0	0	0	0	0	0	2009	9
	Dengue/DHF	140	57	83	0	0	0	2009	9
	Encephalitis	0	0	0	0	0	0	2005	8
	Gonorrhoea	...	...	...	0	0	0	2004	9
	Leprosy	3	1	2	0	0	0	2009	9
	Malaria	50	32	18	0	0	0	2009	9
	Plague	0	0	0	0	0	0	2009	9
	Syphilis	...	...	...	0	0	0	2004	9
	Typhoid fever	35 [g]	15	19	0	0	0	2009	9
17	Acute respiratory infections	21 826 [h]	11 418 [h]	10 408 [h]	507	183	324	C:2004-05 D:2006	8
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	5969 [h]	2986 [h]	2983 [h]	19	10	9	C:2004-05 D:2006	8
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	302	155	147	3	2	1	2009	9
	- New pulmonary tuberculosis (smear-positive)	90	52	38	3	2	1	2009	9
20	**Cancers**								
	All cancers (malignant neoplasms only)	18 895	9849	9046	7997	4085	3912	2006	8
	- Breast	2572	16	2556	619	5	614	2006	8
	- Colon and rectum	2805	1487	1318	1190	565	625	2006	8
	- Cervix			160			52	2006	8
	- Leukaemia	535	302	233	298	170	128	2006	8
	- Lip, oral cavity and pharynx	354	240	114	118	80	38	2006	8
	- Liver	231	158	73	207	131	76	2006	8
	- Oesophagus	260	158	102	208	129	79	2006	8
	- Stomach	368	234	134	273	161	112	2006	8
	- Trachea, bronchus, and lung	1706	934	772	1457	798	659	2006	8
21	**Circulatory**								
	All circulatory system diseases	70 031 [h]	39 210 [h]	30 821 [h]	10 840	5159	5681	C:2004-05 D:2006	8
	- Acute myocardial infarction	12 628 [h]	8037 [h]	4591 [h]	2883	1554	1329	C:2004-05 D:2006	8
	- Cerebrovascular diseases	8859 [h]	4254 [h]	4605 [h]	2673	1000	1673	C:2004-05 D:2006	8
	- Hypertension	881 [h]	320 [h]	561 [h]	329	126	203	C:2004-05 D:2006	8
	- Ischaemic heart disease	26 500 [h]	16 500 [h]	10 000 [h]	5912	3133	2779	C:2004-05 D:2006	8
	- Rheumatic fever and rheumatic heart diseases	729 [h]	350 [h]	379 [h]	186	79	107	C:2004-05 D:2006	8
22	**Diabetes mellitus**	8344 [h]	4356 [h]	3988 [h]	860	447	413	C:2004-05 D:2006	8
23	**Mental disorders**	20 238 [h]	9441 [h]	10797 [h]	832	308	524	C:2004-05 D:2006	8
24	**Injuries**								
	All types	142 820 [i]	76 406 [i]	66 414 [i]	1735 [i]	1132 [i]	603 [i]	C:2004-05 D:2006	8
	- Drowning	102	69	33	54	43	11	C:2004-05 D:2006	8
	- Homicide and violence	4475 [i]	3423 [i]	1052 [i]	64 [i]	41 [i]	23 [i]	C:2004-05 D:2006	8
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	8214 [i]	4976 [i]	3238 [i]	403 [i]	283 [i]	120 [i]	C:2004-05 D:2006	8
	- Suicide	5331 [i]	1689 [i]	3642 [i]	526 [i]	388 [i]	138 [i]	C:2004-05 D:2006	8
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Malignant neoplasms (C00-C96)	44 122	23 090	21 032	1086.08	1155.48	1018.89	2004-05	8
	2. Complications of labour and delivery (060-075)	28 802		28 802	708.97		1395.31	2004-05	8
	3. Ischaemic heart diseases (I20-I25)	26 500	16 500	10 000	652.31	825.70	484.45	2004-05	8
	4. Arthropathies (M00-M25)	22 668	12 191	10 477	557.98	610.07	507.56	2004-05	8
	5. Symptoms and signs involving the circulatory and respiratory systems (R00-R09)	20 997	10 562	10 435	516.85	528.55	505.52	2004-05	8
	6. Other forms of heart disease (I30-I52)	20 814	11 144	9670	512.34	557.67	468.46	2004-05	8
	7. Chronic lower respiratory diseases (J40-J47)	20 233	9733	10 500	498.04308	487.064	508.67164	2004-05	8
	8. Symptoms and signs involving the digestive system and abdomen (R10-R19)	19 493	6672	12 821	479.82769	333.8838	621.112295	2004-05	8
	9. Maternal care related to the fetus and amniotic cavity and possible delivery problems (O30-O48)	17 912		17 912	440.91077		867.745374	2004-05	8
	10. Pregnancy with abortive outcome (O00-O08)	16 113		16 113	396.63		780.59	2004-05	8

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms (C00-C96)	7997	4085	3912	191.00	199.32	183.03	2006	8
	2. Ischaemic heart diseases (I20-I25)	5912	3133	2779	141.20	152.87	130.02	2006	8
	3. Cerebrovascular diseases (I60-I69)	2673	1000	1673	63.84	48.79	78.27	2006	8
	4. Chronic lower respiratory diseases (J40-J47)	1698	858	840	40.56	41.86	39.30	2006	8
	5. Other forms of heart disease (I30-I52)	1147	527	620	27.39	25.71	29.01	2006	8
	6. Diabetes mellitus (E10-E14)	860	447	413	20.54	21.81	19.32	2006	8
	7. Organic, including symptomatic, mental disorders (F00-F09)	765	260	505	18.27	12.69	23.63	2006	8
	8. Intentional self-harm (X60-X84)	526	388	138	12.56	18.93	6.46	2006	8
	9. Diseases of arteries, arterioles and capillaries (I70-I79)	521	271	250	12.44	13.22	11.70	2006	8
	10. Other degenerative diseases of the nervous system (G30-G32)	504	167	337	12.04	8.15	15.77	2006	8
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					72.00		2002 est	11
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	2.53		...		...		2007	8
31	**Percentage of newborn infants weighing less than 2500 g at birth**	5.90						2008	8
32	**Immunization coverage for infants (%)**								
	- BCG	...		...		...			
	- DTP3	92.00		...		...		2009	12
	- Hepatitis B III	93.00		...		...		2009	12
	- MCV2	...		...		...			
	- POL3	92.00		...		...		2009	12
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			16 113			0	C:2004-05 D:2006	8
	- Eclampsia			42			0	C:2004-05 D:2006	8
	- Haemorrhage			4483			0	C:2004-05 D:2006	8
	- Obstructed labour			3208			0	C:2004-05 D:2006	8
	- Sepsis			294			1	C:2004-05 D:2006	8
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	9, 12
	- Diphtheria	0	0	0	0	0	0	2009	9, 12
	- Measles	253	136	117	0	0	0	2009	9
	- Mumps	63	35	28	0	0	0	2009	9
	- Neonatal tetanus	0	0	0	0	0	0	2009	9, 12
	- Pertussis (whooping cough)	1399 [g]	596	798	0	0	0	2009	9
	- Poliomyelitis	0	0	0	0	0	0	2009	9
	- Rubella	4 [g]	2	1	0	0	0	2009	9
	- Total Tetanus	1	1	0	0	0	0	2009	9, 12
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	85	12 484	2002	8
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	360	11 341	2002	8
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			11 475.65	2008p	5
	- total expenditure on health as % of GDP			8.96	2008p	5
	- per capita total expenditure on health (in US$)			3819.74	2008p	5
	Government expenditure on health					
	- amount (in million US$)			9036.16	2008p	5
	- general government expenditure on health as % of total expenditure on health			78.74	2008p	5
	- general government expenditure on health as % of total general government expenditure			17.97	2008p	5
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2008p	5
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			21.26	2008p	5
	- out-of-pocket expenditure on health as % of total expenditure on health			15.24	2008p	5
	Exchange rate in US$ of local currency is: 1 US$ =			1.42	2008p	5
38	**Health insurance coverage as % of total population**			100.00	2007	13

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	10 552	6484	4068	...	...	5691 [j]	4817 [j]	2008	10
		- Ratio per 1000 population	2.47	1.52	0.95	...	...	1.33	1.13	2008	10
	Dentists	- Number	1877 [g]	1360	635	...		126	1751	2007	10
		- Ratio per 1000 population	0.45	0.31	0.14	...	...	0.03	0.42	2007	10
	Pharmacists	- Number	3076	1269	1807	...	...	...	...	2009	16
		- Ratio per 1000 population	0.71	0.29	0.42	...	...	...	...	2009	16
	Nurses	- Number	44 762	3166	41 596	...	...	26 261 [l]	17535 [l]	2008	10
		- Ratio per 1000 population	10.48	0.74	9.74	...	...	6.15	4.11	2008	10
	Midwives	- Number	2468 [m]	13 [m]	2443 [m]	...	...	1323 [m]	889 [m]	2008	10
		- Ratio per 1000 population	0.58	0.00	0.57	...	...	0.31	0.21	2008	10
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	337	...	...	...	...	...	...	2009	14
		Dentists	88	...	...	...	...	...	...	2009	15
		Pharmacists	220	...	...	...	...	...	...	2009	16

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	1320	...	...	...	...	...	...	2009	17
		Midwives	107	...	...	...	...	...	...	2009	18
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	4.79	...	...	2007	8
44	Under-five mortality rate (per 1000 live births)	6.05	...	...	2007	8
45	Proportion of 1 year-old children immunised against measles	89.00	...	...	2009	12
46	Maternal mortality ratio (per 100 000 live births)	11.61			2006	8
47	Proportion of births attended by skilled health personnel	100.00			2001	8
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	95.30			2004 est	8
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	29.39			2009	1
50	Antenatal care coverage - At least one visit	100.00			2005	8
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	0.10	...	...	2007	12
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	1.16 °	1.51 °	0.82 °	2009	9
56	Malaria death rate per 100 000 population	0.00 °	0.00 °	0.00 °	2009	9
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	7.10	...	...	2009	9
60	Tuberculosis death rate per 100 000 population	1.00	...	...	2008	12
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	88.00	...	...	2008	12
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	86.00	...	...	2007	12
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2010p	2
64	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2010p	2
65	Proportion of population with access to affordable essential drugs on a sustainable basis	100.00 [n]	100.00 [n]	100.00 [n]	2010	6

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure excludes inland waters and oceanic areas
b	Figure refers to the estimated resident population for the mean year ended December 2009. The estimated resident population is based on the census usually resident population count, with adjustments for residents missed or counted more than once by the census (net census undercount), and for residents temporarily overseas on census night.
c	Average using estimated resident mean populations for year ended December
d	Computed directly using data from Stats NZ website; resident natural increase , births - deaths (Annual Dec), Estimated Resident population (Annual Dec)
e	Sum of age specific fertility rates between 11 and 49
f	Figure refers to the proportion of the NZ population aged 16-65 years old above ALL (Adult Literacy and Life Skills Survey 2006) “document literacy” level 1
g	Totals may not tally due to some reported cases with no gender breakdown
h	Figure refers to hospitalisation in 2004-05
i	Figure refers to hospitalisations in 2004-05 1st reported e-code
j	Figure based on survey data (approx 85% response rate) of which 44 did not specifty their employer type
k	Refers to per annum average growth in real GDP per capita in $NZ2006; OLS regression run over the period 1996 to 2009; the value quoted is the beta coefficient (the alpha intercept term was $30,743)
l	Figure based on survey responses of which 176 did not indicate location, and 966 did not specify employer type
m	Figure based on survey responses (approximately 98% response rate). Of these respondents, 12 did not specify their gender, 146 did not specify their location, and 256 did not specify their employer type.
n	Ministry of Health: the entire population has access to essential medicines at affordable prices due to pharmaecuticals co-payments limiting most out-of-pocket payments to no more than NZ$3 per drug where patients are enrolled with a Primary Health Care Organisation; in NZ approximately 2000 prescription medicines and therapeutic products are listed on the New Zealand Pharmaceuticals Schedule and attract government subsidies and this includes essential medicines; and while the entire population would not be within 1 hour walking time of the nearest pharmacy or dispensing outlet, the bulk of the population would be within a 1 hours access time frame to receive essential medicines (e.g. walking, driving, public transport, home delivery of medication, ambulance transfer to an acute care facility) especially when living in urban areas
o	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using data from number of malaria cases and deaths

Sources:	
1	Statistics New Zealand [http://www.stats.govt.nz].
2	Ministry of Health Population Health Protection Team
3	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
4	2006 Adult Literacy and Life Skills Survey (ALL). [http://www.educationcounts.govt.nz/data_collections/all]
5	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
6	Ministry of Health
7	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
8	Analytical Services team, National Collections and Reporting. Ministry of Health [www.moh.govt.nz]
9	Environmental science and research, New Zealand. Data source: EpiSurv as of 12 Feb 2010 (for all diseases apart from TB disease - data as of 4 May 2010).
10	Healthworkforce Data Collection, Analytical Services team, National Collections and Reporting. Ministry of Health [www.moh.govt.nz]
11	2002 ESCAP population data sehhet. Bangkok, Economic and Social Commission for Asia and the Pacific, 2002.
12	WHO Regional Office for the Western Pacific, data received from technical units
13	OECD Health Data 2009
14	Medical Council of New Zealand; http://www.mcnz.org.nz/
15	University of Otago Dental School
16	Pharmacy Council of New Zealand; http://www.pharmacycouncil.org.nz/
17	Nursing Council of NZ; http://www.nursingcouncil.org.nz/
18	Midwifery Council of NZ; http://www.midwiferycouncil.org.nz/

NIUE

1. CONTEXT

1.1 Demographics

The population of Niue decreased from a peak of 5194 in 1966, to 2322 in 1991, 1788 in 2001 and an estimated 1514 residents in 2009. There is substantial emigration to New Zealand because of Niue's lack of natural resources, its isolation and insufficient social and economic development, and because Niueans hold New Zealand citizenship. The 2001 New Zealand census listed 20 148 Niueans in the New Zealand population.

Population density is estimated at six persons per square kilometre, with 37% living in urban areas. Children under the age of 15 years make up 25% of the population, and adults 65 years and older accounting for 12%. The crude birth rate is 15.6 per 1000 population and the crude death rate 9.2 per 1000 population.

1.2 Political situation

Niue is a self-governing nation in free association with New Zealand. The head of government is Premier Toke Talagi. The head of state is Queen Elizabeth II of the United Kingdom of Great Britain and Northern Ireland.

The Legislative Assembly is Niue's supreme law-making body. It has 20 members, six elected from a common roll and 14 as village representatives. The Legislative Assembly is responsible for electing the Premier. Elections are held every three years by secret ballot under a system of universal suffrage.

1.3 Socioeconomic situation

The economy is dependent on limited agricultural exports and the sale of fishing rights. The sale of postage stamps to foreign collectors is also an important source of revenue. The gap between domestic production and demand for goods and services is very wide. The resulting trade deficit makes the economy heavily dependent on foreign aid, most of which comes from New Zealand, and remittances from Niueans living abroad.

In 2006, the gross domestic product (GDP) was US$ 13.3 million (NZ$ 20.5 million) and per capita GDP stood at US$ 8208.2 (NZ$ 12 158).

The New Zealand High Commissioner's Office, the only diplomatic mission in Niue, manages the projects of the New Zealand Official Development Assistance (NZODA). Niue also receives aid from the Australian Agency for International Development (AusAID), the Government of Japan and other international and United Nations agencies, including WHO.

The monthly boat between New Zealand and Niue, which provides essential supplies for daily living, illustrates the country's isolation. Plans to develop tourism are under way, but are necessarily limited by dependence on other countries' airlines to service Niue.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

In general, health indicators are good, consistent with the country's high literacy rate (100% in 2003) and its well educated population.

Common childhood illnesses and traditional communicable diseases, such as tuberculosis and leprosy, have been substantially contained. The programme on elimination of filariasis is ongoing, with high coverage (88.05% among the total population at risk) of mass drug administration (MDA). Niue is targeting filariasis elimination and currently has a 0.2% antigenaemia rate.

No case of HIV/AIDS has been reported and sexually transmitted infections are rare. With support from WHO and the Joint United Nations Programme on HIV/AIDS (UNAIDS), the Department of Health has been active in working with communities, nongovernmental organizations and the private sector to increase public awareness on reproductive health and HIV/ AIDS.

Although the prevalence of vectorborne parasitic diseases has been negligible in the last five years, mosquito control activities are ongoing. Because the mosquito population is large, control measures require strengthening.

Lifestyle-related health problems are increasing and the prevalence of risk factors for chronic diseases is high. In the 2006 census, 23% of residents aged 15 years and older said they smoked, with smoking twice as prevalent among men (31%) than women (16%). The proportion of alcohol drinkers is equal to the proportion of non-drinkers, but there are more male drinkers (62.7%) than female drinkers (37.4%).

Cancer incidence remains very low. Cervical screening procedures are available and women are encouraged to practise breast self-examination. Males aged 55 and over are routinely checked for early signs of prostate problems.

The Government is committed to the Healthy Islands programme and the Tobacco Free Initiative, which are supported by WHO. The *Moui Olaola* Project (a Healthy Islands health-promotion project) was started in 1996.

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

In 2001, the major causes of morbidity were hypertension, diabetes mellitus, infections of the skin and subcutaneous tissue, upper respiratory tract infections and influenza. The leading causes of mortality were injuries from gunshots, diabetes and hypertension complications (cardiovascular and cerebrovascular diseases), premature births, pneumonia (one case) and accidental drowning (one case).

2.4 Maternal, child and infant diseases

Niue residents enjoy good maternal and child health care. No maternal death has been recorded since the early 1980s. The estimated fertility rate is 2.6 (2006) and the estimated infant mortality rate is 0 per 1000 live births (2006). In 2009, there was 100% immunization coverage against vaccine-preventable diseases.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Department of Health is run by the Director of Health and a complement of four medical officers, two dental officers, one dental nurse, one pharmacist, 15 nurses (one principal nursing officer, 13 hospital nurses and one maternal and child health nurse), and two midwives (2006). There are also seven paramedical staff, two public health officers, one health promotion coordinator, one health service manager, two office assistants and four drivers (2005). The workforce development plan for the health sector (2000-2003), which was prepared for the Niue Training and Development Council in June 2000, identified training needs.

National health priorities are focused on public health prevention strategies to reduce risk factors associated with causes of morbidity/mortality and lifestyle diseases.

The national priorities are:

- to make Niue the healthiest country in the Pacific in terms of having healthy people and a healthy environment;
- to pursue health promotion, disease prevention and injury prevention strategies with more vigour; and
- to strengthen the capacity of human resources to effectively deliver primary care services and public health programmes.

3.2 Organization of health services and delivery systems

Community outreach is maintained through village visits by public health nurses and regular village inspections by public health officers. While medical services are free for local residents, payment is required for some prescribed medicines, such as contraceptives.

3.3 Health policy, planning and regulatory framework

See Section 3.1.

3.4 Health care financing

Niue's estimated total health expenditure in 2008 was US$ 2.8 million, with per capita total health expenditure of US$ 1408.4. General government expenditure on health was US$ 2.8 million, representing 98.9% of total health expenditure.

3.5 Human resources for health

The only hospital, Lord Liverpool Hospital, was destroyed by Cyclone Heta in January 2004. Hospital services were set up subsequently in a youth centre in Fonuakula, Alofi, which is near the airport, until a new hospital was constructed in Kaimiti, an inland location rather than a coastal area. Lord Liverpool Hospital had been the centre for all preventative and curative health services, dentistry services and school health services since the early 1990s and, from June 2001 to May 2002 the hospital underwent a US$ 2 million renovation project, with financial assistance provided by WHO, the New Zealand Agency for International Development (NZAID) and AusAID. The new hospital, constructed in 2005 with funding from WHO, the European Union and NZAid, was named Niue Foou Hospital. *'Foou'* literally means new.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

Niue has produced one Millennium Development Goals report, the *Niue MDG 2006 progress report: A Pro-active effort towards a prosperous Niue by 2015*. According to the report, the country has achieved five of the eight MDGs and is on track to achieve the rest by 2015. Additional goals and targets were set to further improve the situation.

Goal 1: Eradicate extreme poverty and hunger

There is no extreme poverty and hunger in the country, as confirmed in the Poverty Analysis Report 2004. People have free access to land and sea (territorial waters) for subsistence and commercial use.

Goal 4: Reduce child mortality

In 1991, the under-five mortality rate was 0 per 1000 live births, the infant mortality rate was 1 per 1000 live births, and all children under one year were immunized against measles. With very low baseline values, which were retained up to 2006, MDG 4 is considered to have been achieved.

Goal 5: Improve maternal health

No maternal death has been reported since the early 1980s. The maternal mortality ratio is 0 per 100 000 live births and all births are attended by skilled health personnel (1991). Contraceptives are not widely used unless prescribed by a doctor or family planning nurse. There is low condom use among men as protection against sexual transmitted infections (STIs). As with MDG 4, the low baseline values were sustained up to 2006, indicating that MDG 5 targets have been met.

Goal 6: Combat HIV/AIDS, malaria and other diseases

Niue is HIV/AIDS and malaria-free. In 2001, two tuberculosis cases were diagnosed, after more than a decade of having no TB cases. The identified TB cases, who were immigrants from neighbouring Pacific island countries, were successfully treated under the WHO DOTS programme and local health department management guidelines.

As prevalence rates for noncommunicable diseases, such as diabetes, high blood pressure, gout, asthma, obesity and cancer, are rising, Niue's MDG Task Force has added noncommunicable diseases as a new MDG target (NCDs –Target 8a).

Goal 7: Ensure environmental sustainability

The groundwater supply on Niue is safe and potable for human consumption, and sanitation facilities are available to 100% of the population (2008). Despite this, Niue's MDG Task Force again opted to add another target, target 11a, pertaining to waste management and control. Disposal of wastes is deemed essential as it may affect the water system. AusAID supported the development of the national waste management plan.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Niue statistics*
Web address	:	http://www.who.int/entity/nha/country/MYS
Title 2	:	*National health accounts series*
Operator	:	World Health Organization
Web address	:	http://www.who.int/entity/nha/country/MYS
Title 3	:	*Niue population profile based on 2006 Census of Population and Housing: A guide for planner and policy-makers*
Operator	:	Niue Economics, Planning, Development & Statistics Unit, SPC Statistics and Demography Programme
Title 4	:	*Niue Millennium Development Goals 2006 report*
Operator	:	Economics Planning Development and Statistics Unit
Title 5	:	*Pacific Island Populations - Estimates and projections of demographic indicators for selected years (updated April 2010)* *Population 2000-2015 by 1 and 5 year age groups, February 2010*
Operator		Secretariat of the Pacific Community (SPC), Statistics and Demography Programme
Web address		http://www.spc.int/sdp/

6. ADDRESSES

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NIUE — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.26						2009	1
2	Estimated population ('000s)	1.51		0.74		0.77		2009 est	2
3	Annual population growth rate (%)	…		…		…			
4	Percentage of population								
	- 0–4 years	8.55		8.00		9.08		2009 est	2
	- 5–14 years	16.63 [a]		15.59 [a]		17.64 [a]		2009 est	2
	- 65 years and above	11.93 [a]		10.74 [a]		13.08 [a]		2009 est	2
5	Urban population (%)	37.10		…		…		2009 est	3
6	Crude birth rate (per 1000 population)	14.80		…		…		2010 est	4
7	Crude death rate (per 1000 population)	9.70		…		…		2010 est	4
8	Rate of natural increase of population (% per annum)	0.51 [a]		…		…		2010 est	4
9	Life expectancy (years)								
	- at birth	71.60		67.00		76.00		2001-06	4
	- Healthy Life Expectancy (HALE) at age 60	…		11.60		12.80		2002	5
10	Total fertility rate (women aged 15–49 years)	2.60						2006 est	4
	Socioeconomic indicators								
11	Adult literacy rate (%)	100.00		100.00		100.00		2003	6
12	Per capita GDP at current market prices (US$)	8208.20						2006	7
13	Rate of growth of per capita GDP (%)	5.66 [b]						2006	7
14	Human development index	…							
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	…		…		…			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	0	0	0	0	0	0	2005	8
	- Type A	0	0	0	0	0	0	2005	8
	- Type B	0	0	0	0	0	0	2005	8
	- Type C	0	0	0	0	0	0	2005	8
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	0	0	0	0	0	0	2005	8
	Dengue/DHF	0	0	0	…	…	…	2009	9
	Encephalitis	0	0	0	0	0	0	2005	8
	Gonorrhoea	0	0	0	0	0	0	2005	8
	Leprosy	0	0	0	…	…	…	2009	9
	Malaria	0	0	0	0	0	0	2005	9
	Plague	0	0	0	0	0	0	2005	8
	Syphilis	0	0	0	0	0	0	2005	8
	Typhoid fever	0	0	0	0	0	0	2005	8
17	Acute respiratory infections	…	…	…	…	…	…		
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	0	0	0	...	...	...	2007	9
	- New pulmonary tuberculosis (smear-positive)	0	0	0	...	...	...	2007	9
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix								
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	343	...	...	...	...	...	2001	10
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	308	...	...	...	...	...	2001	10
23	**Mental disorders**	...	...	...	...	...	...		
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning								
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Hypertension	343	...	...	19183.45	...	...	2001	10
	2. Diabetes mellitus	308	...	...	17225.95	...	...	2001	10
	3. Infection of the skin and subcutaneous tissue	271	...	...	15156.60	...	...	2001	10
	4. Upper respiratory tract infection, unspecified	270	...	...	15100.67	...	...	2001	10
	5. Influenza	156	...	...	8724.83	...	...	2001	10
	6. Myalgia and myositis	148	...	...	8277.40	...	...	2001	10
	7. Other disease of the skin	110	...	...	6152.13	...	...	2001	10
	8. Open wounds	97	...	...	5425.06	...	...	2001	10
	9. Bronchitis	78	...	...	4362.42	...	...	2001	10
	10. Sprains and strains of joints and adjacent muscles	72	...	...	4026.85	...	...	2001	10

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Injuries from gunshots	...	...	...	...	...	...	2001	1
	2. Diabetes and hypertension complications	...	...	...	...	...	...	2001	1
	3. Premature births	...	...	...	...	...	...	2001	1
	4. Pneumonia	...	...	...	...	...	...	2001	11
	5. Drowning	...	...	...	...	...	...	2001	11
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					22.00		2005	8
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2008	9
29	**Percentage of pregnant women with anaemia**					2.00		2005	8
30	**Neonatal mortality rate (per 1000 live births)**	0.00		0.00		0.00		2005	6
31	**Percentage of newborn infants weighing less than 2500 g at birth**	0.00		0.00		0.00		2005	8
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2009	9
	- DTP3	100.00		...		...		2009	9
	- Hepatitis B III	100.00		...		...		2009	9
	- MCV2	100.00		...		...		2009	9
	- POL3	100.00		...		...		2009	9
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...					
	- Eclampsia			...					
	- Haemorrhage			...					
	- Obstructed labour			...					
	- Sepsis			...					
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	9
	- Diphtheria	0	0	0	...	...	...	2009	9
	- Measles	0	0	0	...	...	...	2009	9
	- Mumps	0	0	0	...	...	...	2009	9
	- Neonatal tetanus	0	0	0	...	...	...	2009	9
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	9
	- Poliomyelitis	0	0	0	...	...	...	2009	9
	- Rubella	0	0	0	...	...	...	2009	9
	- Total Tetanus	0	0	0	...	...	...	2009	9
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	8	2006	8
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			2.82 [a]	2008p	12
	- total expenditure on health as % of GDP			17.90	2008p	12
	- per capita total expenditure on health (in US$)			1408.45 [a]	2008p	12
	Government expenditure on health					
	- amount (in million US$)			2.82 [a]	2008p	12
	- general government expenditure on health as % of total expenditure on health			98.90	2008p	12
	- general government expenditure on health as % of total general government expenditure			14.30	2008p	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			50.00 [a]	2008p	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			1.10	2008p	12
	- out-of-pocket expenditure on health as % of total expenditure on health			0.00	2008p	12
	Exchange rate in US$ of local currency is: 1 US$ =			1.42	2008p	12
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	4	1	3	...	...	...	...	2006p	8
		- Ratio per 1000 population	2.58	0.65 [a]	1.94 [a]	...	...	...	...	2006p	8
	Dentists	- Number	3	3	0	...	...	...	...	2006p	8
		- Ratio per 1000 population	1.94	1.94 [a]	0.00	...	...	...	...	2006p	8
	Pharmacists	- Number	1	1	0	...	...	...	...	2006p	8
		- Ratio per 1000 population	0.65	0.65 [a]	0.00	...	...	...	...	2006p	8
	Nurses	- Number	13	1	12	...	...	...	...	2006p	8
		- Ratio per 1000 population	8.39	0.65 [a]	7.75 [a]	...	...	...	...	2006p	8
	Midwives	- Number	2	0	2	...	...	...	...	2006p	8
		- Ratio per 1000 population	1.29	0.00	1.29 [a]	...	...	...	...	2006p	8
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	0	0	0	0	0	0	0	2006p	8
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	0.00	0.00	0.00	2005	8
43	Infant mortality rate (per 1000 live births)	0.00	...	...	2006	13
44	Under-five mortality rate (per 1000 live births)	0.00	0.00	0.00	2006	13
45	Proportion of 1 year-old children immunised against measles	100.00	100.00	100.00	2009	9
46	Maternal mortality ratio (per 100 000 live births)	0.00			2006	13
47	Proportion of births attended by skilled health personnel	100.00			2006	13
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00			2006	13
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00			2006	13
48	Contraceptive prevalence rate	22.60	...	...	2001	13
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	10.00			2005	8
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	0.00	...	...	2007	9
60	Tuberculosis death rate per 100 000 population	0.00	...	...	2007	9
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	...	...	...		
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	...	...	...		
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2008	14
64	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2008	14
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to annual nominal GDP growth
c	Revised data

Sources:	
1	Stats at a glance, 2006 Census. Niue Statistics, Economic Planning Development and Statistics [www.spc.int/prism/country/niu/stats].
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3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision. [http://esa.un.org/wup2009/unup/] Accessed on June 2010.
4	Pacific Island Populations - Estimates and projections of demographic indicators for selected years, Updated April 2010. Secretariat of the Pacific Community (SPC), Statistics and Demography Programme. Accessed on June 2010. [http://www.spc.int/sdp/index.php?option=com_docman&task=cat_view&gid=28&dir=ASC&order=name&limit=5&limitstart=0]
5	World health report 2004. Changing history. Geneva, World Health Organization, 2004.
6	Pacific Island Populations 2004. Secretariat of the Pacific Community [www.spc.int/demog/].
7	Statistics Niue [www/spc/int/prism].
8	Niue Foou Hospital Data Sources, 2006.
9	WHO Regional Office for the Western Pacific, data received from technical units
10	Niue sustainable human development situation analysis 2002. New York, United Nations Development Programme, 2002.
11	Information furnished by WHO Representative in Samoa, 13 March 2004.
12	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
13	Niue Millennium Development Goals 2006 Report. Economics Planning Development and Statistics Unit, Niue, 2007.
14	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

Northern Mariana Islands, Commonwealth Of

1. CONTEXT

1.1 Demographics

The Commonwealth of the Northern Mariana Islands comprises 14 islands with a total land area of 457 square kilometres spread out over 683 760 square kilometres of the Pacific Ocean. The Commonwealth's population lives primarily on three islands. Saipan, the largest and most populated island, is 20.1 kilometres long and 8.8 kilometres wide. The other two populated islands are Tinian and Rota, and the nine far northern islands are very sparsely inhabited, with a combined population of about six people.

Since the 1980s, the number of residents has more than quadrupled. In the 2000 census, the total population numbered 69 221, with approximately 90% living in Saipan and 5% each in Tinian and Rota. The total population was estimated in July 2009 at 63 112.

Local residents are primarily Chamorros and Carolinians, the two indigenous ethnic groups. Additionally, the Compact of Free Association with the United States of America permits the free movement of people between the freely associated states, flag territories, Hawaii and the mainland United States. These 'Compact' islands include the Republic of Palau, the Republic of the Marshall Islands and the Federated States of Micronesia. The Department of Public Health estimated in 1996 that it provided health care costing US$ 1 480 000 to 'Compact' residents. The impact of meeting the chronic health care needs of these Micronesian residents within the struggling national health care system plays an important role in overwhelming the capacity of the system. Foreign contract workers from Asia (primarily Chinese and Filipino) represent almost half the population, working in the private and public sector in difficult-to-fill positions, although a recent slowdown in the garment industry has resulted in a decline in the number of such workers.

1.2 Political situation

The Northern Mariana Islands is a commonwealth of the United States of America, formed in 1978, and was formerly the United Nation's Trust Territory of the Pacific Region of Micronesia within Oceania. Negotiations for territorial status began in 1972 and a covenant to establish a commonwealth in political union with the United States of America was approved in 1975. Residents (excluding foreign contract workers) are United States citizens, but do not vote in federal elections and do not pay United States taxes.

It is important to note that the Commonwealth of the Northern Mariana Islands, its governing system and its infrastructure as an independent entity within a commonwealth agreement with the United States are only 30 years old.

The present administration was elected in November 2005, with the Honourable Governor Benigno Fitial taking office in January 2006 and appointing Joseph Kevin Villagomez as Secretary of Public Health. There are three branches of Government: the executive, legislative and judicial. The Secretary of Public Health serves as an Executive Cabinet member and head of the Department of Public Health.

1.3 Socioeconomic situation

The economy benefits substantially from financial assistance from the United States of America, although the rate of funding has declined as locally generated government revenues have grown. In addition to

funds received from the United States, the economy largely depends on two major industries: tourism and garment manufacturing.

Garment production is by far the most important industry, employing 17 500 mostly Chinese workers and with sizable shipments to the United States under duty and quota exemptions. The key tourist industry employs about 50% of the work force and accounts for roughly one-quarter of gross domestic product (GDP). Japanese tourists predominate. Annual tourist entries have exceeded 500 000 in recent years, but financial difficulties in Japan have caused a temporary slowdown.

In a 2007 report by the United States Government Accountability Office, it was stated that "the CNMI's (Commonwealth of the Northern Mariana Islands) economic potential is constrained, in part, by its lack of diversification and faces serious challenges owing to declines in garment manufacturing and tourism, its two major industries. Among factors affecting the garment industry, liberalization in trade law in the early 2000s reduce the CNMI's trade advantage relative to low-wage countries such as China, causing CNMI exports to fall. The CNMI's tourism industry has been subject to fluctuations due to Asian economic trends in the late 1990s, as well as recent changes in airline practices. Until 2007, the CNMI's workforce was subject to a minimum wage set by the CNMI Government that was lower than the U.S. mainland's; however, Congress enacted a law in 2007 that applied the U.S. minimum wage to the CNMI and will gradually increase the CNMI minimum wage until it meets federal minimum wage requirements."

The agricultural sector is made up of cattle ranches and small farms producing coconuts, breadfruit, tomatoes and melons.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Infectious diseases are once again emerging as a major public health concern. Of particular concern are tuberculosis, enteric foodborne illnesses, vaccine-preventable diseases, HIV infection and other sexually transmitted infections. At the same time, obesity, diabetes, hypertension and atherosclerotic vascular disease are increasing concerns facing the ageing population.

2.2 Outbreaks of communicable diseases

The Department of Public Health recently dealt with foodborne disease outbreaks involving salmonella and shigella.

2.3 Leading causes of mortality and morbidity

The Vital Statistics Office of the Department of Public Health monitors the number of deaths and the causes of death in the country each year. The Medical Director reviews these events to examine the data for trends in order to focus preventive health efforts.

The Department of Health and WHO jointly organized a national training workshop on the national NCD STEPS Survey in November 2009. The national NCD STEPS Survey will be conducted in 2010.

In 2005, there were 183 deaths: 79 females and 104 males. Since there is no resident forensic pathologist, autopsies for non-suspicious deaths are not performed routinely. The leading cause of death in 2005 was heart disease, followed by cancer, stroke, renal disease and sepsis.

The number of deaths due to strokes and heart attacks has been increasing in the last three years, with strokes becoming the third leading cause of death in 2005 and increasing among individuals under the age of 50. This disturbing trend is probably due to high rates of untreated diabetes and hypertension in the population. There is also growing evidence that use of methamphetamine ('ice') can contribute to deaths from heart attacks and strokes; ice use is prevalent in the country.

Cancer diagnoses and most chemotherapy are carried out nationally, but radiation therapy is not available in the country and there is no resident oncologist. The Department of Public Health is increasing its public health efforts to improve cancer prevention in the community. A significant example was the 2007 launch of the HPV Vaccination Campaign, aimed at vaccinating girls in high school with the human papillomavirus (HPV) vaccine that immunizes against four HPV strains that can cause cervical cancer.

2.4 Maternal, child and infant diseases

Under the United States Division of Public Health, the Maternal and Child Health (MCH) Programme oversees primary and preventive health care services for mothers and children, including children with special health care needs, and is federally funded by a grant under the Health Resources and Services Administration (HRSA) within the Department of Health and Human Services (DHHS). The MCH Programme authorizes appropriations to the Commonwealth of the Northern Mariana Islands to improve the health of all mothers and children applicable to health status goals and national health objectives. It enables the country to:

- provide and assure mothers and children access to maternal and child health services;
- reduce infant mortality and the incidence of preventable diseases, increase the number of children appropriately immunized against disease, and otherwise promote the health of mothers and infants by providing prenatal and postpartum care, and promote the health of children by providing preventive and primary care services; and
- provide and promote family-centred, community-based coordinated care for children with special health care needs.

The priority MCH concerns include, among others, childhood obesity, lack of or little prenatal care, access to women's health services, identification and referral of infants for early intervention services, and the number of sexually transmitted infection among teenagers. In addition, more effort is being put into decreasing the burden of dental caries in children. An assessment of 480 students for the 2007-2008 school year found that every child had six or more dental caries.

Despite many challenges as regards prenatal care, the infant mortality rate (IMR) is exceptionally low, estimated to be five deaths per 1000 live births in 2006-2008. However, in view of the small numbers and large statistical variation, the Department of Public Health will continue to strive for improvements in perinatal care.

The most common diseases among infants during 2007 were acute upper respiratory infections, fetal/neonatal jaundice and acute bronchiolitis. In the 1-4 years age group, the most common diseases were acute upper respiratory infections and otitis media.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

Health care in the country is facing major challenges in the areas of quality and financing. These problems have been recognized for many years but, with the recent deepening financial crisis, there is increasing pressure to find solutions. The current leadership at the Department of Public Health has been working on many different plans to improve the current situation. Among the highest priorities have been stabilizing and improving the financial status of the Commonwealth Health Center (CHC) and restructuring the Department of Public Health in order to build a foundation that will allow overall improvements in the quality of health care delivery. The overall goal is to improve the health of the people.

As a way of focusing restructuring efforts, a strategic plan has been developed for prioritizing and implementing solutions to some of the more immediate problems affecting health care delivery, with financial stability the top priority. The Mission of the Department of Public Health is "to provide compassionate, quality health care and promote health for all people in the Commonwealth of the Northern Mariana Islands." To guide prioritization in attaining its stated mission, the Department of Public Health plans to deliver the best possible health care by improving its financial stability.

Goals have been chosen from all possible solutions discussed as being the most likely to allow the Department of Public Health to attain its vision. Highest priority has been placed on goals that can be attained relatively quickly within the current resources of the Department, including:

(1) movement towards more autonomy for CHC in the areas of operations, supply chain and finance (over-arching goal);

(2) installation of a new hospital information system and financial management programme (VISTA – a programme through the VA system);

(3) improvement in billing and processing of collections for CHC to improve revenue and cash flow;

(4) reform of Medicaid to improve available resources to CHC and on-island medical providers; and

(5) creation of autonomy in recruitment and retention of Department of Public Health personnel.

This is an ambitious list to accomplish in a relatively short time, but achievement of these goals will allow the development of more adequate resources to improve direct patient care and overall health. The plan will guide efforts in working towards the vision of creating a financially stable hospital to improve the health of all citizens.

3.2 Organization of health services and delivery systems

The Department of Public Health comprises three divisions: the Division of Public Health, which provides preventive and community health programmes; the Hospital Division; and the Community Guidance Center (CGC), which delivers mental health and substance-abuse programmes. The Department of Public Health also oversees the Medicaid programme and the Medical Referral programme.

The Department of Public Health is the sole provider of comprehensive health care services and, through its primary health care facility, the Commonwealth Health Center (CHC) on the island of Saipan, provides a wide range of preventive (public health) and curative health services aimed at protecting and improving the health and quality of life of the population. CHC is an 86-bed, Medicare-certified hospital that opened in 1986 and was expanded in 2007. The hospital's scope of services includes emergency medicine, obstetrics, postpartum care, adult and neonatal intensive care, surgery, general medicine, paediatrics, physical therapy, dialysis, mental health and various outpatient services. CHC is a busy community hospital, with more than 60 000 outpatient visits each year. The hospital is also very full, with a daily census nearing 90% of capacity.

Sub-hospitals are located on the islands of Rota and Tinian and one public health wellness clinic is also located on the island of Saipan. There are six private clinics, all on Saipan, and the nearest United States tertiary medical centre is in Honolulu, Hawaii, over eight hours away by air.

The Department of Public Health strives to maintain full staffing of its health care workforce. Almost all CHC physicians are from the United States of America or Canada, despite challenges to recruitment and retention of clinicians due to highly competitive salaries in the United States. The Department of Public Health also supports efforts to increase training opportunities for the local health care workforce.

3.3 Health policy, planning and regulatory framework

The Department of Public Health is under the umbrella of the Commonwealth of the Northern Mariana Islands Government and has the power and responsibility to:

- maintain and improve health and sanitary conditions;
- minimize and control communicable disease;
- establish and administer programmes regarding vocational rehabilitation, crippled children's services, infant care, Medicaid, Medicare, mental health and related programmes, including substance abuse;
- establish standards for water quality; and
- administer all Government-owned health care facilities.

3.4 Health care financing

The total health expenditure for CHC in 2005 amounted to US$ 44 741 490. For the 2007 fiscal year, health expenditure represented 25.4% of total general government expenditure of US$ 289.1 million. It is notable that total health expenditure is declining because the budget is decreasing; in the last fiscal year, the health budget was only US$ 39 million, a fall from US$ 42 million in the previous year. Significant efforts are being made to maintain critical services in a world of soaring health care costs. CHC will likely privatize adult outpatient services in the near future to continue to improve patient access to the private sector.

3.5 Human resources for health

Building and improving local health care manpower to sustain public health programmes is imperative to improving the delivery of services to the community. This is also in line with the strategic plan for future health initiatives stated in the Institute of Medicine (IOM) report. One of the four recommended approaches includes promoting the education and training of the health care workforce. Through the University of Hawaii, John A. Burns School of Medicine, the Commonwealth of the Northern Mariana Islands has an Area Health Education Center (AHEC) grant. The AHEC's mission is to improve the health services of the Commonwealth by establishing a sustainable health care manpower programme through strengthening of the country's capacity to recruit and retain allied health professions to serve the health needs of the islands. The programme aims to develop competent, committed and compassionate health professionals, and its vision is to improve the quality of health care services and reduce disparities in health conditions in the Commonwealth. In addition, two Division staff are attending the Maternal and Child Health Certificate Program, through a grant, at the University of Hawaii; there is ongoing collaboration with WHO in supporting training for oral health and sanitation; and, in collaboration with the Pacific Islands Health Officers Association (PIHOA), a series of courses dealing with public health disease surveillance and investigation have been sponsored. A PIHOA consultant visited the Commonwealth in 2008 and conducted a strategic planning meeting for human resource capacity building.

3.6 Partnerships

The Department of Public Health recognizes the need for partnerships with various governmental and private agencies, non-profit organizations and other organizations, on-island, regionally and internationally, to sustain and build effective health care programmes and services.

Key partners both on-island and abroad include, among others:

- The Public School System;
- Northern Marianas College;
- The Department of Community and Cultural Affairs;
- The Department of Commerce;
- The Workforce Investment Agency;
- The Developmental Disabilities Council;

- Karidat;
- The Ayuda Network, Inc.;
- The Commonwealth Cancer Association;
- The Diabetes Coalition;
- NAPU Life;
- The Substance Abuse Prevention Coalition (SAPC);
- The University of Hawaii, John A. Burns School of Medicine – Area Health Education Center (AHEC) and Maternal and Child Health Certificate Program through HRSA;
- Western Michigan University (Project Familia);
- The Secretariat of the Pacific Community (SPC);
- WHO;
- The Pacific Islands Health Officers Association (PIHOA);
- The United States Centers for Disease Control and Prevention (CDC);
- The Health Resources and Services Administration (HRSA);
- The Joint Task Force Homeland Defense;
- The Pacific Substance Abuse and Mental Health Collaborating Council (PSAMHCC);
- The Pacific Islands Mental Health Network (PIMHnet);
- The National Prevention Network (NPN);
- The National Asian Pacific American Families Against Substance Abuse, Inc. (NAPAFASA).

3.7 Challenges to health system strengthening

One of the greatest challenges is recruitment and retention of qualified personnel. Some of the main obstacles include the small human resources pool from which to recruit, the ever-rising costs of maintaining the Commonwealth Health Center, and the limited local funding available to sustain quality health care delivery.

Another challenge is the need to improve the Department of Public Health's data infrastructure, which impacts the way the Department plans activities for its programmes and evaluates the effectiveness of services provided to the community.

In addition, the isolation and disparities apparent in the country create unique and challenging barriers to a struggling health care system.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Commonwealth Health Center Website*
Operator	:	CNMI Department of Public Health's Commonwealth Health Center
Features	:	Organization Description, Jobs, Island Lifestyle
Web address	:	http://www.dphsaipan.com/
Title 2	:	*2008 Pocket statistical summary (PSS)*
Operator	:	Secretariat of the Pacific Community, Statistics and Demography.
Web address	:	http://www.spc.int/sdp/

Title 3	:	*Urban and rural areas 2007*.
Operator	:	United Nations, Department of Economic and Social Affairs, Population Division. New York
Features	:	World Population Prospects, International Migration and Development
Web address	:	http:///www.unpopulation.org
Title 4	:	Pacific Island Populations – Estimates and projections of demographic indicators for selected years
Operator	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int

6. ADDRESSES

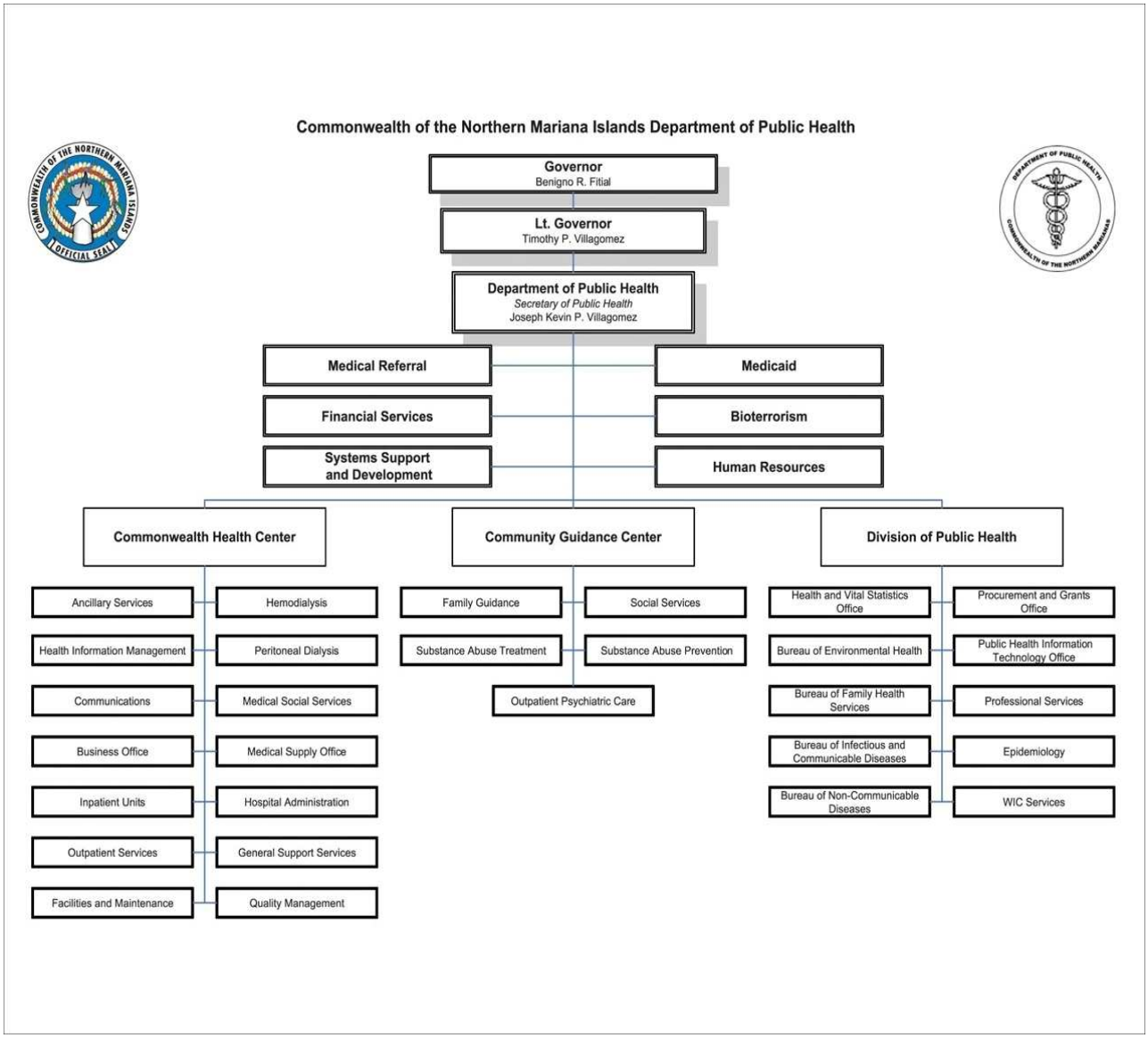
DEPARTMENT OF PUBLIC HEALTH

Office Address	:	CHC, Lower Navy Hill
Postal Address	:	P.O. Box 500409 CK, Saipan MP 96950, Commonwealth of the Northern Mariana Islands
Telephone	:	(670) 234-8950
Fax	:	(670) 234-8930
Website	:	http://www.dphsaipan.com

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One, Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

7. ORGANIZATIONAL CHART: Department of Public Health



NORTHERN MARIANA ISLANDS, COMMONWEALTH OF

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.46			2010	1
2	Estimated population ('000s)	63.11	31.45	31.66	2009 est	2
3	Annual population growth rate (%)	-0.10	...	...	2010 est	1
4	Percentage of population					
	- 0–4 years	9.30 [a]	9.55 [a]	9.05 [a]	2009 est	2
	- 5–14 years	16.90 [a]	18.59 [a]	15.23 [a]	2009 est	2
	- 65 years and above	3.05 [a]	2.97 [a]	3.13 [a]	2009 est	2
5	Urban population (%)	91.20	...	...	2009 est	3
6	Crude birth rate (per 1000 population)	18.44	...	...	2010 est	4
7	Crude death rate (per 1000 population)	2.35	...	...	2010 est	4
8	Rate of natural increase of population (% per annum)	1.61 [a]	...	...	2010 est	4
9	Life expectancy (years)					
	- at birth	76.90	74.27	79.68	2010 est	5
	- Healthy Life Expectancy (HALE) at age 60	...	...	...		
10	Total fertility rate (women aged 15–49 years)	1.12			2010 est	5
	Socioeconomic indicators	...	...	...		
11	Adult literacy rate (%)	...	99.30	98.80	1990	6
12	Per capita GDP at current market prices (US$)	12 638.00			2005	7
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	0	0	0	0	0	0	2009	8
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	0	0	0	...	...	...	2009	8
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	...	...	...	...	...	...		
17	Acute respiratory infections	4242	...	...	...	...	...	2000	9
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	10	...	...	...	...	...	2000	9
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	28	...	...	2	...	...	2008	8
	- New pulmonary tuberculosis (smear-positive)	13	...	...	...	...	...	2008	8
20	**Cancers**								
	All cancers (malignant neoplasms only)	437	...	...	...	...	...	2000	9
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	0	0	0	...	...	...	2000	9
	- Cervix			11			...	2000	9
	- Leukaemia	0	0	0	...	...	...	2000	9
	- Lip, oral cavity and pharynx	0	0	0	...	...	...	2000	9
	- Liver	0	0	0	...	...	...	2000	9
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	1	...	...	...	...	...	2000	9
	- Trachea, bronchus, and lung	12	...	...	...	...	...	2000	9
21	**Circulatory**								
	All circulatory system diseases	2265	...	...	...	...	...	2000	9
	- Acute myocardial infarction	16	...	...	...	...	...	2000	9
	- Cerebrovascular diseases	98	...	...	...	...	...	2000	9
	- Hypertension	1758	...	...	...	...	...	2000	9
	- Ischaemic heart disease	28	...	...	...	...	...	2000	9
	- Rheumatic fever and rheumatic heart diseases	39	...	...	...	...	...	2000	9
22	**Diabetes mellitus**	2 490	...	...	...	...	...	2000	9
23	**Mental disorders**	1197	...	...	...	...	...	2000	9
24	**Injuries**								
	All types	5742	...	...	...	...	...	2000	9
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	389	...	...	...	...	...	2000	9
	- Occupational injuries	510	...	...	...	...	...	2000	9
	- Road traffic accidents	555	...	...	...	...	...	2000	9
	- Suicide	43	...	...	...	...	...	2000	9
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1.	...	...	...	...	...	...		
	2.	...	...	...	...	...	...		
	3.	...	...	...	...	...	...		
	4.	...	...	...	...	...	...		
	5.	...	...	...	...	...	...		
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart disease	…	…	…	…	…	…	2005	10
	2. Cancer	…	…	…	…	…	…	2005	10
	3. Stroke	…	…	…	…	…	…	2005	10
	4. Renal disease	…	…	…	…	…	…	2005	10
	5. Sepsis	…	…	…	…	…	…	2005	10
	6.	…	…	…	…	…	…		
	7.	…	…	…	…	…	…		
	8.	…	…	…	…	…	…		
	9.	…	…	…	…	…	…		
	10.	…	…	…	…	…	…		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					64.00		2000	11
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					NR		2006	8
29	**Percentage of pregnant women with anaemia**					4.55		2000	9
30	**Neonatal mortality rate (per 1000 live births)**	…		…		…			
31	**Percentage of newborn infants weighing less than 2500 g at birth**	18.99 [a,b]		…		…		2000	11
32	**Immunization coverage for infants (%)**								
	- BCG	…		…		…			
	- DTP3	94.00		…		…		2009	8
	- Hepatitis B III	93.00		…		…		2009	8
	- MCV2	84.00		…		…		2009	8
	- POL3	91.00		…		…		2009	8
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			0			0	2000	9
	- Eclampsia			…			…		
	- Haemorrhage			0			0	2000	9
	- Obstructed labour			…			…		
	- Sepsis			…			…		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	…	…	…	2009	8
	- Diphtheria	0	0	0	…	…	…	2009	8
	- Measles	0	0	0	…	…	…	2009	8
	- Mumps	0	0	0	…	…	…	2009	8
	- Neonatal tetanus	0	0	0	…	…	…	2009	8
	- Pertussis (whooping cough)	0	0	0	…	…	…	2009	8
	- Poliomyelitis	0	0	0	…	…	…	2009	8
	- Rubella	0	0	0	…	…	…	2009	8
	- Total Tetanus	0	0	0	…	…	…	2009	8
	Health facilities								
35	**Facilities with HIV testing and counseling services**						…		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	86	2000	9
		- Specialized hospitals	0	0	2000	9
		- District/first-level referral hospitals	2	8	2000	9
		- Primary health care centres	1	0	2000	9
	Private health facilities	- Hospitals	5	0	2000	9
		- Outpatient clinics	6	...	2007	10
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			...		
	- total expenditure on health as % of GDP					
	- per capita total expenditure on health (in US$)			...		
	Government expenditure on health					
	- amount (in million US$)			43.32 [b]	FY2007	12
	- general government expenditure on health as % of total expenditure on health			...		
	- general government expenditure on health as % of total general government expenditure			25.40	FY2007	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	- out-of-pocket expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			...		
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Dentists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Pharmacists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Nurses	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	5.00 e	...	...	2006-08	13
44	Under-five mortality rate (per 1000 live births)	...	...	...		
45	Proportion of 1 year-old children immunised against measles	87.00	...	...	2009	8
46	Maternal mortality ratio (per 100 000 live births)	0.00			2000	9
47	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
48	Contraceptive prevalence rate	64.00	...	...	2000	11
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	75.67			2000	9
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	11.00	...	...	2008	8
60	Tuberculosis death rate per 100 000 population	2.00	...	...	2008	8
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	85.00	...	...	2008	8
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	92.00	...	...	2007	8
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	...	...	96.00	2008	14
64	Proportion of population using an improved sanitation facility	98.00	98.00	97.00	2008	14
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
FY	Fiscal Year
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Figure derived from percentage of newborn infants weighing at least 2500 g at birth.
c	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using population estimate in 2005 (80 362) from US Census Bureau
d	Figure refers to total general government expenditures
e	Data published by the Secretariat of the Pacific Community.

Sources:	
1	Pacific Island Populations - Estimates and projections of demographic indicators for selected years, Updated April 2010. Secretariat of the Pacific Community (SPC), Statistics and Demography Programme. Accessed on June 2010.
2	Population 2000-2015 by 1 and 5 year age groups, February 2010. Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme. [http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158]
3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision, http://esa.un.org/wup2009/unup/, Tuesday, June 01, 2010; 10:28:05 PM
4	Estimates and projections, CNMI: 2000 to 2050. United States Census Bureau, International Programs Center. Accessed on July 2010 at http://www.spc.int/prism/country/mp/stats/Social/Popn/popest.htm
5	Estimates and projections of life expectancy, infant mortality and total fertility, CNMI: 2000 to 2050. United States Census Bureau, International Programs Center. Accessed on July 2010 at http://www.spc.int/prism/country/mp/stats/Social/Popn/estimrtfr.htm
6	Statistical indicators for Asia and the Pacific, 2005 Compendium, 31 December 2005. United Nations Economic and Social Commission for Asia and the Pacific. [http://www.unescap.org/stat/data/statind/pdf/t8_dec05.pdf]
7	2008 Pocket Statistical Summary (PSS). Secretariat of the Pacific Community, Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/
8	WHO Regional Office for the Western Pacific, data received from technical units
9	Data analyzed through the RPMS computerized system. Birth and Death Database Registry, Office of Health Planning and Statistics, Division of Public Health, Department of Public Health.
10	Information furnished by the WHO Representaitive in the South Pacific, 15 April 2008.
11	Family Planning Programme, Division of Public Health, Department of Public Health.
12	Hospital Division, Department of Public Health
13	Statistics and indicators on women and men. United Nations Statistics Division. Accessed on July 2010 at http://unstats.un.org/unsd/demographic/products/indwm/tab3b.htm
14	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010.[http://www.wssinfo.org/en/welcome.html]

PALAU

1. CONTEXT

1.1 Demographics

The estimated multi-ethnic population of Palau was 20 397 in 2009, with an estimated annual population growth rate of 0.6% in 2010. The population consists of 69.9% Palauans (who are a conglomeration of Micronesians with Malayan and Melanesian admixtures), 15.3% Filipinos, 4.9% Chinese, 2.4% other Asian, 1.9% Causacian, 1.4% Carolinian and 4.2% other or unspecified groups (2000 estimate). The 2006 estimate indicates a population density of 46 persons per square kilometre. In 2007, approximately 77% of the Palauan population were living in the capital city of Koror on Koror Island.

Since the 1990 census, life expectancy at birth has been higher for women than men; the 2005 estimate stood at 69 years, 72.1 years for women and 66.3 years for men.

1.2 Political situation

Palau is a democratic republic with directly elected executive and legislative branches. Presidential elections take place every four years to select the President and the Vice-President. Elections were last held in 2008. His Excellency Johnson Toribiong is the current Head of State and President of the Republic of Palau. The Vice-President is Kerai Mariur.

The Palau National Congress (Olbiil era Kelulau) has two houses: the Senate and the House of Delegates. The Senate has 13 members, while the House of Delegates has 16 members, one from each of Palau's states. All legislators serve four-year terms, for a maximum of three cycles or 12 years. Each state also elects its own governor and legislature.

The Council of Chiefs is an advisory body to the President that contains the highest traditional chiefs from each of the 16 states. The Council is consulted on matters concerning traditional laws and customs.

The judicial system consists of the Supreme Court, the National Court, the Court of Common Pleas, and the Land Court. The Supreme Court has trial and appellate divisions and is presided over by the Chief Justice.

1.3 Socioeconomic situation

Palau's real per capita gross domestic product (GDP) of US$ 8423 (2007 estimate) makes it one of the wealthier Pacific island states. The economy consists primarily of tourism, subsistence agriculture and fishing. The Government is the major employer, relying heavily on financial assistance from the United States of America. Business and tourist arrivals numbered 89 151 in 2007. Long-term prospects for the key tourist sector have been greatly bolstered by the expansion of air travel in the Pacific, the rising prosperity of leading East Asian countries, and the willingness of foreigners to finance infrastructure development.

1.4 Risks, vulnerabilities and hazards

The population of Palau is at risk for a high number of hazards, including a uniquely high hydrometeorological and geological risk. Due to its geographical location as the United States of America's westernmost border with Asia, Palau is also more vulnerable to hazards emerging in Asia, such as infectious diseases.

Vulnerability analysis shows that Palau is 19.25 times more vulnerable to hazards than the United States of America. It should not be understated that the most significant risk factor in vulnerability to disasters is poverty. The population of Palau is made of 69.9% Palauans, as well as a large population of young, impoverished, foreign worker households mixed with smaller population factions of local lower- and middle-class households. Economic stability is dependent upon United States federal support, immigration, tourism, and the United States and Asian stock, commodity and import/export markets, as

well as fuel/energy prices. It is unfortunate that this most difficult of vulnerabilities to alter is also the most significant.

Palau's isolation from the United States mainland increases logistical demands. Supply chains, communication networks and air runways are limited options. Improving long-distance communication and logistical coordination that may lessen the "tyranny of distance" for any emergency response measures would help to reduce Palau's vulnerability to public health disasters.

Over the past five years, public health preparedness in Palau has improved significantly, and a comprehensive all-hazard public health emergency operational plan has been developed, although it still needs to be tested and validated by field exercises and is lacking standard operating procedures. The Department of Public Health has developed an extensive level of awareness regarding disaster preparedness and response, yet much still has to be done in terms of education of clinicians and the public. All components of preparedness, planning, training, hazard monitoring, warning, population protection are much more cost-effective than emergency response after an event.[1]

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The population of Palau faces a heavy burden of both infectious and chronic diseases. Like many developing nations, the country has recently undergone an epidemiological shift from diseases of the developing world, such as malnutrition and infectious diseases, to an increasing burden of diseases of the developed world, like diabetes, heart disease, obesity and kidney failure. This places an inordinate burden on the already low human, material and fiscal resources. However, the general health of Palauans seems to have improved a little, as manifested in health indicators such as a decreased crude death rate, increased life expectancy at birth, and a low maternal mortality ratio.

It is expected that environmental problems will increase with more foreign investment and workers on the islands in coming years. Water pollution is a major concern due to the lack of sufficient land area for proper waste disposal, and progressive industrial development will continue to worsen both air and marine quality. Marine life and reefs will be affected by pollution. Other negative health impacts of globalization, such as reduced physical activity and consumption of processed rather than locally produced foods, are already encroaching insidiously beyond Koror and Airai, where over 79% of the population resides.

2.2 Outbreaks of communicable diseases

Palau has one of the best communicable diseases surveillance systems of all the Pacific island countries and regularly reports outbreaks of infectious disease on PacNet. In 2009, the Ministry of Health was able to detect and control the outbreak of pandemic Influenza A (H1N1) the country experienced. Collaborative initiatives among principal health officials, health specialists and multisectoral community leaders have been a positive step forward in monitoring events and communicable diseases outbreaks.

2.3 Leading causes of mortality and morbidity

While tuberculosis remains a problem and the prevalence of leprosy has increased slightly, modern lifestyle-related diseases are at the top of the list of major causes of death. Based on information furnished by the Ministry of Health, the reported leading causes of mortality in 2009 were cardio/cerebrovascular disease; cancer; lung disease; septicaemia; injuries; kidney disease; liver disease and complications of childbirth/pregnancy. In 2007, the leading causes of hospitalization were diseases of the respiratory system; diseases of the genitourinary system; disease of the digestive system; normal childbirth and delivery; diseases of the endocrine and metabolic system; diseases of the circulatory system; infectious and parasitic diseases; injuries and poisonings; diseases of the nervous system; and complications of pregnancy, childbirth and puerperium.

[1] Rykken D, Keim M. Republic of Palau, Public Health Hazard Vulnerability Assessment, June 2006.

2.4 Maternal, child and infant diseases

Great progress is being made toward improving maternal health in Palau and, in 2009, only one maternal death was reported.

The under-five mortality rate fell from 34 per 1000 live births in 1990 to 25.6 in 2009, a fairly low level among Pacific island countries. However, the percentage decline in the 1990s was lower than during the pre-1990s, indicating that further reduction in under-five mortality is becoming progressively more difficult as the mortality rate declines.

Infant mortality decreased from 25 to 22 per 1000 live births in the 1990s, then further to 7.2 per 1000 live births in 2007. In 2009, the rate increased back up to 22 per 1000 live births.

In 2009, the estimated coverage for DTP3 was 49% and 75% for measles first dose (MCV1).

2.5 Burden of disease

To paraphrase the 11th Annual Report on the Republic of Palau's Implementation of the Compact of Free Association fiscal year 2006, the best description for health in Palau is "in transition". The transition of culture, political system, economic development and technology has moved the health emphasis from communicable to noncommunicable diseases. Most of the reported leading causes of death are due to noncommunicable diseases related to lifestyle-associated risk factors, and are therefore preventable. Such a transitional status has led to pending issues that need to be evaluated, such as the cost of off-island medical referrals, the cost of haemodialysis and intensive care services, and the financial sustainability of a secondary health care facility in such a small island community.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

"Health for all" remains a top priority in the socioeconomic development of Palau. The Government aims to provide sufficient trained and qualified staff to provide quality services in all outlying dispensaries, including the more remote areas and islands, as well as at the main hospital in Koror.

The national health priorities are:

- to deliver quality health care, including community-based health care, in order to improve the health of the population and contribute towards building a balanced economy;
- to control communicable and noncommunicable diseases;
- to improve the nutritional status of community members through implementation of a national action plan for food and nutrition;
- to protect environmental health;
- to increase the accessibility of health services through establishment of outlying dispensaries/health centres;
- to train and certify health workers and allied health workers in proper training institutions;
- to establish a national insurance policy; and
- to improve and enhance the health information system.

3.2 Organization of health services and delivery systems

A high percentage of health services are supported by grant funds and technical assistance from the Federal Government of the United States of America, in addition to the provision of technical support and limited funding from a number of United Nations agencies. However, future resource requirements to sustain the operations of the health system will still be dependent on the country's successful economic development.

The Belau National Hospital (BNH), built with United States funding, is the main health facility in the country. BNH has undergone recent upgrades that will significantly mitigate its vulnerability to both national and technological disasters, including: installation of two generators to allow for one month of independent power generation; enhancement of respiratory isolation and PPE capabilities; equipping and training of hazardous materials teams; updating of the hospital's disaster plan; and upgrading of staff communications. Challenges remain, however, in that, by nature, BNH represents a centralized dependency for inpatient and outpatient care that increases the vulnerability of the health system. It is not economically feasible to decentralize inpatient care, but steps to build inpatient capacity and capabilities on the other islands may add some limited additional secondary capability.

Four community health centres, known as superdispensaries, are located strategically throughout the country, three on the big island of Babeldaob and one on the southern island of Peleliu for the Southern Lagoon population. In addition, four additional satellite dispensaries serve hard-to-reach outlying localities, Kayangel in the north, and Angaur and the South-West Islands in the south.

3.3 Health policy, planning and regulatory framework

In June 2005, the Ministry of Health adopted a vision and a mission statement, framed by Article VI of the Constitution of the Republic of Palau, which embraced a holistic definition of health that stated that the health of Palauans is influenced by health services, the environment, behaviour and heredity. These issues were discussed at the 1st Public Health Convention, held in December 2005.

During a leadership symposium, held in February 2006, certain priorities were identified, including addressing the burden of noncommunicable diseases; solid and liquid waste management; human resources for health; and improvement of the legal framework for health in Palau. Operationalization of the health system is based on a conscious decision to make health a domain owned by the community. This clarifies certain strategies that will help move Palau towards a more sustainable health care system. Strategic health planning, improved fiscal control, enhanced primary health care through community health centres, strengthening of community advocacy through the creation of a community advocacy programme, and improvements to the health information system, have all given the health sector the ability to plan better for the future. These activities are also enhanced by the decision to address human resource, procurement and grant issues. All these initiatives in the Ministry of Health and at the national level to increase accountability and promote sound and sustainable development provided the impetus for implementation of the Integrated Planning Process 2006-2008 for the entire executive branch of government. The process was aimed at streamlining health system development and ensuring greater health worker productivity and an improvement in health status for all people living in Palau.

3.4 Health care financing

The total expenditure on health was 10.8% of GDP in 2008, with 78.4% coming from the Government. External resources for health accounted for 32% of total health expenditure. Total per capita expenditure on health was US$ 957.

3.5 Human resources for health

Since enactment of the mandatory retirement law, there has been a rapid reduction in the number of health workers, due to retirement of ageing staff. This has resulted in a critical shortage of health workers, particularly among the nursing force and allied health personnel. In addition, more staff members are needed as a result of the expanded main health facility and completion of the superdispensaries, and training of more local health workers is needed to allow them to replace expensive expatriate staff.

Vigorous efforts are under way between the Ministry of Health and the Ministry of Education to ensure that an increased number of high school graduates can stream into health careers. These include a United States federal grant from the Department of Education to the Ministry of Education to develop a Health Academy in the only public high school, the Palau High School. The Ministry of Health is a key partner in this initiative. Marketing efforts to increase the number of high school students choosing nursing, medicine and allied health professions as careers are under way through development of two marketing videos – "Careers in nursing" and "Careers in health for Palau, the region and the world".

A nursing programme was established in the Palau Community College in 1998 and continues to produce a minimum of two graduates a year, but numbers are insufficient to meet the current staffing requirements. Bridging programmes in nursing and other allied health fields are currently in place in the Palau Community College and within the Ministry of Health.

Since 2001, the Ministry of Health has been partnered with Palau Community College (PCC) to participate in the College's Palau Area Health Education Center (AHEC), which is funded through the United States Department of Health and Human Services/Health Resources and Services Administration. The Palau AHEC is part of the Hawaii-Pacific Basin AHEC, which is managed by the John A. Burns School of Medicine (JABSOM)/University of Hawaii. JABSOM has funnelled over US$ 2 million since 2001 to promote health worker training in Palau and Micronesia. The Palau AHEC has sponsored most of the 98 courses conducted by the Fiji School of Medicine School of Public Health (now Department of Public Health) and all courses conducted by the University of Auckland, Faculty of Medicine (8) in the region. A total of 56 physicians, nurses, environmental health workers, health administrators, and nutrition workers from Palau have graduated with Fiji School of Medicine (FSMed) undergraduate and postgraduate certificates and diplomas. Four physicians from Palau have been awarded Postgraduate Diplomas in General Practice from the University of Auckland, Faculty of Medicine. Most of these activities have been achieved through the efforts of the Ministry of Health–PCC AHEC partnership.

3.6 Partnerships

Partnerships developed by the Ministry of Health fall under three categories: bilateral, regional and institutional. The Ministry has developed bilateral relationships with the governments of the Czech Republic, India, Israel, Japan (JICA), the Philippines, the Republic of Korea, Spain, and the United States of America, among others. Regional partnerships include those with the Pacific Islands Health Officers Association (PIHOA), the Secretariat of the Pacific Community (SPC), the Pacific Forum, the Pacific Emergency Health Initiative (PEHI), the Health Research Council of the Pacific (HRCP) (formerly the Pacific Health Research Council), and the Pacific Open Learning Health Net (POLHN).

Partner institutions in various countries in the region have been developed for the purpose of training and medical referrals for patients requiring tertiary care and services not provided by Belau National Hospital. Partner institutions for education and training include the Fiji School of Medicine (FSMed), and the Good Samaritan Hospital in Los Angeles, United States of America, among others.

Other partner institutions provide specialized services in adult and paediatric cardiology, EENT and ophthalmology, either on an annul basis or every two years. Recent developments will add to the current list of services provided by visiting specialists on an ad hoc basis. Ministry of Health physicians and other health professionals provide training for student interns in partner institutions, such as the University of Washington in Seattle, United States of America, and the University of Hawaii, among others.

3.7 Challenges to health system strengthening

- The numbers and distribution of the health workforce (in medicine, nursing, allied health fields) are inadequate and pose a continuing challenge. In addition, the majority of those already working are underprepared.
- A health resource development services department is needed within the Ministry of Health to provide the necessary support services to Ministry personnel.
- Quality assurance performance measures are needed, not only for service providers, but for all personnel.
- Infrastructure development in the country, particularly in the health sector, is still limited, which hinders the maximum utilization of limited resources for service provision in all aspects of health care, from primary to secondary and tertiary, including off-island medical referrals.
- Health care financing is inadequate and will continue to be, necessitating ongoing lobbying with local legislature and vigorous solicitation efforts for assistance from regional and international organizations and institutions, as well as bilateral negotiations for sources of support via various forms of technical assistance.

- The health information system (HIS) infrastructure is already established, the hardware is already in place and qualified personnel are on board, but not in sufficient numbers and in the necessary specialized areas. There is a great need to increase the capacity of the HIS for monthly compilation, analysis and reporting of data from the various data sources. Integration of data and better management still need to take place. Much progress has taken place, but further support and development is needed to respond to all the competing reporting requirements and needs of the Ministry of Health.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Palau Government statistics*
Operator	:	Palau Government
Web address	:	http://www.palaugov.net
Title 2	:	*World fact book, 2007*
Web address	:	https://www.cia.gov/library/publications/the-world-factbook/print/ps.html
Title 3	:	*Palau statistics and key health indicators*
Operator	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int/prism
Title 4	:	*Health indicators*
Operator	:	Ministry of Health
Title 5	:	*National expenditure on health*
Operator	:	World Health Organization
Web address	:	http://www.who.int/nha/country/plw/en/
Title 4	:	Pacific Island Populations – Estimates and projections of demographic indicators for selected years
Operator	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int

6. ADDRESSES

DEPARTMENT OF HEALTH

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WHO COUNTRY LIAISON OFFICE FOR NORTHERN MICRONESIA

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Office Hours	:	0800 – 1700 Mon. – Fri.

PALAU — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	**Area (1 000 km2)**	0.44			2010	1
2	**Estimated population ('000s)**	20.40	10.94	9.46	2009 est	2
3	**Annual population growth rate (%)**	0.60	…	…	2010 est	1
4	**Percentage of population**					
	- 0–4 years	6.39 [a]	5.96 [a]	6.88 [a]	2009 est	2
	- 5–14 years	14.72 [a]	14.28 [a]	15.22 [a]	2009 est	2
	- 65 years and above	5.73 [a]	4.57 [a]	7.08 [a]	2009 est	2
5	**Urban population (%)**	82.40	…	…	2009 est	3
6	**Crude birth rate (per 1000 population)**	13.16	12.04	14.72	2009	4
7	**Crude death rate (per 1000 population)**	8.68	9.05	8.41	2009	5
8	**Rate of natural increase of population (% per annum)**	0.45 [a]	…	…	2009	4,5
9	**Life expectancy (years)**					
	- at birth	69.00	66.30	72.10	2005	1
	- Healthy Life Expectancy (HALE) at age 60	…	10.20	12.00	2002	6
10	**Total fertility rate (women aged 15–49 years)**	2.00			2007	4
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	99.90 [b]	99.90 [b]	99.80 [b]	2005	7
12	**Per capita GDP at current market prices (US$)**	8423.00			2007 est	8
13	**Rate of growth of per capita GDP (%)**	…				
14	**Human development index**	…				
	Environmental indicators	Total	Urban	Rural		
15	**Health care waste generation (metric tons per year)**	83.00 [c]	…	…	2007	9

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	**Selected communicable diseases**	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	0	0	0	0	0	0	2007	10
	- Type B	67	42	25	0	0	0	2007	10
	- Type C	17	14	3	0	0	0	2007	10
	- Type E	0	0	0	0	0	0	2007	10
	- Unspecified	...	...	...	...	...	...		
	Cholera	0	0	0	0	0	0	2009	10
	Dengue/DHF	4	…	…	…	…	…	2009	11
	Encephalitis	0	0	0	0	0	0	2009	10
	Gonorrhoea	17	5	12	0	0	0	2007	10
	Leprosy	4	2	2	…	…	…	2009	11
	Malaria	0	0	0	0	0	0	2009	10
	Plague	0	0	0	0	0	0	2009	10
	Syphilis	12	8	4	0	0	0	2007	10
	Typhoid fever	0	0	0	0	0	0	2007	10
17	**Acute respiratory infections**	1984	...	...	0	0	0	2007	5, 12
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	987	494	493	0	0	0	2007	5, 12
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	11	...	...	...	...	...	2007	11
	- New pulmonary tuberculosis (smear-positive)	5	...	...	...	...	...	2007	11
20	**Cancers**								
	All cancers (malignant neoplasms only)	30	12	18	31	20	11	2008	5, 13
	- Breast	1	0	1	1	0	1	2008	5, 13
	- Colon and rectum	3	1	2	2	1	1	2008	5, 13
	- Cervix			3			1	2008	5, 13
	- Leukaemia	0	0	0	0	0	0	2008	5, 13
	- Lip, oral cavity and pharynx	3	2	1	2	1	1	2008	5, 13
	- Liver	4	3	1	5	4	1	2008	5, 13
	- Oesophagus	0	0	0	1	1	0	2008	5, 13
	- Stomach	2	0	2	0	0	0	2008	5, 13
	- Trachea, bronchus, and lung	3	2	1	4	3	1	2008	5, 13
21	**Circulatory**								
	All circulatory system diseases	4185	...	...	...	...	...	2007	12
	- Acute myocardial infarction	14 [d]	...	...	10	5	5	2007	5, 12
	- Cerebrovascular diseases	721 [d]	...	...	18	13	5	2007	5, 12
	- Hypertension	2176 [d]	...	...	7	6	1	2007	5, 12
	- Ischaemic heart disease	155 [d]	...	...	9	7	2	2007	5, 12
	- Rheumatic fever and rheumatic heart diseases	399 [d]	...	...	3	1	2	2007	5, 12
22	**Diabetes mellitus**	2 754 [d]	...	...	21 [e]	5	6	2007	5, 12
23	**Mental disorders**	707 [d]	...	...	7	6	1	2007	5, 12
24	**Injuries**								
	All types	...	...	...	11	11	0	2009	5
	- Drowning	...	...	...	5	5	0	2009	5
	- Homicide and violence	...	...	...	1	1	0	2009	5
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	2	2	0	2009	5
	- Suicide	...	...	...	2	2	0	2009	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Disease of the respiratory system	211	...	...	1043.00	...	...	2007	12
	2. Disease of the genitourinary system	170	...	...	840.00	...	...	2007	12
	3. Disease of the digestive system	136	...	...	672.00	...	...	2007	12
	4. Normal childbirth and delivery	128	...	...	634.00	...	...	2007	12
	5. Endocrine & metabolic system	118	...	...	583.00	...	...	2007	12
	6. Disease of the circulatory system	112	...	...	554.00	...	...	2007	12
	7. Infectious and parasitic diseases	109	...	...	539.00	...	...	2007	12
	8. Injury and poisoning	103	...	...	509.22	...	...	2007	12
	9. Disease of the nervous system	98	...	...	485.00	...	...	2007	12
	10. Complications of pregnancy, childbirth, and puerperium	74	...	...	366.00	...	...	2007	12

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Cardio/Cerebrovascular Disease	48	25	23	235.33 [a]	228.54 [a]	243.17 [a]	2009	5
	2. Cancer	38	24	14	186.30 [a]	219.40 [a]	148.02 [a]	2009	5
	3. Respiratory Disease	21	13	8	102.96 [a]	118.84 [a]	84.58 [a]	2009	5
	4. Septicemia	19	8	11	93.15 [a]	73.13 [a]	116.30 [a]	2009	5
	5. Injury	16	14	2	78.44 [a]	127.98 [a]	21.15 [a]	2009	5
	6. Kidney Disease	11	6	5	53.93 [a]	54.85 [a]	52.86 [a]	2009	5
	7. Liver Disease	8	4	4	39.22 [a]	36.57 [a]	42.29 [a]	2009	5
	8. Complications of Childbirth/pregnancy	4	2	2	19.61 [a]	18.28 [a]	21.15 [a]	2009	5
	9.	…	…	…	…	…	…		
	10.	…	…	…	…	…	…		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					22.83		2006	4
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2009	11
29	**Percentage of pregnant women with anaemia**					…			
30	**Neonatal mortality rate (per 1000 live births)**	10.98		15.03		7.51		2009	9
31	**Percentage of newborn infants weighing less than 2500 g at birth**	…		…		…			
32	**Immunization coverage for infants (%)**								
	- BCG	…		…		…			
	- DTP3	49.00		…		…		2009	11
	- Hepatitis B III	69.00		…		…		2009	11
	- MCV2	…		…		…			
	- POL3	48.00		…		…		2009	11
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			30			0	2007	14
	- Eclampsia			9			0	2007	14
	- Haemorrhage			3			0	2007	14
	- Obstructed labour			8			0	2007	14
	- Sepsis			7			0	2007	14
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	11
	- Diphtheria	0	0	0	0	0	0	2009	11
	- Measles	0	0	0	0	0	0	2009	11
	- Mumps	0	0	0	0	0	0	2009	11
	- Neonatal tetanus	0	0	0	0	0	0	2009	11
	- Pertussis (whooping cough)	0	0	0	0	0	0	2009	11
	- Poliomyelitis	0	0	0	0	0	0	2009	11
	- Rubella	0	0	0	0	0	0	2009	11
	- Total Tetanus	0	0	0	0	0	0	2009	11
	Health facilities								
35	**Facilities with HIV testing and counseling services**						2	2009	15

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	90	2009	16
		- Specialized hospitals	0	0	2009	16
		- District/first-level referral hospitals	0	0	2009	16
		- Primary health care centres	4	10	2009	16
	Private health facilities	- Hospitals	0	0	2009	16
		- Outpatient clinics	2	0	2009	16
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			19.55 [a]	2008p	17
	- total expenditure on health as % of GDP			10.80	2008p	17
	- per capita total expenditure on health (in US$)			957.00 [a]	2008p	17
	Government expenditure on health					
	- amount (in million US$)			15.33 [a]	2008p	17
	- general government expenditure on health as % of total expenditure on health			78.40	2008p	17
	- general government expenditure on health as % of total general government expenditure			12.70	2008p	17
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			40.56 [a]	2008p	17
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			21.60	2008p	17
	- out-of-pocket expenditure on health as % of total expenditure on health			8.70 [a]	2008p	17
	Exchange rate in US$ of local currency is: 1 US$ =			1.00	2008p	17
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	29	...	...	...	...	...	...	2009	18
		- Ratio per 1000 population	1.42 [a]	...	...	...	...	...	...	2009	18
	Dentists	- Number	2	2	0	2	0	2	0	2009	16
		- Ratio per 1000 population	0.10 [a]	0.10 [a]	0.00 [a]	0.12 [a]	0.00 [a]	0.10 [a]	0.00 [a]	2009	16
	Pharmacists	- Number	2	1	1	2	0	2	0	2009	16
		- Ratio per 1000 population	0.10 [a]	0.05 [a]	0.05 [a]	0.12 [a]	0.00 [a]	0.10 [a]	0.00 [a]	2009	16
	Nurses	- Number	112	...	...	...	...	...	...	2009	18
		- Ratio per 1000 population	5.49 [a]	...	...	...	...	...	...	2009	18
	Midwives	- Number	1	...	...	...	...	...	...	2006	18
		- Ratio per 1000 population	0.05 [a]	...	...	...	...	...	...	2006	18
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	0	0	0	0	0	0	0	2009	19
		Dentists	0	0	0	0	0	0	0	2009	19
		Pharmacists	0	0	0	0	0	0	0	2009	19

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	2	...	...	...	...	...	...	2007	20
		Midwives	0	0	0	0	0	0	0	2009	19
		Paramedical staff	0	0	0	0	0	0	0	2009	19
		Community health workers	0	0	0	0	0	0	0	2007	19
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	21.97	30.08	14.28	2009	4, 5
44	Under-five mortality rate (per 1000 live births)	25.64	37.59	14.28	2009	4, 5
45	Proportion of 1 year-old children immunised against measles	75.00	...	...	2009	11
46	Maternal mortality ratio (per 100 000 live births)	366.30 [f]			2009	4
47	Proportion of births attended by skilled health personnel	100.00			2009	14
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00			2009	14
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00			2009	14
48	Contraceptive prevalence rate	12.08	...	...	2007	4
49	Adolescent birth rate	18.40			2007	4
50	Antenatal care coverage - At least one visit	95.00			2006	4
	- At least four visits	79.00			2006	4
51	Unmet need for family planning	...	...	....		
52	HIV prevalence among population aged 15-24 years	0.00	0.00	0.00	2007	15
53	Estimated HIV prevalence in adults	0.15	...	...	2007	15
54	Percentage of people with advanced HIV infection receiving ART	0.15 [g]	...	...	2007	15, 21
55	Malaria incidence rate per 100 000 population	NR	NR	NR	2009	10
56	Malaria death rate per 100 000 population	NR	NR	NR	2009	10
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	NR	NR	NR	2009	10
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	NR	NR	NR	2009	10
59	Tuberculosis prevalence rate per 100 000 population	110.00	...	...	2008	11
60	Tuberculosis death rate per 100 000 population	14.00	...	...	2008	11
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	0.00	...	...	2008	11
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	...	...	...		
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	89.00	79.00	94.00	2006	22
64	Proportion of population using an improved sanitation facility	...	96.00	...	2008	23
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to 15-24 years old
c	Figure refers to hospital waste only and excludes dispensaries
d	Figure refers to number of hospital encounters
e	Diabetes was an underlying condition in these deaths, not the direct cause of death. Totals may not tally due to some reported cases with no gender breakdown
f	Figure refers to 1 maternal death.
g	Total of 3 cases

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PAPUA NEW GUINEA

1. CONTEXT

1.1 Demographics

Papua New Guinea has an estimated population of around 6.6 million, 38% under the age of 15. Around 800 languages are spoken in the country, each language group having a distinct culture, and there are large sociocultural differences between and within provinces. The official languages are English, Pidgin and Motu.

Access to widely scattered rural communities (87.5% of the country's population is living in rural areas) is often difficult, slow and expensive. Only 3% of the roads are paved and many villages can only be reached on foot. Most travel between provinces is by air. The capital, Port Moresby, is not linked by road with the rest of the country.

Papua New Guinea has made some progress in social development over the last 30 years. For example, the literacy rate has risen from 32% to 58%. However, only half of all women aged 15 years and above and two-thirds of all men aged 15 years and older have ever attended school, and enrolment rates vary significantly across provinces. Women have a very high fertility rate of 4.1 births per woman. Life expectancy has risen from 49 to 61 years and, in 2000, the crude death rate was 12.0 per 1000 population. Papua New Guinea's Human Development Index has risen from 0.4 to 0.5. However, progress has slowed in recent years.

1.2 Political situation

Papua New Guinea is divided administratively into four regions: Southern Coastal (Papuan) Region, Northern Coastal (MoMaSe = Morobe, Madang and Sepik provinces) Region, Highlands Region, and New Guinea Islands Region. The governance system is a parliamentary democracy based on the Westminster model. As a member of the Commonwealth, the head of the Independent State of Papua New Guinea is Queen Elizabeth II of the United Kingdom of Great Britain and Northern Ireland, represented by the Governor-General, who is elected by the National Parliament for a five-year term.

The current single-chamber Parliament has 109 members, comprising one representative from each of the nineteen provinces and the National Capital District, and one representative from each of the 89 open constituencies. Every five years, political leaders are elected to the two tiers of government: national and local. Presently, there is only one woman representative in the national Parliament. There is a decentralized system of government. At the subnational level, there are three levels of administration: provincial, district and local (including several communes, with their villages).

1.3 Socioeconomic situation

During the 1990s, economic performance was mixed, although the economy benefited greatly from major mining and petroleum projects. While there was the potential for economic and social development, the period was largely characterized by negative economic growth and macroeconomic instability. As a result, the economy grew very little in real terms, with growth in the non-mining sector more sluggish than that in the mining sector. The reasons for the economic stagnation were complex. External contributing factors included the worldwide economic depression, the negative development in commodity prices, and unfavourable trade conditions, among others, while internal factors included a series of inappropriate policy regimes and fiscal failures, the catastrophic civil war in Bougainville from 1989 to 1999, and a series of devastating national disasters.

In recent years, the economic parameters have shown a more stable situation and a slightly more positive trend. However, this has been caused by the rising prices of mining products on the international markets rather than by improved internal performance.

Because of the economic situation, as well as the widespread evidence of deterioration in public services, especially in rural areas, it is a widely held view that living standards for a significant number of Papua New Guineans have declined since 1990. Furthermore, in spite of the increasing cost of living, salaries have changed very little over a long period, contributing to a static or possibly worsening poverty situation, particularly in the urban sector. In 2003, Papua New Guinea developed a poverty-reduction strategy that was intended to give an added focus to poverty in the national Medium-Term Development Strategy (MTDS, 2003–2007, not updated since). The country is a signatory to the Millennium Development Declaration, with its first MDG progress report being published in 2005.

1.4 Risks, vulnerabilities and hazards

Papua New Guinea is prone to numerous chronic natural hazards, as well as the occasional acute disaster situation, on a scale greater than any of its Pacific neighbours. The repertoire of hazards that continually hamper the development process in urban and rural remote locations of the country include volcanic eruptions, earthquakes, tsunamis, tropical cyclones, large-scale landslides, flooding, sporadic droughts, frosts in highland areas, the impact of climate change and variability, and rising sea levels. There is also a high risk of technical and human-made disasters, such as oil spills, industrial pollution and unregulated and destructive land-use practices.

Papua New Guinea is situated on the boundary between the Pacific and the Australian tectonic plates. The country has eight active volcanoes and is subject to regular earthquakes every year, with secondary effects of this activity including tsunamis and landslides. The most recent disasters have included:

- July 2006: Bialla (West New Britain Province) seismo-volanic event, which displaced about 2000 people; no deaths were reported.
- October 2006: Tavurvur (East New Britain Province) volcanic eruption, which displaced about 1200 people; no deaths were directly attributable to the eruption.
- December 2007: Cyclone Guba, with torrential rains, affected 10 000 people through flooding in Oro Province.
- December 2008: sea-level swell with flooding along the northern coast of Papua New Guinea and its outlying islands.

A major challenge to improving health is related to perceptions of illness and health among the general population. There is a widespread lack of awareness regarding risk-related and health-promoting behaviour, and little involvement by local communities in health-promoting activities. Key risks include behaviour and environments that increase the risks of communicable disease; risks of noncommunicable disease, such as chewing betel and smoking tobacco; and the risks associated with unsafe sexual behaviour.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Communicable diseases remain the major causes of morbidity and mortality in all age groups. However, significant progress has been made in some areas. In 2000, the country was declared poliomyelitis-free. In addition, the national leprosy elimination target of less than one case per 10 000 population was reached.

In 2008, malaria was the leading cause of all outpatient visits, the fourth leading cause of hospital admissions and the third leading cause of death. The disease is now endemic in every province, including those that were once malaria-free. An average of 1.5-1.8 million suspected cases of malaria are seen at health care facilities annually, and malaria mortality rates for 2008 were estimated to be 9.7 per 100 000 population. Together, malaria and pneumonia account for one-third of all recorded deaths.

According to WHO estimates, in 2008, Papua New Guinea had an estimated tuberculosis prevalence rate of 130/100 000, a TB death rate of 21/100 000 per year, and a total of 13 984 cases for all types of TB. However, it is very likely that these are underestimates because the prevalence and incidence rates are based on case notifications, and cases are generally underreported. The estimated incidence rate for new

smear-positive cases was 120/100 000 population in 2008. Thus TB remains a major public health problem, particularly in view of the current HIV epidemic. The directly observed treatment, short-course (DOTS) programme is gradually expanding and is currently operational in eight provinces. Reasons for the slower-than-planned expansion of DOTS include a number of system constraints common to other disease-control programmes: central-level staffing; weak infrastructure and support services; and delays in access to funds, which have limited training, supervision and other local-level support.

Papua New Guinea was declared to have a generalized HIV/AIDS epidemic in 2003. The prevalence rate reached approximately 1.5% in 2007, however, a consensus meeting held in June 2010 resulted in a revised HIV prevalence rate estimate of 0.9% for 2009. In February 2006, it was estimated that there were 23 000 to 91 000 HIV-positive individuals in the sexually active population aged 15-49 years. HIV prevalence among women attending antenatal clinics is between 0.6% and 3.7% (2005) and AIDS-related death is the leading cause of death in adult inpatients at the Port Moresby General Hospital. The main mode of HIV transmission is heterosexual. The incidence of other sexually transmitted infections (STI) is also rising, with the high incidence of sexual assaults on women contributing to their risk of contracting an STI.

Filariasis is endemic, although the size of the problem is unknown. Mass drug administration through the Elimination of Lymphatic Filariasis (ELF) programme is ongoing.

The incidence of noncommunicable diseases is rising, creating the double burden observed in most developing countries. Cases of tobacco-related and alcohol-related illness appear to be increasing, while data from Port Moresby General Hospital suggest that diabetes and hypertension are also on the increase. The leading cancer in Papua New Guinea—oral—has a largely preventable cause (betel chewing and tobacco smoking).

Another ongoing health concern is related to injuries caused by road traffic accidents and all forms of violence (domestic, criminal and tribal).

2.2 Outbreaks of communicable diseases

Papua New Guinea still remains susceptible to outbreaks of vaccine-preventable diseases due to suboptimal immunization coverage. Efforts are also required to strengthen the EPI disease surveillance system. Of 898 suspected measles cases reported in 2008, only 48 were adequately investigated (including laboratory confirmation) and, while no investigated case was confirmed as measles, the true status of measles virus circulation in the country is unclear.

Diarrhoeal diseases remain common. Intestinal infectious diseases, including diarrhoeal diseases and typhoid, are major causes of morbidity, with an estimated combined incidence of 434/100 000 year. Contaminated food and water are the major contributing factors, with only 40% of the population using an improved drinking-water source, and poor hygiene conditions resulting in unsafe food-handling practices.

Malaria outbreaks in different parts of the country are annual events. Papua New Guinea still seems to be free of the A(H5N1) avian influenza virus.

2.3 Leading causes of mortality and morbidity

Communicable diseases, including pneumonia, malaria, tuberculosis, diarrhoeal diseases, meningitis and, increasingly, HIV/AIDS, remain the leading causes of morbidity and account for around 50% of mortality. Information on the true impact of HIV on mortality and morbidity in Papua New Guinea is lacking, but AIDS-related death is now the leading cause of death in adult inpatients at the Port Moresby General Hospital.

Perinatal conditions account for over 10% of all recorded deaths and maternal mortality estimates are high and have increased in past years, indicating a decrease in access to quality health services.

The noncommunicable disease epidemic in Papua New Guinea is firmly established and increasing, but remains largely unrecognized in reported data. Tobacco-related and alcohol-related illnesses, diabetes and hypertension are on the increase, as are the three leading cancers (oral, hepatic and cervical), along with breast and lung cancers.

2.4 Maternal, child and infant diseases

Maternal and child morbidity and mortality are not improving. Maternal mortality estimates vary widely, but all are high. The 2006 DHS established a maternal mortality ratio of 733 per 100 000 live births. The causes of maternal mortality include postpartum haemorrhage, puerperal sepsis, antepartum haemorrhage, eclampsia and anaemia. Almost 53% of pregnant women are cared for by trained health personnel and about 52% of births are in health facilities. About 35.7% of women are using modern family planning methods.

Perinatal conditions account for over 10% of all recorded deaths. The infant mortality rate is estimated at 56.7 per 1000 live births for 2006, compared with 82 in 1991 and 72 from the 1981 National Census. Overall, 28% of children are considered to be moderately to severely malnourished and 31% of children aged 0–5 are stunted, while wasting is comparatively low. Again, there are marked regional variations.

Child health problems are being addressed through improved immunization and the joint United Nations Children's Fund (UNICEF)/WHO child survival strategy, with a focus on the integrated management of childhood illness (IMCI) approach.

2.5 Burden of disease

The health status of Papua New Guineans, the lowest in the Pacific region, steadily improved during the 1980s before declining in the 1990s. Life expectancy (2007) is estimated to be 58.7 years for men and 63 years for women, and 15% of a woman's lifetime is estimated to be affected by some form of disability or morbidity. The estimations of mortality and morbidity patterns in the population are very approximate, as data are almost entirely facility-based and laboratory confirmation of clinical diagnoses is rare.

3. HEALTH SYSTEM

3.1 National Department of Health's mission, vision and objectives

The overall mission of the National Department of Health is to promote the physical, social, mental and spiritual well-being of people in their communities, and to promote and encourage the maintenance of community health at an acceptable level by planning and delivering preventive and curative medical and other health services.

The vision of the Department is of a nation of healthy individuals, families and communities where self-reliance prepares all for healthy living in a healthy island environment, with the ultimate goal of improving the health of all Papua New Guineans through the development of a health system that is responsive, effective, affordable, acceptable and accessible to the majority of people.

The Government is focusing its efforts on improving child health and reducing malaria, tuberculosis and HIV/AIDS through specific programmes. To be a nation of healthy individuals, families and communities, and in the spirit of the National Goals and Directive Principles as enshrined in the National Constitution, Papua New Guineans strive for a future in which:

- fewer infants and children die before they have had a chance to experience life;
- fewer mothers die in childbirth from preventable causes;
- all Papua New Guineans have access to basic health care and good nutrition;
- fewer Papua New Guineans die from preventable and treatable diseases including malaria, pneumonia, tuberculosis, diarrhoea and HIV/AIDS;
- women and men live healthier, longer, productive lives and age with dignity;
- villages have safe drinking water and a clean environment; and
- individuals make informed choices as regards health behaviour.

3.2 Organization of health services and delivery systems

Health services are provided by government and church providers (both of which are financed primarily from public sector funds); enterprise-based services (e.g. the mines); a small, modern private sector; and traditional healers (undocumented amount). Within the public sector, management responsibility for hospitals and rural health services within provinces is divided. The National Department of Health manages the provincial hospitals, while provincial and local governments are responsible for all other services (health centres and subcentres, rural hospitals and aid posts), known collectively as 'rural health services'.

The National Health Conference 2001 supported a proposal to create a unified provincial health system. The proposal envisaged a single provincial health authority responsible for both hospital and rural health services, headed by a provincial director of health who would report to both the national and provincial governments. Thus far this system has only been implemented in four provinces.

Strategies to ease managerial difficulties include: amendment of selected public finance and management procedures; quarantining (earmarking) of health funds in provincial grants; delegation of powers over district health staff from the provincial administrator to the provincial health adviser; and alignment of treasury warrants to provincial budgets. Stronger monitoring mechanisms are being developed. A review of functions has recommended that provincial health budgets should make provision for each rural health facility individually, which may have implications for the current budget structure if all resources going to facilities from several different programme heads are to be captured comprehensively. This too still needs to be actually put in place.

3.3 Health policy, planning and regulatory framework

The National Health Plan 2001-2010 and the Medium-Term Expenditure Framework 2005-2007, with its 2007-2009 update, identify some explicit priorities. These include maternal and child health, immunization, malaria control, TB DOTS, HIV/AIDS, and water and sanitation programmes. Work on the development of the next National Health Plan 2011-2020 has started.

3.4 Health care financing

Overall health spending is falling despite receiving a high share of government funds. Total health expenditure as a share of GDP rose steadily from 3.2% to 4.4% between 1997 and 2001. In 2008, however, it decreased back down to 3.2%, while total health expenditure per capita increased to US$ 39, from US$ 32 in 1997. Over 80% of recurrent provincial health budgets were allocated to salaries in 2006. Increased income from the mining sector in the same year provided for an additional US$ 60 million for the health sector, which allowed the undertaking of long-awaited renovation work in hospitals and the addressing of human resource issues, such as staff housing.

Papua New Guinea receives significant levels of official development assistance (ODA), estimated to have amounted to US$ 203 million, or 7.2% of GNP, in 2001. Over recent years, ODA for health has fluctuated, but has been around 24% (2004) of total health spending.

A major new source of funds for health was opened up in 2005 with the signing for a US$ 30 million grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) for the country's HIV/AIDS programme. In 2004, the Global Fund committed US$ 20 million for malaria over five years. A further proposal of US$ 21 million for TB was accepted in 2006 and, in 2008, a malaria proposal of over US$ 152.2 million.

Papua New Guinea does not have any form of private health insurance, although there is an initiative to introduce mandatory staff health insurance in the formal sector. In principle, health services are free. In most provinces, however, a fee is charged for outpatient visits. It is not clear in how much this acts as a deterrent to people accessing health services.

3.5 Human resources for health

The nurse-to-population ratio is estimated at 1:2271 population. An additional 600 nurses, 600 community health workers and 100 midwives are estimated to be needed to fill vacant posts, but current production rates are insufficient to fill the gaps. The doctor-to-population ratio is estimated at 1:19 399 population, the majority of doctors being in Port Moresby.

Churches are important providers of care, especially in rural areas, where they provide up to 80% of health services. They share many of the problems of public facilities, but appear to perform better in a number of areas. Papua New Guinea trains most of its health workforce and the churches run five of the seven nursing schools and all of the community health worker training schools.

3.6 Partnerships

Papua New Guinea has relatively few development partners. According to statistics provided by the Organisation of Economic Co-operation and Development (OECD), 96% of ODA for health in 1998-2000 came from Australia. Since then, other major external agencies providing loans or grants have included: the Asian Development Bank (ADB); United Nations agencies, including WHO; and the governments of Japan (JICA) and New Zealand (NZAID). Smaller contributions have been made by the United States Agency for International Development (USAID), the European Union and the World Bank.

In the last few years, there have been major government and partner efforts to ensure a more unified approach to health sector development. The 2001-2010 National Health Plan was developed after extensive consultation. There is now one annual activity plan for the National Department of Health and all donor partners. A Medium-Term Expenditure Framework was developed for 2004-2006, and was further refined to become a rolling plan. There are formal annual reviews of achievements, most importantly by the National Health Conference, attended by the National Department of Health, donor partners, churches and provincial government staff. In 2004, two bilateral (AusAID, NZAID) and three multilateral partners (UNICEF, UNFPA and WHO) signed a 'partnership arrangement' with the National Department of Health, formally entering into a sectorwide approach called the Health Sector Improvement Programme (HSIP), which ADB joined in 2006. This arrangement, through its management structure, has clearly strengthened day-to-day operations and coordination among development partners and with the National Department of Health. A jointly managed and financed Independent Monitoring and Review Group, which spends a couple of weeks in-country twice a year, is a key instrument in assessing the performance of the health sector in general and interactions between development partners and the Government, mainly the National Department of Health. This group provides recommendations on lessons learnt and best practices and guides the discussion on strategy development for the health sector.

The Country Coordination Mechanism (CCM), a requirement of the Global Fund to execute programme activities, has had a further impact on overall cooperation between the different stakeholders in Papua New Guinea's health sector.

In 2006, under the leadership of the Resident Representative of the United Nations to Papua New Guinea, the EXCOM agencies (UNDP, UNICEF and UNFPA), as well as the other in-country and non-resident United Nations agencies (WHO, UNHCR, OCHA, UNIFEM, UNESCO and FAO), agreed to pilot a 'Delivering as one UN' approach in the country. Although Papua New Guinea (referred to as a 'self-starter') has not been formally included in the first eight pilot countries, there are indications that the Papua New Guinea common United Nations Country Programme is more advanced in the process. The bearing of this on the health sector remains to be seen.

3.7 Challenges to health system strengthening

Under the Organic Law on Provincial Governments and Local Level Governments, district and local governments are given responsibility to manage and support their health services, each level of government having different powers and functions in relation to health. The National Department of Health is responsible for policy, standards, training, medical supplies, specialist services, public hospitals

and monitoring, while the provincial and local governments are responsible for implementation of health policies, standards and funding programmes. However, due to other district and local government priorities, almost all rural health services in the country are underfunded.

Nurses and community health workers form the backbone of primary health care services in rural areas, and both are considered to be in short supply and dramatically reduced. These shortages constitute a serious constraint in implementing the National Health Plan, including the priority programmes. Some provinces and many districts have no doctor.

The passing of the Organic Law exacerbated existing problems in health staff supervision and support. Provincial health advisers lost much of their authority to supervise and discipline district health staff. National Department of Health oversight of provincial staff is also limited. Reasons include the limited capacity of programme units at the central level; the lack of funds for travel; the lack of economies of scale through joint training and supervision across programmes; and delayed disbursement of funds. As a result, rural health services are poor and deteriorating.

A function and expenditure review in 2001 described the health system in rural areas as being in a state of "slow breakdown and collapse, currently being saved from complete collapse by donors". The review stated, "About 600 rural facilities are closed or not functioning effectively. Where services remain, the breadth and quality of the services are diminishing." This dire situation has worsened since then, and more facilities have closed down. In spite of this being acknowledged for some time, little has been done yet to seek redress. The scarcity and maldistribution of human resources for health has not been addressed effectively, and there have only been limited and not very coordinated efforts in training and other approaches to capacity-building. Recommendations from the Human Resources for Health Forum, conducted in 2008, included the urgent need to upscale health care worker training and to develop a human resource development plan. Action on these recommendations is still pending.

There has been no proper assessment of the national health information and surveillance system for many years, resulting in a lack of timely and reliable information for decision-making. The surveillance system is weak and there is a lack of capacity for conducting proper surveillance. Consequently, most information on communicable disease outbreaks come from the media.

At all levels, there are very limited capacities for outbreak response, and current central government policy of putting a ceiling on staff numbers does not allow for recruitment of more staff for the health system, especially in the peripheral areas. The National Department of Health is making an effort to strengthen communicable disease surveillance and to build outbreak response capacities by re-establishing its Disease Control Branch and recruiting staff for communicable disease surveillance and outbreak response, but the process is still ongoing.

There is some laboratory capacity and a laboratory network in Papua New Guinea, but laboratory services are generally weak. The Central Public Health Laboratory (CPHL) in Port Moresby is responsible for overall coordination of operations for communicable disease diagnosis, while the regional and provincial hospital laboratories form the backbone of the country's laboratory network. Some health centres also have some limited laboratory diagnostic capacities.

Medical supply and drug procurement and distribution face many challenges and 'stock-outs' are common occurrences. The distribution system is often dependent on ad hoc solutions. A 2006 survey showed a high level of susceptibility to corruption in the pharmaceutical sector. Although the necessary regulations are in place, they are not being enforced and there seems to be collusion between the approving and procuring authorities. There is anecdotal evidence that the prices paid for drugs may be up to several times higher than those available on international markets. In 2008, on the advice of an independent drug procurement mission, procurement was separated from the regulatory side in medical supply.

4. PROGRESS TOWARDS THE HEALTH MDGs

Since 1990, performance towards achieving the MDGs in Papua New Guinea has been mixed. Although progress has been made in some areas, in others there has been stagnation or even deterioration. Overall,

progress has been limited due to the adverse development context, the restricted institutional framework, severe resource limitations and the many socioeconomic, cultural, political and other constraints. Furthermore, disparities in most MDG-related indices at the provincial and subprovincial levels are very large by any standard. In some cases, the gaps between the provinces have widened further. The most obvious, cost-effective and easiest way of making progress towards achieving the MDGs, and in the process closing the gaps within the country, would be to concentrate on the low-achieving provinces.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	2000 National Census
Operator	:	National Statistical Office (NSO)
Title 2	:	Papua New Guinea Demographic and Health Survey, 2006
Operator	:	National Statistical Office
Features	:	Includes information on health outcomes, family planning etc.
Title 3	:	*Millennium Development Goals progress report for Papua New Guinea 2004*.
Operator	:	Government of Papua New Guinea, United Nations in Papua New Guinea
Features	:	Tables, graphs and maps on MDG indicators by province
Title 4	:	Papua New Guinea National Department of Health Information System,
Operator	:	Monitoring and Research Branch
Features	:	Yearly compiled tables of all collected and compiled data by province
Title 5	:	*Papua New Guinea National Health Plan 2001-2010 (volume III)*
Features	:	Tables, graphs and maps of major health indicators by districts 1995 – 1999
Title 6	:	*Discharge reports 2004*
Operator	:	Monitoring and Research Branch National Department of Health
Features	:	Survey of compiled data drawn from health facility discharge reports
Title 7	:	*Annual Health Sector Review*
Operator	:	National Department of Health, Monitoring and Research Branch
Specification	:	Compiled Provincial Reports with tables and graphs on regularly collected indicators
Title 8	:	*National inventory of health facilities 2003*
Operator	:	National Department of Health
Features	:	Tables (& graphs) on staff and equipment of all health facilities as foreseen by the health coverage plan (gazetteer)
Title 9	:	*Medium Term Development Strategy 2005 - 2010*, (November 2004)
Operator	:	Department of National Planning and Rural development
Features	:	Financial information of all sectors, including health (Annex 1)
Title 10	:	*Report of the 2004 National Consensus Workshop of Papua New Guinea*
Operator	:	National AIDS Council / National Department of Health
Features	:	Tables and graphs on the HIV/AIDS situation in PNG
Title 11	:	*Strategic Plan 2006 – 2008, (formerly Medium Term Expenditure Framework)*
Operator	:	National Department of Health
Features	:	Outlines current situation and the way forward in priority areas in health
Title 12	:	Reports of the Independent Review Group, reports (Nov. 2005, May 2006 & Nov. 2006, May 2007 & November 2007)
Operator	:	National Department of Health with all Development Partners united under the Sector Wide Approach (Health Service Improvement Programme)
Features	:	Narratives on Health Sector Situation

6. ADDRESSES

NATIONAL DEPARTMENT OF HEALTH

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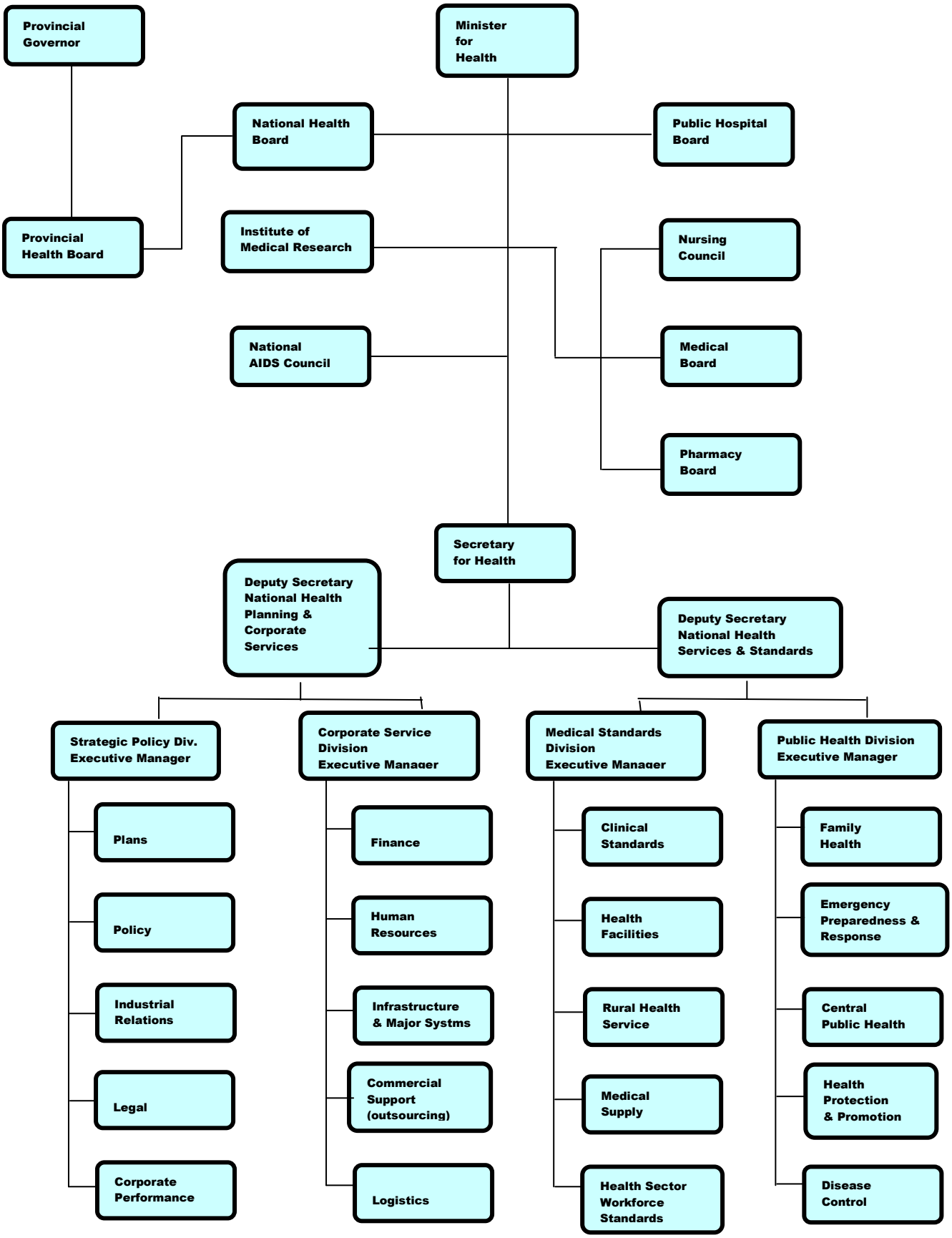
7. ORGANIZATIONAL CHART: National Department of Health



PAPUA NEW GUINEA

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	**Area (1 000 km2)**	462.84			2009	1
2	**Estimated population ('000s)**	6603.13	3403.36	3196.77	2009 est	2
3	**Annual population growth rate (%)**	2.70	...	...	2009	3
4	**Percentage of population**					
	- 0–4 years	14.05 [a]	14.06 [a]	14.05 [a]	2009 est	2
	- 5–14 years	24.38 [a]	24.58 [a]	24.17 [a]	2009 est	2
	- 65 years and above	2.46 [a]	2.42 [a]	2.46 [a]	2009 est	2
5	**Urban population (%)**	12.50	...	...	2009 est	4
6	**Crude birth rate (per 1000 population)**	35.00	...	...	2000	5
7	**Crude death rate (per 1000 population)**	12.00	...	...	2000	5
8	**Rate of natural increase of population (% per annum)**	2.30	...	...	2000	5
9	**Life expectancy (years)**					
	- at birth	60.70	58.70	63.00	2007	6
	- Healthy Life Expectancy (HALE) at age 60	...	...	...		
10	**Total fertility rate (women aged 15–49 years)**	4.10			2005-10	6
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	57.80	62.10	53.40	1999-2007	6
12	**Per capita GDP at current market prices (US$)**	969.23 [a]			2007	6
13	**Rate of growth of per capita GDP (%)**	-0.60			1990-2007	6
14	**Human development index**	0.54			2007	6
	Environmental indicators	Total	Urban	Rural		
15	**Health care waste generation (metric tons per year)**	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	**Selected communicable diseases**								
	Hepatitis viral								
	- Type A	16	8	8	0	0	0	2008	3
	- Type B	37	19	18	4	1	3	2008	3
	- Type C	2	1	1	1	1	0	2008	3
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	...	...	...	...	...	...		
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	...	...	...	..	...	...		
	Leprosy	435	258	177	...	...	...	2009	7
	Malaria	84 452	...	...	628	...	...	2008	7
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	2666	1264	1402	105	68	37	2008	8
17	**Acute respiratory infections**	266 361	...	...	...	...	...	2008	9
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	160 671	...	...	...	...	...	2008	9
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	13 984	...	...	...	...	...	2008	7
	- New pulmonary tuberculosis (smear-positive)	2323	...	...	...	...	...	2008	7
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	206	8	198	31	0	31	2008	8
	- Colon and rectum	69	44	25	8	6	2	2008	8
	- Cervix			621			35	2008	8
	- Leukaemia	71	43	28	30	18	12	2008	8
	- Lip, oral cavity and pharynx	346	195	151	0	0	0	2008	8
	- Liver	165	111	54	59	37	22	2008	8
	- Oesophagus	51	31	20	13	9	4	2008	8
	- Stomach	18	14	4	9	6	3	2008	8
	- Trachea, bronchus, and lung	23	15	8	11	5	6	2008	8
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	80	66	14	13	7	6	2008	8
	- Cerebrovascular diseases	16	10	6	...	...	333	2008	8
	- Hypertension	524	256	268	39	25	14	2008	8
	- Ischaemic heart disease	20	17	3	...	...	333	2008	8
	- Rheumatic fever and rheumatic heart diseases	88	40	48	8	4	4	2008	8
22	**Diabetes mellitus**	397	229	165	49	21	28	2008	8
23	**Mental disorders**	499	323	176	9	7	2	2008	8
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	59 000	...	...	...	...	...	2008	3
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Tuberculosis	73 000	...	...	1130.03 [a]	...	...	2008	8
	2. Normal deliveries (incl. BBA)	64 918		64 918	1004.92 [a]		2075.78 [a]	2008	8
	3. Pneumonia	23 291	12 958	10 333	360.54 [a]	388.49 [a]	330.40 [a]	2008	8
	4. Malaria	20 071	10 177	9894	310.70 [a]	305.12 [a]	316.36 [a]	2008	8
	5. Perinatal conditions	11 454	5986	5468	177.31 [a]	179.47 [a]	174.84 [a]	2008	8
	6. Direct obstetric causes	9273		9273	143.54 [a]		296.51 [a]	2008	8
	7. Diarrhoea	7803	4311	3492	120.79 [a]	129.25 [a]	111.66 [a]	2008	8
	8. Diseases of the digestive system	7190	3449	3741	111.30 [a]	103.40 [a]	119.62 [a]	2008	8
	9. Open wounds and injury to blood vessels	5993	3888	2105	92.77 [a]	116.57 [a]	67.31 [a]	2008	8
	10. Anaemia	3760	1533	2227	58.20 [a]	45.96 [a]	71.21 [a]	2008	8

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Perinatal conditions	824	460	364	12.76 [a]	13.79 [a]	11.64 [a]	2008	9
	2. Pneumonia	708	390	318	10.96 [a]	11.69 [a]	10.17 [a]	2008	9
	3. Malaria	582	303	279	9.01 [a]	9.08 [a]	8.92 [a]	2008	9
	4. Tuberculosis	534	288	246	8.27 [a]	8.63 [a]	7.87 [a]	2008	9
	5. Meningitis	379	200	179	5.87 [a]	6.00 [a]	5.72 [a]	2008	9
	6. Heart diseases	316	171	145	4.89 [a]	5.13 [a]	4.64 [a]	2008	9
	7. Diarrhoea	278	165	113	4.30 [a]	4.95 [a]	3.61 [a]	2008	9
	8. Diseases of the digestive system	266	172	94	4.12 [a]	5.16 [a]	3.01 [a]	2008	9
	9. Diseases of the digestive system	266	172	94	4.04 [a]	3.51 [a]	4.70 [a]	2008	9
		...	...	...					
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**						35.70 [a]	2008	3
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						35.00	2009	7
29	**Percentage of pregnant women with anaemia**						40.30	2005	10
30	**Neonatal mortality rate (per 1000 live births)**	29.10 [a]		...		...		2006	11
31	**Percentage of newborn infants weighing less than 2500 g at birth**	10.00		...		...		2006	11
32	**Immunization coverage for infants (%)**								
	- BCG	80.00		...		...		2009	7
	- DTP3	62.00		...		...		2009	7
	- Hepatitis B III	62.00		...		...		2009	7
	- MCV2	...		...		...			
	- POL3	75.00		...		...		2009	7
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			3970			28	2008	8
	- Eclampsia			26			1	2008	8
	- Haemorrhage			381			10	2008	8
	- Obstructed labour			495			1	2008	8
	- Sepsis			657			20	2008	8
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2009	7
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	125	...	...	...	...	...	2009	7
	- Pertussis (whooping cough)	2932	...	...	...	...	...	2009	7
	- Poliomyelitis	0	0	0	...	...	...	2009	7
	- Rubella	19	...	...	...	...	...	2009	7
	- Total Tetanus	125	...	...	...	...	...	2009	7
	Health facilities								
35	**Facilities with HIV testing and counseling services**						256	2007	12

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	19	...	2003	13
		- Specialized hospitals	4	...	2003	13
		- District/first-level referral hospitals	201	...	2003	13
		- Primary health care centres	2875	...	2003	13
	Private health facilities	- Hospitals	3	...	2003	13
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			256.67	2008p	14
	- total expenditure on health as % of GDP			3.20	2008p	14
	- per capita total expenditure on health (in US$)			39.02	2008p	14
	Government expenditure on health					
	- amount (in million US$)			205.56	2008p	14
	- general government expenditure on health as % of total expenditure on health			81.80	2008p	14
	- general government expenditure on health as % of total general government expenditure			7.30	2008p	14
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			20.60	2008p	14
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			19.90	2008p	14
	- out-of-pocket expenditure on health as % of total expenditure on health			8.23	2008p	
	Exchange rate in US$ of local currency is: 1 US$ =			2.7	2008p	14
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	333	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.05	...	...	...	...	...	...	2008	15
	Dentists	- Number	46	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.01	...	...	...	...	...	...	2008	15
	Pharmacists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Nurses	- Number	2 844	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.44	...	...	...	...	...	...	2008	15
	Midwives	- Number	315	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.05	...	...	...	...	...	...	2008	15
	Paramedical staff	- Number	2262	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.35	...	...	...	...	...	...	2008	15
	Community health workers	- Number	3883	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.60	...	...	...	...	...	...	2008	15
40	**Annual number of graduates**	Physicians	36	...	...	...	...	...	...	2008	16
		Dentists	5	...	...	...	...	...	...	2008	16
		Pharmacists	20	...	...	...	...	...	...	2008	16

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	64 [b]	...	...	...	...	...	...	2008	16
		Paramedical staff	73	...	...	...	...	...	...	2008	16
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	28.00	...	...	2007	9
43	Infant mortality rate (per 1000 live births)	56.70	...	...	2006	11
44	Under-five mortality rate (per 1000 live births)	74.70	...	...	2006	11
45	Proportion of 1 year-old children immunised against measles	60.00	...	...	2009	7
46	Maternal mortality ratio (per 100 000 live births)	733.00			2006	11
47	Proportion of births attended by skilled health personnel	53.00			2006	11
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.00 [c]			2006	11
	- Percentage of deliveries in health facilities (as % of total deliveries)	52.00 [c]			2006	11
48	Contraceptive prevalence rate	25.50	...	...	2006	11
49	Adolescent birth rate	12.90			2006	11
50	Antenatal care coverage - At least one visit	60.00			2008	9
	- At least four visits	28.76			2008	9
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	0.79	...	...	2009	12
53	Estimated HIV prevalence in adults	0.95	...	...	2009	12
54	Percentage of people with advanced HIV infection receiving ART	0.95	...	...	2008	12
55	Malaria incidence rate per 100 000 population	473.32	...	...	2008	7
56	Malaria death rate per 100 000 population	9.72	...	...	2008	7
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	32.50	...	...	2008-09	17
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	38.80	...	...	2008-09	17
59	Tuberculosis prevalence rate per 100 000 population	130.00	...	...	2008	7
60	Tuberculosis death rate per 100 000 population	21.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	29.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	39.00	...	...	2007	7
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	40.00	87.00	33.00	2008	18
64	Proportion of population using an improved sanitation facility	45.00	71.00	41.00	2008	18
65	Proportion of population with access to affordable essential drugs on a sustainable basis	50.00	...	...	2008	3

Notes:	
…	Data not available
est	Estimate
p	Provisional
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Due to non-accreditation of the programs, no graduates are eligible for registration unless they undertake further training and competency assessment
c	Revised data

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PHILIPPINES

1. CONTEXT

1.1 Demographics

The population of the Philippines, as of the last census in 2007, numbered 88 574 614, with a population density of 295 per square kilometre. This translates to an average annual population growth rate of 2.0% for the period from 2000 to 2007. Thus far, this is the lowest annual population growth rate recorded for the Philippines since the 1960s. Among the 14 regions of the country, Calabarzon (Region IV-A) had the largest population, with 11.7 million, followed by the National Capital Region (NCR), with 11.6 million, and Central Luzon (Region III), with 9.7 million. These three regions comprised more than one-third (37.3% of the Philippine population).

The country's population is predominantly young, with the 0-14 years age group representing 31.1% and those aged 65 years and above comprising only 5.0%. There is an almost equal number of males and females. The crude birth rate is 20.5 per 1000 population and crude death rate is 4.8 per 1000 population. Life expectancy for both sexes is 67 years, with that of males being 64 years and females being 70 years.

1.2 Political situation

The Philippines is a democratic and republican state subscribing to the presidential form of government. There are three branches of government—the executive, legislative and judicial branches. The country has a unitary form of government and a multiparty political system. Executive power is vested in the President, who is the head of state and commander-in-chief of the armed forces. The Cabinet members are the heads of agencies and assist the President in drafting executive laws, policies and government programmes. The Constitution ensures direct election by the people for all elective positions from the President down to members of the *barangay* (village) councils.

In 1991, the Local Government Code transferred some of the powers of the national government to local government officials. The Code devolved basic services, including health, giving responsibility to local government units (LGUs). The country is made up of political local government units of provinces, cities, municipalities and *barangays*. A local chief executive heads each LGU. Administrative autonomy enables the LGUs to raise local revenues, to borrow and to determine types of local expenditure, including expenditure on health care.

Since May 2010, the country has been under a new administration led by President Benigno "Noynoy" Aquino III, the 15th President of the Republic.

1.3 Socioeconomic situation

The Philippine economy was at its strongest in 2007, with the gross domestic product (GDP) real growth rate averaging 7.3%, the highest in 31 years. The economy continued to keep pace with population growth in the fourth quarter of 2007 as per capita GDP grew by 5.3% from 3.4 %.

The challenge for the Government is to make these economic gains felt among the poorer sectors of society. The 2006 official poverty statistics revealed an increase of 2.5 percentage points to 26.9% from 24.4% in 2003, meaning a total of 4.7 million poor families in 2006 compared with the 4.0 million estimated in 2003. In terms of population, the number of poor Filipinos reached 27.6 million in 2006, 16% more than the 23.8 million estimated in 2003, while food-poor individuals increased to 12.2 million, 14% more than in 2003. In the presence of the country's gains in economic growth, the Government's move to realign the national budget towards social services is a good opportunity to focus on the education and health needs of the population in tandem with an effective population management programme.

The gender gap appears to be in favour of girls as far as participation in basic education, technical/vocational education and training and higher education are concerned. There is a need for the

Government and other education stakeholders to look more seriously at the low completion and retention rates among boys in the school system. Although indicators to reflect gender equality, such as the country' Gender Development Index (GDI) and Gender Empowerment Measure (GEM) reflect gains, these do not necessarily translate into positive measurable changes in the roles of and status of women, given the continuing incidence of violence against women, the predominance of female child-abuse victims, the trafficking of women and children for sexual exploitation, and female forced labour, among others.

The slow decline in maternal mortality means that the country is unlikely to meet the MDG maternal mortality target of 80% access to reproductive health services by 2015. The reasons include the inadequate access to integrated reproductive health services (such as contraceptives, family planning, and responsible-parenthood education) by women, including poor adolescents, and men.

1.4 Risks, vulnerabilities and hazards

The Asia-Pacific Region has been the epicentre of some recent emerging infectious diseases like SARS and highly pathogenic H5N1 avian influenza. The risk of emerging diseases continuously affects the Region. Mostly zoonotic in origin, the Philippines was recently affected by Ebola Reston in both pigs and humans. Ebola Reston in pigs is new and therefore the risk to humans isuncertain. Further research is needed.

The number of new HIV infections has been rising every year, from one new HIV infection every three days in 2000, to one per day in 2007 and two per day in 2009. In the first quarter of 2010, more than two new infections per day were recorded.

Due to its geographical location along the so-called Pacific Ring of Fire and the typhoon belt, the country faces various natural disasters such as typhoons, landslides, volcanic eruptions and earthquakes. Since 2006, the Philippines has consistently been among those countries around the world most often hit by natural disasters and, in 2009, it topped the list, ranking third in terms of mortalities (1334 deaths) and second in terms of number of victims (13.4 millions).[1] At the same time, the chronic emergency due to armed conflict in Mindanao has been ongoing for more than four decades. Intensification of fighting alternating with periods of relative calm has led to displacement of those in affected communities and currently there are around 20 000 families seeking refuge in evacuation centres and host communities. Environment-related health risks have been cited as a significant problem, with air pollution, water pollution, poor sanitation and unhygienic practices, mismanagement of solid wastes, among others, contributing to an estimated 22% of reported cases of disease and nearly 6% of reported deaths, and costing Php 14.3 billion (US$ 287 million) per year in lost income and medical expenses.

The majority of the regions in the Philippines point to the transport sector as the major source of air pollution. It has been estimated that 21% of the pollutants come from stationary sources, 65% from mobile sources, and the remaining 14% from area sources. Carbon monoxide (CO) has the biggest pollution load contribution of 50%, mainly due to the increasing numbers of gasoline-fed vehicles, including cars (13.58%) and motorcycles/tricycles (47.88%).

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Tuberculosis continues to plague a sizeable segment of the population although, in recent years, effective case-finding, disease management using the directly observed treatment, short-course (DOTS) strategy, and partnership with the private sector have made inroads in the prevention and control of the disease.

Mosquito-borne diseases, such as malaria, dengue and filariasis, are an ever-present danger in endemic areas. Although malaria is no longer a leading cause of death, it was the ninth leading cause of morbidity in 2007, affecting 10.6 million people who live in hilly, mountainous and hard-to-reach areas of the

[1] *Annual disaster statistical review 2009*. Centre for Research on the Epidemiology of Disasters

country.[2] Commonly affected population groups are farmers relying on forest products, migrant workers, indigenous cultural groups, settlers in frontier areas, soldiers, communities affected by armed conflicts and pregnant women and children. Early diagnosis and prompt treatment and the use of insecticide-treated nets are interventions being used for control and elimination of malaria, while indoor residual spraying is adopted in areas where the use of nets is not culturally acceptable, for displaced populations and in epidemic situations.

Dengue fever also remains a threat, with cyclical outbreaks every three to five years. Early in 2008, there was a resurgence in the number of cases and case fatality rate of 0.9%. In 2009, the age group with the highest (44.4%) number of cases was 5-14 year-olds.

Soil-transmitted helminths are endemic nationwide in the Philippines with a prevalence rate of 6%-97% among children aged six to 14 years and 66% among 1-5 year-olds.[3] Schistosomiasis is endemic in 28 provinces with a prevalence rate of 0.04 to 3.95 per 100 000. The population at risk is estimated at 12 million, with 2.5 million people directly exposed to schistosomiasis infection.

The threat of emerging diseases continues. Pandemic influenza A (H1N1) 2009 virus is still circulating, while highly pathogenic H5N1 avian influenza is still a threat to the Philippines since almost all neighbouring countries are affected and are continuously harbouring the disease.

Mortality and morbidity rates for noncommunicable diseases have been increasing steadily since the 1970s. In 1990, diseases of the heart dislodged infectious diseases as the leading cause of mortality. Latest statistics (2005) show that cardiovascular diseases, cancers, chronic respiratory diseases and diabetes continue to be among the country's top 10 killers. Hypertension and diseases of the heart ranked fourth and ninth among the ten leading causes of illness in 2008.

Noncommunicable diseases are often linked by common preventable risk factors related to lifestyle, including tobacco use, unhealthy diet, physical inactivity and alcohol use. In a study conducted by the Food and Nutrition Research Institute (FNRI) in 2003, it was found that 90% of Filipinos had one or more of the following risk factors: physical inactivity, smoking, obesity, hypertension, diabetes and abnormal cholesterol. Alarmingly, more and more children and adolescents are becoming exposed to NCD risks. The latest FNRI study, carried out in 2008, shows the prevalence of NCD risk factors among adults as follows: hypertension (25%), overweight (27%), high blood sugar (5%) and abnormal cholesterol levels (10%). It is also estimated that about two-thirds (60%) of adults are physically inactive. The obesity trend is also catching up with the young. Prevalence of overweight among adolescents aged 9-11 years doubled from 2.4% in 1993 to 4.8% in 2005. Similarly, the prevalence rate of overweight for children aged 6-10 years doubled from 0.8% in 2001 to 1.6% in 2005. Numerous studies have shown a tendency for obese children to remain obese in adulthood. It is also estimated that about 2% of teenage students are overweight and 30% are physically inactive, spending three or more hours per day sitting and watching television, playing computer games, talking with friends or doing other sedentary activities.

The 2009 Global Adult Survey revealed that 28.3% of adults currently smoked (47.7% males and 9% females), 36.9% were exposed to tobacco smoke in enclosed areas at their workplace and 54.4% were exposed to smoke at home. Of the smokers, 22.5% smoked daily (38.2% men and 6.9% women), 27% smoked manufactured cigarettes (46.6% men and 7.5% women) and 21.5% of ever-daily smokers had quit during the previous year. The average number of cigarettes consumed per day by daily cigarette smokers was 10.6 (11.3 for males and 7 for females). Smokeless tobacco users accounted for 2% (2.8% men and 1.2% women). The average age of initiation of daily smoking was 17.6 (17.4 for men and 19.1 for women). Among adults, 20% were overweight and 5% were obese, 22.5% were hypertensive, 60.5% were physically inactive, and a significant number had high blood cholesterol and sugar.

The 2007 Global Youth Tobacco Survey, on the other hand, showed that 21.7% of students in second to fourth year of high school (29.3% male, 13.8% females) smoked cigarettes; 57.8% were living in homes where others smoked in their presence; 67.9% were around others who smoked in places outside their homes; and 64% of those who bought cigarettes in a store were not refused because of their age.

[2] Field Health Service Information System, 2007. Department of Health, Philippines.
[3] Centers for Disease Control, 2002; UNICEF, 2004.

2.2 Outbreaks of communicable diseases

A total of 7880 dengue cases were admitted to different sentinel hospitals nationwide between 1 January and 29 March 2008, 20.6% more than during the same period in 2007 (6532). Cases exceeded and reached the alert threshold in weeks 1, 8 and 9, and went above the epidemic threshold on weeks 2 to 7. Ages of cases ranged from <1 month to 87 years (median 12 years), the majority being male (53%). The age group with a case fatality ratio greater than 1 was the age group 1-10 years.

Outbreaks of diarrhoeal diseases are common in several areas of the country and are almost always related to a contaminated water supply. Most outbreaks are caused by cholera and salmonella. Pandemic influenza reached the Philippines in 21 May 2009 when the first case was reported and confirmed as the 2009 pandemic H1N1 strain. A total of 5469 confirmed cases and 32 deaths were recorded up to the end of 2009.

Also in 2009, an outbreak of leptospirosis, post-typhoon, affected the National Capital Region, the Southern Tagalog Region and the Ilocos Region. The extensive flooding of many areas of the above-mentioned regions caused the outbreak, which resulted than higher than expected numbers of cases and deaths compared with previous rainy seasons.

Starting in January 2010, there have been large measles outbreaks, with 1123 confirmed cases nationwide, 634 of them in the NCR.

2.3 Leading causes of mortality and morbidity

Noncommunicable diseases (NCDs) are considered a major public health concern in the Philippines, accounting for six of the top 10 causes of death. Diseases of the heart and vascular system are the leading causes of mortality, comprising nearly one-third (31%) of all deaths. Other NCDs topping the list include malignant neoplasms, chronic obstructive pulmonary disease (COPD), diabetes mellitus, and kidney disease.

Accidents of all types, including road traffic crashes, rank fourth among the causes of mortality for all age groups. Road traffic accidents constitute the fifth leading cause of injury death, with a mortality rate of 39.1/100 000. Among children aged 0-17 years, it is the second leading cause of injury death (mortality rate of 5.85/100 000), next to drowning.

Eight of the 10 leading causes of morbidity in the country are caused by infections. They are: acute lower respiratory tract infection and pneumonia; bronchitis/bronchiolitis; acute watery diarrhoea; influenza; tuberculosis; acute febrile illness; and chicken pox. Among these communicable diseases, pneumonia and tuberculosis continue to be among the 10 leading causes of mortality, causing a significant number of deaths across the country.

At the same time as deaths due to preventable diseases have been in a decline, lifestyle-related diseases have begun to dominate in the leading causes of death, particularly heart diseases, diseases of the vascular system , malignant neoplasms, diabetes mellitus, and chronic lower respiratory diseases. However, certain conditions originating in the perinatal period are also among the 10 leading causes of mortality, illustrating the vulnerability of the newborn child.

Accidents and injuries, other leading causes of death, are among the neglected conditions of public health importance. The mortality rate from accidents gradually increased from 18.7 deaths per 100 000 populations in 1980 to 23 per 100 000 in 1996. An abrupt increase has been observed since then, reaching a level of 39.1 per 100 000 in 2005, almost double the 1996 rate.

2.4 Maternal, child and infant diseases

The Philippines is one of 55 countries accounting for 94% of all maternal deaths in the world and is statistically off-track for achievement of MDG 5 by 2015, with a maternal mortality ratio (MMR) of 162 per 100 000 live births. Maternal deaths are closely linked with neonatal deaths.

Thirty seven per cent of all pregnancies every year are unintended, resulting in women having one-third more children than they desire and one-third being born less than two years apart. The updated abortion rate is 27 per 1000 women aged 15–44 per year. As regards completed pregnancies, the majority (56%) of deliveries are home-based, 38% of them attended by an unskilled attendant.

The vast majority of maternal deaths are due to haemorrhage, hypertensive diseases, sepsis, obstructed labour and problems related to abortion, all conditions that are treatable if deliveries are attended by skilled health workers. They would also be less prevalent if mothers had only their desired number of children, spaced by at least two years.

The Philippines is one of 42 countries accounting for 90% of global under-five deaths. The under-five mortality rate (U5MR) is currently 34 per 1000 live births. While the probability of reducing the U5MR by two-thirds by 2015 is considered highly probable, it may not be realized unless deaths during the first 28 days (neonatal period) are dealt with, as they account for 47% of deaths among under-fives (16 per 1000 live births). In fact, 85% of neonatal deaths occur during the first seven days of life. Progress to curtail neonatal deaths is dismal, with death rates among this age group remaining statistically unchanged over the past 20 years. The leading causes of under-five mortality are neonatal problems, pneumonia and diarrhoea. The causes of neonatal death are mostly preventable: complications of prematurity, sepsis or pneumonia and asphyxia.

Undernutrition remains a challenge. Only 72% of children under five years of age have the normal weight-for-age using the National Center for Health Statistics/WHO standards. In 2008, the prevalence of underweight pre-school children (0-5 years) was 26.2%, while 27.9% were stunted, 6.1% were considered thin and 2.0% were overweight. According to the 2008 National Demographic and Health Survey (NDHS), 19.6% of babies are of low birth weight.

Exclusive breast-feeding continues to decline, with only 34.0% of children exclusively breast-fed up to less than six months of age.

Other nutritional challenges faced by the Filipino child include:

- Anaemia – Prevalence rates among children aged 6-12 months remains high at 55.7%[4]. Anaemia in children aged 6-12 years declined from 37.4% in 2003 to 19.8% in 2008.
- Vitamin A deficiency – The level among children aged six months to five years increased from 35% in 1993 to 40% in 2003.
- Iodine deficiency – According to the 2008 National Nutrition Survey, the iodine status of children aged 6-12 years and 13–19 years is optimal as indicated by median UIEs. However, localized areas of iodine deficiency exist. In the following regions, median UIEs are indicative of iodine deficiency: Mimaropa, Soccksargen, Central Visayas and Western Visayas Regions (6-12 year olds); and Caraga and Eastern Visayas Region (13 -19 year olds).

The 2008 NDHS showed an historic 10% rise in the number of fully immunized children and a 13% rise in the number of children protected at birth against neonatal tetanus. Local surveys have revealed that children born in hospital and receiving a birth dose of hepatitis B within 24 hours of life rose from 0% in 2007 to 70% in 2008 and 2009.

2.5 Burden of disease

The Philippines still faces a double burden of disease. Outbreaks of communicable diseases remain a public health problem, while noncommunicable diseases are on the rise, contributing to almost all the top 10 causes of mortality in the country. This double burden has been affecting the country for more than two decades.

Tuberculosis is still among the leading causes of morbidity and mortality. The country has the ninth highest TB incidence in the world and the second highest in the Western Pacific Region. The WHO-estimated prevalence for all forms of TB in the country was 550 per 100 000 population in 2008. In the

[4] *2008 National Nutrition Survey*. Food and Nutrition Research Institute, Department of Science and Technology, Manila.

same year, the estimated incidence of sputum smear -positive TB was 140 per 100 000 population, and the incidence rate for all forms of TB was 280 per 100 000 population. The estimated mortality caused by TB was 52 per 100 000 population in 2008. The Drug Resistance Survey (DRS) conducted in 2004 revealed a primary multidrug-resistant tuberculosis (MDR-TB) rate of 3.8% and an acquired MDR-TB rate of 20.9%. As a result, there are expected to be approximately 6400 smear-positive MDR-TB cases annually. The TB burden is disproportionately high among the poor, the elderly and the male population, although the death rate is highest among older persons. Since TB principally affects the productive age group, it is estimated that the country loses some Php 26 billion (US$ 540 million) annually due to TB-related premature deaths.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Department of Health's vision is to be "The leader of health for all in the Philippines". Its mission is to "guarantee equitable, sustainable and quality health care for all Filipinos, especially the poor, and to lead the quest for excellence in health".

The goals of the health department align with the WHO health systems framework, with better health for the entire population being the primary goal. This means making the health status of the people as good as possible over their entire life cycle. The second goal is related to how the health system performs in meeting people's expectations and satisfaction with the services it provides. Equitable health care financing is the third goal, because health and illness involves large and unexpected costs that may result in poverty for many people.

The strategic thrusts to achieve the three primary health goals mentioned above are anchored in the current programme of health reform, 'FOURmula ONE for Health.' It is designed to undertake critical reforms with speed, precision and effective coordination, with the end goal of improving the efficiency, effectiveness and equity of the Philippine health system. Vital reforms are organized into four major implementation components: health financing; health regulations; health service delivery; and good governance in health. Implementation focuses on four general objectives: (1) health financing, the general objective of which is to secure increased, better and sustained investments in health to provide equity and improve health outcomes, especially for the poor; (2) health regulation, which aims to assure access to quality and affordable health products, devices, facilities and services, especially those commonly used by the poor; (3) health service delivery, where health interventions are aimed at improving the accessibility and availability of social and essential health care for all, particularly the poor; and (4) good governance in health, aimed at improving health system performance at the national and local levels.

Efficiency in implementation, through integration of health service delivery and harmonization of systems and processes, is being promoted. Implementation of reforms also follows a sectorwide approach, covering the entire health sector, and an investment portfolio that encompasses all sources. The capacities of local government units (LGUs) are being enhanced to improve public health conditions in their respective jurisdictions. The national Government, on the other hand, maintains institutional influence over the LGUs by leveraging with incentives and regulatory functions.

3.2 Organization of health services and delivery systems

The power of the Department of Health diminished significantly with the transfer of responsibility for health to about 1600 LGUs under the Local Government Code of 1991. With the devolution of health services to LGUs, fragmentation of services became evident. The provincial governments now oversee provincial and district hospitals, while the municipal governments manage rural health units (RHUs) and *barangay* (village) health stations. The Department of Health, however, maintains specialty hospitals, regional hospitals and medical centres. Sub-national Department of Health offices or "centres for health development" are located in 16 regions.

Service provision is regarded as 'dual', consisting of both the public and private sectors. The public sector has three largely independent segments or sets of providers: (1) national government providers,

which include, among others, hospitals run by national government agencies (e.g., hospitals of the Department of Health and the Department of National Defense), and central and regional offices of the Department of Health; (2) provincial government providers, which include provincial hospitals, provincial blood banks and the provincial health offices; and (3) local (municipal or city) government providers, including rural health units or RHUs, city health centers and *barangay* health stations or BHSs. Each BHSs is staffed by a midwife, and each RHU is staffed by a doctor, a nurse and midwives.

The Department of Health has taken steps to address the challenges of devolution. It developed the Health Sector Reform Agenda (HSRA) in 1999 that set the strategic direction in promoting and ensuring effective and efficient provision of adequate health care to the population, despite devolution. The National Health Insurance Program (NHIP) is envisioned as the main lever to effect desired changes and outcomes. The Department's role now focuses on regulation, technical guidelines/orientation, planning, evaluation, and inspection, while the provincial government is responsible for provincial and municipal hospitals, health centres and health posts, although funding flows do not exactly match responsibility. The role of the municipal-government level is not well defined and capacity is reportedly weak.

With decentralization of service delivery, local chief executives became core players in the health sector. The number of actors involved multiplied and hence the need for coordination and policy monitoring. Under a devolved setting, the LGUs serve as stewards of the local health system and therefore they are required to formulate and enforce local policies and ordinances related to health, nutrition, sanitation and other health-related matters in accordance with national policies and standards. They are also in charge of creating an environment conducive to establishment of partnerships with all sectors at the local level

Ongoing reforms in health service delivery are aimed at improving the accessibility and availability of basic and essential health care for all, particularly the poor. Public primary health facilities are perceived as being low quality, and are thus frequently bypassed. Clients are dissatisfied due to long waiting times; perceived inferior medicines and supplies; poor diagnosis, resulting in repeated visits; and perceived lack of medical and people skills of the personnel available, especially in rural areas. The result is that secondary and tertiary facilities are inundated with patients needing primary health care. Since public primary facilities are more accessible to households and are mostly visited by the poor, improving the quality of those services particularly demanded by the poor would improve their health. Furthermore, referral mechanisms among different health facilities across local government units need to be strengthened.

Private providers are predominantly located in highly urbanized areas. The private sector consists of a wide range of privately operated facilities, such as pharmacies, physicians in solo or group practices, small hospitals and maternity centres, diagnostic centres, employer-based outpatient facilities, secondary and tertiary hospitals, traditional birth attendants and indigenous healers.

Pharmaceutical challenges remain due to asymmetric information, income distribution and the inadequacy of the regulatory system. This stems from various factors such as massive campaigns and lucrative incentives from multinational drug firms, prolonged patent rights and a lack of appropriate public understanding regarding generics.

3.3 Health policy, planning and regulatory framework

The Government's policy to achieve improvements in health includes a perspective on the integral value of health for any nation, the coordination of resources from all sectors, the right to access to quality care, and the presence of socioeconomic fundamentals. While the Government provides the leadership and stewardship to ensure that all efforts in the health sector lead to a common goal, greater support to local health system development and emphasis on strong management and administrative support systems at all levels of governance is likewise critical. Better coordination between national policies and external development partner priorities would also play a major role in fostering harmonization of resources for health. In the context of securing sustained financing for ongoing health sector reforms, budget reforms are also underway such that resources that are within the direct control of the Department of Health are aligned and utilized in support of LGU plans for health.

A six-year strategic plan, the National Objectives for Health (NOH), is developed every six years, synchronizing with every change in administration of the Philippine Government. It describes the achievements and problems of the health sector in the previous six years (previous administration), its goals for the next six years, and its strategies for achieving these goals. It is a roadmap of key targets, indicators and strategies to bring the health sector to its desired outcomes.

The fragmentation in management functions brought about by devolution required that planning between the national and local levels be coordinated. Under the FOURmula ONE implementation framework, each local government is required to develop a Province-wide Investment Plan for Health (PIPH). This aims to rationalize the local health systems and harmonize the support from the national Government and development partners. PIPH implementation is accompanied by a service-level agreement (SLA) defining the benchmarks for LGU performance, which triggers the release of corresponding grant/s and variable tranches from the Department of Health. LGU performance is measured using an LGU scorecard that explicitly tracks and holds LGUs accountable for their performance using a set of health outcome, output and governance indicators. The system has guided LGUs to develop PIPHs and City Investment Plans for Health (CIPHs), with the NOH serving as a reference and guide in the drafting of PIPHs. At the same time, the Department of Health attempts to work hand-in-hand with LGUs and to ensure commitment of support to health initiatives coming from the LGUs. Such a scheme ensures the synchronicity of local health programmes with national health goals and has reduced fragmentation in the health service delivery system.

The Department of Health has adopted a sectoral development approach for health, which is a way of organizing the planning and management of international and national support for the health reforms in FOURmula ONE. Corresponding memorandums of agreement are signed between the Department of Health and the provinces to formalize their collaboration in the implementation of their provincial health plans, with defined roles and responsibilities for the stakeholders involved.

With the public health mandate of the Department of Health, health standards, policies and guidelines to support implementation of health services at the local level are continuously provided. As part of its commitment to this mandate, the Philippine National Strategic Plan for Emerging Diseases was developed in response to implementation of the Asia Pacific Strategy for Emerging Diseases (APSED), fulfilling many of the requirements of the revised International Health Regulation (IHR) 2005. One important policy to support the Philippine strategy is the Philippine Integrated Disease Surveillance and Response (PIDSR) policy. The PIDSR aims to increase the capability of LGUs to perform disease surveillance and response, and to increase utilization of disease surveillance data for decision-making, policy-making, programme management and evaluation. Thereby, it aims to increase capability at the local level for risk assessment to prevent outbreaks and early detection of outbreaks, as well as strengthening preparedness and response.

The Department of Health's regulatory agencies consist of the Food and Drug Administration or FDA (formerly Bureau of Food and Drugs), the Bureau of Health Facilities and Services (BHFS), the Bureau of Health Devices and Technology (BHDT) and the Bureau of Quarantine (BOQ). The FDA is responsible for the regulation of products that affect health, while the BHFS covers the regulation of health facilities and services. The BHDT regulates radiation devices and the BOQ covers international health surveillance and security against the introduction of infectious diseases into the country. There is no direct provision for health regulation by LGUs. The general powers and authorities granted to the LGUs, however, do carry several regulatory functions that can directly or indirectly influence health. Examples include: issuance of sanitary permits and clearances, protection of the environment, inspection of markets and food establishments, banning of smoking in public places, and setting taxes and fees for local health services. However, the responsibility for regulation of medical practice and issuance of licenses and other regulatory standards pertaining to the operation of hospitals and health services remains with the Department of Health.

3.4 Health care financing

While budgeting for health follows a yearly cycle, this is based on a "Health Sector Expenditure Framework" (HSEF) that is developed through discussion and negotiation with the Department of

Budget and Management. This defines the amount of resources that will be available in the medium term and the corresponding allocation to health programmes and institutions. The Department of Health has also established the Organizational Performance Indicator Framework which is an approach to expenditure management that directs resources towards results, wherein the agency's performance is measured by the Framework's key quality and quantity indicators. The Department of Health budget has been restructured to allow performance-based budget allocation and coordinated national and health spending through the PIPHs.

The financial protection of the population against the costs of ill health is deteriorating. In terms of overall trends, out-of-pocket spending in the Philippines has been increasing, while public spending has been declining. This is contrary to the trend in other Asian countries. Out-of-pocket payments account for almost half of all health spending in the Philippines and their share has been increasing (56.2% in 2008). At the same time, health insurance coverage in the country is still low, at around 40%, and the subsidies for health services are poorly targeted, as the true poor and indigent households are not adequately captured in programme of social health insurance. Moreover, health insurance coverage is no guarantee of financial protection and enhanced access to good quality health services, due to the limited nature of Philippine Health Insurance Corporation (PHIC) benefits and the difficulties in accessing them.

Meanwhile, overall public spending on health, while increasing very slightly, is still below the level of other similar-income countries (US$ 2112.3 in 2008). The Department of Health budget has doubled as a percentage of government expenditure, resulting in an increase in government expenditure from 6% in 2002 to 6.5% in 2008. In particular, spending for public health interventions such as vaccines, antituberculosis drugs, and the upgrading of government health facilities to provide emergency obstetric care has increased in the past two years. However, the increase has largely been limited to central government expenditure, while LGU expenditure on health has declined in real terms. Based on the Local Government Code, LGUs with higher fiscal capacity (using per capita income as a measure of financial base) tend to get higher per capita internal revenue allocations than those with lower fiscal capacity. Many municipalities and provinces have experienced financial shortfalls, causing the diversion of health funds to other priorities. In addition, the PHIC share of health expenditures has hardly grown since it was established in 1995.

While the national health insurance programme, PhilHealth, has made a relatively slow and cautious increase in its share of total health expenditure, utilization of PhilHealth benefits is reduced among the poor due to lack of awareness of benefits and the stringent requirements for availing of them. The limited financial protection provided by PhilHealth is closely related to the current provider-payment system. As physicians provide more services and raise prices under the current fee-for-service system, medical care expenses increase rapidly. PhilHealth pays only up to a rather low benefit ceiling and patients pay the rest of the expense. As a result of the low benefit ceiling and physicians' freedom to extra-bill without fee regulation, it is easy to extract profit out of patients' insurance benefits. Discussions are now ongoing to explore the feasibility of extending benefit coverage by raising the benefit ceiling.

Public health facilities are funded through a mix of public subsidies, such as PhilHealth reimbursements, user fees and, to a lesser degree, private health insurers. At the primary level, public subsidies and PhilHealth capitation allocations are funding services for both insured and non-insured members and for both public health and personal care. At the local level, several schemes are in operation, depending on local priorities and management styles. Drugs are mainly purchased by out-of-pocket payments from private for-profit retailers. The Government recently introduced thousands of non-profit community outlets, but their impact on access and costs supported by patients remains to be seen.

Based on the latest national health accounts, most health care financing resources are spent on hospital-based curative services, with a smaller share going to preventive and health-promotion services. These are signs that the Philippines is not spending adequately or effectively on health. Meanwhile, the large hospitals in Metropolitan Manila and other urban areas get the biggest share of spending. Non-hospital health services, on the other hand, face difficulties in securing adequate funding.

The national health care financing strategy hopes to address the above-mentioned challenges by improving health care financing polices that would realistically enhance access, equity and effectiveness in

resource mobilization and allocation, as well as use of health services by: (1) increasing resources for health; (2) sustaining membership in social health insurance of all Filipinos; (3) allocating resources according to most appropriate financing agent; (4) shifting to new provider payment mechanisms; and (5) securing the fiscal autonomy of facilities.

3.5 Human resources for health

The Philippines is purportedly the leading exporter of nurses to the world and the second major exporter of physicians. Paradoxically, there are shortages of physicians and a fast turnover of nurses in the country, especially in rural areas. The high unemployment rates among health professionals, in spite of the considerable number of vacancies in rural areas, is another irony. Prevailing challenges include unmanaged emigration of Filipino health workers, a weak and inadequate human resources for health (HRH) information system, and the existing distribution imbalance, among others. Responses to HRH issues in the past have more often been stop-gap measures, and the interventions of the agencies concerned have not been coordinated.

In order to address such complex and multifaceted issues, a comprehensive master plan for human resources for health has been developed and implementation of activities is underway. A high-level coordinating body and multisectoral working group was established in 2006 to mobilize the political commitment, donor/partner support and funding needed to accomplish the priority activities of the master plan. Called the Human Resources for Health (HRH) Network, this group was able to successfully convene a policy forum to advocate their policy agenda, which aims to resolve issues related to the production, entry and retention of health professionals, as well as their exit and re-entry.

Strategic thrusts for 2005-2010 include development of HRH policies and strategies to address outmigration; sustaining incentive mechanisms for HRH distribution and complementation in underserved areas; and making education, training and skills development more appropriate to local needs. The strategies that are being undertaken include, among others, the institutionalization of the HRH management and development system; improvement of the technical competence and relevant skills of health professionals through education and training; provision of targeted and performance-linked compensation benefits; strengthening of the coordination mechanism between the education sector, regulatory agencies and HRH users; and installation of an HRH information system.

3.6 Partnerships

The attainment of national health goals has progressed significantly, thanks to the well-defined, commonly–shared vision and framework for health ('FOURmula ONE'). The Department of Health has learnt from previous experience that better harmonization of efforts among the various stakeholders at all levels is critical. Currently, assistance for the health sector comes mainly in the form of grants, loans and technical support. A sectorwide development approach for health between the Government and its partners is being initiated to maximize investments, minimize duplication of initiatives and generate the necessary resources for the health sector. The Department of Health is working closely with international organizations and global initiatives to strengthen implementation of priority health programmes.

3.7 Challenges to health system strengthening

The publicly funded health system has been undergoing a major reform programme since 1999. At the broadest level, this has included a review of the Department of Health's primary functions, roles and responsibilities, as well as the suitability of the existing organizational structure to support these at both the strategic and service-delivery level. Introduction and pilot-testing of the different concepts and strategies of heath sector reform in selected provinces showcased some gains in health systems development. However, one of the gaps was the absence of a comprehensive operational framework to implement the reform strategies. Thus, the "FOURmula ONE for Health" was launched in August 2005 to set the direction and implementation arrangements for strengthening the way health care is delivered, governed, regulated and financed.

FOURmula ONE is now in its fifth year of implementation and both the Department of Health and the LGUs are being challenged by operational issues, such as procurement. In addition, the health care delivery system has yet to address some major issues and challenges, such as the absence of data

disaggregated at provincial/municipal levels (for baseline and monitoring); the absence of a workable means of identifying the poor for targeted health interventions; the minimal involvement of the private sector in the delivery of public health programmes; the still excessive reliance on use of high-end hospital services rather than primary care; the slow improvement in maternal mortality reduction; and population growth. Issues such as geographic inequity, where people who live in rural and isolated communities receive less and lower quality health services, and socioeconomic inequity, where the poor do not receive health services due to inaccessibility and/or unaffordability, continue to abound in the country.

The above-mentioned health development efforts/reforms in the Philippines have been generally aimed at addressing problems of inequitable access to health services. After four decades, however, inequity continues to be the main root of health sector problems. There remain large disparities in health outcomes between the rich and the poor resulting from economic and geographic barriers to accessing health services. For example, the infant mortality rate (IMR) among the poorest quintiles is four times those for the richest. Another example is that the Autonomous Region of Muslim Mindanao (ARMM) and other poor areas have consistently poorer health status than the richer regions. There are also large income-related disparities in the utilization of health services. For instance, there is skilled attendance at 94% of births among the highest income quintile, compared with 25% in the poorest quintile, and only 13% of all births in the lowest quintile occur at a health facility, compared with 84% in the highest quintile. Similarly, immunization coverage is only 70% among the lowest quintile, compared with 94% in the highest (NDHS, 2009). The unfair distribution of coverage rates is paralleled by similar disparities in the distribution of human and physical resources in the health system. While nationwide average supply levels are adequate or nearly adequate, distribution across provinces is not consistent with need or poverty level.

Utilization patterns are affected by financial barriers and negative perceptions or lack of awareness of services. The poor utilize primary health facilities like RHUs and BHCs more than hospitals because of the co-payments and balance-billing in government or private hospitals, which they cannot afford to pay. In addition, government hospitals and lower-level facilities, despite their geographical accessibility are bypassed in favour of private facilities and higher-level facilities, respectively, because of perceived quality issues. Government hospitals intended to serve the poor are utilized by a large non-poor clientele, who patronize government facilities because of the high cost of private facilities and the low level of support from social health insurance. To a large extent, lack of information often combines with cost considerations to cause low utilization of services among the poor.

There are also capacity constraints as health sector inputs have not kept up with population growth. The bed-to-population ratio is roughly 1 per 1000 inhabitants, lower than in other East Asian countries, such as China (2.6 beds per 1000 inhabitants), Viet Nam (1.2 beds) or Thailand (2.2). Moreover, many of these hospital beds are clustered in large city centres and better-off LGUs. This is particularly true for private hospital beds, which account for approximately half of all hospital beds in the country. The availability of skilled health sector staff is also a problem, especially in the public sector. While the Philippines does not have a problem with the overall supply of doctors and nurses, there is large-scale outmigration.

Overall, health system strengthening efforts have made important contributions to the health sector but have not effectively addressed deeper structural gaps, namely: (1) the continuing low levels, fragmentation and inequity in public financing for health; (2) limitations in PHIC performance in the implementation of universal social health insurance and using health financing as a lever to drive health sector development; (3) gaps in service delivery capacities; and (4) weak stewardship at all levels of the health system, particularly with regard to data for decision-making, monitoring and sector performance management, outdated or non-existent strategies in hospitals, pharmaceuticals and supply-chain management, public and private sector regulation, and public health.

4. PROGRESS TOWARDS THE HEALTH MDGs

The country's commitment to achievement of the MDGs, particularly those concerning universal access to education, maternal mortality and access to reproductive health services, remains an immense challenge.

Goal 4: Reduce child mortality

Childhood mortality continues to decline in the Philippines. The infant and under-five mortality rates during the 2004-2008 period stood at 25 and 34 per 1000 live births, respectively, lower than the rates of 29 and 40 per 1000 live births in 2003. The country is on track to achieve MDG 4, which calls for a two-thirds reduction in the under-five mortality rate over the period 1990-2015.

Goal 5: Improve maternal health

On maternal and reproductive health, progress has been slower than expected and regional and income-related disparities across all health outcomes are persistent and potentially widening. MMR has improved more slowly than expected (162 per 100 0000 live births in 2006) and the country is not expected to reach the MDG 5 goal of a three-quarters reduction in MMR between 1990 and 2015, as well as universal access to reproductive health services.

Goal 6: Combat HIV/AIDS, malaria and other diseases

While the country is on track to meet MDG 6 as regards malaria and tuberculosis, halting the spread of HIV/AIDS has become challenging, with the number of reported new cases increasing rapidly over the past two decades: from 66 in 1990, the number reached 835 in 2009.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Republic of the Philippines (official website)
Web address	:	www.gov.ph
Title 2	:	National Statistics Office.
Web address	:	http://www.nso.gov.ph/
Title 3	:	2007 Government of the Philippines Year-End Report
Web address	:	http://www.gov.ph/faqs/yearend_reports.asp
Title 4	:	Philippine Environment Monitor 2006
Operator	:	The World Bank Group
Web address	:	http://www.worldbank.org.ph/pem
Title 5	:	National Epidemiology Center
Operator	:	Department of Health, Philippines
Web address	:	http://www2.doh.gov.ph/nec/
Title 6	:	2007 Philippines Development Forum. 8-9 March 2007, Cebu City, Philippines.
Title 7	:	2005-2010 National Objectives for Health,
Operator	:	Department of Health, Philippines.
Title 8	:	National Nutrition and Health Survey (NNHeS): Atherosclerosis-related Disease and Risk Factors, Philippine Journal of Internal Medicine, 43:103-115, May-June 2005
Operator	:	Antonio Dans, Dante Morales, Felicidad Velandria, Teresa Abola, Artemio Roxas Jr., Felix Eduardo Punzalan, Rosa Allyn Gy, Elizabeth Paz-Pacheco, Lourdes Amarillo and Maria Vanessa Villaruz
Title 9	:	Philippines. Food and Nutrition Research Institute. *6th National Nutrition Survey*. Taguig, Metro Manila, 2003.

6. ADDRESSES

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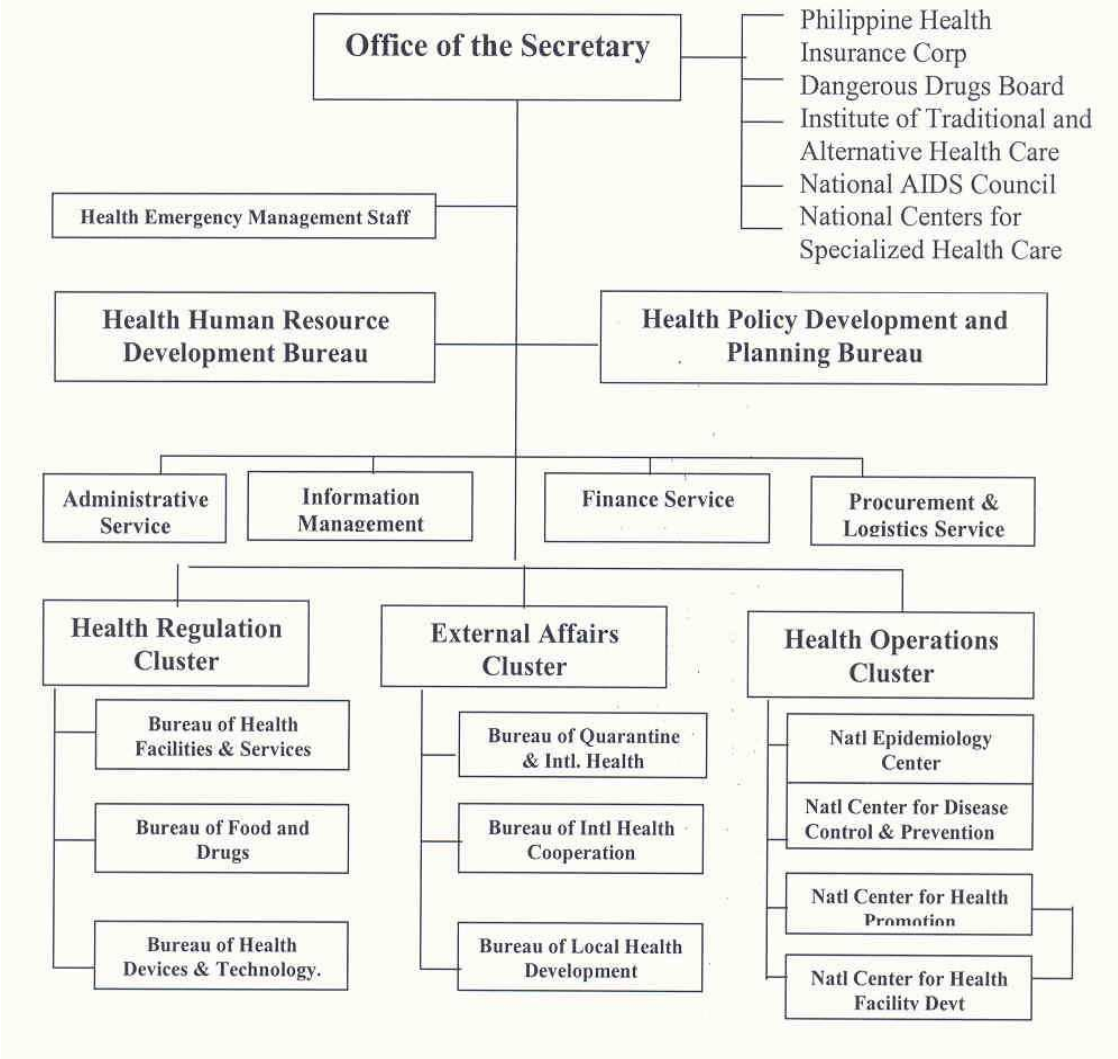
7. ORGANIZATIONAL CHART: Ministry of Health



PHILIPPINES — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	299.76							1
2	Estimated population ('000s)	88574.61		…		…		2007	2
3	Annual population growth rate (%)	2.04		…		…		2000-07	2
4	Percentage of population								
	- 0–4 years	11.47		11.64		11.29		2010 est	3
	- 5–14 years	22.28		22.70		21.87		2010 est	3
	- 65 years and above	4.40		4.02		4.78		2010 est	3
5	Urban population (%)	48.70		…		…		2009 est	4
6	Crude birth rate (per 1000 population)	20.50		…		…		2004	5
7	Crude death rate (per 1000 population)	4.80		…		…		2004	5
8	Rate of natural increase of population (% per annum)	1.57 [a]		…		…		2004	5
9	Life expectancy (years)								
	- at birth	67.00		64.00		70.00		2004	5
	- Healthy Life Expectancy (HALE) at age 60	…		10.60		12.10		2002	6
10	Total fertility rate (women aged 15–49 years)	3.30						2008	7
	Socioeconomic indicators								
11	Adult literacy rate (%)	92.60		…		…		1995-2005	8
12	Per capita GDP at current market prices (US$)	1638.60						2007	9
13	Rate of growth of per capita GDP (%)	8.10						2007	9
14	Human development index	0.75						2007	10
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	…		…		…			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases								
	Hepatitis viral								
	- Type A	316	216	100	4	3	1	2009	11
	- Type B	699	384	315	10	5	5	2009	11
	- Type C	18	13	5	1	1	0	2009	11
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	5521 [b]	2753 [b]	2768 [b]	38 [b]	23 [b]	15 [b]	2009	11
	Dengue/DHF	57 819	30 379	27 440	548	260	288	2009	11, 12
	Encephalitis	96 [b]	61 [b]	35 [b]	11 [b]	8 [b]	3 [b]	2009	23
	Gonorrhoea	…	..	…	…	…	…		
	Leprosy	1795	…	…	…	…	…	2009	12
	Malaria	23 655 [c]	…	…	56 [c]	…	…	2008	12
	Plague	…	…	…	…	…	…		
	Syphilis	…	…	…	…	…	…		
	Typhoid fever	723 [d]	422 [d]	301 [d]	1	1	0	2009	11
17	Acute respiratory infections	690 566 [e]	348 992	328 956	…	…	…	2006	13
	- Among children under 5 years	6185	…					2008	7

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	1905	1073	832	2005	5
	- Among children under 5 years	560	...	...	...	...	...	2008	7
19	**Tuberculosis**								
	- All forms	139 603	...	...	...	...	...	2008	12
	- New pulmonary tuberculosis (smear-positive)	85 025	...	...	...	...	...	2008	12
20	**Cancers**								
	All cancers (malignant neoplasms only)	106 884 [f]	51 980 [f]	54 864 [f]	42 686	22 551	20 135	C: 2005 D: 2004	5, 14
	- Breast	14 043 [f]	0	14 043 [f]	4254	55	4199	C: 2005 D: 2004	5, 14
	- Colon and rectum	8585 [f]	4737 [f]	3848 [f]	2230	1234	996	C: 2005 D: 2004	5, 14
	- Cervix			7277 [f]			1111	C: 2005 D: 2004	5, 14
	- Leukaemia	992 [f]	647 [f]	345 [f]	452	307	145	C: 2005 D: 2004	5, 14
	- Lip, oral cavity and pharynx	4202 [f]	2243 [f]	1959 [f]	2460	1234	1226	C: 2005 D: 2004	5, 14
	- Liver	4113 [f]	2140 [f]	1973 [f]	1927	1201	726	C: 2005 D: 2004	5, 14
	- Oesophagus	7629 [f]	5660 [f]	1969 [f]	...	...	...	C: 2005 D: 2004	5, 14
	- Stomach	3932 [f]	2368 [f]	1564 [f]	1439	811	628	C: 2005 D: 2004	5, 14
	- Trachea, bronchus, and lung	17 238 [f]	13 273 [f]	3965 [f]	7240	5446	1794	C: 2005 D: 2004	5, 14
21	**Circulatory**								
	All circulatory system diseases	...	...	...	54 045	30 598	23 447	2004	5
	- Acute myocardial infarction	...	...	...	28 663	18 571	10 092	2004	5
	- Cerebrovascular diseases	...	...	...	43 077	24 322	18 755	2004	5
	- Hypertension	...	...	...	15 617	8614	7003	2004	5
	- Ischaemic heart disease	...	...	...	13 915	7065	6850	2004	5
	- Rheumatic fever and rheumatic heart diseases	...	...	...	2183	930	1253	2004	5
22	**Diabetes mellitus**	...	...	...	18 441	8912	9529	2005	5
23	**Mental disorders**	...	...	...	1061	824	237	2005	5
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	12 646	11 613	1033	2004	5
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	6976	5312	1664	2004	5
	- Suicide	...	...	...	1818	1400	418	2004	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute Respiratory Infection	1 647 178	780 598	866 580	1840.60	1716.20	1926.80	2008	13
	2. ALTRI AND Pneumonia	780 106	393 996	386 110	871.80	866.20	858.50	2008	13
	3. Bronchitis/bronchiolitis	542 448	255 267	287 181	580.80	561.20	638.50	2008	13
	4. Hypertension	484 690	221 004	263 686	557.80	485.90	586.30	2008	13
	5. Acute watery diarrhoea	418 465	210 058	208 407	485.40	461.80	463.40	2008	13
	6. Influenza	362 455	182 207	180 248	404.80	400.60	400.80	2008	13
	7. TB Respiratory	96 189	58 584	37 605	107.80	128.80	83.60	2008	13
	8. Acute febrile illness	35 869	17 734	18 135	39.50	39.00	40.30	2008	13
	9. Diseases of the Heart	32 053	14 406	17 647	36.40	31.70	39.20	2008	13
	10. Chickenpox	25 545	12 959	12 586	28.70	28.50	28.00	2008	13

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart diseases	77060	43809	33251	90.40	102.10	78.50	2005	5
	2. Vascular system diseases	54372	30531	23841	63.80	71.20	56.30	2005	5
	3. Malignant neoplasm	41697	21993	19704	48.90	51.30	46.50	2005	5
	4. Pneumonia	36510	18145	18365	42.80	42.32	43.30	2005	5
	5. Road traffic accidents	33327	27281	6046	39.10	63.63	14.27	2005	5
	6. Tuberculosis, all form	26588	18229	8359	31.20	42.30	19.70	2005	5
	7. Chronic lower respiratory diseases	20951	14450	6501	24.60	33.70	15.30	2005	5
	8. Diabetes mellitus	18441	8912	9529	21.60	20.80	22.49	2005	5
	9. Certain conditions originating in the perinatal period	12368	7385	4983	14.50	17.20	11.80	2005	5
	10. Nephritis, nephrotic syndrome and nephrosis	11056	6548	4508	13.00	15.30	10.60	2005	5
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					22.00		2008	7
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					47.70 [i]		2008	7
29	**Percentage of pregnant women with anaemia**					42.50		2008	19
30	**Neonatal mortality rate (per 1000 live births)**	16.00		…		…		2008	7
31	**Percentage of newborn infants weighing less than 2500 g at birth**	19.60		…		…		2008	7
32	**Immunization coverage for infants (%)**								
	- BCG	90.00		…		…		2009	12
	- DTP3	87.00		…		…		2009	12
	- Hepatitis B III	85.00		…		…		2009	12
	- MCV2	88.00		…		…		2009	12
	- POL3	86.00		…		…		2009	12
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			…			138	2005	5
	- Eclampsia			…			…		
	- Haemorrhage			…			265	2005	5
	- Obstructed labour			…			…		
	- Sepsis			…			…		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	…	…	…	…	…	…		
	- Diphtheria	118	…	…	…	…	…	2009	12
	- Measles	1469	…	…	…	…	…	2009	12
	- Mumps	…	…	…	…	…	…		
	- Neonatal tetanus	172	…	…	…	…	…	2009	12
	- Pertussis (whooping cough)	2	1	1	0	0	0	2009	1, 12
	- Poliomyelitis	0	0	0	…	…	…	2009	12
	- Rubella	578	251	327	0	0	0	2009	1, 12
	- Total Tetanus	1022	…	…	…	…	…	2009	12
	Health facilities								
35	**Facilities with HIV testing and counseling services**						82	2009	12

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	90 [g]	...	2006	15
		- Specialized hospitals	21	...	2006	15
		- District/first-level referral hospitals	282	...	2006	15
		- Primary health care centres	331 [h]	...	2006	15
	Private health facilities	- Hospitals	1068	44 296	2006	15
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			6422.31	2008p	16
	- total expenditure on health as % of GDP			3.80	2008p	16
	- per capita total expenditure on health (in US$)			71.08	2008p	16
	Government expenditure on health					
	- amount (in million US$)			2112.32	2008p	16
	- general government expenditure on health as % of total expenditure on health			32.90	2008p	16
	- general government expenditure on health as % of total general government expenditure			6.50	2008p	16
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			4.32	2008p	16
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			67.10	2008p	16
	- out-of-pocket expenditure on health as % of total expenditure on health			56.18	2008p	16
	Exchange rate in US$ of local currency is: 1 US$ =			44.47	2008p	16
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	93 862	...	...	...	...	...	...	2004	18
		- Ratio per 1000 population	1.14	...	...	...	...	...	...	2004	18
	Dentists	- Number	45 903	...	...	...	...	...	...	2004	18
		- Ratio per 1000 population	0.55	...	...	...	...	...	...	2004	18
	Pharmacists	- Number	49 667	...	...	...	...	...	...	2004	18
		- Ratio per 1000 population	0.60	...	...	...	...	...	...	2004	18
	Nurses	- Number	352 398	...	...	...	...	...	...	2004	18
		- Ratio per 1000 population	4.26	...	...	...	...	...	...	2004	18
	Midwives	- Number	136 036	...	...	...	...	...	...	2004	18
		- Ratio per 1000 population	1.65	...	...	...	...	...	...	2004	18
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	26.20	...	...	2008	19
43	Infant mortality rate (per 1000 live births)	25.00	...	...	2008	7
44	Under-five mortality rate (per 1000 live births)	34.00	...	...	2008	7
45	Proportion of 1 year-old children immunised against measles	58.00	...	...	2009	12
46	Maternal mortality ratio (per 100 000 live births)	162.00			2006	13
47	Proportion of births attended by skilled health personnel	62.20			2008	7
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	18.20			2008	7
	- Percentage of deliveries in health facilities (as % of total deliveries)	44.00			2008	7
48	Contraceptive prevalence rate	34.00	...	...	2008	7
49	Adolescent birth rate	7.30			2008	7
50	Antenatal care coverage - At least one visit	95.80			2008	7
	- At least four visits	77.80			2008	7
51	Unmet need for family planning	22.00	...	...	2008	7
52	HIV prevalence among population aged 15-24 years	< 1.00	...	...	2009	20
53	Estimated HIV prevalence in adults	< 1.00	...	...	2009	20
54	Percentage of people with advanced HIV infection receiving ART	0.82	...	...	2009	20
55	Malaria incidence rate per 100 000 population	26.39	...	...	2008	12
56	Malaria death rate per 100 000 population	0.06	...	...	2008	12
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	67.00	...	...	2007	12
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	85.00	...	...	2008	13
59	Tuberculosis prevalence rate per 100 000 population	550.00	...	...	2008	12
60	Tuberculosis death rate per 100 000 population	52.00	...	...	2008	12
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	67.00	...	...	2008	12
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	89.00	...	...	2007	12
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	91.00	93.00	87.00	2008	17
64	Proportion of population using an improved sanitation facility	76.00	80.00	69.00	2008	17
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Suspected cases
c	Preliminary
d	Figure includes parathyroid fever
e	Totals may not tally due to some reported cases with no gender breakdown
f	Estimated figure
g	Figure refers to Level 3 and 4 hospitals
h	Figure refers to Level 1 hospitals
i	Revised data

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PITCAIRN ISLANDS

1. CONTEXT

1.1 Demographics

The Pitcairn Islands, officially named the Pitcairn, Henderson, Ducie and Oeno Islands, constitute a group of islands in the South Pacific Ocean about midway between Peru and New Zealand.

The only permanently inhabited island, Pitcairn, covers a total area of 47 square kilometres and is of rugged volcanic formation with a rocky coastline with cliffs. The only access to the island is by cruise and container ships, which travel irregularly between New Zealand and the Americas via the Panama Canal. Ships can only divert for emergency need and a large diversion fee is payable. Pitcairn also receives a scheduled supply boat, presently at approximately three-monthly intervals.

Of the total 63 people living on Pitcairn (April 2009), 17.3% are 0-14 years old, 61.5% are 15-64 years old and 21.2% are 65 years and above. A total of 52 are permanent residents and 11 are expatriates working as teachers, prison staff, health staff, etc., who also reside on the island.

Most dwellings are in Adamstown on the North side of Pitcairn; the island is small and no one is far from the single administrative centre in Adamstown. A variable number of tourists visit Pitcairn, mainly from October to March.

Two languages are spoken: English, the official language, and Pitkern, a mixture of an 18th century English dialect and a Tahitian dialect. Pitkern is spoken as a first language by the population and is taught alongside standard English at the island's only school.

1.2 Political situation

Pitcairn Islands is held by the United Kingdom of Great Britain and Northern Ireland to have come under the jurisdiction of the British High Commission for the Western Pacific in 1898 and, in 1952, the Pitcairn Island Order in Council transferred the responsibility for administration to the person of the Governor of Fiji, following separation of the offices of Governor and High Commissioner. When Fiji gained independence in 1971, the administration was transferred to Auckland, New Zealand, within the jurisdiction of the British High Commissioner to New Zealand, who conjointly holds office as Governor of Pitcairn Islands.

As such, Pitcairn Islands is the smallest British protectorate in the world and is governed from the United Kingdom by an appointed Governor, whose office is in Wellington, New Zealand. As Pitcairn Islands no longer have a Commissioner, the Head of the Pitcairn Island Office now handles most ongoing, practical matters.

Pitcairn Islands is also notable for being the least populated jurisdiction in the world (although it is not a sovereign nation). The United Nations Committee on Decolonization includes the Pitcairn Islands on the United Nations list of non-self-governing territories.

Pitcairn Islands now has a new Constitution (2010), which aims to help protect human rights and was put together after consultations with almost all people on the islands.

1.3 Socioeconomic situation

Pitcairn islanders exist on fishing, subsistence farming, handicrafts and sales of postage stamps. The fertile soil of the valleys produces a wide variety of fruits and vegetables, including citrus, sugarcane, watermelons, bananas, yams and beans. Bartering is an important part of the economy. The major sources of revenue are the sale of postage stamps to collectors and the sale of handicrafts to passing ships.

Trade is restricted by the jagged geography of the island, which lacks a harbour or airstrip, forcing all trade to be made by longboat to visiting ships. Occasionally, passengers from expedition-type cruise ships come ashore for a day, weather permitting. In 2004, the island had a labour force of 15 men and women.

1.4 Risks, vulnerabilities and hazards

While no specific data are available in the information sources listed, the vulnerabilities and hazards facing Pitcairn Islands are similar to those of other tiny and remote Pacific island countries and areas. Remoteness from each other and from trading/supply partners, with resulting high transportation costs, raises the cost of social and protection services, as well as the cost of business.

2. HEALTH SITUATION AND TREND

Health care is easily accessible to all and is financed by the United Kingdom Department for International Development (DFID) and the Government of Pitcairn. Emergency evacuation is by sea to Mangareva, French Polynesia, then air transport to Tahiti, French Polynesia, or New Zealand. While the strength of the health care system in Pitcairn is its advanced primary care, its weakness is isolation from secondary care.

There have been three births and two deaths in the last five years. However, there were no infant, child or maternal deaths in the five years to April 2009.

2.1 Communicable and noncommunicable diseases, health risk factors and transition

In March 2002, a blood survey was carried out by the Pacific Elimination of Lymphatic Filariasis Programme (PacELF) to detect lymphatic filariasis. The survey did not detect anyone with antigenaemia and confirmed the Pitcairn Islands to be non-endemic for filariasis.

2.2 Outbreaks of communicable diseases

Outbreaks of respiratory and gastroenteric infection have occurred in the past six months.

2.3 Leading causes of mortality and morbidity

The five leading causes of overall mortality are likely to be cardiovascular disease, cancer, diabetes, respiratory disease and accidents.

The five leading causes of overall morbidity are likely to be diabetes, cardiovascular disease, asthma, degenerative joint disease and dental caries.

2.4 Maternal, child and infant diseases

No available information.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

There is a subsidized national health system on Pitcairn and a purpose-built, fully equipped Grade 2 medical centre (1997) with a large reception area, a consulting room, a utility room, a small dispensary, an X-ray room, a dental room and a two-bed ward with en-suite bathroom. There is good basic equipment and a well stocked dispensary.

The current medical officer is an expatriate general practitioner on a one-year contract. One Pitcairner acts as facility manager and medical assistant. The medical officer is contracted to provide comprehensive primary care on a 24-hour basis. One Pitcairner has basic training in dental and X-ray work.

The Pacific Public Health Surveillance Network provides infectious disease bulletins. The medical officer gives public health advice to the Pitcairn Island Council.

3.2 Organization of health services and delivery systems

See section 3.1.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

Health care is financed by the United Kingdom DFID and the Government of Pitcairn. Health expenditure as a proportion of GDP is unknown.

3.5 Human resources for health

See section 3.1.

3.6 Partnerships

Authorities collaborate in regional initiatives for the prevention and control of infectious diseases with the Secretariat of the Pacific Community, Pacific Public Health Surveillance Network (SPC/PPHSN).

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Pitcairn Islands Office website*
Operator	:	Pitcairn Islands Office
Comments	:	No information on health aspects
Web address	:	http://government.pn/
Title 2	:	*Pacific Programme to Eliminate Lymphatic Filariasis – PacELF*
Operator	:	PacELF and WHO
Web address	:	http://www.pacelf.org/regions/pitcairn.html
Title 3	:	*Samoa Commitment – achieving healthy islands*
Web address	:	http://www.wpro.who.int/NR/rdonlyres/CE800376-BC67-45D6-A3B9-01EDDE4FCB7B/0/Samoa_Commitment_2005.pdf
Title 4	:	*European Overseas Countries and Territories Needs Assessment*
Operator	:	European Centre for Disease Prevention and Control Office
Comments	:	Completed by Dr Peter Cardon, Pitcairn Islands Medical Officer

6. ADDRESSES

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REPUBLIC OF KOREA

1. CONTEXT

1.1 Demographics

The population of the Republic of Korea, as of 2008, was 48 607 000, with a population density of 488 persons per square kilometre. The Republic saw its population grow by an annual rate of 3% during the 1960s, but growth slowed to 2% over the next decade. In 2009, the rate stood at 0.31% and it is expected to decline further, to 0.02%, by 2020.

A notable trend in the population structure is that it is getting increasingly older. In 2008, it was estimated that 10.3% of the total population was 65 years or older, while those aged 15 to 64 years of age accounted for 72.3%. In the 1960s, the country's population distribution formed a pyramid shape, with a high fertility rate and relatively short life expectancy. However, age-group distribution is now shaped more like a bell because of the low fertility rate and extended life expectancy. Youths (15 and younger) will make up a decreasing portion of the total by 2020, while senior citizens (65 and older) will account for some 15.6% of the total.

In recent years, a low fertility rate has emerged as a serious social challenge. The total fertility rate dropped from 4.53 in the 1970s to 1.2 in 2008, among the lowest in member countries of the Organisation for Economic Co-operation and Development (OECD). The Government is working to tackle the issue by establishing comprehensive plans to create family-friendly workplace environments and bolster childcare policies.

1.2 Political situation

The tension between the Republic of Korea and the Democratic People's Republic of Korea continues to play a major role in life and decision-making on the Korean peninsula. In 2008, inter-Korean relations went through an adjustment of mutual benefit and common prosperity. Since October 2008, however, North Korea has intensified its intimidation against the South, particularly with a threat to cut-off all inter-Korean relations.

Nonetheless, exchanges and cooperation between the two Koreas, led by the private sector, have continued to grow steadily. There were 186 775 cross-border travellers in 2008 and the volume of trade between the two countries was US$ 1.8 billion, a 17.3% and 1.2% increase, respectively, when compared with the previous year. In addition, the Government of the Republic of Korea continued to provide aid to the Democratic People's Republic through NGOs (amounting to Won 16.4 billion [US$ 12.7 million]) and international organizations, including WHO and the United Nations Children's Fund (UNICEF), (amounting to US$ 16 million), to support their programmes in the Democratic People's Republic in such areas as rural development, public health, medical services, and social welfare.

1.3 Socioeconomic situation

Over the past few decades, the Republic of Korea has transformed itself from an agrarian society to an industrialized nation. The Government has been making efforts to upgrade living standards through a vigorous programme of reforms in education, housing, social welfare and the environment. In 2007, the gross domestic product (GDP) was US$ 969.9 billion, and the per capita gross national income (GNI) was US$ 20 045.

The employment structure has undergone remarkable changes since the beginning of industrialization in the early 1960s. In 1960, workers in the agricultural, forestry and fishery sectors accounted for 63% of the total labour force. However, that figure had dropped to 7.3% by 2007. By contrast, the share of the tertiary industry (service sector) grew from 28.3% of the total labour force in 1960 to 75.0% in 2007.

Along with the country's success in economic development, the overall health of Koreans has improved significantly over the past three decades. In 1960, the life expectancy was 51 years for males and 54 for

females. These figures had increased to 76.1 for males and 82.7 for females by 2007. The infant mortality rate has likewise declined sharply, as has maternal mortality.

Korean women today are actively engaged in a wide variety of fields and are making significant contributions to society. Recently, women have been making major inroads in some areas, particularly in the government sector. For example, the number of female Members of Parliament has increased considerably: there were 16 (5.9%) in the 16th National Assembly (2000-2004) but that number has increased to 43 (14.4%) in the 18th National Assembly (2008-2012).

Recently, the Republic of Korea has been in a temporary economic recession as a result of the global financial crisis. The Government is taking a variety of policy steps to prevent the economic slump from threatening the lives and health of the population. As part of the safety net for those with low incomes who are hit hardest in difficult times, the Government has decided to expand support for the poor. In 2009, an additional 184.3 billion won (US$ 143.02 million) of subsistence, housing and medical benefits was awarded to the 1.7 million recipients of the National Basic Livelihood Security System.

Moreover, the Government has provided 101.8 billion won (US$ 79 million) in emergency support for those who have fallen into poverty temporarily due to closure and suspension of businesses or loss of jobs. Subsistence benefits amounting to around 418.1 billion won (US$ 324.4) have been provided to 500 000 households of low-income-earners who are unable to work.

1.4 Risks, vulnerabilities and hazards

With one of the world's lowest fertility rates and fastest ageing populations, the Republic of Korea saw its total fertility rate drop to 1.26 in 2007, about half the replacement rate.

The country became an ageing society (7% of the population old) in 2000 as a result of low fertility and prolonged life expectancy and is expected to become an aged society (14% of the population old) by 2018 and a super-aged society (20% of the population old) by 2026. It took France 115 years to move from an ageing to an aged society and 40 years to move from an aged to a super-aged society, while it took 72 and 16 years, respectively in the United States of America, and 24 and 14 years in Japan. Considering such examples, 18 and 8 years for the Republic of Korea would be the world's shortest transition.

The rapid population ageing is causing concern regarding sustainable development as it will reduce the economically active population, hold back economic growth, narrow the tax base, and lead to tensions between generations.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Changes in socioeconomic structures and lifestyles, as well as improvements in health and medical care, have drastically changed the leading causes of death in the Republic of Korea. In the past, the main causes of mortality were acute and communicable diseases, but these have been replaced by chronic and noncommunicable diseases.

The incidence of noncommunicable disease began to rise in the 1980s, and, in 2008, the 10 leading cases of death included malignant neoplasms (cancer), cerebrovascular diseases, heart diseases, suicides, diabetes, chronic lower respiratory diseases, transport accidents, liver diseases, pneumonia and hypertensive diseases. These 10 causes of death accounted for 70.4% of all deaths.

The prevalence rates of major noncommunicable diseases are also high. For example, the prevalence rates for high blood pressure and diabetes stood at 25.6% and 9.7%, respectively, in 2007. The growing prevalence of noncommunicable diseases is considered to be largely attributable to rapid population ageing, increases in obesity and overweight, a decrease in physical activity, and an increased smoking population.

According to a 2005 study, a high proportion of adults were obese (BMI ≥ 25), 35.2% of males and 28.3% of females, and childhood obesity almost doubled from 6.8% in 1998 to 12% in 2005. Lack of physical activity was found to be a serious problem, with only 38% of adults aged 19 and older engaging in moderate levels of physical activity on a regular basis.

Thanks to strong smoking-control policies, the male smoking population dropped drastically from 67.4% to 46.6% in 2008, but it is still the second highest percentage in the world. Youth smoking stood at a high level of 14.1% in 2006 and the age of starting smoking fell from 15 in 1998 to 12 in 2006, indicating a serious smoking problem among the country's young people.

While per capita alcohol consumption, which is increasing steadily, was 8.1% in 2005, a trend towards heavy drinking and a high death rate due to alcohol are troubling the nation. The annual socioeconomic costs attributable to alcohol drinking were estimated to amount to 2.9% of GDP: 38.8% for reduction of productivity, 26.9% for loss of the workforce, 22.2% for alcoholic beverages, 5.3% for direct medical costs, 2.3% for loss of productivity, 1.9% for direct non-medical costs, 1.5% for administration costs and 1.0% for loss of property.

2.2 Outbreaks of communicable diseases

With vaccination and improved hygiene, the incidence of acute communicable diseases has been decreasing steadily since the 1960s. However, global climate change and increasing overseas travel have increased the incidence of imported tropical diseases. In addition, the growing distribution of food materials, an increase in dining out, and contamination of water resources have the potential to trigger massive outbreaks of waterborne and foodborne infectious diseases. Highly pathogenic H5N1 avian influenza, which has been reported annually in the country since 2006, is also a concern.

A total of 14 670 cases of acute communicable disease (excluding chicken pox) were notified in 2007, giving an incidence rate of 29.7 per 100 000 population, an increase of 17% from 25.3 in the previous year. Among these diseases, measles increased 592% year on year, while the increase was 118% for mumps and 177% for dengue fever. In particular, the incidence of chicken pox rose 1.8 times from 2006 to over 20 000, accounting for 58.4% of total acute communicable disease cases in 2007.

2.3 Leading causes of mortality and morbidity

The number one cause of death in the Republic of Korea is cancer, accounting for 28.0% in 2008, followed by cerebrovascular disease at 11.3% and heart disease at 8.7%.

The number of people dying from cancer rose steadily from 111.9 per 100 000 in 1996 to 139.5 in 2008. Among the major cancers, the number of deaths from stomach cancer has been decreasing, while those from lung and colon cancer have increased.

The number of deaths from cerebrovascular diseases has dropped from 10 years ago. However, the incidence and prevalence rates for the diseases jumped from 1.60 and 6.2 per 1000 in 1998 to 2.3 and 10, respectively, in 2003. The hike means an increase in disabilities related to stroke, adding to the burden of disease.

Cardiovascular diseases are not as prevalent in the Republic of Korea as in many Western countries, but have been showing an upward trend. The number of deaths from ischaemic heart disease more than doubled between 1996 and 2006, from 13.0 to 29.2 per 100 000.

The recent increase in the number of suicides is notable. In 1996, 14.1 persons out of 100 000 killed themselves, making suicide the ninth most common cause of death. In 2008, however, suicide became the fourth largest cause of death, with 26 out of every 100 000 persons taking their own lives.

Among the major noncommunicable diseases, high blood pressure, arthritis and dental caries have the highest morbidity rates. The prevalence rate for hypertension was 27.9% in 2005, showing that one-third of all adults in the country were suffering from high blood pressure. Furthermore, out of every 1000, 703.9 were suffering from dental caries and 102.5 from osteoarthritis, according to a study of prevalence rates among adults aged 19 years and older.

2.4 Maternal, child and infant diseases

The mortality risk for infants and young children, as well as for pregnant women, has decreased dramatically. The infant mortality rate fell from 61.0 per 1000 live births in the 1960s to an estimated 3.4 in 2008, while the maternal mortality ratio stood at 8.4 per 100 000 live births in 2008.

The focus of public health programmes in this area is now not just on reducing mortality rates, but also improving health for a longer period by developing the group's health potential. For example, a life-course approach has been taken to deal with age-specific needs for good health. Medical check-ups are made available to infants and pregnant women at health centres across the country, and medical advice and services are available to promote the health of infants and young children in a timely manner. Pre- and post-pregnancy services are also provided to detect and control any health risks related to pregnancy.

2.5 Burden of disease

According to a study of the disease burden in the country carried out using disability-adjusted life years (DALYs), an indicator developed by WHO and the Global Burden of Disease Study Group, years of life lost (YLL) is highest for cancer, followed by injuries and cardio/cerebrovascular diseases, while years lost due to disability (YLD) is highest for gastrointestinal diseases, followed by respiratory diseases and diabetes.

Of the major diseases, excluding injuries, the DALY (YLL+YLD) for cancer per 100 000 was the highest, at 1525 or 17.1% of the total, followed by cardio/cerebrovascular diseases, with 1492 or 16.7%; gastrointestinal diseases, with 1140 or 12.8%; diabetes, with 970 or 10.9%; and respiratory diseases, with 951 or 10.6%.

Looking at individual diseases rather than disease groups, diabetes was found to have the highest DALY, followed by stroke, asthma, peptic ulcer and ischaemic heart disease.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The mission of the Ministry for Health, Welfare and Family Affairs is to contribute to the quality of life of the public and to national development by protecting the public from social risks, promoting social integration, investing in human resources, and offering social services. The Ministry envisions healthy and happy lives for all citizens. To carry out its mission and realize its vision, the Ministry for Health, Welfare and Family Affairs has set the following objectives:

(1) Expand the social safety net by:
- reforming the National Pension;
- stabilizing the National Health Insurance fund;
- improving the benefit system of the National Basic Livelihood Security; and
- enhancing the quality of life for people with disabilities.

(2) Pursue forward-looking family policies by:
- strengthening comprehensive family policies;
- restructuring child care policies;
- fostering healthy children and youth; and
- introducing long-term care insurance for the elderly.

(3) Protect public health and safety by:
- establishing a public health safety net;
- implementing preventive health care; and
- strengthening food-safety management.

(4) Strengthen economic growth hand in hand with health and welfare by:
- fostering the health care industry;

- creating the market for welfare services;
- pursuing welfare through work ; and
- operating the National Pension Fund strategically.

With these strategies, the mission of the Ministry for Health, Welfare and Family Affairs will pursue proactive welfare by creating jobs for those capable of work, and extending a helping hand to those in need of support.

3.2 Organization of health services and delivery systems

Public health in the Republic of Korea has improved dramatically, especially in terms of life expectancy and infant mortality. The strengthened health care system, as well as increased income and improved living conditions have played a significant role.

As regards health care resources, the number of doctors increased from 22 183 in 1975 to 112 486 in 2008 (including 17 473 traditional medicine doctors). The number of hospital-level institutions (hospitals and traditional hospitals with 30 or more beds, as well as dental hospitals) rose from 178 in 1975 to 2240 in 2007.

Total health expenditure amounted to 6.9% of GDP in 2007. Although this is a relatively low rate compared with other developed countries, the Government is able to offer comparatively good quality health care services. However, health expenditure is growing continuously because of increased use of health care services driven by greater public desire for healthy lives and implementation of the National Health Insurance scheme. To respond effectively to the fast-changing health care environment, it is necessary to comprehensively examine the existing health care system and set a new policy direction to advance it.

3.3 Health policy, planning and regulatory framework

The Ministry for Health, Welfare and Family Affairs focuses on the following areas in its health policy, planning and regulatory framework:

- establishing a lifetime health maintenance system;
- establishing an efficient health care delivery system;
- enhancing National Health Insurance coverage and strengthening the role of the Government in health care; and
- fostering the health care industry.

3.4 Health care financing

Since 1 July 1989, every citizen of the Republic of Korea has received health care benefits through either National Health Insurance (NHI) or the Medical Aid programme. As of the end of 2008, 96.3% of the total population or 48.2 million people were covered by the NHI, while the rest, 1.8 million people, including beneficiaries of the National Basic Livelihood Security System and patriots and veterans, were benefiting from the Medical Aid programme. The NHI is divided into employee insurance and self-employed insurance. Employee insurance covers employees, employers, public servants and teachers. All residents in rural areas, and the self-employed in cities, except those covered by employee insurance and their dependents, are covered by self-employed insurance.

The National Health Insurance system is operated by the Ministry for Health, Welfare and Family Affairs, the National Health Insurance Corporation (NHIC), and the Health Insurance Review Agency (HIRA). The Ministry for Health, Welfare and Family Affairs is in charge of supervision and management of the overall operation of the NHI. The NHIC oversees everyday tasks, such as determining the eligibility of the insured and their dependents, assessing and collecting insurance premiums and other fees, and making benefit payments. The HIRA reviews health care benefits and evaluates health care performance, independent of insurers, providers and other involved parties.

The finances of the NHI are mainly composed of contributions from the insured and their employers, along with government subsidies, including the National Health Promotion Fund. For an insured

employee, the contribution is determined by the level of the standard monthly wage, the calculation of which is based on the wages earned by the employee over a specific period of time. Fifty per cent of the contribution is paid by the employee and 50% by his/her employer. For the self-employed, contributions are calculated per household unit, and the amount is determined by considering the insured person's assets, income and other factors.

Since the introduction of the self-employed insurance scheme in 1998, the Government has subsidized health care benefits and the operation of the insurance programmes for the self-employed to relieve their financial burden. The Government annually supports 14% of the expected insurance premium for the year out of government money, and 6% out of the National Health Promotion Fund.

3.5 Human resources for health

The qualifications for health workers are strictly stipulated by law, and only those licensed by the Government can provide medical treatment and public health services. The Medical Service Act stipulates that the Ministry for Health, Welfare and Family Affairs licenses doctors, dentists, traditional medicine doctors, midwives and nurses. The Act prescribes nurses' aides, bonesetters, acupuncturists, moxibustionists and masseurs as quasi-medical persons.

There were 95 013 physicians, 23 912 dentists, 58 363 pharmacists and 246 837 nurses in the country as of 2008.

3.6 Partnerships

The Ministry for Health, Welfare and Family Affairs is making an effort to contribute to improved health and quality of life for the public by responding to the new challenges of low fertility and population ageing. The Ministry works with the public, nongovernmental groups, local governments and expert groups and includes all of them in its policy formation, implementation and assessment procedures. The partnership helps the Ministry to fulfil the real needs of the public.

At the same time, the Ministry for Health, Welfare and Family Affairs also works in close partnership with international organizations, including WHO and OECD, to resolve pending global health issues. The Republic of Korea strives to play a leadership role in making people of the world healthy and sound by exchanging knowledge, experience and technology, and sharing human, physical and intellectual resources with international partners, as well as by signing memorandums of understanding in the field of health care with foreign governments.

3.7 Challenges to health system strengthening

Challenges to health system strebgthening in the Republic of Korea include:

- the increase in chronic disease;
- the ageing population and low fertility rate; and
- the inequity in income distribution.

Each challenge suggests health policy issues:

- The growing incidence of chronic disease highlights the need to put a stronger emphasis on such diseases in the current health system.
- The ageing population may mean an increase in the number of elderly people with health problems and higher health-related expenditure.
- Income disparities may lead to inequity in health status.

To respond to these issues, the Government is making an effort to prevent disease, enhance NHI coverage, strengthen its own role in health care, and establish a financially sustainable health care delivery system.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Explore Korea through Statistics 2009*
Operator	:	Statistics Korea
Web address	:	www.kostat.go.kr
Title 2	:	*Population projections for Korea*
Operator	:	National Statistical Office
Web address	:	www.nso.go.kr
Title 3	:	*Annual report on the cause of death statistics, 2008*
Operator	:	National Statistical Office
Web address	:	www.nso.go.kr
Title 4	:	*In-depth analysis of the 3rd Korea Health and Nutrition Examination Survey*
Operator	:	Korea Centre for Disease Control and Prevention, Korea Health Industry Development Institute
Web address	:	www.cdc.go.kr, www.khidi..or.kr
Title 5	:	*Annual report of the Ministry of Health and Welfare, 2006*
Operator	:	Ministry of Health & Welfare
Web address	:	www.mw.go.kr
Title 6	:	*2007 Population and Housing Census report*
Operator	:	Korea National Statistical Office, 2006
Web address	:	www.nso.go.kr
Title 7	:	*2008 OECD Health Data*
Operator	:	Korea Institute for Health and Social Affairs
Web address	:	www.kihasa.re.kr

6. ADDRESSES

MINISTRY OF HEALTH, WELFARE AND FAMILY AFFAIRS

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Fax	:	(822) 2023-7234
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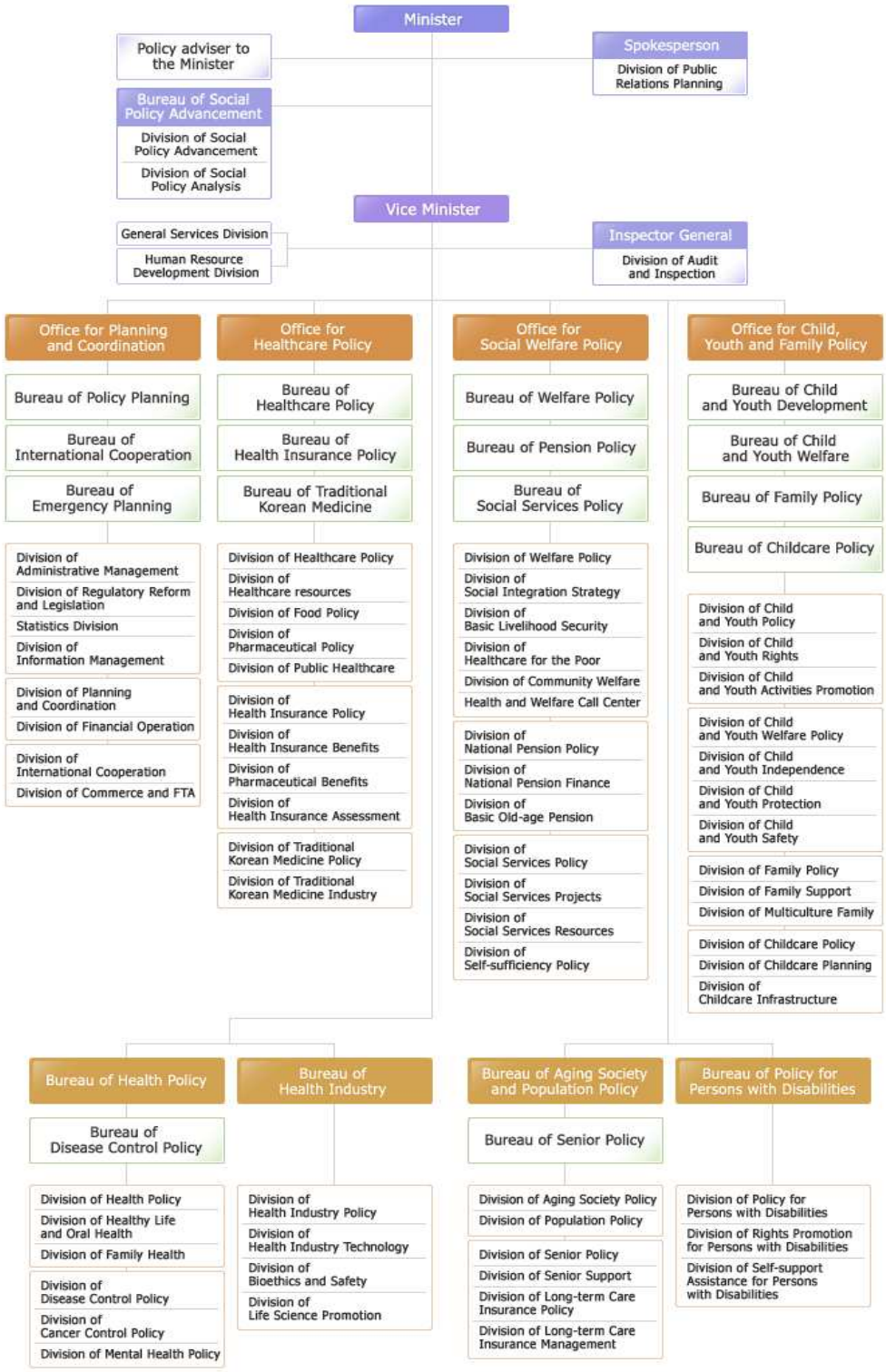
THE WHO OFFICE IN THE REPUBLIC OF KOREA

Office Address	:	Hyundai Bldg.,75 Yulgong-ro, Jongno-gu, Seoul, Republic of Korea
Postal Address	:	Central P.O. Box 540, Seoul, Republic of Korea
Official Email Address	:	ChungN@wpro.who.int
Telephone	:	(822) 2023- 7855
Fax	:	(822) 2023- 7858

7. ORGANIZATIONAL CHART: Ministry of Health, Welfare and Family Affairs



REPUBLIC OF KOREA

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	99.70						2007	1
2	Estimated population ('000s)	48 607.00 [b]		...		...		2008	1
3	Annual population growth rate (%)	0.31		...		...		2008	1
4	Percentage of population								
	- 0–4 years	4.64		4.79		4.49		2008	2
	- 5–14 years	12.76		13.35		12.17		2008	2
	- 65 years and above	10.32		8.32		12.33		2008	2
5	Urban population (%)	82.70		...		...		2009 est	3
6	Crude birth rate (per 1000 population)	9.40		...		...		2008	1
7	Crude death rate (per 1000 population)	4.98		5.53		4.43		2008	4
8	Rate of natural increase of population (% per annum)	0.44		...		...		2008	1
9	Life expectancy (years)								
	- at birth	79.56		76.13		82.73		2007	1, 5
	- Healthy Life Expectancy (HALE) at age 60	15.74		14.86		16.41		2005	6
10	Total fertility rate (women aged 15–49 years)	1.19						2008	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	97.90		99.20		96.60		2002	7
12	Per capita GDP at current market prices (US$)	19 106.30 [a]						2008	1
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	0.94						2007	8
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	2233	1306	927	...	...	...	2007	9
	- Type B	8574	1000	7574	...	...	...	2007	9
	- Type C	5179	2776	2403	...	...	...	2007	9
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	7	3	4	0	0	0	2007	9
	Dengue/DHF	97	65	32	...	...	...	2007	9
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	3115	2578	537	...	...	...	2007	1
	Leprosy	5	...	...	...	...	...	2009	10
	Malaria	1052	...	...	0	0	0	2008	10
	Plague	0	0	0	0	0	0	2007	9
	Syphilis	1415	585	830	...	...	...	2007	9
	Typhoid fever	223	109	114	0	0	0	2007	9
17	Acute respiratory infections	...	...	...	4590	2344	2246	2007	11
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	36 847	...	...	2700	...	...	2008	10
	- New pulmonary tuberculosis (smear-positive)	11 048	...	...	...	...	...	2008	10
20	**Cancers**	...	...	...	...	...	...		
	All cancers (malignant neoplasms only)	...	...	...	67 561	42 778	24 783	2007	11
	- Breast	...	...	...	1678	8	1670	2007	11
	- Colon and rectum	...	...	...	6650	3761	2889	2007	11
	- Cervix			...			987	2007	11
	- Oesophagus				1449	1320	129	2007	11
	- Leukaemia	...	...	...	1447	824	623	2007	11
	- Lip, oral cavity and pharynx	...	...	...	949	746	203	2007	11
	- Liver	...	...	...	11 144	8389	2755	2007	11
	- Stomach	...	...	...	10 563	6875	3688	2007	11
	- Trachea, bronchus, and lung	...	...	...	14 278	10 545	3733	2007	11
21	**Circulatory**								
	All circulatory system diseases	...	...	...	57 574	27 411	30 163	2007	11
	- Acute myocardial infarction	...	...	...	10 628	5784	4844	2007	11
	- Cerebrovascular diseases	...	...	...	29 277	13 941	15 336	2007	11
	- Hypertension	...	...	...	5402	1810	3592	2007	11
	- Ischaemic heart disease	...	...	...	14 497	7636	6861	2007	11
	- Rheumatic fever and rheumatic heart diseases	...	...	...	248	74	174	2007	11
22	**Diabetes mellitus**	...	...	...	11 272	5691	5581	2007	11
23	**Mental disorders**	...	...	...	4219	1821	2398	2007	11
24	**Injuries**								
	All types	...	...	...	30 137	20 076	10 061	2007	11
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	703	369	334	2007	11
	- Occupational injuries	...	...	...	2493	...	...	2005	12
	- Road traffic accidents	...	...	...	7604	5614	1990	2007	11
	- Suicide	...	...	...	12 174	7747	4427	2007	11
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the respiratory system	575 192	260 791	314 401	1194.80	1077.70	1313.00	2005	13
	2. Diseases of the musculoskeletal system & connective tissues	397 384	137 803	259 581	825.40	569.50	1083.90	2005	13
	3. Diseases of the digestive system	340 475	160 360	180 115	708.50	664.30	753.10	2005	13
	4. Injury , poisoning and certain other consequences of external causes	185 052	98 502	86 550	384.60	407.50	361.40	2005	13
	5. Diseases of the circulatory system	162 604	69 632	92 972	337.80	287.90	388.20	2005	13
	6. Diseases of the skin and subscutaneous tissue	95 814	46 968	48 846	199.00	194.10	203.90	2005	13
	7. Diseases of the genitourinary system	91 938	26 472	65 466	191.00	109.50	273.30	2005	13
	8. Diseases of the eye and adnexa	80 898	31 703	49 195	168.10	131.00	205.50	2005	13
	9. Endocrine nutritional and metabolic diseases	67 857	28 793	39 064	141.00	119.00	163.10	2005	13
	10. Certain infectious and parasitic diseases	57 248	27 072	30 176	118.90	111.80	126.00	2005	13

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms	68 912	...	...	139.50	...	...	2008	4
	2. Cerebrovascular diseases	27 932	...	...	56.50	...	...	2008	4
	3. Heart diseases	21 429	...	...	43.40	...	...	2008	4
	4. Suicides	12 858	...	...	26.00	...	...	2008	4
	5. Diabetes mellitus	10 234	...	...	20.70	...	...	2008	4
	6. Chronic lower respiratory disease	7338	...	...	14.90	...	...	2008	4
	7. Transport accidents	7287	...	...	14.70	...	...	2008	4
	8. Liver diseases	7164	...	...	14.50	...	...	2008	4
	9. Pneumonia	5461	...	...	11.10	...	...	2008	4
	10. Hypertensive diseases	4724	...	...	9.60	...	...	2008	4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					79.90		2006	7
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	2.50		2.70		2.20		2006	14
31	**Percentage of newborn infants weighing less than 2500 g at birth**	...		...		...			
32	**Immunization coverage for infants (%)**								
	- BCG	96.00		...		...		2009	10
	- DTP3	94.00		...		...		2009	10
	- Hepatitis B III	94.00		...		...		2009	10
	- MCV2	100.00		...		...		2009	10
	- POL3	95.00		...		...		2009	10
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			5	2006	14
	- Eclampsia			...			8	2006	14
	- Haemorrhage			...			11	2006	14
	- Obstructed labour			...			0	2006	14
	- Sepsis			...			0	2006	14
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	0	0	0	...	...	...	2009	10
	- Measles	11	...	...	...	...	...	2009	10
	- Mumps	6524	...	...	...	...	...	2009	10
	- Neonatal tetanus	...	...	...	...	...	...		
	- Pertussis (whooping cough)	42	...	...	...	...	...	2009	10
	- Poliomyelitis	0	0	0	...	...	...	2009	10
	- Rubella	37	...	...	...	...	...	2009	10
	- Total Tetanus	17	...	...	...	...	...	2009	10
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	313	128 673	2008	15
		- Specialized hospitals	122	41 914	2008	15
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	3473	0	2008	15
	Private health facilities	- Hospitals	2345	326 798	2008	15
		- Outpatient clinics	51 653	99 571	2008	15
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			60 992.96 [a]	2008p	16
	- total expenditure on health as % of GDP			6.60	2008p	16
	- per capita total expenditure on health (in US$)			1254.81 [a]	2008p	16
	Government expenditure on health					
	- amount (in million US$)			33 482.58 [a]	2008p	16
	- general government expenditure on health as % of total expenditure on health			54.90	2008p	16
	- general government expenditure on health as % of total general government expenditure			12.60	2008p	16
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2008p	16
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			45.10	2008p	16
	- out-of-pocket expenditure on health as % of total expenditure on health			34.67 [a]	2008p	16
	Exchange rate in US$ of local currency is: 1 US$ =			1102.05	2008	16
38	**Health insurance coverage as % of total population**			96.3	2007	12

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	95 013	72 140	19 253	...	...	...	...	2008	17
		- Ratio per 1000 population	1.95	1.48	0.4	...	...	...	...	2008	17
	Dentists	- Number	23 912	18 407	5865	...	...	...	...	2008	17
		- Ratio per 1000 population	0.49	0.38	0.12	...	...	...	...	2008	17
	Pharmacists	- Number	58 363	20 821	37 542	...	...	...	...	2008	17
		- Ratio per 1000 population	1.20	0.43	0.77	...	...	...	...	2008	17
	Nurses	- Number	246 837	2130	244 707	...	...	...	...	2008	17
		- Ratio per 1000 population	5.08	0.04	5.03	...	...	...	...	2008	17
	Midwives	- Number	8565	4	8561	...	...	...	...	2008	17
		- Ratio per 1000 population	0.18	0.00	0.18	...	...	...	...	2008	17
	Paramedical staff	- Number	164 913	55 955	108 958	...	...	...	...	2008	17
		- Ratio per 1000 population	3.39	1.15	2.24	...	...	...	...	2008	17
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	3601	2368	1233	...	...	...	...	2008	18
		Dentists	880	525	355	...	...	...	...	2008	18
		Pharmacists	1492	627	865	...	...	...	...	2008	18

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	16 118	560	15 558	...	...	...	...	2008	18
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...	...	
43	Infant mortality rate (per 1000 live births)	3.40	...	...	2008	4
44	Under-five mortality rate (per 1000 live births)	5.70	6.10	5.30	2006	5
45	Proportion of 1 year-old children immunised against measles	93.00	...	...	2009	10
46	Maternal mortality ratio (per 100 000 live births)	8.40			2008	4
47	Proportion of births attended by skilled health personnel	100.00			2007	19
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.10			2007	19
	- Percentage of deliveries in health facilities (as % of total deliveries)	98.90			2007	19
48	Contraceptive prevalence rate	79.60	38.90	40.70	2006	20
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	99.90			2006	20
	- At least four visits	98.60			2006	20
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	1.12	...	...	2008	10
56	Malaria death rate per 100 000 population	0.00	...	...	2008	10
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	50.00	...	...	2008	10
60	Tuberculosis death rate per 100 000 population	6.00	...	...	2008	10
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	88.00	...	...	2008	10
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	82.00	...	...	2007	10
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	98.00	100.00	88.00	2008	21
64	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2008	21
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Revised data

Sources:	
1	*Explore Korea through Statistics 2009* . Statistics Korea. [http://kostat.go.kr/eng2009/emain/explore09_eng/EBook.htm]
2	Population Projections for Korea, National Statistical Office, Republic of Korea
3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision* . Accessed on June 2010 from http://esa.un.org/wup2009/unup/.
4	Causes of Death Statistics 2008, National Statistical Office, Republic of Korea
5	Life Tables for Korea, National Statistical Office, Republic of Korea
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7	Human development report 2004. New York, United Nations Development Programme, 2004.
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13	Patient Survey Report 2005, Ministry of Health and welfare, Republic of Korea
14	Maternal & Infant Mortality Survey Report in 2005-2006, Ministry of Health and Welfare, Republic of Korea
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20	National Fertility and Family Health Survey 2006, Korea Institute for Health and Social Affairs, Republic of Korea
21	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

SAMOA

1. CONTEXT

1.1 Demographics

In 2009, estimates put Samoa's population at 183 204, with around 38.5% young people aged less than 15 years and only 4.9% aged 65 years and over. Life expectancy was 73.2 according to the 2006 census, compared with 72.8 years in 2001.

The country is divided into four major statistical regions: Apia Urban Area (AUA), North West Upolu, Rest of Upolu (including Manono and Apolima Islands) and Savaii. AUA represents the urban area, while the other three regions make up the rural population.

Gender issues, such as the promotion and protection of women's rights, gender equity and women and HIV/AIDS are of high importance in Samoan society. The level of women's participation in the paid labour force is relatively high, and their access to education and achievement in the formal educational system is virtually equal to men. Women occupy a number of senior positions in the public sector. The church plays a key role in influencing public opinion and in education through the provision of schools at all levels.

The United Nations Development Programme (UNDP) Human Development Index (HDI) ranks Samoa 94th out of 182 countries. Based on the HDI, Samoa has one of the higher levels of social development in the Pacific, showing higher overall educational and health standards than other Pacific islands.

1.2 Political situation

Democratic traditions and a strong social system based on village communities and extended family ties continue to play a major role in maintaining peace in Samoan society. The extended family, the *aiga*, is the foundation of the *fa'a-samoa* (traditional way of life). The head of each *aiga* is the *matai* (customary chief), who is elected by family members. Traditionally, the family *matai* is responsible for maintaining the family's dignity and well-being by administering family affairs. More than 80% of the population lives under the *matai* system. Particularly strong in the rural areas and at village level, it functions as a safety net in providing social and financial security. Many Samoans who are resident abroad continue to honour their 'social obligations' by sending significant amounts of money to their extended families and churches.

The national system of government is based on the British Westminster model, with a combination of traditional and democratic features. Universal suffrage has applied since 1991 but, with the exception of two seats reserved for voters considered to be outside the governance of the *matai* system (out of a total of 49 seats), only *matai* can stand for parliament. The Human Rights Protection Party has been in power continuously for almost 20 years. The coalition forming the opposition comprises the Samoan National Development Party and eight independent members.

During 40 years of independence, Samoa has been able to create a stable political environment and to stimulate economic growth through sound macroeconomic management. Over the past 10 years, it has sought to address the challenges of social and economic reforms. Since the early 1990s, the Government has committed itself to the promotion of good governance. Human rights are respected overall. The ongoing Economic and Public Sector Reform Programme (since 1996) has instigated institutional reforms in public services and in several public sector agencies, which has led to improvements in the governance framework. Performance budgeting has encouraged greater efficiency, accountability and transparency. Equally, economic reforms are considered to be crucial for Samoa in the pursuit of the Government's goals to improve the living standards and the welfare of the people.

Since 1996/1997, the Government's national policy framework and development strategies have been set out in statements of economic strategy (SES), currently the *Strategy for the development of Samoa 2008–2012*, which highlight the vision of "improved quality of life for all".

1.3 Socioeconomic situation

The economy of Samoa has traditionally been dependent on development aid, family remittances from overseas, and agriculture and fishing. Agriculture still plays an important role in the economy. Village agriculture provides food security and support to the agro-based industries, such as coconut cream, oil and desiccated coconut, which have been major export products in the past. The manufacturing sector mainly processes agricultural products. Tourism is an expanding sector. The Government has called for deregulation of the financial sector, encouragement of investment, and continued fiscal discipline, while protecting the environment. Development efforts in the area of trade, at both national and international levels, are considered relatively advanced compared with other Pacific islands. However, Samoa is ecologically fragile and vulnerable to natural disasters, such as cyclones and disease infestations.

Gross domestic product (GDP) per capita at the end of March 2010 was US$ 2881.81. Economic growth in 2001 was estimated at 6.5%, with an annual rate of inflation of 4% by the end of the year. Manufacturing, transport and communications, and commerce contributed most to the growth. Agriculture production, on the other hand, dropped by 12% as a direct result of the limited market outlets for copra, cocoa, kava and coconut cream, while gross tourism receipts rose only marginally, by 0.7%. The sharp slowdown in growth was seen as a direct result of the 11 September 2001 terrorist attack in the United States of America. While exports improved by 16.8% compared with 2000, imports increased by 28% in 2001. As a result, the current account deficit widened to 11.2% of GDP. Remittance inflows continued to increase, but at a lower rate than in 2000. At the current level, they are equivalent to 18% of GDP. At the end of 2001, foreign reserves stood at WST 174 .84 million (US$ 66.7 million), equivalent to approximately 4.1 months of import cover. Grants from development partners in 2000/2001 added up to WST 65.09 million (US$ 23 million), equalling some 25% of total revenue.

1.4 Risks, vulnerabilities and hazards

Rural-to-urban migration exacerbates the diminishing agriculture and fishery industry in rural areas. The settlement along the coastal areas of Samoa allows for potentially greater accessibility to services. However, tropical vegetation, tidal mudflats and mangrove areas situated along the coastline, with high humidity, create a prime environment for vectorborne diseases, such as dengue, and for complications of conditions such as wound-healing and tropical ulcers.

Samoa's susceptibility to cyclones and other natural disasters raises the importance of developing well-planned mechanisms for disaster preparedness.

Rural-to-urban migration is also impacting upon the health of urban communities in Samoa. The ready access to unhealthy food, combined with smoking, alcohol and physical inactivity, is contributing to the increasing prevalence of noncommunicable diseases.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The health status of the population has improved significantly, and Samoans now enjoy relatively good health. However, persistently high mortality and morbidity rates for communicable diseases call for a renewed control, management and surveillance commitment.

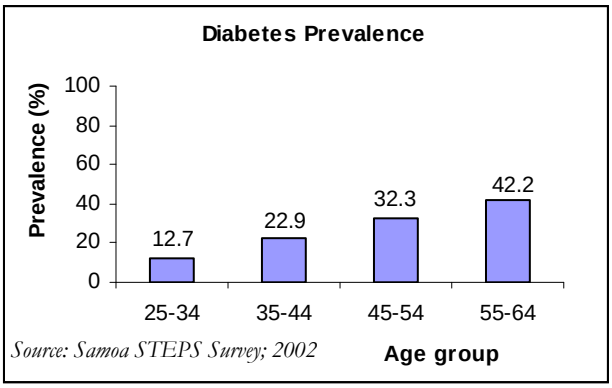
Typhoid and dengue are both endemic and periodically reach epidemic levels. Lymphatic filariasis is also endemic, with a standardized antigen prevalence rate of 1.6% in 2003. As the Government has made a firm commitment to eliminate lymphatic filariasis by 2005, intensive mass drug administration (MDA) campaigns have been carried out, with 96% coverage in 2001, 60.3% in 2002, 80% in 2003 and 74.2% in 2008.

There were 12 tuberculosis cases (all forms) diagnosed in 2008, six with sputum-smear-positive pulmonary TB. The calculated case-detection rate was 37% in 2008. The directly observed treatment, short-course (DOTS) strategy has been established throughout the country and functions well.

The incidence of HIV/AIDS is low, with a cumulative total of 12 known cases since 1990. Other sexually transmitted infections (STI), however, are present at extremely high rates, with 38% of women attending antenatal clinics being found to have at least one STI in a study carried out in Apia in 1999-2000. Women aged less than 25 years were significantly more likely to have an STI. The surprising results of this study indicate the potential for rapid spread of HIV, but also the urgent need to tackle the STI epidemic in its own right. Given the high prevalence and death rates caused by noncommunicable diseases, such as diabetes and suicide, resources for HIV/AIDS programmes are often limited. Whilst the supportive policy and national structures are in place for the coordination and management of HIV/AIDS activities nationally, this infrastructure has been, until recently with the release of funding from the Global Fund, severely underresourced.

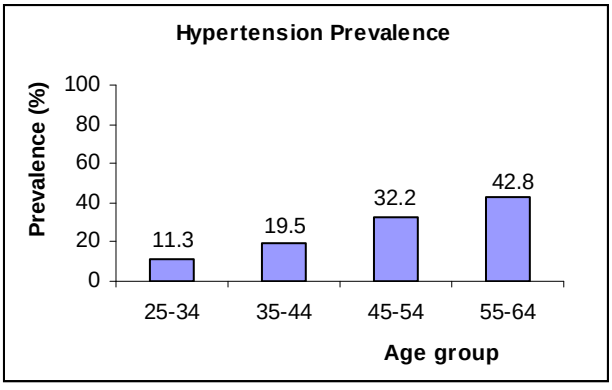
Noncommunicable diseases (NCD), including obesity, diabetes, heart disease, high blood pressure, stroke and cancer, are a top health priority, with high and increasing prevalence rates: the obesity rate is currently 57.0%, the diabetes rate is 23.1% and the hypertension rate is 21.4%. NCD are now appearing in younger age groups and complications are more common. NCD are very costly, accounting for 43.3% of total health care expenditure in 2000. If their prevalence continues to increase, the Government will be unable to continue financing the rising health care costs; hence prevention must remain the mainstay of national NCD management and control. The four main risk factors are smoking (tobacco), poor nutrition, excessive alcohol consumption and physical inactivity (SNAP). To reduce these risk factors changes in the lifestyles and the behaviour of individuals, families and communities are necessary, requiring a coordinated, multisectoral, national response.

The total prevalence rate for diabetes is 23.1%: 22.9% in males and 23.3% in females. Prevalence increases with age and overall has doubled since a previous survey in 1991. The disease is more common in urban areas, (Apia 27%, Rural Upolu 19.7% and Savaii 20.3%), and the trend is similar for males and females.



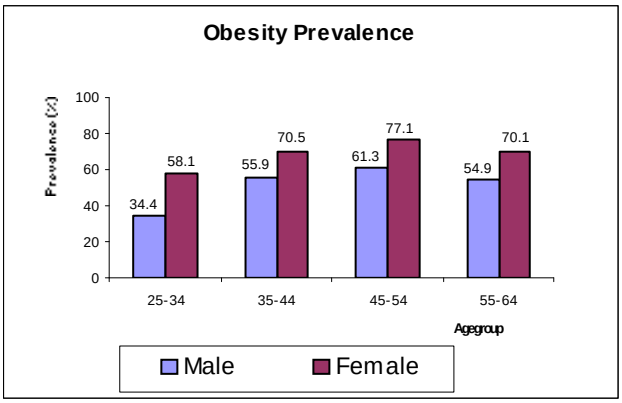
In general, for every known case of diabetes that is diagnosed, almost three remain undiagnosed, with the ratio a lot higher in the younger age groups, (in males, for every known case there are 12 unknown cases). Of those with a known history of diabetes, 56.8% of males and 68.5% of females are taking tablets, and only 4% of males and 5.3% of females are taking insulin.

The total prevalence of hypertension is 21.4%. The rateis higher in males (24.2%) than in females (18.2%) and increases with age in both. High blood pressure is more common in urban areas (Apia 23.5%; Rural Upolu 18.6%; Savaii 21.2%).



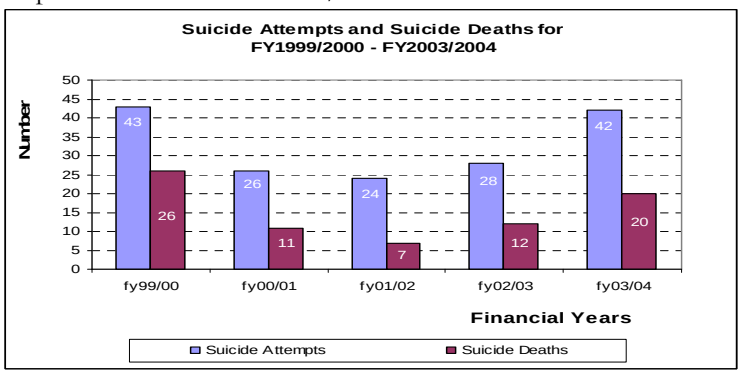
In general, for every known case of high blood pressure that is diagnosed, another four remain undiagnosed. This ratio is higher in the younger age group, (for every known case there are 22 unknown cases). Most people (more than 90%) with high blood pressure do not know that they have it.

The total prevalence of obesity is 57.0% (48.4% in males and 67.4% in females) and increases with age. It is more common in urban areas. (For males, Apia 53.1%; Rural Upolu 48%; Savaii 40.2%. For females, Apia 69.3%, Rural Upolu 65.9%, Savaii 65.4%).



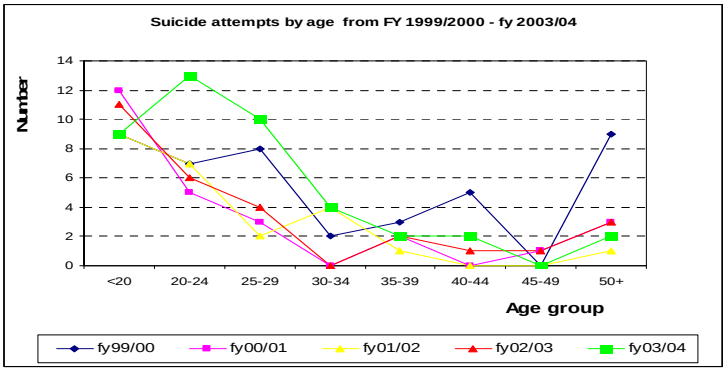
Many risk factors for noncommunicable disease are present among the Samoan population, including: smoking (40% of the total population are smokers: 56.3% of males and 21.8% of females.); poor nutrition: (35.6% of the population eat virtually no fruit[1].); alcohol consumption (current levels of alcohol consumption place 37.6 % of males and 19.6 % of females at moderate to high risk of developing an NCD); and lack of physical activity (21% of the population do very little or no physical activity). People in Apia are more likely to be inactive (28%) than people in rural areas (15%) and women (27.3%) are more likely to be inactive than men (14.8%). There is a lack of regular health checks. In the last 12 months, only 35% of the population have had a blood sugar check and only 44.9% have had a blood pressure check. Males and younger people are less likely to have checks.

The number of suicide attempts is increasing. However, the proportion resulting in death was only 43.2% in 2006/2007, compared with 60.5% in 1999/2000.



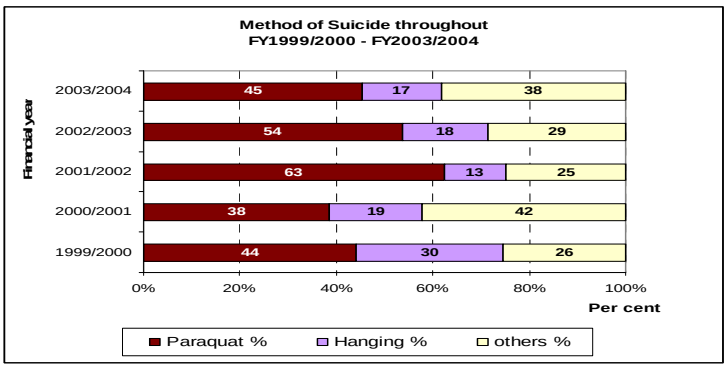
Source: Health Information System, Ministry of Health

The ages of those attempting suicide ranged from 10 to 76 years during the period from 1999 to 2004, with most aged below 30. Paraquat ingestion is the most common mode of suicide. Its use decreased in 2000/2002 then increased to more than 60% in 2001/2002 before exhibiting a slow deceleration in the last few years.



Source: Health Information System, Ministry of Health

[1] No fruit or less than one serving per day



Source: Health Information System, Ministry of Health

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

See Section 2.1.

2.4 Maternal, child and infant diseases

The infant mortality rate increased from 19.3 per 1000 live births in 2001 to 20.4 in 2006 while the under-five mortality rate dropped from 17.8 per 1000 live births in 2000 to 13.0 in 2003-2004. The maternal mortality ratio dropped from 19.6 per 100 000 live births in 2002, to 10.7 in 2003 and 3.0 in 2005-2006.

Tetanus and diphtheria have been virtually eradicated in Samoa, and the whole Pacific region is poliomyelitis-free.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health, as the principal agent of the Government in the area of health, takes the lead role in working with government agencies, NGOs, the private and traditional health sectors and consumers of health services to promote a high quality, comprehensive, sustainable, integrated national health system founded on the Samoan lifestyle. The Ministry is specifically charged with implementing health legislation pertaining to public health issues and advising the Government on issues related to health care delivery, health funding and health status. It is the major provider of publicly funded health services and is responsible for the management of the publicly funded health sector.

More specialized care not available in Samoa is provided to some patients through overseas treatment, either through programmes funded by the Samoan and New Zealand Governments or at personal expense.

3.2 Organization of health services and delivery systems

See Section 3.1.

3.3 Health policy, planning and regulatory framework

National priorities in health are identified in the *Strategy for the development of Samoa 2008-2012*.

The *Health Sector Plan 2008–2018* presents the vision of "A healthy Samoa," and a mission "to regulate and provide quality, accountable and sustainable health services through people working in partnership." To realise the vision and fulfil the mission, four crucial challenges must be met:

- rapidly increasing levels of noncommunicable diseases (NCDs) and their impact on the health system, community mortality and morbidity, and the economy;
- ensuring reproductive and maternal and child health for the long-term health of the community;
- emerging and re-emerging infectious diseases; and
- injuries as a significant cause of death and disability

Six strategic areas have been identified to meet these challenges, underpinned by the guiding principles of accountable governance, sharing, accessibility, affordability and cultural appropriateness:

- Health promotion and primordial prevention (strengthened).
- Quality health care service delivery (access improved and quality strengthened).
- Governance, human resources for health and health systems (governance, human resources and leadership strengthened).
- Partnership commitment (health system strengthened).
- Financing health (financial management and long-term planning of health financing strengthened).
- Donor assistance (increased partner participation).

The publicly funded health system has been undergoing major reform since 1996. At the broadest level this has included a review of the Ministry of Health's primary functions, roles and responsibilities and the suitability of the existing organizational structure to support these at both the strategic and service delivery levels. The themes of this reform have been: (1) Function before form; and (2) Client-based development. The reform process indicated a need for a more defined separation of the governance role from the service delivery role. This has culminated in the formal separation of the existing Ministry of Health into two new bodies, the revised Ministry of Health, as a governance and regulatory body, and the newly established National Health Service (NHS), to take responsibility for service delivery.

The Government's reform agenda is not only about organizational reform, but is also focused on reorienting the sector towards a population-health approach. The introduction of the Integrated Community Health Services (ICHS) model was a major step forward in that approach, the objective being to provide services closer to home, to strengthen primary health care services and to improve health services for the most vulnerable groups. Greater emphasis is also being placed on health promotion, protection and prevention services. It is acknowledged that this will be most effectively realized through partnerships with other groups in the health sector, other sectors, private enterprise and communities.

While increasing the focus on a population-health approach, there is a need to sustain, integrate and enhance the delivery of primary care services to the community. The Ministry of Health has developed a services planning model that is documented in the National Health Services Planning Framework.

3.4 Health care financing

Total national health expenditure in Samoa amounted to US$ 27.5 million in 2008, with per capita spending of US$ 153.9. In the same period, health spending as a share of GDP came to 5.2% (6% in 1998/1999), public expenditures for health comprised 84.8% of total health spending (62% in 1998/1999), and private spending for health comprised 15.2% of total health spending (23% in 1998/1999).

3.5 Human resources for health

In 2005, Samoa's health workforce comprised 50 physicians, 6 dentists, 3 pharmacists, 136 nurses, 37 midwives, and 73 other nursing/ auxiliary staff.

3.6 Partnerships

The review of the *Health Sector Strategic Plan* for the period 2006-2010 highlighted some of the specific objectives and strategies that the Ministry is promoting to improve health services and health outcomes in partnership with other members of the sector. Partnership is thus a major theme of the *Health Sector Plan 2008–2018* and is pertinent given the changes occurring within the sector. Government-funded health services are undergoing major reforms and there are rapid developments in the private health care industry. There is also a need to continue developing and strengthening collaboration with traditional health practitioners, as well as community-based and nongovernmental organizations.

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Samoa National Health Service Planning Framework April 2002; Department of Health Annual Report 1999-2000 (leading cause of mortality); Department of Health Annual Report 2002/2003 & 2003/2004; Review of the Health Sector Plan 2006-2010 (Draft)
Operator	:	Department of Health
Title 2	:	Samoa National Health Accounts Report for FY 2002-2003; Samoa National Health Account for FY 2000/2001 (Executive summary)
Operator	:	Ministry of Health and the World Bank
Title 3	:	*Strategy for the Development of Samoa 2005-2007: Enhancing People's Choices*
Title 4	:	*Strategy for the development of Samoa 2008-2012*
Title 5	:	Review of the Rural Health Services Plan 2006 (Draft)
Title 6	:	Report of the PacELF 5th Annual Meeting 2003
Title 7	:	*Samoa Suicide Prevention Strategy 2002-2006: An introduction 'Faataua le Ola' (FLO)*
Title 8	:	Collins V, Dowse GK, Toelupe et al. *Increasing prevalence of NIDDM* in *Pacific Islands population*
Title 9	:	Hodge AM, Dowse GK, Toelupe et al. Dramatic increase in the prevalence of obesity in Western Samoa over the 13 years period of 1978-1991. *International journal of obesity*, 1994; 18:419-428
Title 10	:	Dr Viali Lameko et al. *Review of the National Tuberculosis Control Programme in Samoa from the internal medicine perspective*, 20 June 2002.
Title 11	:	Review of the National Tuberculosis Control Programme in May 2001 (WHO mission report by Dr Pierre Yves Norval).
Table 12	:	Update of Samoa's Country Overview – WHO Programme Budget 2010-2011
Operator	:	Ministry of Health
Title 12	:	WHO Global Health Observatory
Website	:	http://apps.who.int/ghodata/
Title 13	:	2009 Statistical Abstract
Operator	:	Samoa Bureau of Statistics
Title 14	:	The 2009 Human Development Report
Website	:	http://hdr.undp.org/en/statistics/

6. ADDRESSES

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Official Email Address	:	who@sma.wpro.who.int
Telephone	:	(685) 23756; (685) 24976
Fax	:	(685) 23765

SAMOA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total	Male	Female					
1	Area (1 000 km2)	2.79						2010 est	1
2	Estimated population ('000s)	183.20	94.95	88.25				2009 est	2
3	Annual population growth rate (%)	2.50	…	…				2010 est	1
4	Percentage of population								
	- 0–4 years	12.91 [a]	12.89 [a]	12.93 [a]				2009 est	3
	- 5–14 years	25.76 [a]	25.93 [a]	25.57 [a]				2009 est	3
	- 65 years and above	4.96 [a]	4.31 [a]	5.66 [a]				2009 est	3
5	Urban population (%)	20.86 [a]	20.41 [a]	21.35 [a]				2009 est	2
6	Crude birth rate (per 1000 population)	27.30	…	…				2006	4
7	Crude death rate (per 1000 population)	4.00	…	…				2006	4
8	Rate of natural increase of population (% per annum)	2.33 [a]	…	…				2006	4
9	Life expectancy (years)								
	- at birth	73.20	71.50	74.20				2006	4
	- Healthy Life Expectancy (HALE) at age 60	…	10.90	11.60				2002	5
10	Total fertility rate (women aged 15–49 years)	4.20	…	…				2006	4
	Socioeconomic indicators								
11	Adult literacy rate (%)	…	89.00 [b]	92.00 [b]				2006	4
12	Per capita GDP at current market prices (US$)	2881.81 [a,c]						2009-10	6
13	Rate of growth of per capita GDP (%)	…							
14	Human development index	0.77						2007	7
	Environmental indicators	Total	Urban	Rural					
15	Health care waste generation (metric tons per year)	…	…	…					
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	2	1	1	0	0	0	2002	8
	- Type B	10	4	6	0	0	0	2004	9
	- Type C	0	0	0	0	0	0	2002	8
	- Type E	…	…	…	…	…	…		
	- Unspecified	34	13	21	0	0	0	2004	9
	Cholera	0	0	0	0	0	0	2004	10
	Dengue/DHF	677	…	…	1	…	…	2008	11
	Encephalitis	1	1	0	0	0	0	2004	10
	Gonorrhoea	0	0	0	0	0	0	2004	10
	Leprosy	5	4	1	…	…	…	2009	11
	Malaria	…	…	…	…	…	…		
	Plague	0	0	0	0	0	0	2004	10
	Syphilis	0	0	0	0	0	0	2004	10
	Typhoid fever	254	151	103	0	0	0	2004	10
17	Acute respiratory infections	349	206	143	0	0	0	2004	10
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	322	184	138	5	2	3	2004	10
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	12	...	...	...	...	...	2008	11
	- New pulmonary tuberculosis (smear-positive)	6	...	...	...	...	...	2008	11
20	**Cancers**								
	All cancers (malignant neoplasms only)	73	43	30	66	...	...	C:2004 D: 2006	C:10 D: 4
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	6	5	1	3	2	1	2004	10
	- Cervix			6			0	2004	10
	- Leukaemia	17	10	7	2	1	1	2004	10
	- Lip, oral cavity and pharynx	7	5	2	0	0	0	2004	10
	- Liver	8	4	4	2	1	1	2004	10
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	8	6	2	0	0	0	2004	10
	- Trachea, bronchus, and lung	21	13	8	5	4	1	2004	10
21	**Circulatory**								
	All circulatory system diseases	301	143	158	175 [a,d]	...	...	C:2004 D:2006	C:10 D:4
	- Acute myocardial infarction	39	15	24	1	0	1	2004	10
	- Cerebrovascular diseases	77	26	51	51 [a,e]	...	...	C:2004 D:2006	C:10 D:4
	- Hypertension	349 [f]	206	143	44 [a,g]	...	...	C:2004 D:2006	C:10 D:4
	- Ischaemic heart disease	72	52	20	3	2	1	2004	10
	- Rheumatic fever and rheumatic heart diseases	113	50	63	27	5	22	2004	10
22	**Diabetes mellitus**	7195 [h]	...	...		...	...	2004-05	12
23	**Mental disorders**	141	74	67	...	...	...	2006	4
24	**Injuries**								
	All types	733	556	177	44	...	...	C:2002 D:2006	C:8 D:4
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	129	103	26	4	3	1	2002	8
	- Suicide	37	21	16	16 [i]	...	...	FY 2006-07	2
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Influenza and pneumonia	1424	...	...	784.32	...	...	FY2006-07	2
	2. Injury, wounds, poisoning and certain other consequences of external causes	900	...	...	495.71		...	FY2006-07	2
	3. Infections of the skin and subcutaneous tissue	700	...	...	385.55	...	...	FY2006-07	2
	4. Complications of labour and delilvery	650		650	358.01		736.54	FY2006-07	2
	5. Diabetes mellitus	511	...	...	281.45	...	...	FY2006-07	2
	6. Other acute lower respiratory infections	438	...	...	241.25	...	...	FY2006-07	2
	7. Intestinal infectious diseases	...	...	...	...	...	...	FY2006-07	2
	8. Respiratory & cardiovascular disorders specific to the perinatal period	...	...	...	...	...	...	FY2006-07	2
	9. Chronic lower respiratory diseases	...	...	...	...	...	...	FY2006-07	2
	10. Malignant neoplasms	...	...	...	...	...	...	FY2006-07	2

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diabetes	46	26 [g]	20	24.91	26.94 [a]	22.57 [a]	FY2005-06	10
	2. Cancer all sites	41	18	23	22.20	18.65 [a]	25.96 [a]	FY2005-06	10
	3. Injuries and wounds	40	31	9	21.66	32.12 [a]	10.16 [a]	FY2005-06	10
	4. Hypertensive diseases	39	19	20	21.12	19.69 [a]	22.57 [a]	FY2005-06	10
	5. Pneumonia	23	12	11	12.46	12.44 [a]	12.41 [a]	FY2005-06	10
	6. Cerebrovascular diseases	23	16	7	12.46	16.58 [a]	7.90 [a]	FY2005-06	10
	7. Other forms of heart disease	20	10	10	10.83	10.36 [a]	11.29 [a]	FY2005-06	10
	8. Chronic lower respiratory diseases	16	9	7	8.67	9.33 [a]	7.90 [a]	FY2005-06	10
	9. Ischaemic heart diseases	13	8	5	7.04	8.29 [a]	5.64 [a]	FY2005-06	10
	10. Septicaemia	9	6	3	4.87	6.22 [a]	3.39 [a]	FY2005-06	10
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					30.00 [j]		1997-2005	13
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					27.00		2008	11
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	4.20		...		...		2002	8
31	**Percentage of newborn infants weighing less than 2500 g at birth**	1.20		...		...		2004	14
32	**Immunization coverage for infants (%)**								
	- BCG	94.00		...		...		2009	11
	- DTP3	72.00		...		...		2009	11
	- Hepatitis B III	72.00		...		...		2009	11
	- MCV2	29.00		...		...		2009	11
	- POL3	72.00		...		...		2009	11
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			134			0	2004	10
	- Eclampsia			7			0	2004	10
	- Haemorrhage			15			0	2004	10
	- Obstructed labour			7			0	2004	10
	- Sepsis			23			1	2002	10
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	11
	- Diphtheria	0	0	0	...	...	...	2009	11
	- Measles	0	0	0	...	...	...	2009	11
	- Mumps	0	0	0	...	...	...	2009	11
	- Neonatal tetanus	0	0	0	...	...	...	2009	11
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	11
	- Poliomyelitis	0	0	0	...	...	...	2009	11
	- Rubella	0	0	0	...	...	...	2009	11
	- Total Tetanus	0	0	0	...	...	...	2009	11
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	2	177 [k]	2005	15
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	6	55	2004	16
		- Primary health care centres	19	0	2005	16
	Private health facilities	- Hospitals	1	21	2004	16
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			27.54 [a]	2008p	17
	- total expenditure on health as % of GDP			5.15	2008p	17
	- per capita total expenditure on health (in US$)			153.86	2008p	17
	Government expenditure on health					
	- amount (in million US$)			23.35 [a]	2008p	17
	- general government expenditure on health as % of total expenditure on health			84.80	2008p	17
	- general government expenditure on health as % of total general government expenditure			12.64	2008p	17
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			8.21	2008p	17
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			15.20	2008p	17
	- out-of-pocket expenditure on health as % of total expenditure on health			10.96	2008p	17
	Exchange rate in US$ of local currency is: 1 US$ =			2.64	2008p	17
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	50	33	17	...	...	...	...	2005	18
		- Ratio per 1000 population	0.27 [f]	0.18 [l]	0.09 [l]	...	...	...	...	2005	18
	Dentists	- Number	6	3	3					2005	19
		- Ratio per 1000 population	0.03 [f]	0.02 [l]	0.02 [l]	...	...	...	...	2005	19
	Pharmacists	- Number	3	3	0	...	...	...	...	2005	20
		- Ratio per 1000 population	0.02 [f]	0.02	0.00	...	...	...	...	2005	20
	Nurses	- Number	136	...	...	...	...	...	...	2005	15
		- Ratio per 1000 population	0.75 [f]	...	...	...	...	...	...	2005	15
	Midwives	- Number	37	...	...	...	...	...	...	2005	15
		- Ratio per 1000 population	0.20 [f]	...	...	...	...	...	...	2005	15
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	20.40 [m]	18.20 [m]	22.90 [m]	2006	4
44	Under-five mortality rate (per 1000 live births)	13.00	...	...	2003-04	21
45	Proportion of 1 year-old children immunised against measles	45.00	...	...	2008	11
46	Maternal mortality ratio (per 100 000 live births)	3.00 [n]			2005-06	10
47	Proportion of births attended by skilled health personnel	100.00			2004	22
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	9.00			2004	22
	- Percentage of deliveries in health facilities (as % of total deliveries)	91.00			2004	22
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	100.00			2004	22
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	36.00	...	...	2008	11
60	Tuberculosis death rate per 100 000 population	4.00	...	...	2008	11
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	37.00	...	...	2008	11
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	92.00	...	...	2007	11
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	88.00	90.00	87.00	2006	23
64	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2008	24
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
est	Estimate
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to literacy rate in Samoan language of person aged 15-24 years
c	Computed using GDP at current market prices for April 2009 to March 2010 and converted using exchange rate of 2.7150 Tala per USD (2009 period average from 2009 Statistical Abstract)
d	Figure refers to deaths due to heart problems (80), diabetes/hypertension (46) and stroke/tuaula (51)
e	Figure refers to deaths caused by stroke/tuaula
f	Revised data
g	Figure refers to deaths caused by hypertension/diabetes
h	Figure refers to registered patients
i	11 deaths were due to paraquat ingestion
j	Data refer to a year or period other than that specified, differ from the standard definition or refer to only part of a country
k	Figure includes 157 beds in Tupua Tamasese Meaole Hospital, and 20 beds in Maliettoa Tanumafili II Hospital
l	Figure computed using 2006 estimated population
m	Figure derived from total number of children born to women aged 15-49 and number of live births in the 12 months preceding the 2006 census
n	Figure refers to hospital reported MMR

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SINGAPORE

1. CONTEXT

1.1 Demographics

Singapore is a small country with a total land area of 710 square kilometres. The total population is about 4.9 million, with a resident population of 3.7 million in 2009. While the population is relatively young, with only 8.8% of the resident population aged 65 and over, the proportion of residents aged 65 and over is projected to increase to 19% by 2030.

In 2009, life expectancy at birth for males was 79.0 years and 83.7 years for females. The crude birth rate for 2008 was 10.2 per 1000 resident population and the crude death rate was 4.4 per 1000 resident population. The total fertility rate per resident female is 1.3. The infant mortality rate is very low, at 2.1 per 1000 resident live births.

1.2 Political situation

Singapore is a parliamentary republic that obtained independence from Malaysia on 9 August 1965. The Constitution was established on 3 June 1959 and amended in 1965 (based on the pre-independence State of Singapore Constitution). The legal system is based on English common law.

The head of state is President S R Nathan (since 1 September 1999), the head of government is Prime Minister Lee Hsien Loong (since 12 August 2004), and the Deputy Prime Ministers are S Jayakumar (since 12 August 2004), and Wong Kan Seng (since 1 September 2005). The Cabinet is appointed by the President and is responsible to the Parliament. The President is elected by popular vote for a six-year term. President Sellapan Ramanathan was re-elected for his second term in August 2005.

The legislative branch is a unicameral parliament (84 seats; members elected by popular vote to serve five-year terms). The judicial branch has a supreme court headed by the Chief Justice, who is appointed by the President on the advice of the Prime Minister.

1.3 Socioeconomic situation

Singapore is characterized by a highly developed and successful free-market economy. It has a very open and corruption-free business environment. With trade 3.6 times the size of gross domestic product (GDP), external demand is the main driver of the economy. The Singapore economy grew by -1.3% in 2009. Per capita gross domestic product amounted to US$ 36 537 in 2009.

Singapore continues to position itself as a vibrant global city and a hub of talent, enterprise and innovation in order to succeed in a globalized world.

1.4 Risks, vulnerabilities and hazards

Singapore suffers from few physical hazards. The island city-state is protected from typhoons and monsoons by neighbouring landmasses. Being a small country, Singapore's key challenge arises from its size and limited natural resources. As such, human resources are its key strength and great emphasis is given to the development of its population. Singapore is one of the world's most open economies, highly dependent on the foreign investment, trade and health of other economies. This openness, coupled with a high population density, makes Singapore particularly vulnerable to outbreaks of infectious diseases, such as the severe acute respiratory syndrome (SARS) outbreak in 2003 and the influenza A (H1N1) pandemic in 2009.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Over previous decades, national efforts to combat traditional and vaccine-preventable, communicable diseases have achieved great success. However, the SARS, Nipah virus and influenza A (H1N1) 2009 outbreaks highlighted the regional vulnerability to new and emerging infectious diseases; the lessons learnt from the global SARS epidemic and influenza A (H1N1) pandemic have been applied to enhance surveillance and outbreak response for pandemics, as well as emerging and re-emerging infectious diseases.

The effective implementation of the childhood immunization programme against major vaccine-preventable diseases has contributed to a significant reduction in their incidence. The incidence of acute hepatitis B showed a rapid decline from 9.5 per 100 000 in 1985 to 1.4 per 100 000 population in 2009, and no acute hepatitis B case has been reported in children below 15 years of age since 1998. Similarly, the incidence of measles was 0.2 per 100 000 in 2009, a decline from 2.3 per 100 000 population in 2004. Despite being in a region endemic for malaria, Singapore has maintained the malaria-free status accorded by WHO since 1982. The incidence of malaria was 2.6 per 100 000 population in 2009, with the majority of cases imported from endemic countries.

Chronic infectious diseases, such as tuberculosis (TB) and HIV/AIDS, are still considered public health problems. The notification rate for HIV/AIDS increased steadily from 0.8 per million in 1985 to 124 per million in 2009. After a rapid decline in TB incidence during the period from 1960 to 1987, the incidence rate has remained stable at a low level. The Singapore TB Elimination Programme (STEP) was relatively successful in further reducing the incidence of TB from 57 per 100 000 population in 1998 to a low level of 35 per 100 000 in 2008. The rate increased slightly to 38.6 per 100 000 in 2009.

Noncommunicable diseases, like cancer, heart disease and cerebrovascular disease, remain the leading causes of death, together accounting for 58% of all deaths. This is in contrast to the 1950s, when infectious diseases like TB featured among the leading causes of death.

National representative population-based health surveys show that the prevalence of chronic diseases, such as diabetes mellitus and hypertension, and health risk factors, such as smoking, physical inactivity, obesity and high blood cholesterol, declined between 1992 and 2004. The age-standardized prevalence of diabetes mellitus fell from 10% to 8%, and the percentage of the population smoking declined from 18% to 14%. The age-standardized prevalence of high blood cholesterol also dropped, from 21% to 18%, and the proportion of Singaporeans engaging in regular physical activity rose from 14% to 22.5%. The age-standardized prevalence of hypertension stabilized at 24%, but that of obesity rose from 5% to 7%. Table 1 shows the trends in the prevalence of diabetes mellitus, hypertension and health risk factors between 1992 and 2004, or 2007 where available.

Table 1: Prevalence of risk factors for cardiovascular diseases, 1992, 1998, 2004 and 2007

Risk factor#	Prevalence	1992	1998	2004	2007
Diabetes mellitus [plasma glucose 2 hours post-OGTT ≥ 11.1 mmol/l]	Crude Age-standardized	8.6% 10.0%	9.0% 9.5%	8.2% 7.8%	… …
Hypertension [systolic pressure ≥ 140 mmHg or diastolic pressure ≥ 90 mmHg]	Crude Age-standardized	22.2% 24.0%	27.3% 28.0%	24.9% 24.0%	… …
High blood cholesterol [Total cholesterol ≥ 6.2 mmol/l]	Crude Age-standardized	19.4% 21.4%	25.4% 26.0%	18.7% 18.1%	… …
Obesity [BMI ≥ 30 kg/m^2]	Crude Age-standardized	5.1% 5.3%	6.0% 6.2%	6.9% 6.8%	… …

Risk factor#	Prevalence	1992	1998	2004	2007
Cigarette smoking [smoked cigarettes at least once a day]	Crude	18.3%	15.2%	12.6%	13.6%
	Age-standardized	17.8%	15.0%	12.5%	14.2%
Physical activity [exercised ≥ 20 minutes for ≥ 3 days per week]	Crude	13.6%	16.8%	24.9%	23.6%
	Age-standardized	13.5%	17.0%	25.0%	22.5%

Risk factor for age group 18-69, except for hypertension, which is for age group 30-69
Sources: National Health Survey 1992, 1998 and 2004; National Health Surveillance Survey 2007

2.2 Outbreaks of communicable diseases

To prevent the introduction and spread of infectious diseases with outbreak potential, the Ministry of Health maintains a comprehensive and well-established system of disease surveillance and control, involving the epidemiological investigation of specific notifiable diseases under the Infectious Diseases Act, as well as some emerging infectious diseases of public health importance. In the control of vectorborne diseases, such as dengue and malaria, the Ministry works closely with the National Environment Agency, which is responsible for eliminating the vector through larval-source-reduction activities, environmental controls, public education and community mobilization.

2.3 Leading causes of mortality and morbidity

Cancer has been the leading cause of mortality since 1991; in 2009, it accounted for 29% of all deaths. Men have a much higher cancer death rate than women, but rates for both genders have been declining slowly since 1995. In 2009, the age-standardized cancer death rates for men and women were 129 and 86 per 100 000 resident population, respectively. The cancer incidence rate in men has slowly declined since the early 1980s, due mainly to declines in lung, stomach, liver, nasopharyngeal and oesophageal cancers. Of note is the fact that colorectal and prostate cancers are increasing in men. The cancer incidence rate in women has increased, due mainly to increases in breast and colorectal cancers, despite declines in cervical, stomach, liver and oesophageal cancers. In the five-year period from 2003 to 2007, the five most common cancers were colorectal, lung, prostate, liver and stomach in men, and cancers of the breast, colorectum, lung, corpus uteri and ovary in women.

Heart diseases constitute the second most common cause of death. Coronary heart disease mortality rates have shown consistent declines over the past 15 years, with men having almost twice the death rates of women. The difference in rates has remained constant over the years. In 2009, the age-standardized death rate from heart disease for men was 90 per 100 000 resident population, compared with 48 for women. The incidence of acute myocardial infarction events among adults has generally decreased since 1990. The incidence rate for men is about twice that for women; in 2007, the age-standardized incidence rate for men was 179 per 100 000 resident population, compared with 79 for women.

Stroke has been among the leading causes of mortality since 1970. In 2009, it was the fourth leading cause of death, accounting for 8% of all deaths. Nonetheless, death rates for both genders have fallen noticeably over the years. In 2009, the age-standardized death rates from stroke for men and women were 31 and 26 per 100 000 resident population, respectively.

2.4 Maternal, child and infant diseases

The number of maternal deaths declined sharply from 86 deaths in 1950 to 12 deaths in 1975, and has dropped further to less than eight deaths per year since. There were three maternal deaths in 2008. The corresponding maternal mortality ratio fell in tandem, from 180 per 100 000 live births and stillbirths in 1950 to 30 in 1975, and has remained at a low of between 10 and 20 since then. The maternal mortality ratio was 7.5 per 100 000 live births in 2008.

The infant mortality rate also fell sharply from 82.2 per 1000 live births in 1950 to 6.6 in 1990, and has continued to drop steadily. The rate was 2.1 in 2008. The main causes of infant death are perinatal conditions, congenital anomalies and pneumonia.

2.5 Burden of disease

The growing demand for health services in spite of limited resources has always been a challenge. To cope with this growing demand, careful health policy planning and wise allocation of resources are needed to respond to people's health needs. Inadequate information to guide decisions on health policies and resource allocation is one of the obstacles to better policy development. Therefore, the Ministry of Health, in 2004, conducted Singapore's first Burden of Disease (SBoD) study, which provides a comprehensive and detailed assessment of the size and distribution of health problems in the country and was the first local study to use disability-adjusted life years (DALYs) to quantify total disease burden. The Study in general applied the methods developed for the original Global Burden of Disease (GBD) study to data specific to Singapore to compute DALYs. DALYs stratified by gender and age group were calculated for more than 130 specific health conditions for the resident population for the year 2004.

An update of the study, carried out for 2007, found that more than 390 thousand years of 'healthy' life (that is DALYs) were lost in Singapore in that year due to premature deaths and ill-health . That translates to 110 DALYs lost per 1000 residents or, in other words, an average probability of 0.110 of losing health due to illness or death in the population. Cardiovascular diseases and cancers were the leading causes of disease and injury burden, accounting for 37% of total DALYs. More than fourth-fifths (83%) of the burden was due to mortality. Ischaemic heart disease and stroke dominated the burden of cardiovascular diseases. Lung, colorectal and breast cancers were the top cancers.

Neurological and sense disorders, mental disorders and diabetes were the next largest contributors, together accounting for another 35% of total DALYs. Less than one-tenth (7%) of the burden from those groups was due to mortality. Anxiety and depression, schizophrenia and autism spectrum disorders were the main specific causes of mental disorder. The leading neurological and sense disorder conditions were vision disorders, Alzheimer's and other dementias and adult-onset hearing loss.

The distribution of DALYs between men and women was approximately equal (52% vs 48%). The non-fatal burden was responsible for 48% of the males' total burden and 59% of the females' total burden. For nutritional deficiencies and genitourinary diseases, DALYs were notably higher in women. Conversely, men experienced a higher burden for injuries, endocrine disorders and chronic respiratory diseases.

The five leading specific causes of disease in men were ischaemic heart disease (12.9%), diabetes (9.3%), stroke (6.3%), lung cancer (4.3%) and vision disorders (3.9%). The five leading specific causes in women were diabetes (10.7%), anxiety and depression (8.7%), ischaemic heart disease (8.1%), stroke (5.8%), and breast cancer (5.4%).

Ischaemic heart disease (16.1%), followed by stroke (9.7%), diabetes (7.4%), Alzheimer's and other dementias (7.1%), and vision disorder (6.0%) were the top five leading causes of DALYs among the elderly aged 65 years and above.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The vision of the Ministry of Health is to develop the world's most cost-effective health care system to keep Singaporeans in good health. Its mission is to promote good health and reduce illness, ensure access to good and affordable health care, and pursue medical excellence. This is to be achieved through three strategies:

- Promote good health and reduce illness
- Ensure access to good and affordable health care
- Pursue medical excellence

3.2 Organization of health services and delivery systems

Health services are provided through three cooperating ministries, as well as the private sector.

The Ministry of Health is responsible for providing preventive, curative and rehabilitative health services. The Ministry formulates national health policies, coordinates the development and planning of the private and public health sectors, and regulates health standards.

The Ministry of Environment and Water Resources manages water resources and the supply of drinking-water to the nation. It is responsible for weather forecasting services; environmental and public health services, such as collection and treatment of used water, pollution and toxic chemicals and poisons; control of vectors that could spread diseases; and the hygienic preparation of food. The Ministry also licenses food-stall proprietors and looks after all public markets and food centres, public toilets and public cemeteries and crematoria.

The Ministry of Manpower is responsible for the health, safety and welfare of employed persons. The Ministry enforces requirements on employment conditions under the Employment Act, has provisions in the Workplace Safety and Health Act to safeguard the health and safety of the workforce, and administers the Workmen's Compensation Act to ensure fair compensation for persons with work-related injuries and diseases.

There is a dual system of health care delivery. The public system is managed by the Government, while the private system is provided by private hospitals and general practitioners. The health care delivery system comprises primary health care provision at outpatient polyclinics and private medical practitioners' clinics, and secondary and tertiary specialist care in public and private hospitals. Eighty per cent of primary health care services are provided by private practitioners, while government polyclinics provide the remainder. For hospital care, the ratios are reversed, with 80% provided by the public sector and the remainder by the private sector.

Patients are free to choose their health care providers within the dual health care delivery system, and can walk in for a consultation at any private clinic or any government polyclinic. For emergency services, patients can access the 24-hour accident and emergency departments located in government hospitals. The Singapore Civil Defence Force runs an emergency ambulance service to transport accident and trauma cases and medical emergencies to the acute general hospitals.

Primary health care involves the provision of primary medical treatment, preventive health care and health education. Primary health care is provided through an island network of 18 outpatient polyclinics and over 2400 private medical practitioners' clinics. Each polyclinic is an affordable, subsidized, one-stop health centre, providing outpatient medical care, follow-up of patients discharged from hospital, immunization, health screening and education, investigative facilities and pharmacy services. The needy elderly receive further help through the Primary Care Partnership Scheme (PCPS). PCPS is most helpful for those who cannot travel to polyclinics. The private clinics are located in close proximity to population centres in the city, housing estates and satellite towns. The average outpatient consultation fee is between S$ 10 (US$ 6.00) and S$15 (US$ 9.00), well within the means of Singaporeans. At government polyclinics, Singapore citizens aged 65 and above, children up to 18 years of age and all schoolchildren are given a discount of up to 57% on their consultation and treatment fees. Other Singapore citizens are given a 50% discount.

There are about 11 431 hospital beds in the 29 public and private hospitals and speciality centres, giving a ratio of 3.1 beds per 1000 residents; 72.5% of the beds are in the 13 public-sector, specialty centres and hospitals, each with between 185 and 2064 beds. The 15 private-sector hospitals are smaller, with a capacity of between 24 and 505 beds. The Government's role as the dominant provider of secondary and tertiary care allows it to manage the supply of hospital beds, the adoption of high-tech/ high-cost medicine, and cost increases in the public sector, which serves as a price benchmark for the private sector.

The seven public hospitals comprise five general hospitals, a women's and children's hospital and a psychiatric hospital. The general hospitals provide inpatient and specialist outpatient services, and a 24-hour emergency department. Seventy-five per cent of public hospital beds are heavily subsidized. There

are also six national specialty centres for oncology, cardiology, ophthalmology, dermatology, neuroscience and dentistry. Tertiary specialist care in the areas of cardiology, renal medicine, haematology, neurology, oncology, radiotherapy, plastic and reconstructive surgery, paediatric surgery, neurosurgery, cardiothoracic surgery and transplant surgery is centralized in two of the larger general hospitals, the Singapore General Hospital and the National University Hospital. The private hospitals have similar specialist disciplines and comparable facilities.

The Government has structured all its 13 hospitals and specialty institutes as private companies wholly owned by the Government and managed as not-for-profit organizations. This has granted the public hospitals management autonomy and flexibility to respond more promptly to the needs of their patients. In the process, greater financial discipline and accountability have been introduced. The corporatized health care institutions are also clustered into vertically integrated networks to deliver comprehensive, yet affordable quality health care services through cooperation and collaboration between public health care establishments. Unlike private hospitals, the restructured public hospitals receive an annual government subsidy for the provision of subsidized patient care, and are subject to broad government policy guidance through the Ministry of Health. The Government has also introduced low-cost community hospitals for intermediate health care for the convalescent sick and aged who do not require the more expensive care provided by the acute general hospitals.

Support services for the hospital and primary health care programmes include forensic pathology, pharmaceutical services and the blood transfusion service. Except for forensic pathology and the blood transfusion service, which are centralized in the Ministry of Health, most of the other services can be found in both the public and private sectors.

Dental care begins with preventive dentistry promoted through the Health Promotion Board. The Board targets students through a network of 200 static clinics located in schools, as well as 30 mobile dental clinics. This, plus fluoridation of potable water and availability of fluoridated toothpaste, has greatly diminished dental decay and tooth loss. Public dental services are available in some polyclinics and hospitals, and in the National Dental Centre.

3.3 Health policy, planning and regulatory framework

The Singapore health care philosophy emphasizes the building of a healthy population through preventive health care programmes and the promotion of healthy living. Singaporeans are encouraged, through the public health education programme, to adopt healthy lifestyles and be responsible for their health, and are made aware of the adverse consequences of harmful habits like smoking, alcohol consumption, bad diet and sedentary lifestyles. The child immunization programme, which targets infectious diseases like tuberculosis, poliomyelitis, diphtheria, whooping cough, tetanus, measles, mumps, rubella and hepatitis B, is offered at government polyclinics, as well as private primary health care clinics. Health screening programmes have been introduced for the early detection of common ailments, such as cancer, heart disease, hypertension and diabetes mellitus. These are available in both primary and secondary care settings.

The Government ensures that good and affordable basic medical services are made available to all Singaporeans through heavily subsidized medical services at public hospitals and government clinics. The basic medical package includes evidence-based medical practices, and is delivered cost-effectively by trained personnel. Experimental, non-evidence-based treatments, as well as cosmetic and aesthetic treatments may be excluded.

The health care regulatory framework consists mainly of two parties; the regulator (comprising the Ministry of Health along with its statutory boards) and the regulated (comprising public and private providers). All hospitals, clinics, clinical laboratories and nursing homes are required to maintain a good standard of medical services through licensing by the Ministry. Health care professionals are self-regulated by their relevant professional bodies:

- Singapore Medical Council,
- Singapore Dental Council,
- Singapore Nursing Board,

- Singapore Pharmacy Council,
- Traditional Chinese Medicine Practitioners Board,
- Optometrists and Opticians Board.

In addition, health-related products, such as medicines and medical devices, are regulated by the Health Sciences Authority.

3.4 Health care financing

In the 2008 financial year, Singapore spent about S$ 10.4 billion (US$ 7.2 billion) or 4.0% of GDP on health care. Out of this, the Government expended S$2.7 billion (US$1.9 billion) or 1.1% of GDP on health services.

The philosophy of Singapore's public health care delivery system is one of strong government support combined with individual responsibility and community support. Multiple tiers of protection have been built into the health care financing system to ensure universal coverage for all citizens. The first level of protection is through heavy government subsidies of up to 80% for patients who choose to stay in subsidised wards within the public hospitals.. The second level of protection is provided by Medisave, a compulsory individual medical savings account scheme that helps Singaporeans to save and pay for their share of medical treatment without financial difficulty. The third level of protection is provided by MediShield and ElderShield, which riskpool the financial risk of patients suffering a major illness or severe disability. Finally, Medifund, a medical endowment fund act as the ultimate safety net for needy patients.

Individuals are encouraged to take responsibility for their own health by saving for their medical expenses. Medisave, as a national savings scheme, helps individuals set aside part of their income into Medisave accounts to meet their personal or immediate family's hospitalization expenses. Medisave can be used to pay for an individual's co-payment portion of his or her medical bill, as well as the premiums of approved medical insurance products.

In 2006, the Ministry of Health initiated the Medisave for Chronic Disease Management programme, a coordinated, nationwide effort to transform care for common chronic illnesses, starting with diabetes mellitus. Participating medical institutions include all public hospitals and polyclinics, as well as about half of the 1400 private primary care clinics in the country. Since then, the programme has been extended progressively to cover hypertension, lipid disorder, stroke, asthma and chronic obstructive pulmonary disease (COPD). Two more diseases, schizophrenia and major depression were added in 2009, bringing the number of chronic diseases to eight. The programme seeks to improve chronic disease care through two chief avenues: (1) enhancing access and (2) improving care. By liberalizing the use of Medisave to cover outpatient treatment for the chronic diseases (enhancing access) and implementing evidence-based disease management programmes, together with clinical quality improvement efforts (improving care), complications arising from these chronic diseases can be better prevented. Correspondingly, patients will be healthier and the risks of expensive hospitalization and potential disabilities will be reduced. The programme is supported by the participation of medical and allied health professionals in the public and private sectors, enhancements to IT systems to improve sharing of essential medical data, and education tools to improve patients' ability to manage their conditions.

MediShield is a low-cost, catastrophic illness insurance scheme designed to help members meet the medical expenses from major or prolonged illnesses, for which their Medisave balance would be insufficient. Individual responsibility is promoted through the features of deductibles and co-payment in MediShield. Annual premiums for MediShield can be paid from the individual's Medisave account. There are also private supplementary insurance products offering additional coverage. These are integrated with MediShield to provide a national risk pool for basic coverage.

Medifund is an endowment fund set up by the Government as a safety net to help poor Singaporeans pay for their medical care. Medifund is meant to be an avenue of last resort for patients who, despite heavy government subsidies and Medisave and MediShield coverage, are unable to pay for their medical expenses. Therefore, no Singaporeans are denied access into the health care system or turned away by the

public hospitals because of their inability to pay. In 2007, part of Medifund was specifically set aside for needy, elderly patients (65 years and above).

ElderShield is an affordable, severe-disability insurance scheme designed to provide Singaporeans with basic financial protection against long-term care expenses. Introduced in September 2002, it was further reformed in 2007 to improve its benefits, and private insurers are now allowed to provide supplementary products with higher coverage.

Public-sector health services are provided to cater for lower income groups who cannot afford private-sector charges, and also to set the benchmark for the private sector on professional standards and charges. To support the latter objective, the Government requires public hospitals to publish basic consultation and ward charges to ensure greater price transparency.

The Ministry of Health also publishes hospital pricing data and bill sizes for common conditions on its website.

3.5 Human resources for health

In 2009, Singapore had 8323 doctors in its health care delivery system, giving a doctor-to-population ratio of 1:600. Thirty-eight per cent of the doctors were trained specialists.

There were 1531 dentists, giving a dentist-to-total population ratio of 1:3258 in 2009. There were also 263 oral health therapists, giving an oral health therapist-to-total population ratio of 1:18964. Seventeen per cent of the dentists were trained dental specialists.

Singapore had 1658 registered pharmacists in 2009, giving a pharmacist-to-population ratio of 1:3008. The number of pharmacists is expected to increase to meet demand due to growing health care needs and anticipated growth in the biomedical and pharmaceutical sectors.

In 2009, Singapore had 26 792 nurses and 294 registered midwives, giving a nurse-to-population ratio of 1:186 or 5.38 nurses per 1000 population.

As the population grows and patient expectations rise, there is a need for greater investment in human resources for health. Besides increasing the number of health care professionals, the skills of the workforce must also change as chronic diseases become more prevalent with the ageing of the population. Efforts are being made to increase local training capacity and to facilitate mid-career conversions, as well as the movement of overseas-trained health care professionals to Singapore. Examples include:

- The intake of medical students was recently increased to 260, while the number of overseas medical schools recognized by the Singapore Medical Council has increased to 160.
- The Duke-NUS Graduate Medical School, which offers a postgraduate doctoral medicine (MD) programme, began their inaugural academic year in 2007 with a batch of 26 students, followed by an increased intake of 48 students in 2008 and 56 students in 2009.
- The intake of nursing students has also expanded over the years, with the Diploma in Nursing being offered in two polytechnics. A third Diploma in Nursing course offered by a private college was accredited by the Singapore Nursing Board in 2008. In 2006, the National University of Singapore introduced the Bachelor of Science (Nursing) programme, a full-time undergraduate degree programme, and the numbers will be increased over the years. To meet the needs of an ageing population, an advanced diploma nursing course in palliative care is in the pipeline.
- In 2007, the Professional Conversion Programme was expanded to help mid-career entrants pursue a career in allied health.
- The intake for the diploma courses in optometry, physiotherapy, occupational therapy and diagnostic radiography have been doubled in recent years in line with increasing demand for allied health professionals. New programmes, such as the Masters in Speech and Language

Pathology, and Masters in Psychology (Clinical), have also been established in the National University of Singapore.

To prepare the workforce for the changing skills required to look after an ageing population, efforts have also been made to enhance their capabilities. For example,

- The Singapore Nursing Board implemented an Advanced Practice Nurse Register in 2006.
- Qualifying examinations were also implemented in the same year to ensure that foreign allied health professionals in physiotherapy, occupational therapy, diagnostic radiography and radiation therapy have the required knowledge and skills to provide good care to patients.
- The Ministry also offers post-graduate scholarships for health care professionals to further their training locally or overseas.

Policy efforts will continue to be geared towards ensuring adequate health care manpower to meet the evolving health care demands of the growing and rapidly ageing population.

3.6 Partnerships

Harnessing and forging strong partnerships is important for the attainment of national health goals. The Ministry of Health maintains strong partnerships and strategic alliances with voluntary welfare organizations and charities involved in health to ensure that their activities are aligned with the national health care framework. The Ministry of Health continues to work with health care institutions, organizations, professional associations, private general practitioners and other partners to develop health services in an integrated manner throughout the continuum of primary, intermediate and long-term care services.

3.7 Challenges to health system strengthening

Singapore is facing an ageing population. It is projected that the number of residents aged 65 years or older will increase from the current 8.5% to 19% by 2030, and careful planning is needed to ensure that provision is made for this population. To this end, the Government has set up the Ministerial Committee on Aging to spearhead a whole-of-government response to the opportunities and challenges presented by the ageing population. The Government aims to achieve its vision of successful ageing for Singapore by creating an environment where Singaporeans can look forward to leading healthy, active and productive lives as they grow old.

The health workforce also faces the challenges of an ageing population, as well as new technologies, lifestyle medicine and higher demands for good medical care. There are shortages of professional staff that will have to be filled. At the same time, the growth of the private sector may lead to higher attrition from the public sector. High quality care will be delivered by health care professionals who are trained in an holistic way to meet the required standards of care in a changing, more sophisticated population. The challenge is to ensure adequate numbers of such health care professionals are trained in different disciplines, especially in those health care disciplines that are currently undersubscribed.

Chronic diseases are another area of concern. An estimated one million Singaporeans suffer from four major chronic diseases: diabetes, hypertension, lipid disorder and stroke, and the numbers are expected to rise with the ageing population base.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goal 4: Reduce child mortality

Singapore's performance on indicators for Millennium Development Goal 4 has been comparable to the best in the world. The under-five mortality rate is 3.4 per 1000 live births, the infant mortality rate is 2.1 per 1000 live births, and 95% of one-year-old children have been vaccinated against measles.

Goal 5: Improve maternal health

For MDG 5, 99.7% of deliveries occur in health facilities and are attended by skilled health personnel, and the maternal mortality ratio is 7.5 per 100 000 live births.

Goal 6: Combat HIV/AIDS, malaria and other diseases

The national HIV Prevention and Control Programme was established in 1985 to combat the HIV epidemic. It adopts a multisectoral and multidisciplinary approach and comprises HIV education, testing and counselling, protection of the blood supply, provision of care and support to those living with HIV/AIDS and surveillance of the disease. The prevalence of known HIV cases among the resident population aged 15 years and above was about 0.1% in 2009. During the course of 2008 and 2009, national efforts to increase access to HIV prevention, education, testing, care and support continued to be ramped up and enhanced. STI/HIV prevention and education programmes for the general population, schools, workplaces and at-risk groups have been implemented and enhanced. Access to testing has been further increased with the expansion of the anonymous HIV testing programme and the initiation of voluntary opt-out HIV testing in acute public sector hospitals. People living with HIV/AIDS have access to subsidized inpatient and outpatient care. From 1 February 2010, Medifund assistance was extended to HIV treatment.

The national Tuberculosis Control Programme was established in 1957 with the setting up of the Tuberculosis Control Unit (TBCU) and a national TB registry in 1958. The programme was further enhanced in 1997 with the implementation of the Singapore Tuberculosis Elimination Programme (STEP). STEP has achieved significant results since its implementation. The incidence of TB in Singapore fell from 46.4 per 100 000 population in 2000 to 38.6 per 100 000 population in 2009. One of the key components of STEP is early diagnosis and proper treatment of TB patients. This will prevent further transmission of the disease and the emergence of drug-resistant TB. TB treatment compliance is enhanced by the use of directly observed treatment, short-course (DOTS), which is easily accessible at the TB Control Unit and the polyclinics. To further encourage more people to go on DOTS, TB drugs administered through DOTS are provided free. Public health education on the signs and symptoms of TB has been conducted to heighten awareness of the disease so that people will come forward to seek treatment early. The importance of full compliance with treatment through DOTS is also strengthened via public education. The Ministry has also reminded all medical practitioners to notify patients with TB promptly so as to enhance the surveillance and control of the disease.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Ministry of Health website
Features	:	Information on health policies, facilities and statistics
Web address	:	www.moh.gov.sg
Title 2	:	Singapore Department of Statistics website
Features	:	Information on general Singapore statistics
Web address	:	www.singstat.gov.sg

6. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	Ministry of Health, College of Medicine Building, 16 College Road, Singapore 169854
Official Email Address	:	moh_info@moh.gov.sg
Telephone	:	(65) 6325 9220
Fax	:	(65) 6224 1677
Office Hours	:	8.30am – 5.30pm
Website	:	http://www.moh.gov.sg

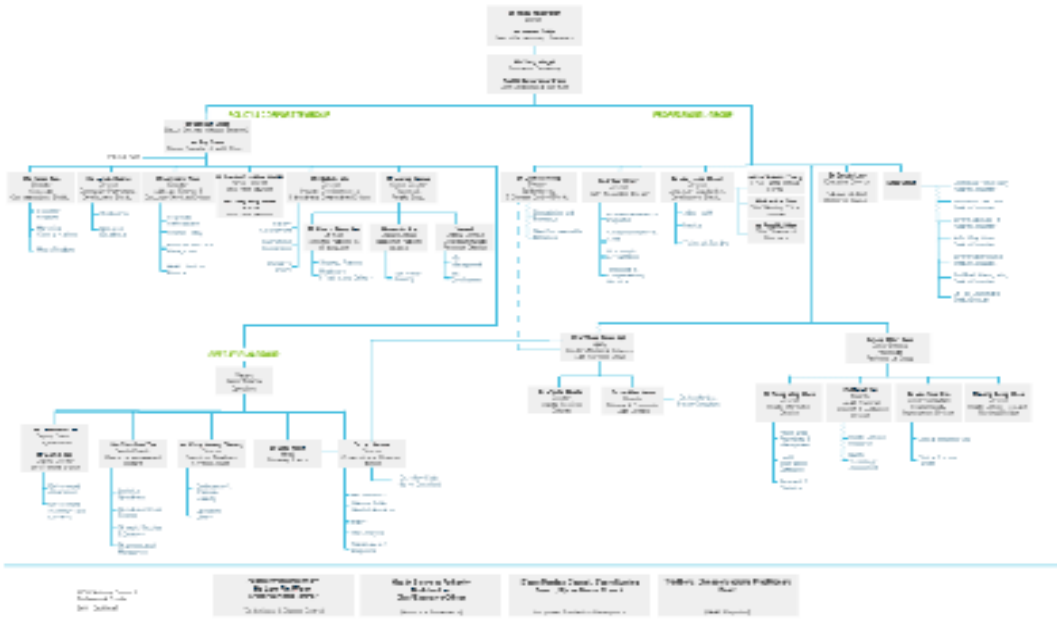
WHO REPRESENTATIVE IN MALAYSIA, BRUNEI DARUSSALAM AND SINGAPORE

Office Address	:	1st Floor, Wisma UN, Block C Komplek Pejabat Damansara Jalan Dungun, Damansara Heights 50490 Kuala Lumpur, Malaysia
Postal Address	:	P. O. Box 12550 50782 Kuala Lumpur, Malaysia
Official Email Address	:	who@maa.wpro.who.int
Telephone	:	(603) 209 39908 / 2092 1184
Fax	:	(603) 209 37446

7. ORGANIZATIONAL CHART: Ministry of Health

MINISTRY OF HEALTH
SINGAPORE

ORGANISATION CHART



Click to view the complete Organisation Chart

SINGAPORE — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.71						2009p	1
2	Estimated population ('000s)	3733.90 [a]		1844.70		1889.20		2009p	1
3	Annual population growth rate (%)	2.50 [a]		...		...		2009p	1
4	Percentage of population								
	- 0–4 years	...		...		...			
	- 5–14 years	17.88 [b]		...		...		2009p	1
	- 65 years and above	8.84 [a]		...		...		2009p	1
5	Urban population (%)	100.00		...		...		2009 est	2
6	Crude birth rate (per 1000 population)	10.20 [a]		...		...		2008	1
7	Crude death rate (per 1000 population)	4.40 [a]		...		...		2008	1
8	Rate of natural increase of population (% per annum)	0.58 [a]		...		...		2008	1
9	Life expectancy (years)								
	- at birth	81.40 [a]		79.00 [a]		83.70 [a]		2009	1
	- Healthy Life Expectancy (HALE) at age 60			17.22 [c]		20.39 [c]		2007	3
10	Total fertility rate (women aged 15–49 years)	1.28 [a]						2008	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	96.30 [d]		...		...		2009	1
12	Per capita GDP at current market prices (US$)	36 537.00						2009p	1
13	Rate of growth of per capita GDP (%)	-1.30						2009p	4
14	Human development index	0.94						2007	4
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	82	55	27	0	0	0	2009	5
	- Type B	68	58	10	0	0	0	2009	5
	- Type C	5	5	0	0	0	0	2009	5
	- Type E	79	53	26	0	0	0	2009	5
	- Unspecified	0	0	0	0	0	0	2009	5
	Cholera	4	4	0	0	0	0	2009	5
	Dengue/DHF	4187	2556	1631	8	5	3	2009	5
	Encephalitis	43	27	16	0	0	0	2009	5
	Gonorrhoea	2214	1774	440	0	0	0	2009	5
	Leprosy	8	6	2	0	0	0	2009	5, 6
	Malaria	131	118	13	2	2	0	2009	5
	Plague	0	0	0	0	0	0	2009	5
	Syphilis	1105	669	436	0	0	0	2009	5
	Typhoid fever	58	30	28	0	0	0	2009	5
17	Acute respiratory infections	8665 [e,f]	4710 [e]	3954 [e]	3	2	1	2007p	5, 7
	- Among children under 5 years								

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	…	…	…	…	…	…		
	- Among children under 5 years	…	…	…	…	…	…		
19	**Tuberculosis**								
	- All forms	1567 [g]	1140	427	66	56	10	2009	5
	- New pulmonary tuberculosis (smear-positive)	552 [a]	422	130	NA	NA	NA	2009	5
20	**Cancers**								
	All cancers (malignant neoplasms only)	9036 [h]	4393 [h]	4643 [h]	4990	2760	2230	C: 2007 D: 2009	7, 8
	- Breast	1363 [h]	3 [h]	1360 [h]	426	1	425	C: 2007 D: 2009	7, 8
	- Colon and rectum	1455 [h]	780 [h]	675 [h]	728	408	320	C: 2007 D: 2009	7, 8
	- Cervix		0	202 [h]			67	C: 2007 D: 2009	7, 8
	- Leukaemia	239 [h]	135 [h]	105 [h]	126	69	57	C: 2007 D: 2009	7, 8
	- Lip, oral cavity and pharynx	481 [h]	352 [h]	128 [h]	208	152	56	C: 2007 D: 2009	7, 8
	- Liver	450 [h]	340 [h]	110 [h]	483	346	137	C: 2007 D: 2009	7, 8
	- Oesophagus	84 [h]	67 [h]	17 [h]	103	83	20	C: 2007 D: 2009	7, 8
	- Stomach	452 [h]	275 [h]	177 [h]	328	197	131	C: 2007 D: 2009	7, 8
	- Trachea, bronchus, and lung	1139 [h]	766 [h]	374 [h]	1182	776	406	C: 2007 D: 2009	7, 8
21	**Circulatory**								
	All circulatory system diseases	…	…	…	5550	3067	2483	2009	7
	- Acute myocardial infarction	5992 [h]	3885 [h]	2107 [h]	1490	875	615	C: 2007 D: 2009	7, 8
	- Cerebrovascular diseases	5401 [h]	2970 [h]	2431 [h]	1373	633	740	C: 2007 D: 2009	7, 8
	- Hypertension	298 000 [i]	153 000 [i]	145 000 [i]	366	203	163	C: 2007 D: 2009	7
	- Ischaemic heart disease	14 770	10 621	4149	3256	1940	1316	C: 2007 D: 2009	5, 7
	- Rheumatic fever and rheumatic heart diseases	…	…	…	23	6	17	2009	7
22	**Diabetes mellitus**	115 000 [i]	63 000 [i]	52 000 [i]	287	112	175	C: 2007 D: 2009	7, 9
23	**Mental disorders**	12466 [e,f]	6671 [e]	5795 [e]	4	1	3	2007p	5, 7
24	**Injuries**								
	All types	…	…	…	591	428	163	2009	7
	- Drowning				10	10	0	2009	
	- Homicide and violence	…	…	…	1	1	0	2009	7
	- Occupational injuries	…	…	…	…	…	…		
	- Road traffic accidents	…	…	…	152	127	25	2009	7
	- Suicide	…	…	…	266	182	84	2009	7
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Accidents, poisioning & violence (ICD9: 800-999)	38 651	22 825	15 826	845.00 [a]	…	…	2008p	5
	2. Cancer (ICD9: 140-208)	22 555	11 195	11 360	491.70 [a]	…	…	2008p	5
	3. Ischemic heart disease (ICD9: 410 - 414)	14 770	10 621	4149	344.00 [a]	…	…	2008p	5
	4. Pneumonia (ICD9: 480 - 486)	10 584 [g]	5377	5205	271.80 [a]	…	…	2008p	5
	5. Obstetric complications affecting fetus or newborn (ICD9: 761 - 763)	10 546	5832	4714	264.80 [a]	…	…	2008p	5
	6. Chronic obstructive lung disease (ICD9: 490 - 493, 496)	9568	5202	4366	244.10 [a]	…	…	2008p	5
	7. Other heart diseases (ICD9: 393 - 398, 402, 415 - 429)	9319	5667	3652	244.50 [a]	…	…	2008p	5
	8. Cerebrovascular disease (ICD9: 430 - 438)	8852	4978	3874	223.00 [a]	…	…	2008p	5
	9. Intestinal infectious infections (ICD9: 001 - 009)	8191	5237	2954	194.50 [a]	…	…	2008p	5
	10. Complications related to pregnancy (ICD9: 640 - 648)	7620		7620	184.70 [a]		…	2008p	5

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Cancer (ICD9: 140-208)	4990	2760	2230	126.11 [a]	141.59 [a]	111.01 [a]	2009p	7
	2. Ischemic heart disease (ICD9: 410 - 414)	3256	1940	1316	81.95 [a]	96.93 [a]	67.33 [a]	2009p	7
	3. Pneumonia (ICD9: 480 - 486)	2600	1356	1244	67.54 [a]	71.07 [a]	64.10 [a]	2009p	7
	4. Cerebrovascular disease (ICD9: 430 - 438)	1373	633	740	35.14 [a]	32.42 [a]	37.80 [a]	2009p	7
	5. Accidents, poisioning & violence (ICD9: E800-E999)	591	428	163	12.75 [a]	18.11 [a]	7.52 [a]	2009p	7
	6. Other heart disease(ICD9: 393 - 398, 402, 415 - 429)	739	400	339	18.45 [a]	19.73 [a]	17.20 [a]	2009p	7
	7. Diabetes mellitus (ICD9: 250)	287	112	175	7.36 [a]	5.96 [a]	8.73 [a]	2009p	7
	8. Chronic obstructive lung disease (ICD9: 490 - 493, 496)	409	329	80	10.44 [a]	17.08 [a]	3.97	2009p	7
	9. Urinary tract infections (ICD9: 599.0)	426	121	305	11.25 [a]	6.45 [a]	15.93 [a]	2009p	7
	10. Nephritis, nephrotic syndrome & nephrosis (ICD9: 580 - 589)	391	169	222	10.04 [a]	8.84 [a]	11.22 [a]	2009p	7
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**						72.50	2003	10
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						...		
29	**Percentage of pregnant women with anaemia**						...		
30	**Neonatal mortality rate (per 1000 live births)**		1.50		...		...	2008p	11
31	**Percentage of newborn infants weighing less than 2500 g at birth**		9.30		...		...	2007	7
32	**Immunization coverage for infants (%)**								
	- BCG		99.51		...		...	2009	5
	- DTP3		94.37		...		...	2009	5
	- Hepatitis B III		93.90		...		...	2009	5
	- MCV2		NA [l]		...		...	2009	5
	- POL3		94.32		...		...	2009	5
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			4189 [e]			1	2007p	5,7
	- Eclampsia			2 [e]			0	2007p	5,7
	- Haemorrhage			1959 [e]			1	2007p	5,7
	- Obstructed labour			218 [e]			0	2007p	5,7
	- Sepsis			11 [e]			0	2007p	5,7
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2009	6
	- Diphtheria	0	0	0	0	0	0	2009	5,6
	- Measles	13	8	5	0	0	0	2009	5
	- Mumps	631	384	247	0	0	0	2009	5,6
	- Neonatal tetanus	0	0	0	0	0	0	2009	5,6
	- Pertussis (whooping cough)	13	8	5	0	0	0	2009	5,6
	- Poliomyelitis	0	0	0	0	0	0	2009	5,6
	- Rubella	178	110	68	0	0	0	2009	5,6
	- Total Tetanus	0	0	0	0	0	0	2009	5,6
	Health facilities								
35	**Facilities with HIV testing and counseling services**						6	2008	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	5	5217	2008	5
		- Specialized hospitals	2	2891	2008	5
		- District/first-level referral hospitals	6	185	2008	5
		- Primary health care centres	18 [m]	0 [m]	2010	5
	Private health facilities	- Hospitals	16	3138	2008	5
		- Outpatient clinics	2400 [m]	...	2010	5
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			7215.97	FY2008p	1, 5
	- total expenditure on health as % of GDP			4.04	FY2008p	1, 5
	- per capita total expenditure on health (in US$)			1932.55	FY2008p	1, 5
	Government expenditure on health					
	- amount (in million US$)			1885.41	FY2008p	5
	- general government expenditure on health as % of total expenditure on health			26.13	FY2008p	1, 5
	- general government expenditure on health as % of total general government expenditure			6.98	FY2008p	5, 12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			NA		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	- out-of-pocket expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			1.44	2008	12
38	**Health insurance coverage as % of total population**			88.00 [j]	2009	5

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	8323	...	...	...	...	...	...	2009	13
		- Ratio per 1000 population	1.60	...	...	...	...	...	...	2009	13
	Dentists	- Number	1531	...	...	...	...	...	...	2009	14
		- Ratio per 1000 population	0.31	...	...	...	...	...	...	2009	14
	Pharmacists	- Number	1658	...	...	...	...	...	...	2009	15
		- Ratio per 1000 population	0.33	...	...	...	...	...	...	2009	15
	Nurses	- Number	26 792	...	...	...	...	...	...	2009	16
		- Ratio per 1000 population	5.38	...	...	...	...	...	...	2009	16
	Midwives	- Number	294	...	...	...	...	...	...	2009	16
		- Ratio per 1000 population	0.06	...	...	...	...	...	...	2009	16
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	226	...	...	...	...	...	...	2009	17
		Dentists	33	...	...	...	...	...	...	2009	17
		Pharmacists	98	...	...	...	...	...	...	2009	17

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	1361	...	...	...	...	...	...	2009	16-19
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	14.00	...	...	1995-2003	10
43	Infant mortality rate (per 1000 live births)	2.10 [a]	...	...	2008p	1
44	Under-five mortality rate (per 1000 live births)	3.40	...	...	2008p	11
45	Proportion of 1 year-old children immunised against measles	NA [l]	...	...	2009	5
46	Maternal mortality ratio (per 100 000 live births)	7.50 [n]			2007	7
47	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.74 [k]			2008p	11
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	100.00			2006	5
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	0.10	0.18	0.02	2009	5
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	2.60	4.53	0.54	2009	5
56	Malaria death rate per 100 000 population	0.04	0.08	0.00	2009	5
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	NA	...	...	2007	5
60	Tuberculosis death rate per 100 000 population	1.77	3.04	0.53	2009	5
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	NA	...	...	2007	5
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	69.00	...	...	2009	5
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	...	...	2008	20
64	Proportion of population using an improved sanitation facility	100.00	...	...	2008	20
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure applies or refers to resident population
b	Figure refers to 0-14 years old
c	Figure refers to life expectancy at age 60 among the resident population
d	Figure applies to residents aged 15 years and over
e	Figure refers to number of inpatient discharges
f	Totals may not tally due to some reported cases with no gender breakdown
g	Figure refers to new and relapse cases among Singapore residents
h	Figure refers to average of total number of new cases between 2003 and 2007
i	Revised figure refers to number of known cases (told by doctor to have the condition and on medication)
j	Figure refers to MediShield and Integrated Shield plans regulated by the Ministry of Health, as a % of total resident population
k	Figure refers to livebirths
l	The first and second dose of MMR vaccine is administered to 1-2 years and 6-7 years of age, respectively.
m	Figure as of June 2010.
n	Revised data

Sources:	
1	Statistics Singapore- Key Annual Indicators, Department of Statistics [http://www.singstat.gov.sg/stats/keyind.html#demoind].
2	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision [http://esa.un.org/wup2009/unup/].
3	Singapore Disease of Burden Study 2007, Ministry of Health Singapore.
4	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
5	Ministry of Health Singapore [http://www.moh.gov.sg/mohcorp/default.aspx].
6	WHO Regional Office for the Western Pacific, data received from the technical units.
7	Report on Registration of Births and Deaths, 2007. Registry of Births and Deaths, Immigration and Checkpoints Authority.
8	National Disease Registries Office, Health Promotion Board Singapore.
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10	Study on Marriage and Procreation, Perception and Policies in Singapore, 2003. Ministry of Community Development and Sports.
11	Singapore Demographic Bulletin, December 2008. Registry of Births and Deaths, Immigration and Checkpoints Authority.
12	Ministry of Finance Singapore [http://app.mof.gov.sg/index.asp].
13	Singapore Medical Council.
14	Singapore Dental Council.
15	Singapore Pharmacy Council.
16	Singapore Nursing Board.
17	National University of Singapore.
18	Nanyang Polytechnic.
19	Institue of Technical Education.
20	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

SOLOMON ISLANDS

1. CONTEXT

1.1 Demographics

Solomon Islands is a double-chain archipelago of more than 900 coral atolls located in the south-west Pacific about 1800 kilometres north-east of Australia. Its total land area of 28 370 square kilometres is widely scattered over 1.3 million square kilometres (Exclusive Economic Zone) of the Pacific Ocean, with most of its smaller islands uninhabited.

The population of Solomon Islands is estimated to be 549 574 (2009 estimate). The growing population and its relatively young structure dominate concerns about future development. In 2007, estimated life expectancy at birth was 64.9 years for males and 66.7 years for females. According to the 1999 national population census, 93% of the total population are Melanesians, 4% are Polynesians and 3% are from other ethnic groups. According to the Pacific Regional Information System, the population is growing at 2.7% per annum. Most of the population live in rural areas, with only 18% living in urban areas. The median age of the population is 19.7 years old. This demographic trend is creating increasing pressure on infrastructures and jobs, as well as raising growing environmental issues.

1.2 Political situation

The country has continued its peaceful development since 2003 with the help of the Regional Assistance Mission to Solomon Islands (RAMSI). RAMSI comprises soldiers and policemen from Cook Islands, Fiji, New Zealand, Papua New Guinea, Samoa and Tonga, led by the Australian Army and Police. With the restoration of law and order, RAMSI has been scaled back to 302 police officers and 120 soldiers, in addition to civilian technical advisors, since the end of 2004.

The country successfully conducted parliamentary elections on 4 August 2010 and elected Danny Phillip as the new Prime Minister.

1.3 Socioeconomic situation

Since 2004, the country's economy has shown a positive recovery along with the restoration of law and order. According to the Pacific Regional Information System, gross domestic product (GDP) was US$ 528 million in 2008. Total government revenue was US$ 1.7 billion and expenditure was US$ 1.7 billion in 2009. Contributions to government revenue were derived mainly from export duties on timber and growth in both company and personal income tax receipts.

1.4 Risks, vulnerabilities and hazards

Solomon Islands is in the Pacific "ring of fire" and is thus prone to earthquakes. Some parts were devastated during the tsunami of 2004. Some of the islands are also being threatened by rising tides and sea levels.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Solomon Islands is in a phase of epidemiological transition. Having to deal with both the control of infectious diseases and an increasing incidence of noncommunicable diseases, with very limited resources, poses a major challenge for the Government.

With the dissipation of ethnic conflict during 1999-2003 and with support in 2004 from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund), the Australian Agency for International Development (AusAID), the World Bank and Rotary International, progress has been made in malaria control. The malaria burden, measured by annual parasite incidence (API) has been declining steadily over

the years. From an API of 167 per 1000 population in 2002, data from 2009 show an API of 74.8 per 1000 population, better than the targeted API of 90 per 1000 population.

The achievement and consolidation of these targets is dependent on maintenance of efforts and continuous financial support.

The tuberculosis prevalence rate was 70 per 100 000 for 2009, with a 93% cure rate through directly observed treatment, short-course (DOTS) therapy in 2008 cohort cases. With the recent approval of the Global Fund submission, the national TB programme is set to make further rapid improvements in TB prevention and control.

2.2 Outbreaks of communicable diseases

There was no major disease outbreak in 2008/2009. However, the worldwide threats of influenza A(HINI) and HIV/AIDS have resulted in the development of new policies and strategies to strengthen and revitalize disease prevention, control and surveillance, as well as preparedness for action.

2.3 Leading causes of mortality and morbidity

Although infectious diseases are still the major causes of morbidity and mortality, there is some evidence that noncommunicable diseases like cancer (cervical and breast cancers are reported to be the most common, followed by lung cancer), diabetes mellitus, hypertension, tobacco-related diseases and mental illness are increasing.

In 2005, cardiovascular diseases, neoplasms, malaria, respiratory diseases and neonatal causes were major public health problems in terms of mortality.

2.4 Maternal, child and infant diseases

A reduction in childhood mortality and morbidity from diarrhoeal diseases is attributed to the improved status of sanitation, the water supply, with 84.2% of population having access to an improved drinking-water source, personal hygiene and breast-feeding. A reduction in mortality due to neonatal causes is attributed to the improved status of maternal/safe motherhood programmes and services, supported by much improved paediatric care and the focus on the integrated management of childhood illness (IMCI) approach.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health and Medical Services' *Corporate Plan for 2006-2008*, based on the gains made during 2004 and 2005, had the following eight priority areas:

- improvement of management and supervision of services;
- improvement of access to quality care;
- management and development of human resources for health care;
- mortality and morbidity reduction;
- maintenance of healthy environments;
- promotion of healthy living and lifestyles;
- improvement of reproductive health and family planning and;
- forging of partnerships in health development.

The Plan detailed future directions in terms of strategies and plans for the three years it covered, demonstrating the Government's commitment to meeting the Millennium Development Goals and those set by the International Conference on Population and Development (Cairo, Egypt, 1994). Improving

public health and primary health care functions, focusing on the prevention and control of noncommunicable diseases and STI/HIV/AIDS, continue to be among the top priorities.

3.2 Organization of health services and delivery systems

See Section 3.5.

3.3 Health policy, planning and regulatory framework

See Section 3.1

3.4 Health care financing

In 2008, total expenditure on health in Solomon Islands amounted to US$ 34.5 million, with per capita spending of US$ 67.5. In the same period, health spending as a share of GDP came to 5.26%. Government expenditure on health was US$ 32.2 million, or 16% of total government expenditure.

3.5 Human resources for health

Seven of the nine provinces have a public hospital: Guadalcanal Province is serviced by the National Referral Hospital, and Rennel/Bellona Province has no hospital. Additionally, there is one private hospital in the Western Province, one in Malaita Province and one in Choiseul Province. This gives a total of eight public and three private hospitals throughout the country. The public hospital in Choiseul has recently been upgraded from health centre status, while the Central Province Hospital is still without a doctor. The Government of Japan is funding the rebuilding of the Gizo hospital, destroyed by the tsunami in 2004.

The area and rural health centres and nurse aide posts are well distributed throughout the provinces, based on the size and geographical distribution of their populations.

At end of 2005, a total of 52 dentists (11 dentists per 100 000 population) and 53 pharmacists (11 pharmacists per 100 000 population) were employed by the Government and were working in the country. In 2009, there was a total of 118 doctors (2.1 doctors per 10 000 population), 934 nurses (17 nurses per 10 000 population) and 146 midwives (2.6 midwives per 10 000 population).

3.6 Partnerships

Overseas development assistance increased from US$ 122 million in 2004 to over 350 million in 2009, with key contributions from Australia, Japan, New Zealand, Taiwan (China) and the European Union.

In 2009, expenditure by the Ministry of Health and Medical Services amounted to US$ 32.2 million, compared with US$ 12 million in 2004, representing over a 100% increase. Although the Government is the major source of funding for health services at both the central and provincial levels, there is still heavy reliance on external financial assistance, with 35.9% of the financing being external.

An increase in the recurrent budget would undoubtedly strengthen the provision of quality health care services and also enhance the implementation of the WHO programme of assistance.

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Goals and Strategies, Corporate Plan 2006-2008; IMCI Annual Report 2004; Reproductive Health Annual Report 2004; Tuberculosis Unit Annual Report 2005; EPI Annual Report 2004; National Vector Borne Disease Control Programme*

		Annual Report 2005; Year 2006 Approved Recurrent Estimates
Operator	:	Honiara, Ministry of Health and Medical Services
Title 2	:	*Solomon Islands Health Status Assessment Report.*
Operator	:	Australian Agency for International Development, Canberra, 2005.
Title 3	:	*Health Workforce for the Solomon Islands, 2005*
Operator	:	Nursing School
Title 4	:	*Death records 2005*
Operator	:	Heath Statistics Unit, Ministry of Health and Medical Services
Title 5	:	Press releases 2005
Operator	:	Department of Prime Minister and Cabinet
Web address	:	http://www.pmc.gov.sb/
Title 6	:	*Statistical Profiles of the Least Developed Countries*

6. ADDRESSES

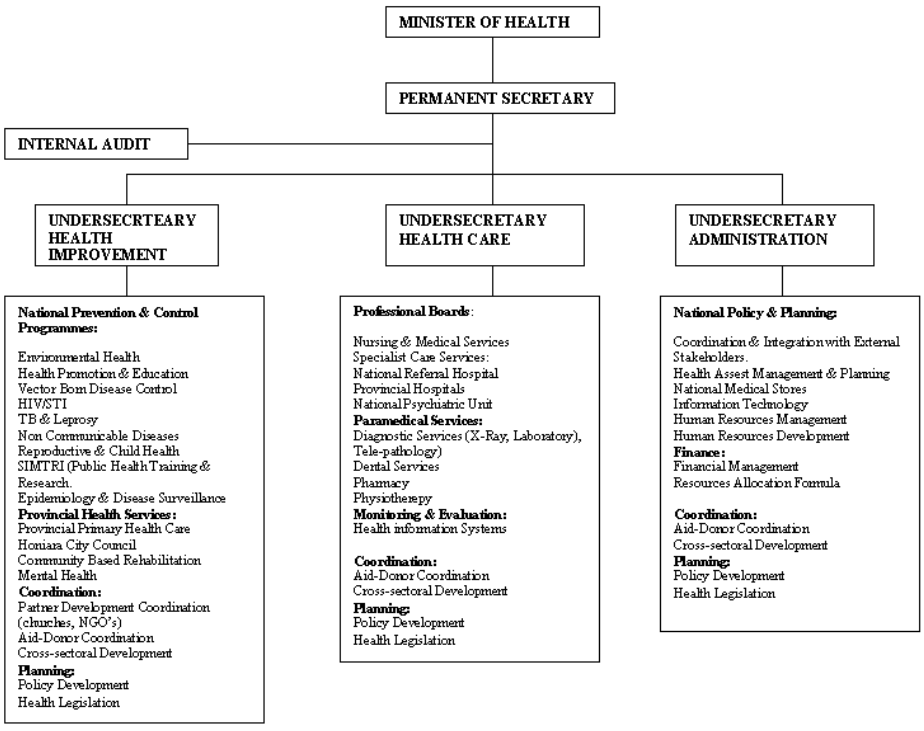
MINISTRY OF HEALTH

Office Address	:	Ministry of Health and Medical Services, Chinatown
Postal Address	:	P.O. Box 349, Honiara, Solomon Islands
Official Email Address	:	malefoasi@solomon.com.sb / pshealth@pmc.gov.sb
Telephone	:	+677 20830
Fax	:	+677 20085
Office Hours	:	8:00 – 16:30

WHO COUNTRY LIAISON OFFICER IN SOLOMON ISLANDS

Office Address	:	Ministry of Health and Medical Services, Chinatown
Postal Address	:	P.O. Box 22, Honiara, Solomon Islands
Official Email Address	:	who@sol.wpro.who.int
Telephone	:	+677 23 406
Fax	:	+677 21 344
Office Hours	:	8:00 – 16:30

7. ORGANIZATIONAL CHART: Ministry of Health



COUNTRY HEALTH INFORMATION PROFILE

SOLOMON ISLANDS — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	30.40						2008	1
2	Estimated population ('000s)	549.57		285.65		263.92		2009 est	2
3	Annual population growth rate (%)	2.70		...		...		2010 est	1
4	Percentage of population								
	- 0–4 years	15.63 [a]		15.63 [a]		15.63 [a]		2009 est	3
	- 5–14 years	25.06 [a]		25.24 [a]		24.87 [a]		2009 est	3
	- 65 years and above	3.14 [a]		3.16 [a]		3.12 [a]		2009 est	3
5	Urban population (%)	18.20		...		...		2009 est	4
6	Crude birth rate (per 1000 population)	34.90		...		...		2008 est	2
7	Crude death rate (per 1000 population)	7.60		...		...		2008 est	2
8	Rate of natural increase of population (% per annum)	2.73 [a]		...		...		2008 est	2
9	Life expectancy (years)								
	- at birth	65.80		64.90		66.70		2007	5
	- Healthy Life Expectancy (HALE) at age 60	...		10.90		11.60		2002	6
10	Total fertility rate (women aged 15–49 years)	4.60						2004-07	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	76.60		...		...		1999-2007	5
12	Per capita GDP at current market prices (US$)	1 014.00						2008	1
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	0.61						2007	5
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	0	0	0	0	0	0	2009	7
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	30	15	15	...	...	...	2009	7
	Malaria	30 597	...	...	53	...	...	2009	8
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	...	...	...	...	...	...		
17	Acute respiratory infections	184 042	...	...	...	...	...	2009	8
	- Among children under 5 years	79 452	...	...	...	...	...	2009	8

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	14 856	…	…	…	…	…	2009	8
	- Among children under 5 years	8036	…	…	…	…	…	2009	8
19	**Tuberculosis**								
	- All forms	387	…	…	…	…	…	2008	7
	- New pulmonary tuberculosis (smear-positive)	140	…	…	…	…	…	2008	7
20	**Cancers**								
	All cancers (malignant neoplasms only)	…	…	…	…	…	…		
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	…	…	…	…	…	…		
	- Cervix			…			…		
	- Leukaemia	…	…	…	…	…	…		
	- Lip, oral cavity and pharynx	…	…	…	…	…	…		
	- Liver	…	…	…	…	…	…		
	- Oesophagus	…	…	…	…	…	…		
	- Stomach	…	…	…	…	…	…		
	- Trachea, bronchus, and lung	…	…	…	…	…	…		
21	**Circulatory**								
	All circulatory system diseases	…	…	…	…	…	…		
	- Acute myocardial infarction	…	…	…	…	…	…		
	- Cerebrovascular diseases	…	…	…	…	…	…		
	- Hypertension	…	…	…	…	…	…		
	- Ischaemic heart disease	…	…	…	…	…	…		
	- Rheumatic fever and rheumatic heart diseases	…	…	…	…	…	…		
22	**Diabetes mellitus**	…	…	…	…	…	…		
23	**Mental disorders**	…	…	…	…	…	…		
24	**Injuries**								
	All types	…	…	…	…	…	…		
	- Drowning	…	…	…	…	…	…		
	- Homicide and violence	…	…	…	…	…	…		
	- Occupational injuries	…	…	…	…	…	…		
	- Road traffic accidents	…	…	…	…	…	…		
	- Suicide	…	…	…	…	…	…		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infection	184 042 [b]	…	…	33 488.36 [a,b]	…	…	2009	8
	2. Clinical and presumptive malaria	84 078 [b]	…	…	15 298.87 [a,b]	…	…	2009	8
	3. Skin disease	41 457 [b]	…	…	7543.53 [a,b]	…	…	2009	8
	4. Ear infection	22 136 [b]	…	…	4027.87 [a,b]	…	…	2009	8
	5. Yaws	11 622 [b]	…	…	2114.74 [a,b]	…	…	2009	8
	6. Red eye	9358 [b]	…	…	1702.78 [a,b]	…	…	2009	8
	7.	…	…	…	…	…	…		
	8.	…	…	…	…	…	…		
	9.	…	…	…	…	…	…		
	10.	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Cardiovascular diseases	...	...	...	...	...	...	2005	9
	2. Malaria	...	...	...	...	...	...	2005	9
	3. Neonatal causes	...	...	...	...	...	...	2005	9
	4. Neoplasm	...	...	...	...	...	...	2005	9
	5. Respiratory diseases (pneumonia as the leading causes)	...	...	...	...	...	...	2005	9
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					25.00		2005	10
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					60.00		2008	7
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	12.00 [c]		...		...		2002	6
31	**Percentage of newborn infants weighing less than 2500 g at birth**	...		...		...			
32	**Immunization coverage for infants (%)**								
	- BCG	58.00		...		...		2009	7
	- DTP3	81.00		...		...		2009	7
	- Hepatitis B III	81.00		...		...		2009	7
	- MCV2	...		...		...			
	- POL3	81.70		...		...		2009	7
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	7
	- Diphtheria	0	0	0	...	...	...	2009	7
	- Measles	0	0	0	...	...	...	2009	7
	- Mumps	0	0	0	...	...	...	2009	7
	- Neonatal tetanus	0	0	0	...	...	...	2009	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	7
	- Poliomyelitis	0	0	0	...	...	...	2009	7
	- Rubella	0	0	0	...	...	...	2009	7
	- Total Tetanus	0	0	0	...	...	...	2009	7
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

INDICATORS			DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	8	...	2009	10
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	323	...	2009	10
	Private health facilities	- Hospitals	3	...	2009	10
		- Outpatient clinics	4	...	2009	11
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			34.48 [a]	2008p	12
	- total expenditure on health as % of GDP			5.26	2008p	12
	- per capita total expenditure on health (in US$)			67.51	2008p	12
	Government expenditure on health					
	- amount (in million US$)			32.19 [a]	2008p	12
	- general government expenditure on health as % of total expenditure on health			93.37	2008p	12
	- general government expenditure on health as % of total general government expenditure			16.04	2008p	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			35.91 [a]	2008p	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			6.63	2008p	12
	- out-of-pocket expenditure on health as % of total expenditure on health			4.42 [a]	2008p	12
	Exchange rate in US$ of local currency is: 1 US$ =			7.73	2008p	12
38	**Health insurance coverage as % of total population**			...		

INDICATORS			DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	118	...	...	...	...	...	...	2009	13
		- Ratio per 1000 population	0.21 [a]	...	...	...	...	...	...	2009	13
	Dentists	- Number	52	29	23	...	...	...	...	2005	10
		- Ratio per 1000 population	0.11	0.06	0.05	...	...	...	...	2005	10
	Pharmacists	- Number	53	40	13	...	...	...	...	2005	10
		- Ratio per 1000 population	0.11	0.08	0.03	...	...	...	...	2005	10
	Nurses	- Number	934	...	...	...	...	...	...	2009	13
		- Ratio per 1000 population	1.70	...	...	...	...	...	...	2009	13
	Midwives	- Number	146	...	...	...	...	...	...	2009	13
		- Ratio per 1000 population	0.26	...	...	...	...	...	...	2009	13
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	43	...	...	...	...	...	...	2005	10
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	11.80	...	...	2007	14
43	Infant mortality rate (per 1000 live births)	44.30 [d]	45.60	42.90	2008	15
44	Under-five mortality rate (per 1000 live births)	37.20	...	...	2007	14
45	Proportion of 1 year-old children immunised against measles	60.00	...	...	2009	7
46	Maternal mortality ratio (per 100 000 live births)	103.00			2007	11
47	Proportion of births attended by skilled health personnel	86.00			2007	14
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.00			2007	14
	- Percentage of deliveries in health facilities (as % of total deliveries)	85.00			2007	14
48	Contraceptive prevalence rate	34.60	...	...	2007	14
49	Adolescent birth rate	7.00			2007	14
50	Antenatal care coverage - At least one visit	90.60			2009	8
	- At least four visits	...				
51	Unmet need for family planning	11.10	...	...	2007	14
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	2.40	0.75	1.68	2009	2
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	5666.00	...	...	2009	8
56	Malaria death rate per 100 000 population	9.80	...	...	2009	8
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	40.40	...	...	2007	14
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	19.00	...	...	2007	14
59	Tuberculosis prevalence rate per 100 000 population	70.00	...	...	2009	16
60	Tuberculosis death rate per 100 000 population	19.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	46.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	93.00	...	...	2008	16
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	84.20	94.00	82.60	2007	14
64	Proportion of population using an improved sanitation facility	...	98.00	...	2008	17
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to primary health care data
c	Estimates derived by regression and similar estimation methods
d	Revised data

Sources:	
1	2010 Pocket Statistical Summary. Secretariat of the Pacific Community (SPC), Statistics and Demography Programme (SDP). Accessed on 30 June 2010 at http://www.spc.int/prism/
2	Solomon Islands Statistics (http://www.spc.int/prism).
3	Population 2000-2015 by 1 and 5 year age groups, February 2010. Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme. [http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158]
4	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision, http://esa.un.org/wup2009/unup/, Thursday, September 02, 2010; 10:59:13 PM.
5	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
6	World health report 2004. Changing history. Geneva, World Health Organization, 2004.
7	WHO Regional Office for the Western Pacific, data received from technical units
8	Health Information System Annual Report 2009, Health Statistic Unit, MOHMS.
9	Information provided by Solomon Islands CLO 04 April 2006.
10	Registry Department, Nursing School and Registry of Reproductive Health Unit.
11	Information provided by Solomon Islands Country Liaison Officer 27 August 2010.
12	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
13	2009 Annual report for health sector performance for Solomon Islands Solomon Islands
14	Solomon Islands Demographic Health Survey 2006-2007
15	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision [http://esa.un.org/unpp, Saturday, September 04, 2010; 1:28:08 AM]
16	Solomon Islands TB and Leprosy control division
17	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

TOKELAU

1. CONTEXT

1.1 Demographics

The estimated population of Tokelau in 2006 was 1466, 35% below 15 years of age and 7.4% above 65 years. Life expectancy at birth is 67.8 years for males and 70.4 years for females (2008). The crude birth rate is 15 per 1000 population (2009) and the crude death rate is five per 1000 population (2009).

1.2 Political situation

The constraints of atoll life and limited opportunities have led some 6000 Tokelauans to settle in New Zealand and a few hundred more in Samoa. Tokelauans have linguistic, family and cultural links with other Pacific islands, notably Samoa and Tuvalu. The family and extended family constitute the core of social organization, with the village (*nuku*) being the foundation of Tokelauan society. Community welfare is paramount in what has been traditionally a subsistence environment.

1.3 Socioeconomic situation

Per capita gross national product (GNP) was NZ$ 1000 in 2003, or about US$ 612.50. The economy is basically subsistence, although cash is now becoming an important part of everyday life. The resource base is fragile, as very little land is available for any agricultural endeavour without substantial preparation and support. Marine resources have not been fully explored as yet, and ocean and lagoon fish form a stable constituent of the local diet. While there is no significant agricultural activity owing to the limited and infertile coral land, Tokelauans raise pigs and chickens and have access to traditional crops, such as coconut and breadfruit, as well as limited quantities of pandanus fruit and taro. However, there is increasing evidence of over-reliance on imported, processed foods, which is contributing to lifestyle-related diseases.

1.4 Risks, vulnerabilities and hazards

The effects of climate change, where sea levels are likely to cause increased flooding in the form of storm surges and other coastal hazards in small islands and low-lying states, pose risks to Tokelau. Furthermore, the deterioration of coastal environments through beach erosion, coastal deforestation and coral bleaching has the potential to adversely affect food security. In addition, ocean acidification due to the increase of carbon dioxide in the sea and increase in temperature with little precipitation will also affect the diversity and availability of marine food resources and marine systems.

The most significant climate change impacts in Tokelau will be on water resources. There is no surface water and, in a typical atoll, the aquifer's potential as a source of fresh water is limited. Consequently, dry spells and droughts have adverse impacts on fresh water sources, subsistence agriculture (impacting food security), and reef and lagoon ecology.

Other risks are related to the need for urgent access to medical care in the event of an emergency where the only vessel currently available is the MV Tokelau and, in extreme emergencies, the Samoa Government Police Patrol Boat, Nafanua.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

While overall health status is reasonably good, changes have been observed in the last few years. There has been an increase in noncommunicable diseases, with cerebrovascular disease the leading cause of death. The mortality rate due to cardiovascular diseases increased from 31.0% of the total in 1981 to 37.8% in 2009. Blood pressure recordings of 90 mm Hg diastolic and greater are seen in 36% of women

and 23% of men aged 30 years and over. Random blood sugar levels of 7 mmol/litre and above for the same group appear in 18% of men and 28% of women.

Tobacco and alcohol consumption is relatively high among the adult population, but is more prominent in males. Obesity is common and is attributed to diet and physical inactivity, with prevalence rates of 70% for men and 83% for women between the ages of 30 and 39. There is an observable diet shift from local to imported foods.

2.2 Outbreaks of communicable diseases

There was an outbreak of an influenza-like illness in March/April 2008, which affected a significant number of children across the nation. It was managed with no deaths and field surveillance was carried out by WHO, the Capital and Coast District Health Board (CCDHB) (Wellington, New Zealand) and local health staff.

2.3 Leading causes of mortality and morbidity

In 2003, the top three leading causes of death in Tokelau were diseases of the circulatory system; diseases of the respiratory system; and neoplastic diseases. The 2009 leading causes of morbidity were upper and lower respiratory diseases; diseases of the digestive system; and diseases of the skin and subcutaneous tissue.

2.4 Maternal, child and infant diseases

The infant mortality rate in 2009 was 0 per 1000 live births. The maternal mortality ratio is 0 per 100 000 live births (2001-09) and the total fertility rate is 4.5 (2008).

2.5 Burden of disease

The main burden of disease is from NCDs. A chronic disease management approach, together with *nuku*-(village) and family-driven programmes, is the only way that change can occur and the *Taupulega* (Village Council) realize this.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Vision for the Ministry of Health is: Promotion, Prevention, Preservation and Sustainability

The objectives are to:

1. Protect our population.
2. Ensure efficiency and effectiveness.
3. Promote public health.
4. Protect our environment.

3.2 Organization of health services and delivery systems

Each of the three atolls has a 12-bed hospital that provides primary health care to the community. The three hospitals are similarly equipped. There are no X-ray facilities due to the short life of this type of machinery in Tokelau. Ongoing renovation of the three hospitals has meant that bed capacity has been reduced to six in each.

Preventive health services are also provided by the Health Department. Water and sanitation programmes are ongoing, as well as maternal and child health programmes that are supported by women's committees.

3.3 Health policy, planning and regulatory framework

Tokelau's national health plan priorities are the following:

(1) Healthy islands and communities: Support existing community groups and structures that will enhance the ability to provide a healthy environment for the people.

(2) Promotion of healthy lifestyles: Support community members and health workers to lead healthy and improved diverse lifestyles.

(3) Development of health partnerships: Establish long-term strategic relationships with key partners in government, external donors, other relevant institutions and community groups in health development.

(4) Development of accessible primary health care services: Develop and improve primary health care services that are effective and relevant to communities.

(5) Successful community participation: Develop a successful participative strategy for an effective, combined approach to service delivery by community groups and health service providers.

(6) Development and improvement of health service system: Improve the accessibility and quality of health services, which will increase people's confidence and participation in the total health system and add value to existing services.

Tokelau's National Women's Policy 2010 ensures that women's health concerns are addressed and are integrated within the Health Department'ss National Health Strategic Plan 2009 -2015.

3.4 Health care financing

For the financial years 2001-2009, the Tokelau GNP forecast was NZ$ 11 381 770 or US$ 8 115 604. Health was allocated 10.5% (NZ$ 1 195 085.85 or US$ 852 138.42)

Total health expenditure for 2001-2009 was NZ$ 7 million or US$ 4.3 million, while per capita expenditure was US$ 3705.6.

The national budget is made up of locally generated resources and a grant from the New Zealand Government as part of its constitutional responsibility for Tokelau. Other assistance comes from international partner agencies including WHO, the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), and the Australian Agency for International Development (AusAID).

3.5 Human resources for health

Each of the three atoll hospitals is manned by a medical officer, four to five staff nurses, one dental nurse, four to five nurse's aides and a handyman. There is one dentist employed nationally with another employed on a contractual basis. The doctor-to-population ratio is 1:389, the dentist-to-population ratio 1:1167, the nurse-to-population ratio 1:106, and midwife-to-population ratio 1:389. Tokelau still relies on the 'locum' scheme in recruiting doctors. It was envisioned that this would go on for the next year, by which time new graduates would fill vacancies. However, there is only one graduate completing a Trainee Intern Year, who will commence in Tokelau in 2011.

3.6 Partnerships

Tokelau has informal partnerships with the National Hospital in Samoa, two district health boards in New Zealand. For more specialist interventions, Tokelau has access to various doctors in Samoa.

3.7 Challenges to health system strengthening

Devolution has impacted on health system strengthening, with all health staff on the atolls being employed by the *taupulegas* (village councils). All programmes and projects have to be presented to each *taupulega* and the Department is working very closely with each community to develop a community model of care with a focus on the family.

The Department has also adopted a whole-village, whole-of-government approach, with a view to creating a sense of nationhood and consistency in approach, especially in addressing NCDs.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*2006 Tokelau Census of Population and Dwellings: 2006 Census Tabular Report.*
Web address	:	[http://www.spc.int/prism/NSO-News/TK/2006%20Census%20Tabular%20Report%20-%20Final.pdf]
Title 2	:	Tokelau Department of Health

6. ADDRESSES

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Fax	:	(685) 23765

TOKELAU

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	**Area (1 000 km2)**	0.01			2008	1
2	**Estimated population ('000s)**	1.47	0.74	0.73	2006	2
3	**Annual population growth rate (%)**	…	…	…		
4	**Percentage of population**					
	- 0–4 years	11.32	5.73	5.59	2006	2
	- 5–14 years	23.74	12.28	11.46	2006	2
	- 65 years and above	7.37	3.07	4.30	2006	2
5	**Urban population (%)**	0.00	…	…	2009 est	3
6	**Crude birth rate (per 1000 population)**	15.00	…	…	2009	4
7	**Crude death rate (per 1000 population)**	5.00	…	…	2009	4
8	**Rate of natural increase of population (% per annum)**	1.00 [a]	…	…	2009	4
9	**Life expectancy (years)**					
	- at birth	…	67.80	70.40	2008	1
	- Healthy Life Expectancy (HALE) at age 60	…	…	…		
10	**Total fertility rate (women aged 15–49 years)**	4.50			2008	1
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	96.00	…	…	2009	4
12	**Per capita GDP at current market prices (US$)**	612.50 [b]			2003	5
13	**Rate of growth of per capita GDP (%)**	…				
14	**Human development index**	…				
	Environmental indicators	Total	Urban	Rural		
15	**Health care waste generation (metric tons per year)**	…	…	…		
	Communicable and noncommunicable diseases	Number of new cases		Number of deaths		
16	**Selected communicable diseases**							
	Hepatitis viral							
	- Type A	…	…	…	…	…	…	
	- Type B	…	…	…	…	…	…	
	- Type C	…	…	…	…	…	…	
	- Type E	…	…	…	…	…	…	
	- Unspecified	…	…	…	…	…	…	
	Cholera	…	…	…	…	…	…	
	Dengue/DHF	0	0	0	…	…	…	2009	6
	Encephalitis	…	…	…	…	…	…	
	Gonorrhoea	…	…	…	…	…	…	
	Leprosy	0	0	0	…	…	…	2009	6
	Malaria	…	…	…	…	…	…	
	Plague	…	…	…	…	…	…	
	Syphilis	1	…	…	…	…	…	2009	4
	Typhoid fever	…	…	…	…	…	…	
17	**Acute respiratory infections**	162	…	…	…	…	…	2009	4
	- Among children under 5 years	25	…	…	…	…	…	2009	4

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	30	15	15	...	...	...	2009	4
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	0	0	0	...	...	...	2007	6
	- New pulmonary tuberculosis (smear-positive)	0	0	0	...	...	...	2007	6
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	1	1	0	...	...	...	2009	4
	- Cervix			1			...	2009	4
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	1	1	0	...	...	...	2009	4
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	3	3	0	...	...	...	2009	4
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	3	3	0	...	...	...	2009	4
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	7	0	7	...	...	...	2009	4
23	**Mental disorders**	...	...	...	...	...	...		
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	...	...	...		
	- Suicide	1	0	1	...	...	...	2009	4
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Upper and lower respiratory diseases	12	6	6	1028.28 [a]	1016.95 [a]	1041.67 [a]	2009	4
	2. Diseases of the digestive system	6	4	3	514.14 [a]	677.97 [a]	520.83 [a]	2009	4
	3. Diseases of the circulatory system	5	5	0	428.45 [a]	847.46 [a]	0.00 [a]	2009	4
	4. Diseases of the musculoskeletal system	4	4	0	342.76 [a]	677.97 [a]	0.00 [a]	2009	4
	5. Diseases of the skin and subcutaneous tissues	1	0	1	85.69 [a]	0.00 [a]	173.61 [a]	2009	4
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	...	...	...	37.80 [c]	...	...	2003	7
	2. Diseases of the respiratory system	...	...	...	20.70 [c]	...	...	2003	7
	3. Neoplastic diseases	...	...	...	15.90 [c]	...	...	2003	7
	4. Ill-defined and undiagnosed conditions	...	...	...	11.00 [c]	...	...	2003	7
	5. Congenital anomalies	...	...	...	4.90 [c]	...	...	2003	7
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					...			
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2009	6
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	0.00		0.00		0.00		2009	4
31	**Percentage of newborn infants weighing less than 2500 g at birth**	0.00		0.00		0.00		2009	4
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2009	6
	- DTP3	100.00		...		...		2009	6
	- Hepatitis B III	100.00		...		...		2009	6
	- MCV2	100.00		...		...		2009	6
	- POL3	100.00		...		...		2009	6
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	6
	- Diphtheria	0	0	0	...	...	...	2009	6
	- Measles	0	0	0	...	...	...	2009	6
	- Mumps	0	0	0	...	...	...	2009	6
	- Neonatal tetanus	0	0	0	...	...	...	2009	6
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	6
	- Poliomyelitis	0	0	0	...	...	...	2009	6
	- Rubella	0	0	0	...	...	...	2009	6
	- Total Tetanus	0	0	0	...	...	...	2009	6
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	3	18	2009	4
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	…	…		
		- Primary health care centres	…	…		
	Private health facilities	- Hospitals	…	…		
		- Outpatient clinics	…	…		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)		4.32 [d]		FY2001-09	4
	- total expenditure on health as % of GDP		…			
	- per capita total expenditure on health (in US$)		3705.64 [d]		2001-09	4
	Government expenditure on health					
	- amount (in million US$)		4.32 [d]		FY2001-09	4
	- general government expenditure on health as % of total expenditure on health		…			
	- general government expenditure on health as % of total general government expenditure		10.46		FY2001-09	4
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		…			
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		…			
	- out-of-pocket expenditure on health as % of total expenditure on health					
	Exchange rate in US$ of local currency is: 1 US$ =		1.62		2009	6
38	**Health insurance coverage as % of total population**		…			

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	3	…	…	…	…	…	…	2009	4
		- Ratio per 1000 population	2.57 [a]	…	…	…	…	…	…	2009	4
	Dentists	- Number	1	…	…	…	…	…	…	2009	4
		- Ratio per 1000 population	0.86 [a]	…	…	…	…	…	…	2009	4
	Pharmacists	- Number	0	0	0	0	0	0	0	2009	4
		- Ratio per 1000 population	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2009	4
	Nurses	- Number	11	…	…	…	…	…	…	2009	4
		- Ratio per 1000 population	9.43 [a]	…	…	…	…	…	…	2009	4
	Midwives	- Number	3	…	…	…	…	…	…	2009	4
		- Ratio per 1000 population	2.57 [a]	…	…	…	…	…	…	2009	4
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
40	**Annual number of graduates**	Physicians	1	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	0.00	...	...	2009	4
44	Under-five mortality rate (per 1000 live births)	...	...	...		
45	Proportion of 1 year-old children immunised against measles	100.00	...	...	2009	6
46	Maternal mortality ratio (per 100 000 live births)	0.00			2005-09	4
47	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00			2009	4
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	3.00			2009	4
50	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	0.00	0.00	0.00	2007	6
60	Tuberculosis death rate per 100 000 population	0.00	0.00	0.00	2007	6
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	...	...	...		
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	...	...	...		
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	97.00	NA	97.00	2008	8
64	Proportion of population using an improved sanitation facility	93.00	NA	93.00	2008	8
65	Proportion of population with access to affordable essential drugs on a sustainable basis	100.00	NA	100.00	2009	4

Notes:	
…	Data not available
est	Estimate
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to per capita GNP at current market prices (US$)
c	Figure refers to percentage of deaths reported
d	Converted to USD using average UN exchange rates for 2009.

Sources:	
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2	2006 Tokelau Census of Population and Dwellings: 2006 Census Tabular Report. [http://www.spc.int/prism/NSO-News/TK/2006%20Census%20Tabular%20Report%20-%20Final.pdf].
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4	Information furnished by the Tokelau Department of Health, 22 July 2010.
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TONGA

1. CONTEXT

1.1 Demographics

Tonga's estimated population for 2009 was 103 023, giving a population density of 158 per square kilometre. About 23.3% of the population live in urban settings. The population is young, with 38% in the 0-14 year-old age group. The fertility rate remains high, although it has been falling slowly, decreasing from 4.1 in 1986 to 3.7 in 2008. The population growth rate is around 0.4%, a low figure taking into consideration a crude birth rate of about 28.5 per 1000 and the fact that child mortality rates are the lowest in the Pacific. The explanation is found in the high net emigration rate, which averaged 19.8% between 1986 and 1996. It is estimated that as many as 100 000 Tongans live overseas, most of them in Australia, New Zealand and the United States of America. The Tongan community in New Zealand alone accounts some 50 000 people.

1.2 Political situation

Tonga is a constitutional monarchy with almost absolute power given to the head of state, King Siaosi Tupou V, who succeeded his father in 2006. The King's Cabinet consists of the Prime Minister, the ministers of the Crown and the governors of Vava'au and Ha'apai, all directly appointed by the King. The unicameral Parliament consists of the cabinet members, the Speaker of the House (appointed by the King), nine nobles elected by the peers from among Tonga's 33 hereditary title holders, and nine democratically elected peoples' representatives. Important political reforms are being implemented in 2010 that affect various sectors of public life, including the powers of the monarchy, parliament, government and the prime minister.

1.3 Socioeconomic situation

Agriculture forms the backbone of the economy, and the export of pumpkins for the Japanese market plays a particularly important role as a foreign exchange earner. The second biggest industry, fishing, is in recession due to decreasing catches over several years. Tourism is slowly increasing in importance, although the prospects of Tonga developing a mass-tourism industry are limited. Remittances from relatives living abroad play an increasingly important role in the economy. The total value of private remittances was estimated at TOP 200 million (US$ 105 million) in 2004, roughly 55% of the gross domestic product (GDP), which was estimated at TOP 361 million (US$ 189.6 million). The Government is heavily dependent on development support for capital investments.

Economic development has been sluggish in recent years and real growth in GDP fell from 2.3% in 1998-1999 and 5.4% in 1999-2000 to only 1.4% in 2003-2004. The figure was 2.5% in 2004-2005, giving an average GDP growth per year for 1998-2005 of 2.9% per year. The Government has liberalized the economy in recent years and has abolished government monopolies and allowed competition in several areas, including telecommunications, power supply and civil aviation.

Tonga joined the World Trade Organization in December 2005 in an agreement that saw the country reduce its import tariffs for most goods to 15% and open its domestic markets, including health care provision and education, to foreign investors. A 15% consumption tax was introduced on goods and services in April 2005 and compensates for the loss of income from import duties. The tax base is small, with only about 4000 people having a taxable income, and income tax is low (10%) and non-progressive, resulting in a revenue from income taxation of less than TOP 2 million (US$ 1.05 million) per year. Property taxation is negligible and land ownership is concentrated among the royal family, churches and nobles. The labour force participation rate in 2003 (Labour Force Survey 2003) was 64% (75% for men and 53% for women).

The literacy rate is very high (99%) and most children complete compulsory primary school classes. Education absorbed 14% of the national budget in 2004. While most primary schools teach in Tongan,

secondary education is mainly conducted in English. The education rate is similar for both genders, with some advantages for girls at the secondary level. Despite equal opportunities in education, the number of women in leading positions remains limited. An important step was taken in 2005 when the first female Member of Parliament was elected. Tonga has ratified the Convention on the Rights of the Child (CRC), but has failed to fulfil the reporting requirements. It has yet to sign the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW). Women continue to be discriminated against in legislation, including land ownership rights, child support rights and inheritance laws.

The standard of living has improved dramatically over the last 50 years and there is now little absolute poverty. The country is placed 99th in the United Nations Development Programme's Human Development Index ranking (HDI), the highest ranking of any Pacific island state, reflecting the comparatively high GDP per capita of US$ 2 319 (2006), high life expectancy and near-universal literacy. Disposable income per capita is considerably higher than GDP per capita as a result of remittances from Tongans working abroad. The value of those remittances is also increasing much faster than the domestic economy and official development assistance, and the strong performance in the HDI is partly explained by the high disposable income. However, many families are dependent for food security on what they can produce on their farmland, and limited access to such land is an increasing problem. An estimated 4% of the population live on less than US$ 1.00 per day and about 6.7% of households live below the food poverty line. The Government uses the term 'hardship' to describe economically disadvantaged groups in Tonga and hardship is defined as "having difficulties in meeting basic needs, such as education and transport". When translated into monetary terms, hardship is the equivalent of living on less than TOP 28.17 (US$ 14.79) per week (indexed value), and an estimated 23% of the population falls into that category. People who live on the outer islands, where access to education and health care is poor, transport costs are high and income opportunities few, have higher rates of hardship.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Tonga has gone through an epidemiological transition since the 1950s, with increasing life expectancy and falling fertility rates, childhood mortality rates and maternal mortality. Life expectancy at birth increased from 40 years in 1939 to 67.3 years for males and 73 years for females in 2008. The proportion of deaths caused by infectious diseases fell from 32% in the 1950s to 6% in the 1990s, while the proportion of deaths from diseases of the circulatory system grew from 5.6% to 38% over the same period. However, there is likely to be considerable underreporting for many noncommunicable diseases. Post-mortem examinations are limited to criminal cases and death certificates are, at best, based on clinical findings and frequently on reports from relatives. More importantly, as many as 18% of deceased people do not have a proper death certificate stating the cause of death, and unknown cause of death actually ranks second when included in the list of leading causes of death. While the mortality data are considered to be fairly consistent over time for those who die in hospital, there are clearly distortions in morbidity reporting caused by misclassification and inconsistent ICD-10 coding, particularly for communicable diseases.

The steep increase in the burden of noncommunicable disease (NCD) is worrying and is the most important current health problem. Obesity, diabetes and cardiovascular diseases have increased to levels of epidemic proportion and prevalence rates now surpass those of most industrialized countries. Tonga developed a multisectoral national strategy to prevent and control NCD in 2003. There are multiple reasons for the rapidly growing NCD burden, of which the most important include increasing rates of overweight and obesity, reduced physical activity, smoking, and, to some extent, the ageing of the population. Economic development, motorization, improved access to processed imported food and the adoption of 'western' dishes with high fat and high sugar contents have had a strong negative impact on people's health.

Food, gifts of food and feasting traditionally play an important role in Tongan culture. Higher economic standards, improved communications and better access to processed and high-fat and high-sugar foods have led to a rapidly increasing overweight and obesity problem. Figures from 2004 show that the average weight for a Tongan male increased over 30 years by 17.4 kg to 95.7 kg, while the average weight for a woman increased by 21.1 kg to 95.0 kg, a rise in body weight with few comparisons in the world. There are also indications that people are becoming overweight and obese earlier in life; girls and young women in particular tend to gain weight during adolescence and pregnancy. The overall adult obesity rate (BMI>30) was 60% in the 2004 survey. Women have higher obesity rates than men over all age groups and they are more obese (mean BMI 34.5 compared with 31.0 for men). As a consequence, they have higher rates of diabetes than men, with 19.1% of women and 16.5% of men meeting the definition of diabetic. Most people continue to perceive fatty food as something desirable, a taste that may be explained partly by the scarcity of fat in the traditional fishing and farming society and by historic periods of food shortage. Other findings indicate that the quantity of food consumed by Tongan adults is as much to blame as its composition. Studies have shown that the average Tongan male consumes double the quantity of food and amount of calories consumed by the average Australian male. Women are more overweight than men, while men have a higher prevalence of other risk factors, including hypertension, elevated blood lipids and smoking.

The overall adult prevalence of diabetes type II has increased from 7% to 18% over the last 30 years. A community survey in 2000 showed that as many as 80% of people with diabetes remain undiagnosed and untreated. Access to health services for people with diabetes and its complications has improved, but the health system does not have the capacity to provide quality care for all those who need it, and primary and secondary prevention have so far not been enough. The number of registered diabetic patients at the specialist clinic at the referral hospital on Tongatapu increased by 54% between 1999 and 2003 from 1463 to 2247, which corresponds to more than 9% of the serviced population aged 30 years and over. A hereditary predisposition towards impaired glucose tolerance is likely to play some role in the high rates of diabetes, but this is a non-modifiable factor and has in itself little to contribute to the design of public health interventions.

Physical inactivity is also thought to be an important cause of overweight, particularly for women and middle-aged people. It is unusual today for people to walk or bicycle, as the number of vehicles is increasing rapidly. The increasing number of cars on the roads, together with outdated traffic safety measures, contributed to the record 24 traffic-related deaths in 2003, a figure that puts Tonga ahead of the United States of America in the number of traffic deaths per 100 000 population. Seatbelts are not compulsory and only 1% of drivers were found to be using them in a Ministry of Health survey in 2004. The single most important cause of traffic injury is driving under the influence of alcohol, kava or marijuana. All 24 deaths in 2003 were caused directly or indirectly by intoxication. The section on alcohol in the current Traffic Act is antiquated and not enforceable in practice, and neither the health services nor the police have the equipment to measure blood alcohol or to 'breathalize' motorists. The health and social problems caused by the harmful use of alcohol has received increasing attention in Tonga lately and this will hopefully result in measures aimed at reducing access to alcohol and enforcing drink-driving controls in the future.

The incidence of cancer is perceived to be increasing, but weaknesses in diagnosis, surveillance and reporting do not allow for reliable analysis of trends. The sharp increase in overall cancer incidence is likely to be partly or entirely explained by changes in reporting rather than by a true increase. Diagnostic capacity is limited for many malignancies, and it is not always obvious when the reported figure refers to cytological diagnoses or when clinical (non-confirmed) diagnoses have been included. A cancer register was established in 2004 to capture both clinically determined cancers and laboratory-confirmed cases. Although this important development improved the statistical information on cancer incidence, the proportion of cytologically and histologically confirmed cancer cases remains low compared with overall cancer incidence, and the autopsy rate is very low. A pilot project on Pap-smear screening for cervical cancer was started in 2005. Mammography is not available. Liver cancer, which is closely related to hepatitis B virus infection (HBV), is common in Tonga, where HBV infection rates in the adult population are hyperendemic (10%-14%). It will take another two to three generations until immunization against HBV, which was introduced in 1989, impacts on incidence. Lung cancer now ranks

among the three most common cancers, a result of smoking, and it is expected that the incidence will continue to increase.

Of the 17 hospital-certified deaths in the 1-4 age group in 2003, eight were from infectious causes, one from dehydration, two from malignancies and two from road trauma. Of the eight children who died as a result of infection, six were from septicaemia and CNS infection, one from dengue fever and one from pneumonia. This picture resembles the situation in an industrialized country more than that of a poor developing one. There is limited information available on childhood morbidity, but the two deaths from road trauma indicate that child safety is a potential area for improving child health.

Infectious diseases have, to a large extent, been brought under control in the last 30-40 years, with some important exceptions. Tonga does not have the vector for malaria, but a few imported cases are diagnosed each year in people returning from visits to areas with malaria transmission.

A fifth and final round of mass drug administration (MDA) for the eradication of lymphatic filariasis took place in 2005, with 100% geographical coverage and an estimated population coverage of >90%. A nationwide post-MDA-campaign serosurvey was conducted in 2006 to evaluate the results.

Leprosy has, in practice, been eradicated, although the latest infection was diagnosed in 2004. This was an imported case in a Tongan adult who returned after having lived his entire life in American Samoa. The last case of indigenous transmission was in 1998 and today there are a handful of well documented people living with complications of leprosy.

Hepatitis B is highly endemic in Tonga and screening of blood donors, government employees and visa applicants shows that more than 10% of the adult population are positive for HbsAg. A survey in pregnant women in 2005 found an HbsAg-positive rate of 13.9%. Childhood immunization against hepatitis B started in 1989 and the first immunized cohorts are now entering reproductive life. A serosurvey of 211 preschool children in 1998 found a 3.8% prevalence of chronic hepatitis B infection, indicating a lower-than-expected efficacy for hepatitis B immunization. Increasing efforts are now being made to improve particularly the timeliness of hepatitis B vaccine delivery. A study using convenience testing for HbsAg in children admitted to Vaiola Hospital started in 2005 for surveillance purposes; of more than 100 children tested so far, none has been positive for HbsAg.

Poor household hygiene and sanitation, as well as contamination of drinking-water sources, are thought to contribute to the average 10-20 cases of typhoid fever recorded annually (22 confirmed cases in 2003). The Ministry of Health places great importance on finding and treating asymptomatic chronic typhoid carriers through contact-tracing and stool-sampling, and this limits the spread of typhoid. However, it can be argued that Tonga is in the position to eliminate typhoid fever altogether if adequate coordinated resources were to be allocated to treat carriers, improve sanitary practices and ensure the supply of safe water in all villages.

Thirteen new cases of tuberculosis (all types) were reported in 2008. All tuberculosis treatment follows the directly observed treatment, short-course (DOTS) strategy and there is active contact-tracing. The success rate for patients diagnosed in 2007 was 93%.

HIV prevalence remains very low. Fourteen people have been diagnosed with HIV infection over the last 16 years and, as of January 2006, there was only one person known to be living with HIV infection. The volume of HIV serology testing is high, with an average of 2500-3000 HIV tests carried out annually as part of screening of blood donors, government employees and visa applicants, and an estimated 45 000 HIV tests have been carried out since the start in the 1980s. A pilot trial of voluntary counselling and testing (VCT) at the antenatal clinic at the referral hospital reported a very high uptake, but no decision has been taken to continue to offer antenatal screening. Risk-behaviour surveillance and high-risk group serosurveillance started in 2005 and will provide valuable information on the risk of transmission. Antiretroviral treatment (ART) is not available through the public health system and there are no officially endorsed guidelines for treatment of HIV infection or prevention of mother-to-child transmission.

The diagnostic capacity for sexually transmitted infections (STIs) is limited to gonorrhoea and syphilis (with the exception of HIV). The number of cases is thought to be much higher than revealed by the

statistics, as many patients are treated by private practitioners who do not notify the Ministry of Health. The ratio of men to women receiving treatment for gonorrhoea is 10:1, indicating weak contact-tracing and a lack of appropriate services for women. A serosurvey in pregnant women in 2005 found a high overall prevalence of chlamydial infection of 14.5%. The rate was 27.5% in women <25 years of age, an indication that transmission may be increasing in younger women. The RPR-positive rate for syphilis was 3.2%, which is alarming considering that the Ministry of Health took the controversial decision to discontinue syphilis screening in pregnancy a few years ago. The same study also asked questions about sexual risk behaviour, which showed that the condom use rate is very low and that condoms are primarily seen as a method of contraception to be used within marriage, and not as a means to protect against STIs.

2.2 Outbreaks of communicable diseases

The country experienced a large outbreak of dengue fever (serotype 1) in 2003, causing six deaths in children, and transmission continued into 2005. The outbreak was confined to the main island of Tongatapu in the first year, but transmission then spread to all island groups except the Niuas. Two adult deaths due to dengue were recorded in 2005. It is unlikely that dengue will become endemic in Tonga because the population is not large enough to sustain transmission over time. However, vector control and vector surveillance is poor and the measures introduced to prevent fatalities and control transmission during outbreaks are suboptimal. It looks inevitable that the introduction of another serotype will cause a new outbreak of dengue fever, with fatalities.

Tonga experienced an outbreak of watery diarrhoea from December 2005 to February 2006, with altogether six fatalities in children below one year of age. This was an unusually large outbreak and, for the first time, Rota virus was confirmed in a sample sent to the Pasteur Institute in New Caledonia.

2.3 Leading causes of mortality and morbidity

See Section 2.1.

2.4 Maternal, child and infant diseases

More than 98% of pregnant women attend antenatal clinics, 98% deliver in a health facility and 100% of deliveries are attended by trained staff. The maternal mortality ratio (MMR) was 76.1 per 100 000 live births in 2008. Indicators that are based on relatively uncommon events, such as MMR and IMR, will show large variations between years due to chance and it can be more informative to either compare absolute numbers or to examine rates over five-year or 10-year periods. The mean MMR for the five-year period from 1999 to 2003 was 39.4 per 100 000 live births, which translates to one death per year. It is of concern that the MMR has been stable over the last two decades and that it has proved very difficult to reduce it further. The absolute majority of maternal deaths took place in hospital, which is an indication that patient monitoring and emergency services, such as availability of blood for transfusion, need strengthening.

Tonga is the best performing country in the Pacific in terms of infant and child mortality. The unusually low infant mortality rate of 9.1 deaths per 1000 live births at the 1990 baseline for the Millennium Development Goals (MDGs), together with the fact that the IMR has remained unchanged for the last decade, makes it unrealistic for the country to achieve the MDG for infant mortality. There are several explanations for the low IMR, but at the core is the Government's commitment to delivering key interventions, such as immunizations, antenatal care and trained delivery care, to the entire population. The result shows that it is possible to provide high coverage of essential services in an island state with isolated populations, and that it pays off.

There is little absolute poverty in Tonga, no chronic undernutrition (stunting), no important micronutrient deficiencies and no malaria, all factors that contribute to well nourished and healthy mothers and children. The comparatively low teenage (<20 years) pregnancy rate (4.1% in the 2000-2003 period) is another protective factor. Breast-feeding promotion is receiving increasing attention as an important public health intervention. The goal of establishing Vaiola Hospital as a baby-friendly hospital in 2005 was, unfortunately, not achieved. This would have meant that two-thirds of all children in Tonga would be born in a baby-friendly environment. Work has started to translate the International Code on Marketing of Breast-milk Substitutes into national law and regulations.

The challenge for child health lies in protecting the impressive gains made so far while at the same time identifying and implementing affordable and sustainable interventions that will reduce mortality rates further. Mortality from *Haemophilus influenzae* type B (Hib) infection lies almost entirely in the 0-1 age group and the introduction of routine childhood immunizations against Hib in 2005 is a good example of an affordable new intervention to improve child health.

Immunization rates are higher than in many industrialized countries, and neonatal tetanus and poliomyelitis have been eliminated. Rubella vaccine (measles-rubella [MR] vaccine) was added to the immunization schedule in 2002 in response to a large outbreak of the disease, and there have been no detected cases of congenital rubella syndrome (CRS) since. The immunization campaign with MR vaccine to break the epidemic included all children of 0-15 years and all women up to 45 years of age, with a coverage rate of above 80%, meaning that population immunity against measles can be expected to be high. The last confirmed measles infection was in 1998 and Tonga set 2007 as a target for measles elimination. Immunization against Hib was introduced in April 2005, with a catch-up immunization campaign for children below two years of age. It has been estimated that Hib vaccine will prevent one to two infant deaths and several more cases of severe sequelae per year caused by Hib meningitis. The hospital paediatric departments are documenting the impact of Hib vaccine on admissions for meningitis and pneumonia.

2.5 Burden of disease

See Section 2.1.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

Mission:

To support and improve the health of the nation by providing quality, effective and sustainable health services and being accountable for the health outcomes.

Vision:

By 2020, we are the healthiest nation compared with our Pacific neighbours, as judged by international determinants.

Objectives:

(1) To fight the NCD epidemic and communicable diseases by using effective preventive measures, being good role models and developing public participation and commitment.

(2) To deliver the range and quality of services needed to meet the basic health requirements of the public.

(3) To provide appropriate health services to all the outer islands and community centres through effective resourcing.

(4) To build staff commitment and development by demonstrating to staff that they are valued.

(5) To deliver services in a professional and friendly manner.

(6) To continue to improve the standard of existing facilities and ICT, and to construct new facilities and introduce new ICT where needed.

(7) To improve the management of financial resources through: better revenue collection, balanced budgeting, compliance with procurement procedures, timely processing of payments, and compliance with proper financial procedures.

3.2 Organization of health services and delivery systems

The Ministry of Health works in four programme areas: (1) policy formulation and administration; (2) preventive health services; (3) curative health services; and (4) dental health services.

Government health services are provided free of charge and physical access to care is good for the majority of people, with the exception of small populations living on isolated islands. Primary curative care and preventive services are delivered through a system of 14 health centres.

There are four hospitals in Tonga: the tertiary Vaiola Hospital in Nuku'alofa, with 196 beds; and three district hospitals, Prince Ngu's hospital in Vava'u, Niu'ui hospital in Ha'apai and Niu'eki hospital in Eua. The overall bed occupancy rate is low, 34% in 2003, an indication that the hospital system is oversized and has not adapted to the changes in the disease pattern and to improvements in physical access. However, transportation between islands remains difficult and acute referrals to the tertiary hospital are uncommon, making centralization of services problematic. The four hospitals also serve the populations on their respective islands with primary health care and they all run busy outpatient and emergency departments.

Patients requiring specialist care that is not available in Tonga can be referred to New Zealand under two treatment schemes, one funded by the Government of Tonga and one by the Government of New Zealand. The decision to refer is made on a case-by-case basis by the Medical Transfer Board. Specialist treatment teams in such areas as eye surgery, plastic surgery, corrective orthopaedic surgery and rheumatic heart disease visit Tonga regularly.

3.3 Health policy, planning and regulatory framework

See Section 3.2

3.4 Health care financing

Total health expenditure amounted to US$ 11.3 million in 2008. The Government covers 68.7% of total expenditure on health, while private expenditure covers 31.3%. When expenditure on traditional healers and international referrals is excluded, it becomes obvious that the Government covers the absolute majority of both curative and preventive care costs and that 'out-of-pocket' payments for health care are low, 27.3% in 2008. About 12% of the population have some kind of health insurance. The private sector is still small and consists mainly of traditional healers and 'after-hours' practising government-employed doctors. About 14% of total expenditure on health is for traditional healers, although they are mostly paid in kind. Expenditure on drugs accounts for approximately 7.8% of total expenditure on health. There is a health insurance system, but it only covers government employees.

3.5 Human resources for health

There are large variations in equipment, staffing and catchment populations depending on location but, on average, a health centre serves 7200 people and is typically staffed by a health officer and one to three nurses. There were 57 physicians in 2007 (0.6 doctors per 1000 population). In the same year, there were 345 nurses (3.4 nurses per 1000 population). There were 11 dental officers and dental therapists. The number of private providers is increasing, but the majority of private doctors remain government employees and run part-time private clinics, many out of their homes.

The Ministry of Health had a total of 945 established posts in 2002, with an overall vacancy rate of 25%, making it one of the biggest employers in the country. Doctors normally train in Australia, Fiji or New Zealand, often on bilateral scholarships or WHO fellowships. Three-year health-officer training courses are organized by the Ministry of Health when required. Nurses train at the Queen Salote School of Nursing in Tonga. On average, 30 nurses graduate each year from the basic nursing training programme. A decision has been made to increase the intake several-fold in order to make up for the continuous loss of nurses to Australia, New Zealand and the United States of America. The Nursing School also runs a postgraduate certificate training programme in collaboration with the nursing department at the Auckland University of Technology, New Zealand. The first training programme in intensive care nursing started in

2005 and postgraduate training programmes in midwifery, internal medicine, surgery and public health were offered in 2006-2007.

3.6 Partnerships

One of the core values of the Ministry of Health is to develop and sustain partnerships with relevant health stakeholders. An example of a recently established successful partnership is the Tonga-Australia partnership for development. Its aim is to support progress towards poverty reduction and improvement in living standards for Tongans, through improved health outcomes. This partnership will support the Government of Tonga to implement the Ministry of Health Corporate Plan 2008/09-2011/12 to achieve the targets of :

- Reduced prevalence of noncommunicable disease risk factors including:
  - Tobacco use: 2% decrease in prevalence of smokers by 2015
  - Obesity: 2% decrease in overall prevalence of obesity by 2015
- Budget for preventive health care reaches 10% of total public health operational budget by 2015
- Primary health care to all communities in Tonga to follow common national standards, including the utilization of the service.

There are also other examples of partnerships between the Ministry of Health and other organizations, such as the Health Promoting Church Partnerships and the Health Promotion Foundation. There is close collaboration with WHO in strengthening the health system, based on primary health care principles. The Ministry of Health also has very good working relationships with the governments of Australia, Japan, New Zealand the People's Republic of China, and recently, the Government of Cuba assisted in providing medical training for students from Tonga. There are ongoing partnerships with the following organizations: the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the European Union, the Global Fund, the Asian Development Bank, and several others.

3.7 Challenges to health system strengthening

The most critical question for the health system today is how to increase the resources available for health. Government health expenditure is about US$ 100 per capita per year and, given that this pays for free medical treatment and free drugs, it is fair to say that Tongans get a lot of value for their money. Around 10%-15% of the Government's total budget has been spent on health for the last two decades and it is unlikely that share will increase substantially in the future. Since government income is likely to grow only slowly in the coming years, there will be little space for growth in health sector spending within the current health financing system. At the same time, the pressure on the health system will increase with the increasing burden of noncommunicable diseases and the ageing of the population. Identifying alternative sources of health care financing is thus one of the top priorities of the Ministry of Health. In December 2005, Cabinet approved the introduction of user fees. A decision has also been made to introduce social health insurance within the next three to five years. Initially it will cover civil servants, but the intention is to gradually include larger sections of the population. Tonga has achieved many of the health goals within its reach given its existing health spending level, and the challenge now is to increase the resources for health promotion and health care without jeopardizing the health of poor and disadvantaged groups in the population.

The increase in noncommunicable diseases (NCD) has now reached epidemic proportions. In addition to human suffering, NCD can have a negative impact on family economies. The loss of income due to disease and the cost of treating chronic conditions can put enormous strain on families and destroy years of work to improve a family's situation. Ultimately there will be a negative impact on the country's economic development as more resources have to be used for health care and productive and experienced middle-aged people in the workforce are lost to chronic disease or death. Identifying and implementing effective population-targeted preventive measures that can slow the increase of disease and, in the future, reverse the trend, are of the highest priority. The national multisectoral strategy for the

control and prevention of noncommunicable diseases, developed in 2003, is a sign that the Government takes the issue very seriously. There are plans to establish a Health Promotion Foundation with funding from dedicated taxation on tobacco and alcohol. Such a mechanism could provide crucial resources for health promotion, an area of health that is currently heavily dependent on external support.

There is a recognized need to improve both the quality of and access to health care, particularly for NCD, in view of the increasing burden of the ageing population. A large proportion of patients with diabetes and cardiovascular disease remain undiagnosed and untreated. It is therefore a priority to both increase access to care and improve the quality of care for people with noncommunicable diseases. This must include solutions for financing the treatment of chronic conditions and for increasing patients' knowledge of their condition and their responsibility for care. Active participation in treatment and patient empowerment are essential for successful treatment of chronic conditions.

There is a need to strengthen both the collection of information and the analysis and dissemination of health statistics for decision-making. The outcomes of investments in health care financing and prevention of NCD must be able to be evaluated so that strategies can be modified when needed. The information must be easily available, cheap and reliable, and should therefore be based on ongoing surveillance rather than repeated and costly surveys. A first step towards such a system is the strengthening of vital statistics on births and deaths, as well as a consistent hospital-based diagnosis registration system. The Government has already started important work in this area, but there is a need to strengthen the system of data collection as well as increase the capacity to process and interpret the information gathered. The Ministry of Health is expected to invest substantially in the area of health information in the coming years, partly with resources made available through a World Bank loan.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goal 4: Reduce child mortality

- On track to meet target for MDG4 by 2015, but needs sustained action: Tonga is one of the best-performing Pacific island countries in the area of infant mortality. The infant mortality rate (IMR) declined progressively from approximately 90 infant deaths per 1000 live births in 1966, to 26 per 1000 live births in 1990, and 16.4 per 1000 live births in 2008. The under-five mortality rate (U5MR) has also decreased, from 32 in 1990 to 24 per 1000 live births in 2008. The neonatal mortality rate was estimated at 12 per 1000 live births in 2006. Tonga is thus on track to achieve the MDG4 target by 2015. Major reasons for this healthy declining trend lie in the policy to prioritize children's health and the drive for universal immunization coverage. Presently this is estimated at 97%. Tonga is one of the few countries that has made immunization mandatory by law.

Goal 5: Improve maternal health

- Good progress in MDG5: Tonga's maternal mortality rate (MMR) is also one of the lowest in the Pacific, with no more than two or three deaths per year and no deaths recorded in recent years. This may reflect further improvements in health care facilities and services, especially the high proportion (95%) of deliveries attended by skilled health personnel.

Goal 7: Ensure environmental sustainability

- Improved water and sanitation have no doubt also contributed positively, as 100% of households now have sustainable access to an improved water source and 96% of households have access to improved sanitation.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Annual reports 1995 to 2004; Ministry of Health Corporate Plan 2001-2004; Ministry of Health Corporate Plan 2005-2008; EPI and Reproductive Health Services annual reports 2000-2003*
Operator	:	Ministry of Health

Title 2	:	Tonga Department of Statistics
Web address	:	http://www.spc.int/prism/country/to/stats
Title 3	:	*Social and economic update and pro-poor policy formulation, Tonga.* Pacific Island Economic Report series
Operator	:	Asian Development Bank TA6245 (reg)
Title 4	:	*Tonga's report on progress towards the Millennium Development Goals (MDGs)*
Title 5	:	*Annual report of the National Reserve Bank 2003-2004*
Title 6	:	Health Sector Support Project (HSSP/WB) Project Implementation Plan (PIP)
Title 7	:	*National Health Accounts report of July 2004*
Title 8	:	*Tonga's health 2000*

6. ADDRESSES

MINISTRY OF HEALTH

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WHO COUNTRY LIAISON OFFICER IN TONGA

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Fax	:	(676) 23 938
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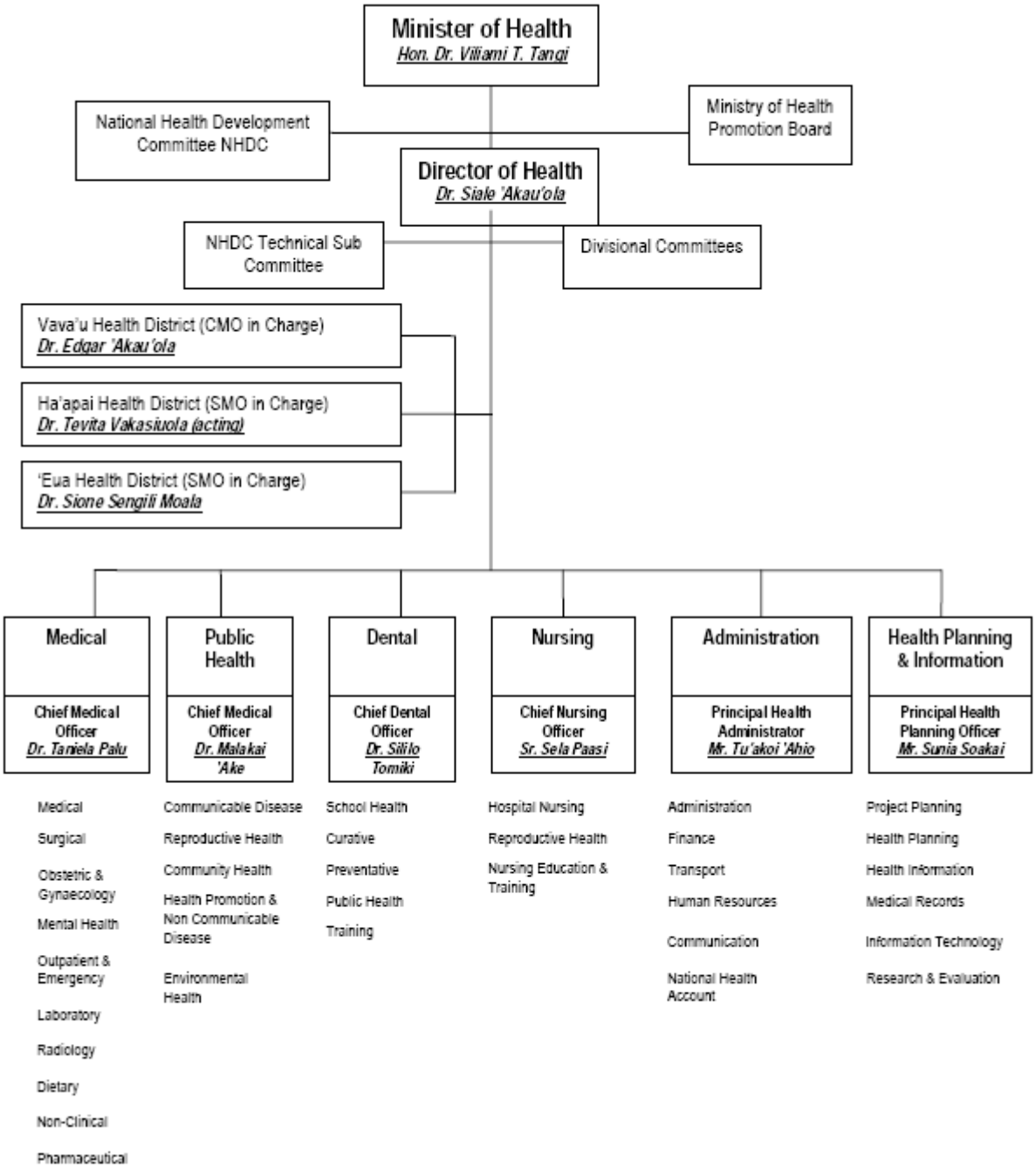
7. ORGANIZATIONAL CHART: Ministry of Health



TONGA — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	**Area (1 000 km2)**	0.65						2008	1
2	**Estimated population ('000s)**	103.02		…		…		2009 est	2
3	**Annual population growth rate (%)**	0.40		…		…		2008	1
4	**Percentage of population**								
	- 0–4 years	13.00		14.00		13.00		2009 est	2
	- 5–14 years	24.93 [a]		25.78 [a]		24.06 [a]		2009 est	2
	- 65 years and above	5.77 [a]		5.17 [a]		6.38 [a]		2009 est	2
5	**Urban population (%)**	23.30		…		…		2009 est	3
6	**Crude birth rate (per 1000 population)**	28.50		…		…		2008 est	1
7	**Crude death rate (per 1000 population)**	6.80		…		…		2008 est	1
8	**Rate of natural increase of population (% per annum)**	2.17 [a]		…		…		2008 est	1
9	**Life expectancy (years)**								
	- at birth	…		67.30		73.00		2008 est	1
	- Healthy Life Expectancy (HALE) at age 60	…		11.90		12.00		2002	4
10	**Total fertility rate (women aged 15–49 years)**	3.70						2008	5
	Socioeconomic indicators								
11	**Adult literacy rate (%)**	99.00		98.80		99.00		1995-2005	6
12	**Per capita GDP at current market prices (US$)**	2319.00						2006 est	1
13	**Rate of growth of per capita GDP (%)**	…							
14	**Human development index**	0.77						2007	7
	Environmental indicators	Total		Urban		Rural			
15	**Health care waste generation (metric tons per year)**	…		…		…			
	Communicable and noncommunicable diseases	Number of new cases				Number of deaths			
16	**Selected communicable diseases**								
	Hepatitis viral								
	- Type A	2	0	2	0	0	0	2002	8
	- Type B	5	4	1	5	3	2	2002	8
	- Type C	0	0	0	0	0	0	2002	8
	- Type E	…	…	…	…	…	…		
	- Unspecified	0	0	0	0	0	0	2008	5
	Cholera	0	0	0	0	0	0	2008	5
	Dengue/DHF	273	…	…	…	…	…	2009	9
	Encephalitis	0	0	0	0	0	0	2008	5
	Gonorrhoea	20	…	…	0	0	0	2008	5
	Leprosy	0	0	0	…	…	…	2009	9
	Malaria	0	0	0	0	0	0	2008	5
	Plague	0	0	0	0	0	0	2008	5
	Syphilis	0	0	0	0	0	0	2008	5
	Typhoid fever	4	…	…	0	0	0	2008	5
17	**Acute respiratory infections**	…	…	…	…	…	…		
	- Among children under 5 years	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	13	9	4	0	0	0	2008	5, 9
	- New pulmonary tuberculosis (smear-positive)	11	8	3	0	0	0	2008	5, 9
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	1	0	1	2008	5
	- Cervix			...			1	2008	5
	- Leukaemia	...	...	...	0	0	0	2008	5
	- Lip, oral cavity and pharynx	...	...	...	6	4	2	2008	5
	- Liver	...	...	...	0	0	0	2008	5
	- Oesophagus	...	...	...	2	0	2	2008	5
	- Stomach	...	...	...	7	4	3	2008	5
	- Trachea, bronchus, and lung	...	...	...	4	3	1	2008	5
21	**Circulatory**								
	All circulatory system diseases	...	...	...	144	94	50	2008	5
	- Acute myocardial infarction	...	..	...	26	19	7	2008	5
	- Cerebrovascular diseases	...	...	...	2	1	1	2008	5
	- Hypertension	...	...	...	2	0	2	2008	5
	- Ischaemic heart disease	...	...	...	8	6	2	2008	5
	- Rheumatic fever and rheumatic heart diseases	...	...	...	0	0	0	2008	5
22	**Diabetes mellitus**	...	...	...	11	6	5	2008	5
23	**Mental disorders**	...	...	...	0	0	0	2008	5
24	**Injuries**								
	All types	42	37	5	10	8	2	2008	5
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	0	0	0	2008	5
	- Occupational injuries	...	...	...	0	0	0	2008	5
	- Road traffic accidents	42	37	5	0	0	0	2008	5
	- Suicide	...	...	...	0	0	0	2008	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Factor Influencing health status and contact with health services	2367	...	...	2304.32 [a]	...	...	2008	5
	2. Pregnancy, childbirth and the puerperium	2260	...	...	2200.16 [a]	...	...	2008	5
	3. Certain infectious and parasitic diseases	622	...	...	605.53 [a]	...	...	2008	5
	4. Disease of the respiratory system	550	...	...	535.44 [a]	...	...	2008	5
	5. Injury, poisoning and certain other consequences of external causes	351	...	...	341.70 [a]	...	...	2008	5
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	144	94	50	140.18	91.51	48.67	2008	5
	2. Neoplasms	70	37	33	68.14	36.02	32.12	2008	5
	3. Symptoms, signs and ill-defined conditions	42	24	18	40.89	23.36	17.52	2008	5
	4. Diseases of the respiratory system	59	26	33	57.44	25.31	32.12	2008	5
	5. Certain infectious and parasitic disease	39	21	18	37.97	20.44	17.52	2008	5
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					27.70		2008	5
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					98.00		2009	9
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	10.20		...		...		2008	5
31	**Percentage of newborn infants weighing less than 2500 g at birth**	3.00		...		...		2008	5
32	**Immunization coverage for infants (%)**								
	- BCG	99.00		...		...		2009	9
	- DTP3	99.00		...		...		2009	9
	- Hepatitis B III	99.00		...		...		2009	9
	- MCV2	98.00		...		...		2009	9
	- POL3	99.00		...		...		2008	9
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	9
	- Diphtheria	0	0	0	...	...	...	2009	9
	- Measles	0	0	0	...	...	...	2009	9
	- Mumps	0	0	0	...	...	...	2009	9
	- Neonatal tetanus	0	0	0	...	...	...	2009	9
	- Pertussis (whooping cough)	5	...	...	...	...	...	2009	9
	- Poliomyelitis	0	0	0	...	...	...	2009	9
	- Rubella	0	0	0	...	...	...	2009	9
	- Total Tetanus	0	0	0	...	...	...	2009	9
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	196	2008	5
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	3	70	2008	5
		- Primary health care centres	14	...	2008	5
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			11.34 [a]	2008p	10
	- total expenditure on health as % of GDP			4.00	2008p	10
	- per capita total expenditure on health (in US$)			109.04 [a]	2008p	10
	Government expenditure on health					
	- amount (in million US$)			7.73 [a]	2008p	10
	- general government expenditure on health as % of total expenditure on health			68.70	2008p	10
	- general government expenditure on health as % of total general government expenditure			8.50	2008p	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			6.67 [a]	2008p	10
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			31.30	2008p	10
	- out-of-pocket expenditure on health as % of total expenditure on health			27.27	2008p	10
	Exchange rate in US$ of local currency is: 1 US$ =			1.97	2008p	10
38	**Health insurance coverage as % of total population**			12	FY 2002-2003	11

	INDICATORS		DATA							Year	Source
39	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	57 [b]	35	22	...	...	...	...	2008	5
		- Ratio per 1000 population	0.55 [a]	0.34 [a]	0.21 [a]	...	...	...	...	2008	5
	Dentists	- Number	11 [c]	8	3	...	...	...	...	2008	5
		- Ratio per 1000 population	0.11 [a]	0.07 [a]	0.03 [a]	...	...	...	...	2008	5
	Pharmacists	- Number	4	1	3	...	...	...	...	2008	5
		- Ratio per 1000 population	0.04 [a]	0.01 [a]	0.03 [a]	...	...	...	...	2008	5
	Nurses	- Number	345	31	314	...	...	...	...	2008	5
		- Ratio per 1000 population	3.36 [a]	0.30 [a]	3.03 [a]	...	...	...	...	2008	5
	Midwives	- Number	19	0	19	...	...	...	...	2008	5
		- Ratio per 1000 population	0.18 [a]	0.00 [a]	0.18 [a]	...	...	...	...	2008	5
	Paramedical staff	- Number	52	29	23	...	...	...	...	2008	5
		- Ratio per 1000 population	0.50 [a]	0.28 [a]	0.22 [a]	...	...	...	...	2008	5
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	31	...	...	...	...	...	...	2008	5
		Midwives	0	...	...	...	...	...	...	2008	5
		Paramedical staff	0	...	...	...	...	...	...	2008	5
		Community health workers	0	...	...	...	...	...	...	2008	5
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	16.40	...	...	2008	5
44	Under-five mortality rate (per 1000 live births)	26.00	...	...	2008	5
45	Proportion of 1 year-old children immunised against measles	99.00	...	...	2008	9
46	Maternal mortality ratio (per 100 000 live births)	76.10			2008	5
47	Proportion of births attended by skilled health personnel	99.90			2008	5
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.90			2008	5
	- Percentage of deliveries in health facilities (as % of total deliveries)	98.00			2008	5
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	4.10			2000-03	11
50	Antenatal care coverage - At least one visit	> 98.00			2008	5
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	22.00	...	...	2008	9
60	Tuberculosis death rate per 100 000 population	3.00	...	...	2008	9
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	88.00	...	...	2008	9
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	93.00	...	...	2007	9
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2008	5, 12
64	Proportion of population using an improved sanitation facility	96.00	98.00	96.00	2008	5, 12
65	Proportion of population with access to affordable essential drugs on a sustainable basis	>95.00	...	...	2008	5

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to government doctors
c	Figure refers to dental officers and dental therapists

Sources:	
1	2008 Pocket Statistical Summary (PSS) Secretariat of the Pacific Community, Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/
2	Population 2000-2015 by 1 and 5 year age groups, February 2010. Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme. [http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158]
3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision. [http://esa.un.org/wup2009/unup/] Accessed on June 2010.
4	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
5	Report of the Minister of Health for the year 2008. Tonga Ministry of Health.
6	2007/2008 Human Development Report. United Nations Development Programme [http://hdrstats.undp.org/countries/data_sheets/cty_ds_TON.html]
7	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme. [http://hdr.undp.org/en/reports/global/hdr2009/]
8	Information Unit, Ministry of Health, Tonga.
9	WHO Regional Office for the Western Pacific, data received from the technical units.
10	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
11	Information provided by Country Liaison Officer for Tonga, 10 May 2005.
12	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

TUVALU

1. CONTEXT

1.1 Demographics

Tuvalu comprises nine coral islands and is, by population, the smallest member of the United Nations. The population, however, has more than doubled since 1980 and was estimated to have reached 11 093 in 2009. About 32.3% are in the 0-14 year age group, 62.4% in the 15-64 year age group and 5.4% are 65 years or older. The population growth rate is estimated at 0.3% (2008), and the crude birth rate at 21.8 per 1000 population.

Life expectancy at birth was 63.6 years for both sexes in 2002: 61.7 years for males and 65.1 years for female.

The Tuvaluan language is spoken by virtually everyone, while a language very similar to Gilbertese is spoken on Nui. English is also an official language, but is not spoken in daily use. Parliamentary and official functions are conducted in Tuvaluan.

1.2 Political situation

The islands came under the United Kingdom's sphere of influence in the late 19th century. In 1974, the Ellice Islanders voted for separate British dependency status as Tuvalu, separating from the Gilbert Islands, which became Kiribati upon independence. Tuvalu became fully independent within the Commonwealth in 1978.

Tuvalu is a constitutional monarchy and Commonwealth realm, with Queen Elizabeth II of the United Kingdom of Great Britain and Northern Ireland recognized as Queen of Tuvalu. She is represented in Tuvalu by a Governor General, who is appointed upon the advice of the Prime Minister. The local unicameral parliament, or *Fale I Fono*, has 15 members and is elected every four years. The members elect a Prime Minister as head of government. The Cabinet is appointed by the Governor General on the advice of the Prime Minister. Some elders also exercise informal authority on a local level. There are no formal political parties and election campaigns are largely on the basis of personal/family ties and reputation.

The highest court in Tuvalu is the High Court. There are also eight island courts with limited jurisdiction. Rulings from the High Court can be appealed to the Court of Appeal in Fiji.

Tuvalu has no regular military force and spends no money on defence. The police force includes the Maritime Surveillance Unit for search and rescue missions and surveillance operations. The police have a Pacific-class patrol boat (*Te Matail*), provided by Australia under the Pacific Patrol Boat Program, for use in maritime surveillance and fishery patrol.

1.3 Socioeconomic situation

Tuvalu has very limited natural resources, its main income deriving from foreign aid, subsistence farming, and fishing. Government revenues largely come from the sale of stamps, coins and fishing licenses and from worker remittances. Substantial income is received annually from an international trust fund established in 1987 by Australia, New Zealand and the United Kingdom and also supported by Japan and the Republic of Korea. This fund grew from an initial US$ 17 million to over US$ 35 million in 1999. The United States Government is also a major revenue source for Tuvalu, with 1999 payments from a 1988 treaty on fisheries valued at about US$ 9 million, a total that is expected to rise annually. In an effort to reduce the country's dependence on foreign aid, the Government is pursuing public sector reforms, including privatization of some government functions and personnel cuts of up to 7%.

In 1998, Tuvalu began deriving revenue from use of its area code for '900' lines and from the sale of its '.tv' Internet domain name. In 2000, Tuvalu negotiated a contract leasing its Internet domain name '.tv'

for US$ 50 million in royalties. However, the Canadian entrepreneur who negotiated the deal was unable to raise the US$ 50 million in the contracted time period, and the contract eventually fell into other hands.

Due to its remoteness, tourism does not provide much income, with only a handful of tourists visiting the country annually. Almost all visitors are government officials, aid workers, officials of nongovernmental organizations or consultants.

1.4 Risks, vulnerabilities and hazards

In terms of land area, Tuvalu is the fourth smallest country in the world. The land is very low-lying, with five narrow coral atolls and four islands. The highest elevation is five metres (16 ft) above sea level. Because of this low elevation, the islands that make up the nation may be threatened by any future rise in sea level due to global warming. Under such circumstances, the population may evacuate to New Zealand, Niue or the Fijian island of Kioa.

Tuvalu has very poor land and the soil is hardly usable for agriculture. There is almost no reliable supply of drinking-water.

The country has westerly gales and heavy rain from November to March and tropical temperatures moderated by easterly winds from March to November.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Noncommunicable diseases (NCDs) are the main cause of morbidity and mortality in Tuvalu, and the Ministry of Health is designing an NCD plan to specifically focus on four main areas: food and nutrition; physical health; tobacco; and alcohol. The plan will provide a road map for the Department of Public Health to combat NCDs in the future.

Tuberculosis, previously thought to be under control, is now increasing again, with an average of 15 new sputum-positive cases every year. The increase is most likely due to improved sputum testing facilities and diagnostics. A full-time programme officer will be recruited with Global Fund support to work with the assigned medical officer, thus allowing more time for clinical care, contact tracing, patient counselling, inpatient care and DOTS implementation.

A filariasis mass drug administration programme is in place. Vector control is an ongoing activity.

As in other Pacific island countries, diseases like dengue and typhoid fever occur from time to time. For diagnosis of many diseases, specimens need to be shipped to overseas laboratories and this limits the sensitivity and timeliness of surveillance. There may be an occupational risk of leptospirosis among pig farmers, although this disease has not been reported on the island for several years.

There is a limited supply of safe water. Groundwater is brackish and is not generally considered safe for consumption. In 2009, all households on Funafuti were provided with large rain-water tanks through a project sponsored by the European Union, and this is expected to greatly reduce the incidence of waterborne disease.

2.2 Outbreaks of communicable diseases

In 2009, pandemic influenza A(H1N1) went through Tuvalu. There were 23 laboratory-confirmed cases but many more were likely infected. No deaths due to H1N1 were reported. No other outbreaks of infectious disease have been reported in recent years, although dengue outbreaks are thought to occur every few years.

2.3 Leading causes of mortality and morbidity

Noncommunicable diseases remain the leading causes of morbidity and mortality, with cardiac diseases accounting for the majority of deaths. Diabetes mellitus, hypertension, and cancers (all types) are among the others.

2.4 Maternal, child and infant diseases

According to the Tuvalu Demographic Health Survey (DHS), conducted in 2007, the infant mortality rate in 2003-2007 was high, at 31 per 1000 live births. The total fertility rate was estimated at 3.9 in 2007.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

No available information.

3.2 Organization of health services and delivery systems

Health services are working to meet the new demands of changing lifestyles (especially regarding diet) among the population.

There is one hospital, located on the main island of Funafuti. The outer islands have clinics staffed by trained nurses.

3.3 Health policy, planning and regulatory framework

The year 2008 marked the beginning of the health reform process, with the development of a new health master plan to guide the work of the Ministry of Health over a 10-year period stretching from 2009 to 2019. The Strategic Health Plan 2009-2019, completed in early 2009, provides the Ministry of Health with the renewed aim to focus on primary health care and disease prevention.

Development of health infrastructure in the outer islands was another successful project that the Ministry of Health started to execute in 2008. The Ministry secured funding through the Japan Grassroots Projects to build a new medical centre for Vaitupu Island, to be followed by Niutao Island Medical Centre and Nui Medical Centre in 2009. The same project will also cover new medical centres for the remaining outer islands. The new centres will improve the delivery of health services to the outer islands, with better facilities for inpatient care. In Funafuti, the renovation of the Reproductive Health Clinic to house the integrated programmes for Reproductive Health, Maternal Child Health, HIV and STI, TB and Adolescent Health Development was completed in early 2009.

3.4 Health care financing

As in other developing countries, health care financing remains a problem. In 2008, the Ministry of Health secured funding from the Global Fund for tuberculosis and HIV. The distribution supported the recruitment of two full-time HIV and STI programme officers and the expansion of the HIV and STI programmes.

3.5 Human resources for health

Human resources are a major weak spot in the health care system. The workforce, comprising seven physicians and approximately 54 trained nurses, provides for limited surge capacity and is very sensitive to 'brain drain' to countries such as Australia and New Zealand.

The Ministry of Health received another medical graduate from the Fiji School of Medicine to join the local team of doctors in mid-2008, and earlier that year, the Ministry sent out two of its medical officers for specialized training at the Colonial War Memorial Hospital in Fiji in the areas of obstetrics and

anaesthesia. The recruitment of medical specialists from Cuba allowed for local medical officers to pursue specialized training in Fiji.

The introduction of the Cuban Medical Programme in 2008 was a result of an agreement between the Government of Tuvalu and the Government of Cuba to assist Tuvalu with its shortages in medical specialists working at the main hospital, Princess Margaret Hospital. One Medical Officer arrived from Cuba in June 2008 and two more in 2009.

In 2008, two mobile medical teams from Taiwan (China) visited Tuvalu to offer services in general surgery, urology, obstetrics and gynaecology, ENT, cardiology, anaesthesia and orthopaedics. In the same year, the Australian Pacific Islands Project (PIP) provided eye surgery, ENT and biomedical services in the country.

3.6 Partnerships

The Ministry of Health continues to work closely with regional and international donor agencies and partners, who support public health programmes and activities in the country through funding mechanisms and the provision of technical assistance at various levels throughout the year.

3.7 Challenges to health system strengthening

Human resources are the main challenge to health services in Tuvalu. There needs to be an ongoing effort to strengthen the knowledge and expertise of the existing staff.

4. PROGRESS TOWARDS THE HEALTH MDGs

According to the Tuvalu Millennium Development Goals Report 2006, the country's progress is as follows:

Goal 4: Reduce child mortality

MDG 4 will potentially be achieved with improvements in facilities and training of staff. The under-five mortality rate decreased significantly from 59 to 32 per 100 live births between 1991 and 2003, and the infant mortality rate from 41 to 21 per 1000 live births. That significant progress can be attributed to training courses and programmes provided for nurses, more and improved health facilities and the ongoing programmes for regular antenatal and postnatal check-ups and immunization of children. As most of the ongoing activities for child health are partially financed by donor agencies, one major challenge in achieving the 2015 target for this goal is the sustainability of funding.

Goal 5: Improve maternal health

MDG 5 will probably be achieved. Maternal mortality is already very low in Tuvalu, with only one reported maternal death in the last 10 years. However, that single maternal death would yield a maternal mortality ratio of 200 per 100 000 live births, given the very small number of annual births. Hence, monitoring of the actual number of maternal deaths would be more appropriate in Tuvalu. The main challenges in achieving the goal for maternal health are the provision of emergency and obstetric care for complicated births, and identifying potential problems early during pregnancy, particularly among mothers in the outer islands.

Goal 6: Combat HIV/AIDS, malaria and other diseases

MDG 6 will be partially achieved. The HIV/AIDS goal is unlikely to be achieved but, with sufficient donor support, the goal to halt and reverse the trend in other diseases, such as tuberculosis, outbreak-prone diseases, filariasis and noncommunicable diseases, is probably achievable. Malaria is not endemic to Tuvalu.

Goal 7: Ensure environmental sustainability

MDG 7 will probably be achieved with support from donors, particularly for infrastructure projects to improve drinking-water sources and sanitation facilities. Another challenge will be the ongoing need for

community education and awareness programmes on the importance of safe water and sanitation and community management of water resources, as well as suitable methods for the treatment and disposal of sewage.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : Central Statistics Department
Operator : Government of Tuvalu
Web address : http://www.spc.int/prism/country/tv/stats/

Title 2 : Secretariat of the Pacific Community – *Prism.*
Web address : http://www.spc.int/prism/country/tv/tv_index.html

Title 3 : *2008 Pocket statistical summary (PSS)*
Operator : Secretariat of the Pacific Community, Statistics and Demography
Web address : http://www.spc.int/sdp/

Title 4 : Household Income and Expenditure Survey (HIES) 2004/2005
Operator : Government of Tuvalu Central Statistics Division
Web address : http://www.spc.int/prism/Country/TV/Stats/Publictn/Tuvalu%20HIES%20Report.pdf

Title 5 : Annual Report: Health, 2008
Operator : Ministry Of Health, Government Of Tuvalu

Title 6 : Tuvalu Millennium Development Goals Report 2006
Operator : Government Of Tuvalu
Web address : http://www.spc.int/prism/country/tv/stats/mdg/TV_mdgrpt.pdf

Title 7 : Tuvalu Demographic and Health Survey 2007
Web address : http://www.spc.int/sdp/index.php?option=com_docman&task=cat_view&gid=46&Itemid=42

6. ADDRESSES

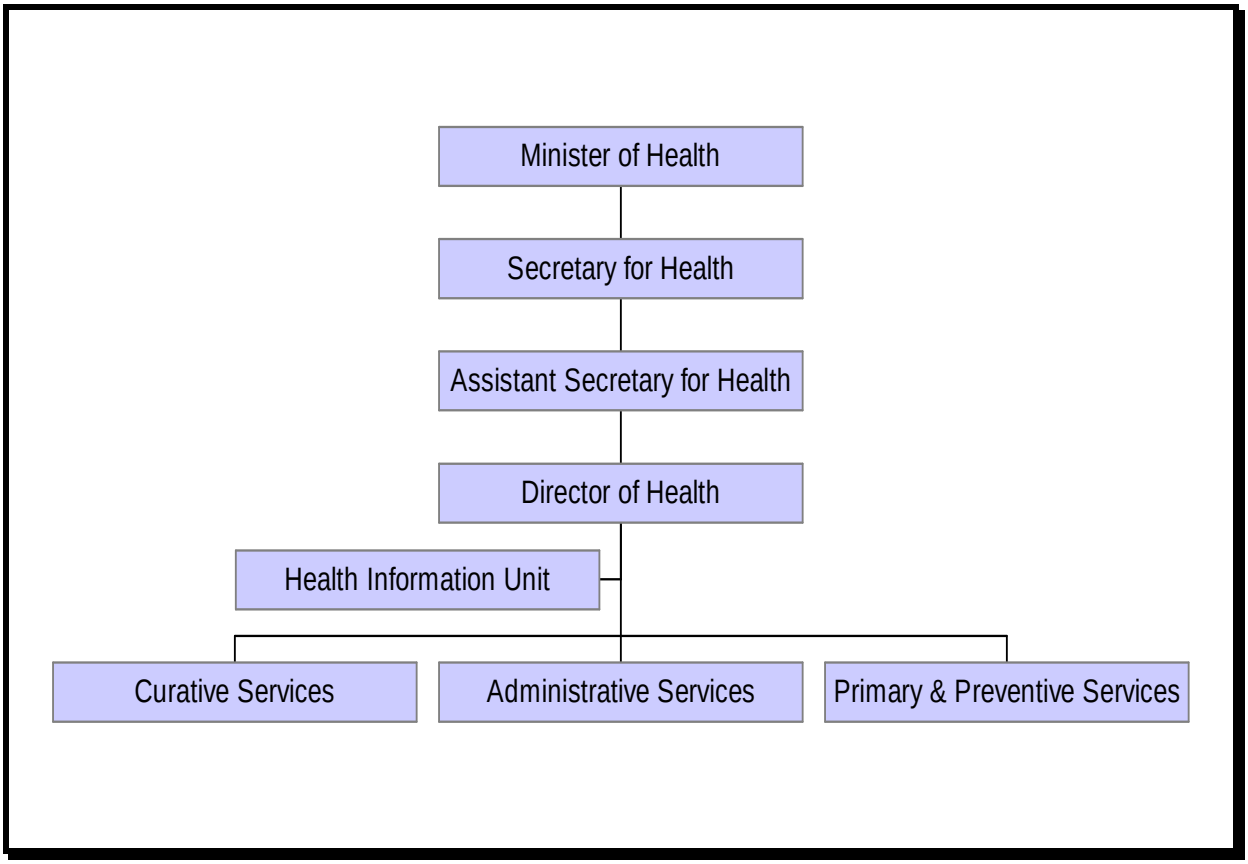
MINISTRY OF HEALTH

Office Address : Vaiaku, Funafuti, Tuvalu
Postal Address : P.O. Box 36, Funafuti, Tuvalu
Official Email Address : soh@tuvalu.tv
Telephone : Health Division: (688) 20403
Fax : Health Division: (688) 20832
Office Hours : 0800-1600

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address : Level 4, Provident Plaza One,
Downtown Boulevard,
33 Ellery Street, Suva
Postal Address : P O Box 113, Suva, Fiji
Official Email Address : who@sp.wpro.who.int
Telephone : (679) 3234 100
Fax : (679) 3234 166; 3234 177
Office Hours : 0800 – 1700
Website : http://www.wpro.who.int/southpacific

7. ORGANIZATIONAL CHART: Ministry of Health



TUVALU — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.03			2008	1
2	Estimated population ('000s)	11.09	5.52	5.58	2009 est	2
3	Annual population growth rate (%)	0.30	...	...	2008	1
4	Percentage of population					
	- 0–4 years	10.91 [a]	11.30 [a]	10.52 [a]	2009 est	2
	- 5–14 years	21.37 [a]	22.21 [a]	20.53 [a]	2009 est	2
	- 65 years and above	5.36 [a]	4.41 [a]	6.31 [a]	2009 est	2
5	Urban population (%)	49.90	...	...	2009 est	3
6	Crude birth rate (per 1000 population)	21.80	...	...	2008 est	1
7	Crude death rate (per 1000 population)	9.50	...	...	2008 est	1
8	Rate of natural increase of population (% per annum)	1.23 [a]	...	...	2008 est	1
9	Life expectancy (years)					
	- at birth	63.60	61.70	65.10	1997-2002	4
	- Healthy Life Expectancy (HALE) at age 60	...	9.70	10.30	2002	5
10	Total fertility rate (women aged 15–49 years)	3.90			2007	6
	Socioeconomic indicators					
11	Adult literacy rate (%)	...	92.70	97.10 [b]	2007	6
12	Per capita GDP at current market prices (US$)	1 139.32			2002	4
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	0	0	0	0	0	0	2001	7
	- Type B	0	0	0	0	0	0	2001	7
	- Type C	0	0	0	0	0	0	2001	7
	- Type E	...	...	...	...	...	...		
	- Unspecified	23	...	...	0	0	0	2001	7
	Cholera	0	0	0	0	0	0	2005	7
	Dengue/DHF	0	0	0	0	0	0	2009	7
	Encephalitis	0	0	0	0	0	0	2005	7
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	0	0	0	...	...	...	2009	7
	Malaria	...	...	...	...	...	...		
	Plague	0	0	0	0	0	0	2001	7
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	0	0	0	0	0	0	2005	7
17	Acute respiratory infections	2950	...	...	...	...	...	2003	8
	- Among children under 5 years	12 [c]	6 [c]	6 [c]	...	...	...	2007	9

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	967	...	...	1	...	...	2002	8
	- Among children under 5 years	42 [d]	16 [d]	26 [d]	...	...	...	2007	6
19	**Tuberculosis**								
	- All forms	17	...	...	...	...	...	2008	7
	- New pulmonary tuberculosis (smear-positive)	9	...	...	...	...	...	2008	7
20	**Cancers**								
	All cancers (malignant neoplasms only)	1	...	...	0	0	0	2004	8
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	344	...	...	...	...	...	2002	8
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	281	...	...	...	...	...	2002	8
23	**Mental disorders**	...	...	...	...	...	...		
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	32	...	...	...	...	...	2002	8
	- Road traffic accidents	1	...	...	0	0	0	2001	9
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Septic sores	1667	...	...	17 274.61 [a]	...	...	2007	4
	2. Headache	1504	...	...	15 585.49 [a]	...	...	2007	4
	3. Acute respiratory infection	1298	...	...	13 450.78 [a]	...	...	2007	4
	4. Body ache	1186	...	...	12 290.16 [a]	...	...	2007	4
	5. Cough	1067	...	...	11 056.99 [a]	...	...	2007	4
	6. Abdominal pain	992	...	...	10 279.79 [a]	...	...	2007	4
	7. Ringworm	732	...	...	7585.49 [a]	...	...	2007	4
	8. Conjunctivitis	553	...	...	5730.57 [a]	...	...	2007	4
	9. Tooth decay	536	...	...	5554.40 [a]	...	...	2007	4
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Senility	14	...	...	145.08 [a]	...	...	2007	4
	2. Cardiac arrest	8	...	...	82.90 [a]	...	...	2007	4
	3. Diabetes	5	...	...	51.81 [a]	...	...	2007	4
	4. Pneumonia	4	...	...	41.45 [a]	...	...	2007	4
	5. Hypertension	3	...	...	31.09 [a]	...	...	2007	4
	6. Congestive heart failure	3	...	...	31.09 [a]	...	...	2007	4
	7. Cerebrovascular accident	2	...	...	20.73 [a]	...	...	2007	4
	8. Stillbirth	2	...	...	20.73 [a]	...	...	2007	4
	9. Pulmonary tuberculosis	2	...	...	20.73 [a]	...	...	2007	4
	10.Tuberculosis & others	2	...	...	20.73 [a]	...	...	2007	4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					22.40		2007	6
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2009	7
29	**Percentage of pregnant women with anaemia**					28.80		2007	6
30	**Neonatal mortality rate (per 1000 live births)**	29.00		...		...		2003-07	6
31	**Percentage of newborn infants weighing less than 2500 g at birth**	6.10		...		...		2007	6
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2009	7
	- DTP3	5.00		...		...		2009	7
	- Hepatitis B III	8.00		...		...		2009	7
	- MCV2	84.00		...		...		2009	7
	- POL3	85.00		...		...		2009	7
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2009	7
	- Diphtheria	0	0	0	...	...	...	2009	7
	- Measles	0	0	0	...	...	...	2009	7
	- Mumps	0	0	0	...	...	...	2009	7
	- Neonatal tetanus	0	0	0	...	...	...	2009	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2009	7
	- Poliomyelitis	0	0	0	...	...	...	2009	7
	- Rubella	0	0	0	...	...	...	2009	7
	- Total Tetanus	0	0	0	...	...	...	2009	7
	Health facilities								
35	**Facilities with HIV testing and counseling services**						...		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	1	40	2001	9
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	8	16	2001	9
	Private health facilities	- Hospitals	0	0	2001	9
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			2.87 [a]	2008p	10
	- total expenditure on health as % of GDP			9.00	2008p	10
	- per capita total expenditure on health (in US$)			295.37 [a]	2008p	10
	Government expenditure on health					
	- amount (in million US$)			2.87 [a]	2008p	10
	- general government expenditure on health as % of total expenditure on health			99.80	2008p	10
	- general government expenditure on health as % of total general government expenditure			14.80	2008p	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			2.30 [a]	2008p	10
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			0.20	2008p	10
	- out-of-pocket expenditure on health as % of total expenditure on health			0.20 [a]	2008p	10
	Exchange rate in US$ of local currency is: 1 US$ =			1.19	2008p	10
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	10	6	4	...	...	...	...	2008	11
		- Ratio per 1000 population	1.03	0.62	0.41	...	...	...	...	2008	11
	Dentists	- Number	2	...	...	...	...	...	...	2008	12
		- Ratio per 1000 population	0.21	...	...	...	...	...	...	2008	12
	Pharmacists	- Number	1	...	...	...	...	...	...	2008	12
		- Ratio per 1000 population	0.10	...	...	...	...	...	...	2008	12
	Nurses	- Number	54 [e]	...	...	...	...	...	...	2008	12
		- Ratio per 1000 population	5.55	...	...	...	...	...	...	2008	12
	Midwives	- Number	10	...	...	...	...	...	...	2008	12
		- Ratio per 1000 population	1.03	...	...	...	...	...	...	2008	12
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	0	0	0	0	0	0	0	2008	12
		- Ratio per 1000 population	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2008	12
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	1.60	...	...	2007	6
43	Infant mortality rate (per 1000 live births)	31.00	...	...	2003-07	6
44	Under-five mortality rate (per 1000 live births)	36.00	...	...	2003-07	6
45	Proportion of 1 year-old children immunised against measles	90.00	...	...	2009	7
46	Maternal mortality ratio (per 100 000 live births)	0.00 [f]			2003	13
47	Proportion of births attended by skilled health personnel	97.90			2007	6
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	93.00			2007	6
48	Contraceptive prevalence rate	32.00	...	...	2002	12
49	Adolescent birth rate	8.00			2007	14
50	Antenatal care coverage - At least one visit	77.20			2007	6
	- At least four visits	67.30			2007	6
51	Unmet need for family planning	24.20	...	...	2007	6
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	44.00	...	...	2008	7
60	Tuberculosis death rate per 100 000 population	11.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	114.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	75.00	...	...	2007	7
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	97.00	98.00	97.00	2008	14
64	Proportion of population using an improved sanitation facility	84.00	88.00	81.00	2008	14
65	Proportion of population with access to affordable essential drugs on a sustainable basis	100.00	...	...	2008	11

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research (IER) Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to women aged 15-49 years old at the time of the DHS survey.
c	Computed by IER of WHO-WPRO based on the given percentage of under-five years old with symptoms of ARI - 2.80 (total), 2.80 (males), and 2.70 (females).
d	Computed by IER of WHO-WPRO based on the given percentage of under-five years old with diarrhoea in the two weeks preceeding the survey - 9.70 (total), 7.00 (males), and 12.5 (females).
e	Figure refers to bachelor and diploma graduate nurses
f	There is only one maternal death in the last 5 years

Sources:	
1	2008 Pocket Statistical Summary (PSS) Secretariat of the Pacific Community, Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/
2	Population 2000-2015 by 1 and 5 year age groups, February 2010. Secretariat of the Pacific Community (SPC) - Statistics and Demography (SDP) Programme. [http://www.spc.int/sdp/index.php?option=com_docman&task=doc_details&gid=158]
3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision [http://esa.un.org/wup2009/unup/]
4	Tuvalu Central Statistics Division (http://www.spc.int/prism).
5	World health report 2004. Changing history. Geneva, World Health Organization, 2004.The world health report 2004: changing history. Geneva, World Health Organization, 2004.
6	Tuvalu Demographic and Health Survey 2007 [http://www.spc.int/sdp/index.php?option=com_docman&task=cat_view&gid=46&Itemid=42]
7	WHO Regional Office for the Western Pacific, data received from technical units.
8	PMH health report 2002. Ministry of Health.
9	Information furnished by the Health Department, Government of Tuvalu, 18 March 2003.
10	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
11	Annual Report: Health, 2008, Ministry Of Health, Government Of Tuvalu
12	University of New South Wales. Mapping of human resources for health, Pacific Island Countries, April 2009
13	Tuvalu Millennium Development Goals Report 2006. Government of Tuvalu, and United Nations Development Programme, 2006.
14	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

VANUATU

1. CONTEXT

1.1 Demographics

The 2009 National Census of Population and Housing reported the population of Vanuatu to be 234 023, with a growth rate of 2.3% per annum. Life expectancy at birth is 68 for males and 70 for females, and 3.5% of the population is over 65 years of age.

The 2008 estimated crude birth rate was 31.1 per 1000 population and the estimated crude death rate was 5.5. The infant mortality rate was 27 per 1000 live births in 2008.

According to the last national census, the urban population accounted for 24.4% of the total population in 2009. The urban migration is increasing at an alarming rate, particularly from rural islands to Port Vila and Luganville, as people sought employment or education. Most of the population are employed in subsistence agriculture, the rest being in government departments, private companies and other employment sectors.

1.2 Political situation

Vanuatu has a republican political system headed by a President who has primarily ceremonial powers. The President is elected for a five-year term by a two-thirds majority in the Electoral College, consisting of Members of Parliament and the presidents of Regional Councils. The Prime Minister, who is the head of the Government, is elected by a majority vote by a three-fourths quorum of Parliament. The Prime Minister appoints the Council of Ministers, whose number may not exceed one-fourth of parliamentary representatives. The Prime Minister and the Council of Ministers constitute the Executive Government. The Parliament has 52 members who are elected every four years by popular vote. The legal system of the country is based on English common law.

Vanuatu has had a relatively prolonged period of political stability. Prime Minister Edward Nipake Natapei has been in office since September 2008. Moses Kahu has been Minister of Health since July 2009.

1.3 Socioeconomic situation

The economy is based primarily on subsistence or small-scale agriculture, which provides a living for 76% of the population. Fishing, offshore financial services and tourism are other mainstays of the economy. A small light industry sector caters to the local market. Economic development is hindered by dependence on relatively few commodity exports, vulnerability to natural disasters and the long distances from main markets.

The average gross domestic product (GDP) growth rate is 3.5% in 2007. As part of plans to improve the economic status of the country, the Government has introduced a priority action agenda: a long-term investment plan to expand the economy and improve the living standards of the people. The agenda relies mainly on foreign aid for investment, with Australia, China, the European Union, Japan, Malaysia and New Zealand being the main donors.

The traditional economic staples, such as copra, cocoa and kava, are not likely to sustain economic growth into the future. The Government currently subsidizes copra and demand is not increasing to meet production. Kava (*Rhizoma Piperis Methystici*) has been subjected to investigations into its possible detrimental effect on health, specifically liver toxicity. Cocoa could be an important export if sufficient quantities could be produced. The economy is moving towards complete dependence on the tourism industry, which will not be sustainable for economic development. Very few new jobs are created annually in all sectors of the economy, especially for returned trainees and graduates.

1.4 Risks, vulnerabilities and hazards

Vanuatu is highly vulnerable to natural disasters as the country is in an earthquake zone. Volcanic eruptions, earthquakes, tsunamis and cyclones are the main culprits damaging the country. Most of the islands of Vanuatu are mountainous and of volcanic origin, and have tropical or subtropical climates. There are several active volcanoes, including several under water. Volcanic activity is common, with the ever-present danger of a major eruption.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Malaria is the major public health problem in the country, other communicable disease concerns being tuberculosis; sexually transmitted infections; acute respiratory tract infections, including pneumonia; diarrhoeal diseases; viral hepatitis; typhoid fever; and measles.

In 2008, the rapid diagnostic test for malaria was progressively introduced in all health facilities. Annual parasite incidence decreased from a baseline of 73.9 positive cases per 1000 inhabitants to 23.3 per 1000 in 2007. The annual parasitic incidence (API) was 13.3 per 1000 in 2009 as compared to 15.6 per 1000 in 2008. This remarkable decline has opened up the prospect of further reduction and eventual elimination of malaria. The Ministry of Health has introduced long-lasting, insecticide-treated nets, using funding from the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria, to combat malaria. The use of bednets now seems to be widespread, with 56% of children sleeping under nets in 2007. In 2009, LLN distribution has increased to 85%. Nevertheless, concentrated efforts are still needed to achieve the elimination target.

Tuberculosis (TB) is a national concern in both urban and rural settings. From 2000 to 2007, the average annual prevalence rate was six cases per 10 000 inhabitants, which corresponds to 120 TB cases a year. The Ministry of Health has implemented the directly observed treatment, short-course (DOTS) strategy. The case detection rate was 52% in 2008 and the treatment success rate was 93% in 2007. The programme is now concentrating on quality, consistency and sustainability issues.

Dengue fever, dengue haemorrhagic fever and filariasis are also very significant communicable diseases, and the Directorate of Public Health has implemented an extensive vectorborne-disease control programme over the past 20 years. The five rounds of mass drug administration against filariasis have been completed and the programme is now in an evaluation and surveillance phase.

Sexually transmitted infections (STI) have always been suspected of being highly prevalent, and data from health facilities indicate high prevalence and incidence rates. Azythromycin-based presumptive treatment for pregnant women has been ongoing at Vila Central Hospital since January 2001. In 2000, a survey of women visiting the antenatal clinic at the Vila Central Hospital showed incidence rates of 27.5% for *Trichomonal vaginalis* and 21.5% for *Chlamydia trachomatis*. However, the results of a cervical cancer screening project carried out in 2007 in 500 women in Efate found chlamydial infection in only 2% of the sample. On the other hand, the survey revealed that 9% of the sample had cervical pre-cancer or cancer lesions. A number of STI were also identified, such as syphilis in 4% of the sample.

Vanuatu officially reported its first HIV infection on 25 September 2002. There was considerable public interest in the case, giving impetus to health service improvements in the areas of counselling, blood safety and testing. There has been an increase in the number of people requesting HIV tests. Three confirmed HIV cases have been reported to date, with one AIDS-related death in 2006 and one in 2007.

Other major health concerns are acute respiratory infections (ARI) and diarrhoeal diseases, which contribute significantly to the morbidity burden. Children under two years of age account for about 50% of all hospital admissions for ARI. The introduction of the integrated management of childhood illness (IMCI) strategy and the support for integrated health services may reduce the burden on the health system caused by advanced cases of ARI and diarrhoeal disease.

Noncommunicable diseases, especially diabetes and hypertension, have come to the attention of the Ministry of Health in the last few years; in 2006, diabetes was the eighth leading cause of morbidity (inpatient care) and hypertension the 10th leading cause. Lifestyle changes and the growing urban population appear to be the main causes.

2.2 Outbreaks of communicable diseases

The country needs to develop a good disease surveillance system for early reporting of disease incidence in order to respond to outbreaks properly. During 2006, there was an outbreak of typhoid fever on the island of Tanna, which was successfully controlled by the Southern Health Care Directorate. There were also sporadic outbreaks of diarrhoeal diseases. In June 2008, a workshop on the International Health Regulations (IHR 2005) was organized and a national surveillance action plan has been developed. During the H1N1 outbreak, Vanuatu implemented a very comprehensive disease surveillance programme.

2.3 Leading causes of mortality and morbidity

The 10 leading causes of morbidity (inpatient) during 2006 were: acute respiratory infection, including pneumonia; cutaneous abscess; malaria; asthma; diarrhoea; injuries; food poisoning; diabetes; chronic obstructive pulmonary disease; and hypertension. The quality of diagnosis is often hampered by inadequate laboratory facilities for investigation and is mainly based on clinical judgement.

The leading causes of mortality reported in 2006 were: heart disease, cancer, asthma, stroke, pneumonia, liver diseases, neonatal death, diabetes mellitus, septicaemia, and hypertension. The mortality pattern over the years shows a clearly increasing trend towards noncommunicable diseases becoming the leading cause of mortality in the country.

2.4 Maternal, child and infant diseases

The Maternal and Child Health (MCH) Programme conducts clinics for antenatal mothers, child immunizations and family planning. In addition to care, it offers support, information and advice regarding parenting, child health and development, maternal health and well-being, child safety, immunization, breast-feeding, nutrition and birth spacing.

During 2006, the five hospitals in the country treated 168 maternity cases: 109 for abortions, 7 for eclampsia, 11 for haemorrhage, 33 for obstructed labour and 8 for sepsis. There were six maternal deaths reported during the year.

A total of 8567 births were reported for 2006: 2507 (29%) were delivered in hospitals; 5296 (61%) were delivered in health centres; 156 (2%) were delivered outside health facilities, assisted by skilled health personnel; and 608 (7%) were delivered by traditional birth attendants (TBA). Of the total births reported, 92.9% were attended by skilled health personnel, and 95.5% of the newborn babies weighed more than 2500g.

In 2009, 95% of pregnant women received a second dose of tetanus toxoid (TT2). Coverage for DTP3, POL3, BCG and hepatitis B III were 95% in 2009.

2.5 Burden of disease

With an annual population growth rate of 2.3%, the population is expected to continue to grow, with higher numbers of births every year. At the same time, life expectancy at birth is also increasing. This will lead to a double burden of disease: childhood diseases will continue in importance while, at the same time, diseases of the elderly will rise. Hypertension and its complications, heart disease, cancer, diabetes and injuries are the diseases that will place a serious burden on the health services in coming years.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The vision of the Ministry of Health is to protect and promote the health of all people living in Vanuatu. The Ministry's mission is to establish an integrated and decentralized health system to promote effective,

efficient and equitable development and services for the well-being of all people across the country, based on the following values:

> Customer focus: Customers are the first priority and concern in the provision of quality care and access, while respecting their geographic situation, economic circumstances, and social and cultural beliefs and values.
>
> Equity: In cultural, ethnic, religious and political diversity, and irrespective of disability, gender and age, fairness, respect and honesty must prevail in all dealings.
>
> Quality: High quality outcomes will be pursued using safe and affordable interventions, and science and technology will be applied to maximize benefits, while minimizing risks in all facets of activities.
>
> Integrity: The health system will strive for improvement and will commit to the highest ethical standards in all that is done in providing quality care in Vanuatu.

The objectives are:

- to restructure the Ministry to ensure effective, efficient and responsive service delivery;
- to strengthen health partnerships to ensure effective, efficient and coordinated service delivery;
- to plan and provide equitable service delivery for the people of Vanuatu;
- to further develop a range of public health programmes and initiatives, including programmes for tuberculosis, leprosy, malaria and HIV/AIDS;
- to provide and promote effective and efficient reproductive health services;
- to improve and strengthen the drug and medical supply system;
- to plan new primary health care facilities based on population numbers;
- to review and develop the patient referral system;
- to develop hospital service standards, policy and regulations to assure quality and customer-focused services;
- to strengthen the national health information system to support planning, management and effective service delivery to patients and customers; and
- to further develop human resource management and development to achieve a well-managed and well-trained workforce.

3.2 Organization of health services and delivery systems

The Ministry of Health is responsible for the provision of curative and preventive health services. The Ministry formulates national health policies, coordinates the development and planning of public health sectors, and regulates health standards.

The five public and one private hospital provide inpatient and specialist outpatient services. Of the five hospitals, there are two tertiary referral public hospitals located in both Port Vila and Luganville. Specialized tertiary services are not available in Vanuatu and are referred for overseas treatment, mainly to Australia and New Zealand.

There are 27 health centres, about four in each province. They provide outpatient and inpatient services (mostly prescription of drugs and deliveries), health promotion and preventive health services, such as immunization. Each of these health centres is staffed by a nurse practitioner, who is also the manager, a midwife and a general nurse. The health centres are the referral centres for dispensaries (referred to as PHC centres in the health databank) and aid posts. There are 97 active dispensaries providing primary care. All the islands have at least one dispensary, which is usually staffed by a general nurse.

Aid posts have been established in most villages and are funded by the community, while the Ministry of Health provides basic medicine and training for the staff. There are about 231 aid posts in the country, each staffed by a village health worker.

The support services for hospitals and primary health care programmes include pharmaceutical, blood-transfusion and laboratory services.

The five public hospitals in the country have a total of 390 beds and the health centres have lower number of beds. In 2006, 14 856 inpatients and 356 236 outpatients attended clinics. Thus, the bed occupancy rate was 2.1 per 1000 population and there were 1.5 outpatient visits per person.

3.3 Health policy, planning and regulatory framework

Based on an overarching primary health care philosophy, the policy objectives for the health sector are:

- to improve the health status of the people;
- to improve access to services;
- to improve the quality of the services delivered; and
- to make more effective use of resources

The strategies to achieve these objectives are as follows:

- Base health services delivery on a primary health care approach to ensure access to sustainable provincial services, including strong links with provincial governments.
- Improve the health status of the people by:
  - reducing illness and death in children under five years of age;
  - promoting birth spacing and reducing teenage pregnancies; and
  - reducing disability and deaths among productive adults.
- Improve access to services through:
  - adoption of the role-delineation tool to distribute resources more fairly based on community health needs;
  - implementation of mechanisms to evaluate tertiary services and provide guidance for their access both within Vanuatu and beyond;
  - development of an integrated primary health care strategy and public health care strategy for Vanuatu; and
  - giving a higher priority to improving transportation and communication to (1) improve access for patients, (2) reduce the isolation of health workers, and (3) improve and strengthen partnerships for and ownership of health programmes through the coordination of donors, NGOs, other sectors of Government, chiefs, churches, etc.
- Improve the quality of services delivered through:
  - implementation of a comprehensive hospital and health service quality and safety standards programme; and
  - recognition of the potential for a key role to be played by health professionals in providing leadership and ensuring there is continued skills-base development and retention in the workforce.
- Make more effective use of resources by:
  - improving the collection of data to enable monitoring of health status and support health planning and management; and
  - adopting only those health initiatives that are cost-effective and proven in the South Pacific, and continuing to roll out the planning process to include high-priority services and new programmes.

The Ministry of Health's Sector Strategy 2010-2016 contains strategies, targets and performance indicators to measure progress in the priority areas. Performance indicators to reflect overall progress in the sector include those on:

- infant and child mortality;
- maternal mortality;
- births attended by trained health personnel;
- immunization coverage;
- contraceptive prevalence;
- malaria, TB and noncommunicable disease incidence; and
- availability of timely and accurate health statistics.

3.4 Health care financing

Until 2005, Vanuatu had one financing scheme represented by national health services operated and funded by the Government and under the supervision of the Ministry of Health. The major sources of funding for the health sector were the government budget and donor contributions. Household contributions consisted of in-kind payments to traditional healers and fees-for-services at government facilities.

The fees-for-service scheme, a Ministry of Health cost-recovery scheme, realized the reasonable amount of 10 to 12 million Vatu (US$ 95 000 to US$ 114 000) between 2002 and 2005, representing 1% to 2% of the Ministry's executed budget. Unfortunately, these funds are not added to the Ministry of Health budget, but are treated as state revenue and go into the Ministry of Finance account.

National Health Account (NHA 2007) results found that, in 2005, almost 100% of inpatient and 60% of outpatient services were provided by Ministry of Health facilities. Recently, private sector health services have started up. New polyclinics have been established in the capital city of Port Vila and the major city of Luganville, and a private hospital (Vila Bay Hospital) was established in Port Vila in 2006. The private insurance market in the country is utilized mainly by the large number of expatriates residing in the two major cities. Private insurance companies represented 3% of total health expenditure in 2005.

National health expenditure in 2008 was estimated at Vatu 2297 million (US$ 22.7 million), representing 4.1% of GDP. Almost 79.2% of the total health expenditure was from public sources and 20.8% from private funds.

To date, there has been no social health insurance scheme based on the principles of mandatory contribution, risk-sharing and fund-pooling, but such a scheme is now being seriously considered.

3.5 Human resources for health

The Ministry of Health is responsible for development of the human resources required to provide health services in the country. A comprehensive Human Resource Development Plan has been prepared by the Ministry and is being implemented with the assistance of WHO and other donors.

There have been developments in the management of human resources in the Ministry of Health towards rationalization of salary levels and a review of career options for health workers. Currently, only clinicians have an established career path, but the Ministry is working towards establishing career paths for technical categories. Salary and career advancement will be tied to the new performance appraisal system and the new structure.

The major challenge facing Vanuatu in the development and employment of its human resources for health is staff shortages. Almost 90% of the health workforce is based on nursing staff that perform both clinical and community health roles, as well as most management roles. The Vanuatu Centre for Nursing Education (VCNE) graduated 21 nurses in 2007 and an intake of 25 nurses will graduate in 2010. However, these graduates will hardly compensate for the 40 or 50 nurses who are due to retire in the next few years.

3.6 Partnerships

The Government and the Ministry of Health work very closely with partners. While WHO is the Ministry's main technical assistance partner, the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), the Japan International Cooperation Agency (JICA), the Australian Agency for International Development (AusAID), the New Zealand Agency for International Development (NZAID), the Asian Development Bank (ADB) and the Global Fund are the main development partners in the health sector. The Secretariat of the Pacific Community (SPC) and the Pacific Island Forum also assist the country in health sector development programmes.

3.7 Challenges to health system strengthening

Vanuatu faces major challenges in the development and delivery of health services. Its citizens, numbering about 234 023, are spread over 80 islands and it is a huge task for the Ministry of Health to provide health services to such a dispersed population.

The Government also has to face challenges due to the rapid growth of the population. The number of people will have doubled by 2030 and the population base will keep expanding, resulting in a very young population. As a result, health services will have to provide more and more services in the areas of antenatal, natal and postnatal care, as well as neonatal care. Diseases of childhood will continue and more and more paediatric and obstetric care services will be required. At the same time, the elderly population will also keep increasing due to longer life expectancy, and the diseases of the elderly will be another serious problem.

With urbanization and changing lifestyles, the incidence of chronic diseases, such as diabetes, hypertension and stroke, are increasing. To address these issues properly, the health services need human resources trained in both the clinical and preventive health fields that are adequate in terms of both numbers and quality. Further, proper equipments for good diagnosis, treatment and rehabilitation are needed. Production of human resources for health will be the major challenge to be addressed in the near future.

4. PROGRESS TOWARDS THE HEALTH MDGs

Vanuatu produced its first Millennium Development Goal (MDG) Report in 2005, in cooperation with SPC, UNDP and the National MDG Committee. The report provided a situational analysis, including progress made towards achieving the MDGs. It also identified the challenges and the priorities needed to meet the 2015 targets. Findings showed that significant progress has been made in many areas. However, with the many obstacles and challenges that the country needs to overcome to be able to meet the 2015 targets, Vanuatu can likely or potentially achieve its MDGs in 2015. A second report is in preparation for the September 2010 MDG review.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*2009 Vanuatu national population and housing census*
Operator	:	National Statistics Office
Specification	:	Include information on population structure & dynamics, social profile, educational characteristic, household characteristic and economic activity
Title 2	:	*Vanuatu health situation report 2006*
Operator	:	HIS Unit/ Ministry of Health
Specification	:	Nationwide data compilation, as reported by health centres, dispensaries and hospitals
Comments	:	20 to 30% of health facilities don't send in their monthly report, hence total are not accurate but gives the general trend.
Title 3	:	*Statistical summary 2008*
Operator	:	Secretariat of the Pacific Community , Noumea, New Caledonia
Web address	:	http://www.spc.int/prisim/demog/
Title 4	:	*Multiple cluster sampling survey (MIC) 2007, Vanuatu*
Web address	:	www.unicef.org/pacificislands/
Title 5	:	*Vanuatu national health accounts 2005*
Operator	:	Vanuatu NHA team, Finance unit/ Ministry of Health
Web address	:	www.who.int/nha/country/vut/en/
Title 6	:	*Republic of Vanuatu Master Health Service Plan (2004-2009)*
Operator	:	Ministry of Health
Title 7	:	*WHO Global Health Observatory*
Web address	:	http://apps.who.int/ghodata/

Title 8	:	*Republic of Vanuatu: Millennium Development Goals Report 2005*
Operator	:	United Nations Development Programme
Web address	:	*http://www.spc.int/prism/MDG/mdg_national_rpts.htm*

6. ADDRESSES

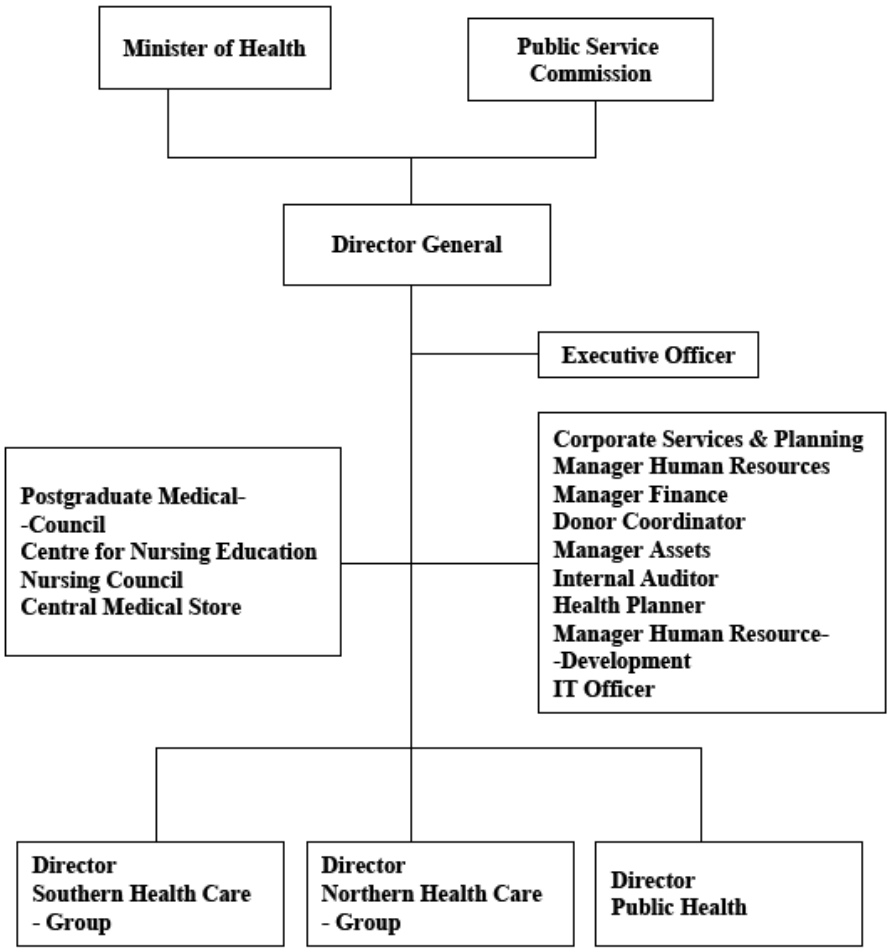
MINISTRY OF HEALTH

Office Address	:	Iatika Complex
Postal Address	:	Private Mail Bag 009, Port Vila, Vanuatu
Official Email Address	:	MOH Secretariat: msolomon@vanuatu.gov.vu Director General of Health: mbebe@vanuatu.gov.vu
Telephone	:	(678) 22512
Fax	:	(678) 26 204
Office Hours	:	7.30 am to 11.30 am and 1.15pm to 4.30pm

WHO COUNTRY LIAISON OFFICER IN VANUATU

Office Address	:	Iatika Complex, Ministry of Health, Port Vila, Vanuatu
Postal Address	:	World Health Organization P.O. Box 177, Port Vila Vanuatu, South Pacific
Official Email Address	:	CLO secretariat: williama@wpro.who.int CLO: who.van@wpro.who.int
Telephone	:	(678) 27 683
Fax	:	(678) 22 691
Office Hours	:	7.30 am to 12.00 am and 1.30pm to 5.00pm

7. ORGANIZATIONAL CHART: Ministry of Health



VANUATU — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	12.28			2010	1
2	Estimated population ('000s)	234.02	119.09	114.93	2009	2
3	Annual population growth rate (%)	2.30	2.20	2.30	2009	2
4	Percentage of population					
	- 0–4 years	13.97 [a]	14.07 [a]	13.86 [a]	2009 est	3
	- 5–14 years	24.00 [a]	24.30 [a]	23.68 [a]	2009 est	3
	- 65 years and above	3.50 [a]	3.57 [a]	3.42 [a]	2009 est	3
5	Urban population (%)	24.45 [a]	24.88 [a]	24.00 [a]	2009	2
6	Crude birth rate (per 1000 population)	31.10	...	...	2008 est	4
7	Crude death rate (per 1000 population)	5.50	...	...	2008 est	4
8	Rate of natural increase of population (% per annum)	2.56	...	...	2008 est	4
9	Life expectancy (years)					
	- at birth	69.00	68.00	70.00	2008 est	5
	- Healthy Life Expectancy (HALE) at age 60	...	11.10	11.70	2002	6
10	Total fertility rate (women aged 15–49 years)	4.00			2005-10	7
	Socioeconomic indicators					
11	Adult literacy rate (%)	78.10 [b]	...	...	2007	7
12	Per capita GDP at current market prices (US$)	2218.00			2007	8
13	Rate of growth of per capita GDP (%)	3.50			2007	17
14	Human development index	0.69			2007	7
	Environmental indicators	Total	Urban	Rural		
15	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	2 [c]	...	...	...	...	...	2006	9
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	8 [c]	...	...	...	...	...	2006	9
	Cholera	1 [c]	0 [c]	1 [c]	...	...	...	2006	9
	Dengue/DHF	45	...	...	0	0	0	2009	10
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	910	910	0	0	0	0	2006	9
	Leprosy	5	3	2	...	...	...	2009	10
	Malaria	3477 [f]	...	...	1	...	...	2008	10
	Plague	...	...	...	...	...	...		
	Syphilis	192	93	99	0	0	0	2006	9
	Typhoid fever	...	...	...	...	...	...		
17	Acute respiratory infections	25 411	...	...	14	...	...	2006	9
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	5657	...	...	2	...	...	2006	9
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	103	...	...	...	...	...	2008	10
	- New pulmonary tuberculosis (smear-positive)	45	...	...	...	...	...	2008	10
20	**Cancers**								
	All cancers (malignant neoplasms only)	96 [c]	37 [c]	59 [c]	58 [c]	36 [c]	22 [c]	2006	9
	- Breast	6 [c]	0	6 [c]	2 [c]	0 [c]	2 [c]	2006	9
	- Colon and rectum	0 [c]	0 [c]	0 [c]	0 [c]	0 [c]	0 [c]	2006	9
	- Cervix			15 [c]			5 [c]	2006	9
	- Leukaemia	2 [c]	2 [c]	0 [c]	3 [c]	2 [c]	1 [c]	2006	9
	- Lip, oral cavity and pharynx	7 [c]	6 [c]	1 [c]	6 [c]	4 [c]	2 [c]	2006	9
	- Liver	1 [c]	1 [c]	0 [c]	0 [c]	0 [c]	0 [c]	2006	9
	- Oesophagus	2 [c]	1 [c]	1 [c]	1 [c]	0 [c]	1 [c]	2006	9
	- Stomach	15 [c]	11 [c]	4 [c]	8 [c]	7 [c]	1 [c]	2006	9
	- Trachea, bronchus, and lung	9 [c]	5 [c]	4 [c]	7 [c]	5 [c]	2 [c]	2006	9
21	**Circulatory**								
	All circulatory system diseases	414 [c]	216 [c]	198 [c]	53 [c]	35 [c]	18 [c]	2006	9
	- Acute myocardial infarction	10 [c]	8 [c]	2 [c]	6 [c]	5 [c]	1 [c]	2006	9
	- Cerebrovascular diseases	48 [c]	26 [c]	22 [c]	13 [c]	6 [c]	7 [c]	2006	9
	- Hypertension	137 [c]	65 [c]	72 [c]	4 [c]	3 [c]	1 [c]	2006	9
	- Ischaemic heart disease	34 [c]	26 [c]	8 [c]	10 [c]	8 [c]	2 [c]	2006	9
	- Rheumatic fever and rheumatic heart diseases	22 [c]	8 [c]	14 [c]	1 [c]	0 [c]	1 [c]	2006	9
22	**Diabetes mellitus**	120 [c]	58 [c]	62 [c]	8 [c]	5 [c]	3 [c]	2006	9
23	**Mental disorders**	26 [c]	12 [c]	14 [c]	...	...	...	2006	9
24	**Injuries**								
	All types	5166 [c]	...	...	3 [c]	...	...	2006	9
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	122 [c]	66 [c]	56 [c]	...	...	...	2006	9
	- Occupational injuries	3708	...	...	...	...	...	2006	9
	- Road traffic accidents	101 [d]	...	...	...	...	...	2006	9
	- Suicide	19 [c]	3 [c]	16 [c]	...	...	...	2006	9
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infection including Pneumonia	566 [c]	409 [c]	157 [c]	252.63 [c]	182.56 [c]	70.08 [c]	2006	9
	2. Cutaneous abscess	251 [c]	167 [c]	84 [c]	112.03 [c]	74.54 [c]	37.49 [c]	2006	9
	3. Malaria	249 [c]	137 [c]	112 [c]	111.14 [c]	61.15 [c]	49.99 [c]	2006	9
	4. Asthma	241 [c]	149 [c]	92 [c]	107.57 [c]	66.51 [c]	41.06 [c]	2006	9
	5. Diarrhoea	214 [c]	110 [c]	104 [c]	95.52 [c]	49.10 [c]	46.42 [c]	2006	9
	6. Injuries	181 [c]	125 [c]	56 [c]	80.79 [c]	55.79 [c]	25.00 [c]	2006	9
	7. Food poisoning	88 [c]	55 [c]	33 [c]	39.28 [c]	24.79 [c]	14.73 [c]	2006	9
	8. Diabetes mellitus (non-Insulin-dependent)	85 [c]	37 [c]	48 [c]	37.94 [c]	16.51 [c]	21.42 [c]	2006	9
	9. Chronic obstructive pulmonary disease	75 [c]	52 [c]	23 [c]	33.48 [c]	23.21 [c]	10.27 [c]	2006	9
	10. Hypertension	62 [c]	27 [c]	35 [c]	27.67 [c]	12.05 [c]	15.62 [c]	2006	9

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart disease	112	56	56	49.99	25.00	25.00	2006	9
	2. Cancer	48	24	24	21.42	10.71	10.71	2006	9
	3. Asthma	42	21	21	18.75	9.37	9.37	2006	9
	4. Stroke	30	15	15	13.39	6.70	6.70	2006	9
	5. Pneumonia	24	10	14	10.71	4.46	6.25	2006	9
	6. Liver diseases	20	10	10	8.93	4.46	4.46	2006	9
	7. Neonatal death	11	8	3	4.91	3.57	1.34	2006	9
	8. Diabetes mellitus	8	6	2	3.57	2.68	0.89	2006	9
	9. Septicaemia	8	4	4	3.57	1.79	1.79	2006	9
	10. Hypertension	8	4	4	3.57	1.79	1.79	2006	9
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					37.00		2007	11
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					95.00		2009	10
29	**Percentage of pregnant women with anaemia**					3.00		2006	9
30	**Neonatal mortality rate (per 1000 live births)**	30.00		30.00		28.00		2006	9
31	**Percentage of newborn infants weighing less than 2500 g at birth**	10.20		…		…		2007	11
32	**Immunization coverage for infants (%)**								
	- BCG	95.00		…		…		2009	10
	- DTP3	95.00		…		…		2009	10
	- Hepatitis B III	95.00		…		…		2009	10
	- MCV2	…		…		…			
	- POL3	95.00		…		…		2009	10
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			109 [c]			…	2006	9
	- Eclampsia			7 [c]			…	2006	9
	- Haemorrhage			11 [c]			…	2006	9
	- Obstructed labour			33 [c]			…	2006	9
	- Sepsis			8 [c]			…	2006	9
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	…	…	…	…	…	…		
	- Diphtheria	0	0	0	…	…	…	2009	10
	- Measles	0	0	0	…	…	…	2009	10
	- Mumps	…	…	…	…	…	…		
	- Neonatal tetanus	0	0	0	…	…	…	2009	10
	- Pertussis (whooping cough)	0	0	0	…	…	…	2009	10
	- Poliomyelitis	0	0	0	…	…	…	2009	10
	- Rubella	…	…	…	…	…	…		
	- Total Tetanus	0	0	0	…	…	…	2009	10
	Health facilities								
35	**Facilities with HIV testing and counseling services**						…		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	3 [e]	135 [e]	2008	12
		- Specialized hospitals	2 [e]	255 [e]	2008	12
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	27 [e]	...	2008	12
	Private health facilities	- Hospitals	1	3	2008	12
		- Outpatient clinics	4	...	2008	12
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			22.67 [a]	2008p	13
	- total expenditure on health as % of GDP			4.06	2008p	13
	- per capita total expenditure on health (in US$)			96.94	2008p	13
	Government expenditure on health					
	- amount (in million US$)			17.97 [a]	2008p	13
	- general government expenditure on health as % of total expenditure on health			79.25	2008p	13
	- general government expenditure on health as % of total general government expenditure			11.37	2008p	13
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			16.50 [a]	2008p	13
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			20.75	2008p	13
	- out-of-pocket expenditure on health as % of total expenditure on health			14.86 [a]	2008p	13
	Exchange rate in US$ of local currency is: 1 US$ =			101.33	2008p	13
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	26	20	6	26	0	22	4	2008	12
		- Ratio per 1000 population	0.11	0.09	0.03	0.46	0	0.09	0.02	2008	12
	Dentists	- Number	3	2	1	3	0	2	1	2008	12
		- Ratio per 1000 population	0.01	0.01	0.00	0.05	0	0.01	0.00	2008	12
	Pharmacists	- Number	2	0	2	2	0	2	0	2008	12
		- Ratio per 1000 population	0.01	0	0.01	0.04	0	0.01	0.00	2008	12
	Nurses	- Number	332	115	217	110	222	332	0	2008	12
		- Ratio per 1000 population	1.42	0.49	0.93	1.94	1.26	1.42	0.00	2008	12
	Midwives	- Number	48	2	46	18	30	48	0	2008	12
		- Ratio per 1000 population	0.21	0.01	0.20	0.32	0.17	0.21	0.00	2008	12
	Paramedical staff	- Number	58	37	21	47	30	58	0	2008	12
		- Ratio per 1000 population	0.25	0.16	0.09	0.83	0.17	0.25	0	2008	12
	Community health workers	- Number	212	112	100	0	212	212	0	2008	12
		- Ratio per 1000 population	0.91	0.48	0.43	0	1.2	0.91	0	2008	12
40	**Annual number of graduates**	Physicians	3	...	...	...	...	...	...	2008	14
		Dentists	1	...	...	...	...	...	...	2007	14
		Pharmacists	1	...	...	...	...	...	...	2008	14

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	21	...	...	...	...	...	...	2007	14
		Midwives	9	...	...	...	...	...	...	2008	14
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	19.50	17.80	1.70	2007	11
43	Infant mortality rate (per 1000 live births)	27.00 e	27.00 e	27.00 e	2008	5
44	Under-five mortality rate (per 1000 live births)	31.00	34.00	33.00	2008	5
45	Proportion of 1 year-old children immunised against measles	95.00	...	...	2009	10
46	Maternal mortality ratio (per 100 000 live births)	70.04			2006	9
47	Proportion of births attended by skilled health personnel	92.90			2006	9
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.82			2006	9
	- Percentage of deliveries in health facilities (as % of total deliveries)	91.08			2006	9
48	Contraceptive prevalence rate	38.40 e	...	...	2007	11
49	Adolescent birth rate	21.00			2003	15
50	Antenatal care coverage - At least one visit	98.10			2007	11
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	0.00	...	...	2007	10
53	Estimated HIV prevalence in adults	0.00	...	...	2007	10
54	Percentage of people with advanced HIV infection receiving ART	100.00	...	...	2007	10
55	Malaria incidence rate per 100 000 population	1498.71	...	...	2008	10
56	Malaria death rate per 100 000 population	0.43	...	...	2008	10
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	56.00 e	...	...	2007	10
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	88.00	...	...	2008	10
60	Tuberculosis death rate per 100 000 population	11.00	...	...	2008	10
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	52.00	...	...	2008	10
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	93.00	...	...	2007	10
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	83.00	96.00	79.00	2008	16
64	Proportion of population using an improved sanitation facility	52.00	66.00	48.00	2008	16
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
b	UNESCO Institute for Statistics estimates based on its Global Age-Specific Literacy Projections model, April 2009
c	Figure refers to hospital data only
d	Figure refers to motor and other vehicular accidents
e	Revised data
f	Data is not reflective of actual case numbers as laboratory confirmation is limited

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VIET NAM

1. CONTEXT

1.1 Demographics

The estimated population of Viet Nam rose to 86 210 800 in 2008, 49.2% of them male. The population density is 260 persons per square kilometre, with most (69.6%) of the population living in rural areas. Over the past few years, Viet Nam has witnessed a gradual change in its population structure. In 2008, the percentage of the population aged 0-14 was 25.1%, a decrease of 5.9% compared with 2000. However, the proportion aged over 64 years increased rapidly (by 0.6 %) over the same seven-year period. This shows that fertility has continued to decline over recent years while the share of the elderly has been increasing gradually.

Viet Nam has 54 different ethnic groups, with the Kinh representing 87% of the total population. The rest are ethnic minorities scattered all over the country, mostly in mountainous and remote areas. Population migration is an important factor in rural-urban population growth differentials. The General Statistics Office survey on migration and family planning indicates that substantial spontaneous migration has been taking place and that migrants from rural to urban areas are numerous.

In 2008, life expectancy at birth was 71 for males and 75 for females. In the same year, the population growth rate was 1.2% per annum. The total fertility rate decreased from 2.33 in 1999 to 2.08 in 2008, reaching replacement-level fertility. In 2008, the crude birth rate was 16.7 per 1000 population and the crude death rate was 4.9 per 1000 population.

The maternal mortality ratio was 130/100 000 live births in 1990. By 2008, the ratio had fallen to 75.0/100 000 live births. However, the MDG target of 32.5 maternal deaths per 100 000 live births by the year 2015 is a real challenge and will require drastic efforts.

The under-five mortality rate was 55.4% in 1990 and fell by more than half to 25.5% by 2008. In order to achieve the MDG of 18.4% by 2015, however, progress must be accelerated.

1.2 Political situation

Viet Nam is a socialist republic and one-party state governed by the Communist Party of Viet Nam. The National Assembly is designated the highest representative body of the people and is the only organ with constitutional and legislative powers.

Beyond central government, the People's Committees at different levels are responsible for daily administration at the local level. Mass organizations, such as the Women's Union, Farmers' Union and Youth Union, exist to serve the interests of the people and to act as a link between the people and the Party.

Although the political system is stable, the country's senior leaders have raised concerns on a number of occasions about the lack of transparency, administrative inefficiency and corruption. Steps have been taken to strengthen open public debate and effective rule of law from the central to local level.

1.3 Socioeconomic situation

Vietnamese authorities have moved to implement a free-market economy with socialist orientation, to modernize the economy and to produce more competitive, export-driven industries. This has led to a strong rate of growth in gross domestic product (GDP). Major economic achievements in the period 2001-2005 included, among others, a high level of economic growth, averaging 7.2% per year; comprehensive development; the solution of many social problems, especially hunger eradication and poverty reduction; and the improvement of people's living standards.

In 2000, the GDP per capita was only about US$ 400. It then increased to US$ 562 in 2004, higher than the mean of the lower income country group (US$ 530 per capita). By 2008, it stood at US$ 1034, representing a 158% increase compared with 2000.

According to the standard poverty measurement of US$ 1PPP/day, Viet Nam has exceeded the MDG of halving the proportion of people whose income is less than one dollar a day between 1990 and 2015. This proportion was cut by eight times from 39.9% as of 1993 to 4.9 % in 2006. Poverty incidence, measured by standard food poverty, also declined sharply from 24.9% in 1993 to 15% in 1998. The rate further declined to 10.9% in 2002, 7.4% in 2004 and 6.7% in 2006.

During the period from 2001 to 2005, the economy created jobs for about 7.5 million workers. In 2005, 43 million people, about 52% of the population, were employed. The proportion of unemployed working-age people declined from 6.4% in 2001 to 5.3 % in 2005. It is planned that, by 2010, 8 million workers will be employed, reducing unemployment to 5%, and that farming will only involve 50% of the labour force.

Access to safe water and sanitation has also improved. In 2008, 94.0% of the population had access to an improved water source and 75.0% to improved sanitation.

About 21 000 tons of solid waste is discharged each year from hospitals, sanatoriums and other health facilities. In the period from 1998 to 2002, there was considerable government investment in hospital waste treatment and disposal, mostly in the form of incinerators.

Air pollution sources include industry, traffic, construction, traditional handicrafts, forest fires and households. Of the facilities that pollute severely, 13% are cement factories, traditional handicraft villages using coal and wood, and waste collection facilities. In urban areas, traffic is the main cause of air pollution (70%).

1.4 Risks, vulnerabilities and hazards

Viet Nam is one of the most disasters-prone countries in the world. It extends over 11 latitudes, with a 3200 kilometre coastline, and is located in an area ranging from a humid tropical to a sub-tropical climate, with complex topography and a dense river network.

Every year, the country suffers from many natural disasters, such as typhoons, tropical storms, floods, drought, seawater intrusion, landslides, forest fires and, occasionally, earthquakes. Disasters triggered by typhoons and floods are by far the most frequent and severe. In recent years, disasters have occurred continually all over the country, causing vast losses in human lives, property and socioeconomic and cultural infrastructure, as well as environmental degradation. During the period from 1980 to 2009, natural disasters such as typhoons, floods and droughts, caused significant losses, including 15 917 dead people, 69 700 028 affected people and damage equivalent to US$ 7 356 350 000. Natural disasters are becoming increasingly severe in terms of magnitude, frequency and volatility, due to climate change.

The most important natural hazards in Viet Nam are water-related, particularly typhoons and floods, and increasingly in recent years, flash floods, landslides and droughts. Typhoons occur between May and December and are often accompanied by storm surges that inundate huge areas of the delta regions with saline water. Half of all the typhoons to hit Viet Nam in the last 30 years have caused surges of at least one metre and 11% have caused surges of over 2.5 metres. These typhoons and storm surges have often overtopped—and frequently destroyed—sea dykes, causing damage and seawater flooding in addition to wind damage and flooding from the storm itself.

Besides natural disasters, man-made and technological hazards are becoming an increasing threat to communities. These hazards include urban fires, transportation accidents, chemical or industrial accidents, and epidemics, among others.

There is a risk of many diseases breaking out or being imported from overseas, especially emerging diseases like severe acute respiratory syndrome (SARS), influenza A(H5N1) and encephalitis due to arbovirus, which creates many difficult challenges as regards prediction, prevention and control. At the

same time, the increasingly polluted environment, unusual weather patterns, natural disasters, rapid urbanization, lack of clean water in many residential areas and increasing contact between travellers from different localities and countries creates favourable conditions for the development and spread of diseases. These same factors may also complicate the disease situation and make it hard to control.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Morbidity due to infectious diseases has decreased by 34.6% and mortality by 5% compared with 2007. Compared with the period from 2001 to 2005, morbidity due to infectious diseases has been reduced by 52.6% and mortality by 18.7%. All outbreaks of avian influenza A (H5N1) and dangerous acute diarrhoea have been detected and controlled. The viral encephalitis rate decreased from 4.0 in 1998 to 0.5 per 100 000 population in 2008.

Dengue and dengue hemorrhagic fever are big public health problems. According to the Ministry of Health's Department of Preventive Medicine, the incidence of dengue fever is increasing, especially in the southern part of the country. In 2009, the incidence rate was 119.6 per 100 000 population, an increase from the 118.8 per 100 00 in 2007. There were 105 370 cases of dengue in 2009 and 87 related deaths. Although the mortality rate has declined, morbidity has not been controlled, with around 100 000 cases per year. Vector control is the main activity for dengue control, including reducing mosquito-breeding sites, applying biological measures for larvae reduction, and insecticide-spraying during outbreaks. Education about self-protection and mobilization of different sectors in dengue control at the community level are being strengthened.

The national malaria control programme has continued its efforts to halt and reverse the incidence of malaria and plans to have the disease eradicated by 2015. The number of confirmed malaria cases fell from 14 581 in 2007 to 11 355 in 2008. However, mortality increased from 20 malaria deaths in 2007 to 25 in 2008. In general, malaria has been controlled in endemic areas and prevented and reduced in the whole country, with no recent malaria epidemic. Insecticide-treated nets and indoor residual spraying are the main control activities, with about 12 million people at high risk being covered by such measures, and rapid diagnostic testing has been introduced at all levels. Artemisinin-based combination therapy (ACT) is used widely and is the first-line treatment for *Plasmodium falciparum*. The challenges for malaria control include the uncontrolled movements in and out malaria areas by forest-goers and people staying overnight in rice fields and coffee plantations; people crossing international borders; and remote and hard-to-reach areas where minority groups with a low level of education are living.

In 2008, pneumonia was among the leading causes of morbidity. According to 2008 hospital statistics, there were 284 500 pneumonia cases and 1624 related deaths.

There were 20 260 new HIV infections, 8974 new cases of AIDS and 3928 reported deaths due to HIV/AIDS in 2008, with an estimated 293 000 people living with HIV/AIDS. The HIV epidemic remains largely concentrated among key populations at higher risk; there is a high level of HIV prevalence among injecting drug users (28.6%), female sex workers (4.4%) and their partners, and men having sex with men (9.4% and 5.3% in Hanoi and HCMC, respectively), while HIV prevalence among pregnant women remains low (0.37%). According to the Ministry of Health, people aged 20-39 account for more than 80% of all reported HIV infections. This ratio has hardly changed in five years. Moreover, the percentage of people aged 30-39 living with HIV in the total number of reported cases is increasing. HIV prevention and care and treatment services are being expanded rapidly. It is estimated by the Ministry of Health that the number of people living with HIV in need of ARV treatment will increase from 42 480 in 2006 to 72 970 in 2010. The National Action Plan states that 70% of adults and all children infected with HIV will be eligible to receive ARV by 2010.

In 2008, there was a slight increase in the number of recent cases of tuberculosis, with 95 970 cases being reported in 2005 and 97 772 in 2008, of which 53 484 were new pulmonary AFB-positive cases, 19 056 were pulmonary tuberculosis with negative AFB, and 18 610 were non-pulmonary tuberculosis. The number of tuberculosis-related deaths has decreased, although not significantly: 1936 TB deaths were

reported in 2005 compared with 1802 in 2008. Most tuberculosis patients receive treatment under the DOTS strategy. With a detection rate of 62.0%) and a high success rate of 92.0%, Viet Nam has reached the WHO target for tuberculosis control. However, the tuberculosis control programme is facing new challenges including drug-resistant bacillus (it is estimated that about 30% of new cases are resistant to one drug and 2.3% resistant to more than one) and tuberculosis among HIV/AIDS patients.

Diarrhoea is also one of the leading causes of morbidity in the country. Cholera, typhoid fever and dysentery still exist in some areas where safe water supply and sanitary facilities remain inadequate.

The mortality and morbidity rates for leprosy are not high. The number of new leprosy cases decreased from 588 in 2007 to 413 reported in 2009. Viet Nam has reached the WHO leprosy elimination target on the national scale (the incidence rate is less than 1 per 10 000 people).

Noncommunicable diseases have shown a tendency to increase in the last two decades, with their share of total morbidity rising from 39.0% in 1986 to 63.14% in 2008, and in mortality from 41.1% to 60.02%. Economic growth, the ageing population and lifestyle changes are the leading causes of the increasing burden of noncommunicable disease. Some noncommunicable diseases are common among children, such as nutritional disorders, asthma, vision disorders, dental caries, congenital malformations, and disability due to accident or illness. These diseases are also found among adults. Diseases commonly found among the elderly include cardiovascular disease, diabetes and cancer.

Protein energy malnutrition and micronutrient deficiencies among under-five children have fallen significantly in the last period. Nevertheless, a new trend towards overweight and obesity in children in cities and more economically developed areas has developed and needs to be controlled in order to prevent the negative consequences that may result, such as diabetes and cardiovascular diseases.

The incidence rate of cancer has been increasing, with about 95 471 new cases per year. The case fatality rate is very high.

Lifestyle-related health problems are becoming increasingly important, particularly tobacco use, alcohol and drug abuse, injuries due to road accidents, violence, suicide and mental disorders. However, non-users, particularly women and children, may also suffer from external effects like passive or second-hand smoking, domestic violence, traffic accidents and exposure to HIV/AIDS. In 2002, the adult male smoking prevalence rate was 56.0% (compared with 50.0% in 1998). Males aged 15 years and over consume an average of 12.5 cigarettes per day and a female of the same age 8.1 cigarettes per day. The National Health Survey 2001-2002 showed that 45.7% of males and 1.9% of females aged 15 and over were drinking once or more and each was drinking 100 ml of spirits/wine or one can/bottle of beer or more each time.

Injuries and accidents are causing serious concern. In the period from 2002 to 2008, morbidity due to accidents, injuries and poisonings increased from 9.2% of all hospital admissions to 11.7%, and hospital deaths related to accidents increased from 18.5% of all deaths in hospitals to 22.8%. Transport accident is the ninth leading cause of morbidity and the fifth leading cause of mortality.

2.2 Outbreaks of communicable diseases

In 2004, dengue fever was widespread in the Mekong delta, accounting for 84.0% of cases, with 9.0% in the south central coast, 5.0% in the central highlands, and only 2.0% in the north. The health sector has made great efforts to reduce the incidence of dengue fever and, in 2008, only 88 related deaths were detected. Treatment currently consists of analgesic and antipyretic drugs, such as acetaminophen. The prevention methods being applied include activities to reduce vectors in the community and to monitor when there is an outbreak. The sustainability of these achievements and the potential reduction of morbidity and mortality are still in question.

In 2008, there were 853 positive cases of cholera recorded in 22 provinces/cities, a 55.3% reduction compared with 2007.

An outbreak of foot and mouth disease occurred in May 2008, with 9650 cases and 24 deaths. The outbreak was detected and extinguished in a timely manner.

2.3 Leading causes of mortality and morbidity

In the past, most of the leading causes of morbidity were communicable diseases. However, in 2008, noncommunicable diseases were also among the leading causes (reported by public hospitals), the incidence rate for hypertension being particularly high.

Currently, the vital registration system in Viet Nam does not operate effectively and cannot provide accurate data on number of deaths, causes of death, or age, sex and socioeconomic status of those who die. Therefore, it is still necessary to rely on mortality data collected in public hospitals for assessment of mortality patterns and trends. According to 2008 data from hospitals, injuries, AIDS-related conditions, pneumonia, accidents and some noncommunicable diseases are the leading causes of mortality.

2.4 Maternal, child and infant diseases

The maternal mortality ratio (MMR) and the infant mortality rate (IMR) are lower in Viet Nam than in other Asian countries with the same level of economic development. In addition, more than 96.1% (2006) of pregnant women are cared for by skilled health personnel, and 94.7 % of pregnant women were assisted by skilled health personnel during delivery in 2008. The MMR fell from 200 per 100 000 live births in the 1980s to 75.0 per 100 000 in 2008. However, there are huge differences in MMR across regions, with the highest in the northern mountainous area and the central highlands.

The IMR has fallen rapidly in the last two decades: from 55.0 per 1000 live births in 1983 it declined to 15.0 in 2008. In the eight years leading up to 2008, the IMR fell from 31.2 per 1000 live births to 15.0, a decline of more than 50%, with an average reduction of 2 % per year.

The under-five mortality rate fell from 42.0 in 1999 to 25.5 per 1000 live births in 2008, with an average decline of 2.3% per year. A recent study indicated that deaths among children under five years of age are concentrated in the perinatal period and are mainly due to premature birth, asphyxia at birth or multiple birth defects. For children beyond the perinatal period, mortality is mainly due to drowning, respiratory infection and encephalitis.

Child malnutrition is measured using two basic indicators: the proportion of children born with low birth weights and the proportion of children under five years of age who are malnourished. The proportion of babies born with low birth weights (under 2500g) declined from 7.3% in 2000 to 5.3% in 2008 and the under-five malnutrition rate fell from 33.8% to 19.9% over the same period. The problem of overweight children is beginning to appear, although it is still at an early stage, accounting for about 1.3% of children in the under-five age group and 0.8% in the 5-10 year age group.

2.5 Burden of disease

No available information, with the exception of a few specific diseases.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is the government agency exercising state management in the field of people's health care, including preventive medicine; consultation and treatment; rehabilitation; traditional medicine; pharmaceuticals, including vaccine production; hazardous effects of cosmetics on human health; food hygiene and safety; medical equipment; health facilities; population and family planning; and health system development and management.

3.2 Organization of health services and delivery systems

The health system is a mixed public-private provider system, in which the public system plays a key role in health care, especially in policy, prevention, research and training. The private sector has grown

steadily since the 'reform' of the health sector in 1989, but is mainly active in outpatient care; inpatient care is provided essentially through the public sector.

The health care network is organized under state administrative units: central, provincial, district, commune and village levels, with the Ministry of Health at the central level. In the public sector, there are 774 general hospitals, 136 specialized hospitals and 11 576 primary health centres. The establishment of the grassroots health care network (including commune and district levels) as the foundation for health care has yielded many achievements, especially that of contributing towards attainment of national health care goals for the entire population. The health stations in communes provide primary health care services, including consultation, outbreak prevention and surveillance, treatment of common diseases, maternal and child health care, family planning, hygiene and health promotion. The total number of private facilities rose from 56 000 in 2001 to 65 000 in 2004. In 2008, there were 83 private hospitals, accounting for 8.64 % of the total number of hospitals nationwide, with 5429 beds, accounting for 3.4% of the total number of hospital beds nationwide.

Health care is further strengthened by implementation of national health programmes to deal with diseases and health issues that are of important public health concern. For example, the tuberculosis control programme has made every effort to maintain, over many years, a high implementation rate, with DOTS now covering 100% of the affected population. WHO has highly commended the programme and has ranked it as being on par with those countries reaching the highest achievements in the world.

The expanded programme on immunization is also considered a successful child health care programme, with a marked reduction in vaccine-preventable diseases, including the eradication of poliomyelitis and the elimination of neonatal tetanus and leprosy, according to WHO definitions. However, current conditions for vaccine maintenance, vaccination timeliness and safety, as well as the fact that newly developed vaccines are insufficient to meet demand, are among the current challenges to the continued quality of the child immunization programme.

The HIV/AIDS control programme was a priority health programme for the period from 2001 to 2005. Through its implementation, more than 90% of state officials, members of popular organizations, servicemen and students, more than 80% of the urban population, and 70% of the rural and mountain-dwelling population gained good knowledge about HIV/AIDS and participated actively in HIV/AIDS intervention activities.

3.3 Health policy, planning and regulatory framework

The Government set ambitious goals and targets in the *Ten-Year Socio-Economic Development Strategy, the Comprehensive Poverty Reduction and Growth Strategy* and the *National Strategy for People's Health Care 2001–2010*. These include substantially improving the human development index of the country and providing prevention and treatment services to the whole population.

The Minister of Health then promulgated a five-year plan for health sector, setting the following new targets for 2010:

- to increase average life expectancy to 71 years;
- to reduce the maternal mortality ratio to below 70 per 100 000 live births;
- to reduce the infant mortality rate to below 25 per 1000 live births;
- to reduce the under-five mortality rate to below 32 per 1000 live births;
- to reduce the percentage of low-birth-weight infants to below 6%;
- to reduce the percentage of malnourished under-five children to below 20%;
- to increase the average height of young people to at least 160 cm;
- to increase the ratio of medical doctors to 4.5/10 000 people;
- to increase the ratio of college-trained pharmacists to 1/10 000 people.

The *National Strategy* recognizes the important role of health and the need to invest in health for accelerated socioeconomic development and to improve the quality of life of each individual. The strategy is based on four principles:

- equity and efficiency of the health sector;
- the fight against the broad social determinants of bad health;
- the integration of traditional and modern medicines; and
- an appropriate public-private mix, with the Government in a position to protect the public interest.

The strategy outlines the Government's main policies and proposals for improving the overall level and distribution of health among the entire population (ethnic minority groups, women, children, the poor and the elderly). These include:

- using the government budget more effectively and moving to prepayment schemes in the medium term to finance health;
- reviewing and strengthening the organization of the health sector, and consolidating and developing primary health care/community-based services;
- strengthening preventive care and health promotion, improving curative care, and putting in place an effective referral system;
- developing human resources according to the needs of each level, and improving training;
- developing traditional medicines and implementing the national drug policy in order to promote rational and effective use of modern and traditional drugs;
- developing new technologies to catch up with other countries in the Region; and
- increasing the capacity of planning and management in all areas within the health sector.

As it stands today, the *National Strategy* provides a broad basis for further planning and can be seen as an orientation document for the development of the health sector. However, it does not provide specific solutions on how to: (1) ensure equal access to health care; (2) improve the performance of the health system and the quality of care; (3) rationalize the prescription and use of drugs and expenditure on medicines; and (4) respond to new public health problems, including noncommunicable diseases.

Some recent policies have begun to address these issues. In October 2002, the Prime Minister signed Decree 139 to establish the Health Care Fund for the Poor, which aims to provide free health Insurance for 14.6 million people. As of December 2008, 15.8 million people had received health care through this financing mechanism.

3.4 Health care financing

Since 2000, the State has continued building and adjusting health financing policies with greater concern for equity, efficiency and development than in the past. The broad orientation of health financing was decided upon in the 1990s through development of a health insurance scheme, the partial user fee policy and the Government resolution on "social mobilization" in the areas of education, health and culture. These orientations have created a health financing system that combines partially subsidized state health services with health services that collect user fees from patients. Nevertheless, the partial user fees created some contradictions and have led to inequalities. Therefore, the Government had to pay attention to financial assistance for certain social groups, especially for the poor. Health financing underwent further major changes in the 1990s as the State began to strongly promote decentralization of public finance, which had major implications for the health sector.

Total health expenditure in 2008 was 7.3% of GDP, with government expenditure accounting for only 38.5% of total health expenditure. Most health finance is used for curative and preventive care (93%-98%): curative care accounts for 75.2%, preventive care for 23.6%, and there is some expenditure on scientific research and training (less than 2%). By 2008, within the sphere of the government system, the number of enrolees in public health insurance was over 37.7 million, accounting for 43.76% of the population, including compulsory insurance, voluntary insurance and insurance for the poor.

3.5 Human resources for health

Currently, the number of health workers per bed in general for the whole country is 1.4 (including contract workers). The number of medical doctors on average for the whole country is about 2.6 per 10 beds, while the number of nurses is about 3.0 per 10 beds. The number of doctors per 1000 population is

0.65, the number of nurses is 0.78, and the number of pharmacists is 0.12 (not including the private sector).

According to data from the Ministry of Health, of all health workers at the provincial level in the whole country, 81.8% are working in curative care, 13.0% in preventive medicine and those in management account for 4.0%.

The number of health staff in public facilities has increased over the past five years, from 241 498 in 2003 to 299 100 in 2008. Total staff at the central, provincial, district and communal levels includes: 56 258 medical doctors (including PhD and master degree), 10 524 pharmacists, 67 081 nurses and 22 943 midwives.

3.6 Partnerships

The external relations line of the Party and the State is one of multilateralism, diversification and expansion of health cooperation with international NGOs and foreign partners to gain financial, technical and technological support. In implementation of this, international cooperation in health has created positive changes in terms of both quantity and quality. Since the 1990s, the number of donors/partners in health has increased considerably. However, aid for health still accounts for just 3% of total health expenditure and between 8% and 10% of government spending. As Viet Nam reaches middle-income-country status, the number of health partners is expected to decline; indeed, some partners with a global mandate to focus on the poorest countries have already announced their intention to leave the country. Nevertheless, aid to the health sector has been significant in certain areas, particularly HIV/AIDS and communicable disease control. ODA funds have come in diverse forms and have included grant aid from governments, international organizations, intergovernmental organizations and NGOs, and soft loans from international monetary institutions. While Viet Nam has a substantial general budget support programme, coordinated by the World Bank, there are no examples of budget or programmatic support in the health sector, where assistance remains heavily project-based (98% of health projects funded by a single donor).

3.7 Challenges to health system strengthening

Despite the important achievements recorded in health care, the country is still beset with many problems. The Party Politburo's Resolution No. 46 - NQ/TW on Health Care, Protection and Improvement for People in the new situation points out irrationalities of the health sector as follows:

- The health system is slow to renew and has not adapted itself to the development of a socialist-oriented market economy and changes in disease patterns
- The quality of health services has not met the increasingly diversified needs of the people.
- The health care conditions for the poor and those in remote areas and areas inhabited by ethnic groups remain very difficult.
- Pharmaceutical production and supply capacity remains weak; the price of pharmaceuticals remains high in comparison with people's incomes.
- The organization and operation of preventive medicine remain insufficient. A portion of the population lacks awareness about self-protection, self-care and health promotion. Environmental health and food safety have not been put under tight control.

Therefore, Viet Nam still faces a number of key challenges, such as:

- achieving adequate recognition that improved health outcomes are central to poverty reduction and economic growth and that health improvements require an intersectoral approach to address broad health determinants;
- developing a clear consensus among policy-makers on the road to developing an efficient equity-oriented health sector;
- achieving better coordination among ministries and across departments in the Ministry of Health and among partners;

- strengthening pro-poor health policies to meet the needs of the disadvantaged and ethnic minorities, particularly addressing the problems of financial access and the lack of responsiveness of health services to the needs of the poor;
- strengthening the public health agenda to address the incomplete agenda of infectious diseases and the problems brought about by urbanization, changing lifestyles and an ageing population;
- strengthening capacities at district and provincial levels to prioritize and implement successful interventions within an increasingly decentralized health system; and
- improving the enforcement of regulations and speeding up the implementation of public administration reform.

4. PROGRESS TOWARDS THE HEALTH MDGs

Goal 4. Reduce child mortality

Child health continues to improve. The open immunization programme has wider coverage and is of higher quality. The under-five mortality rate has been significantly reduced. In addition, the nutrition status of children in many regions of the country has been improved over recent years.

Goal 5. Improve maternal health

Women's reproductive health care programmes have been implemented nationwide. Increasingly, trained health personnel are monitoring and assisting during pregnancy and at delivery, thus improving maternal health indicators. The local health care network has been strengthened and upgraded, while epidemics and dangerous diseases affecting women's health are under control. The MMR fell significantly from 203 per 100 000 live births in 1990 to only 75 in 2007. The proportion of births attended by health personnel remains around 95%.

Goal 6. Combat HIV/AIDS, malaria and other diseases

The Government has issued the "National Strategy on HIV/AIDS Prevention and Control in Viet Nam Until 2010, With a Vision to 2020". It has also established a national committee for HIV/AIDS, drug and prostitution prevention and control, as well as provincial steering committees responsible for HIV and AIDS prevention and control. At the same time, it has strengthened the preventive health care system to combat the spread of HIV. The approach to HIV prevention and control has evolved to now combine health promotion with remedial activities, and integrate people living with HIV into the community. Malaria has been effectively controlled, with malaria cases per 100 000 people reduced by 90% between 2000 and 2007. Since 1995, the TB prevention programme has been a priority health care programme. It has achieved considerable success and has been commended by the international community.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Health statistical year books, 1998-2008.*
Operator : Ministry of Health, 1999-2008.
Web address : http://www.gso.gov.vn

Title 2 : *Statistical year book 2008*
Operator : General Statistics Office of Viet Nam, 2008.

Title 3 : *Vietnam development report: poverty.*
Features : Joint Donor Report to the Vietnam Consultative Group Meeting.

Title 4 : *Reports on National Health Survey 2001*-2002.
Operator : Ministry of Health and General Statistics Office, 2003.
Web address : http://www.moh.gov.vn/tinbyt/ and http://www.gso.gov.vn/

Title 5 : *Millennium Development Goals: closing the Millennium gaps.*
Features : Hanoi, *United* Nations, 2003.

Title 6	:	*Health policies and guidelines*
Operator	:	Health Policy Unit, Ministry of Health, 2002.
Web address	:	http://www.moh.gov.vn/tinbyt/
Title 7	:	*Vietnam MDG report in 2008*
Operator	:	Ministry of planning & Investment

6. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	138A Giang Vo, Hanoi, Viet Nam
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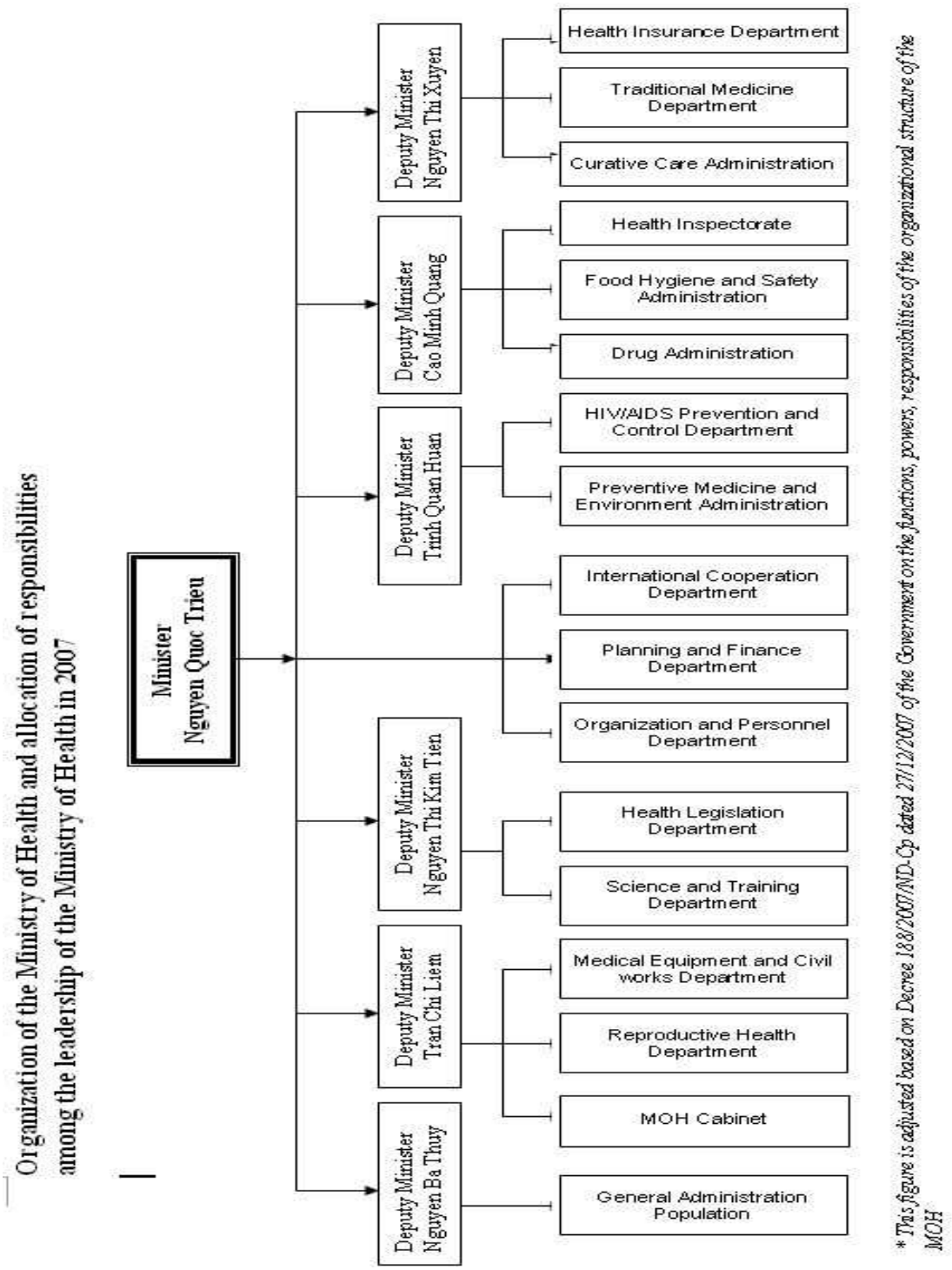
7. ORGANIZATIONAL CHART: Ministry of Health



COUNTRY HEALTH INFORMATION PROFILE

VIET NAM — WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	**Area (1 000 km2)**	331.21						2008	1
2	**Estimated population ('000s)**	86 210.80		42 384.50		43 826.30		2008 est	1
3	**Annual population growth rate (%)**	1.24		...		...		2008 est	1
4	**Percentage of population**								
	- 0–4 years	7.69		8.20		7.20		2008 est	1
	- 5–14 years	17.36		18.30		16.50		2008 est	1
	- 65 years and above	7.47		6.00		8.87		2008 est	1
5	**Urban population (%)**	29.80		...		...		2009 est	2
6	**Crude birth rate (per 1000 population)**	16.70		...		...		2008 est	1
7	**Crude death rate (per 1000 population)**	4.90		...		...		2008 est	1
8	**Rate of natural increase of population (% per annum)**	1.18		...		...		2008 est	1
9	**Life expectancy (years)**								
	- at birth	...		71.00		75.00		2008	1
	- Healthy Life Expectancy (HALE) at age 60	...		60.00		63.00		2002	3
10	**Total fertility rate (women aged 15–49 years)**	2.08						2008 est	1
	Socioeconomic indicators								
11	**Adult literacy rate (%)**	93.60 [a]		96.10 [a]		91.30 [a]		2008	1
12	**Per capita GDP at current market prices (US$)**	1034.00						2008	1
13	**Rate of growth of per capita GDP (%)**	23.98						2008	1
14	**Human development index**	0.73						2007	4
	Environmental indicators	Total		Urban		Rural			
15	**Health care waste generation (metric tons per year)**	21.00		...		...		2005	5
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral	5629	...	...	7	...	...	2008	6
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	886	...	...	0	0	0	2008	5
	Dengue/DHF	105 370	...	...	87	...	...	2009	6
	Encephalitis	1345	...	...	19	...	...	2008	5
	Gonorrhoea	6148	...	...	0	0	0	2008	5
	Leprosy	413	...	...	...	...	...	2009	6
	Malaria	11 355	...	...	25	...	...	2009	6
	Plague	15	...	...	1	...	...	2008	5
	Syphilis	1942	...	...	0	0	0	2008	5
	Typhoid fever	2015	...	...	1	....	...	2008	5
17	**Acute respiratory infections**	395 441	...	...	58	...	...	2008	5
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	288 570	...	...	96	...	...	2008	5
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	97 772	...	...	...	...	...	2008	6
	- New pulmonary tuberculosis (smear-positive)	53 484	...	...	...	...	...	2008	6
20	**Cancers**								
	All cancers (malignant neoplasms only)	95 471	...	...	398	...	...	2008	5
	- Breast	9441	...	...	13	...	...	2008	5
	- Colon and rectum	7635	...	...	40	...	...	2008	5
	- Cervix			184			0	2008	5
	- Leukaemia	4905	...	...	43	...	...	2008	5
	- Lip, oral cavity and pharynx	7213	...	...	15	...	...	2008	5
	- Liver	6052	...	...	71	...	...	2008	5
	- Oesophagus	1400	...	...	9	...	...	2008	5
	- Stomach	6731	...	...	28	...	...	2008	5
	- Trachea, bronchus, and lung	10 348	...	...	75	...	...	2008	5
21	**Circulatory**								
	All circulatory system diseases	178 893	...	...	2465	...	...	2008	5
	- Acute myocardial infarction	8547	...	...	594	...	...	2008	5
	- Cerebrovascular diseases	92 705	...	...	1499	...	...	2008	5
	- Hypertension	201 079	...	...	152	...	...	2008	5
	- Ischaemic heart disease	32 211	...	...	58	...	...	2008	5
	- Rheumatic fever and rheumatic heart diseases	14 960	...	...	37	...	...	2008	5
22	**Diabetes mellitus**	43 761	...	...	69	...	...	2008	5
23	**Mental disorders**	37 866	...	...	22	...	...	2008	5
24	**Injuries**							2008	5
	All types	180 384	...	...	1283	...	...	2008	5
	- Drowning	...	...	...	...	...	...		
	- Homicide and violence	11 390	...	...	27	...	...	2008	5
	- Occupational injuries	11 079	...	...	21	...	...	2008	5
	- Road traffic accidents	92 984	...	...	766	...	...	2008	5
	- Suicide	16 065	...	...	299	...	...	2008	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Pneumonia	284 500 [b]	...	...	409.12 [b]	...	...	2008	5
	2. Acute pharyngitis and acute tonsillitis	266 740 [b]	...	...	383.58 [b]	...	...	2008	5
	3. Acute bronchitis and acute bronchiolitis	212 937 [b]	...	...	306.21 [b]	...	...	2008	5
	4. Diarrhoea and gastroenteritis of presumed infectious origin	184 842 [b]	...	...	265.81 [b]	...	...	2008	5
	5. Essential (primary) hypertension	169 161 [b]	...	...	243.26 [b]	...	...	2008	5
	6. Arthropod-borne viral fevers and viral haemorrhagic fevers	127 052 [b]	...	...	182.71 [b]	...	...	2008	5
	7. Gastritis and duodenitis	122 121 [b]	...	...	175.61 [b]	...	...	2008	5
	8. Other acute upper respiratory infections	111 550 [b]	...	...	160.41 [b]	...	...	2008	5
	9. Transport accident	92 984 [b]	...	...	133.71 [b]	...	...	2008	5
	10. Fracture of other limb bones	89 356 [b]	...	...	128.50 [b]	...	...	2008	5

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Intracranial injury	1761 [b]	...	...	2.53 [b]	...	...	2008	5
	2. Human immuno deficiency virus disease	1691 [b]	...	...	2.43 [b]	...	...	2008	5
	3. Pneumonia	1624 [b]	...	...	2.34 [b]	...	...	2008	5
	4. Intracerebral haemorrhage	880 [b]	...	...	1.27 [b]	...	...	2008	5
	5. Transport accident	766 [b]	...	...	1.10 [b]	...	...	2008	5
	6. Acute myocardial infarction	594 [b]	...	...	0.85 [b]	...	...	2008	5
	7. Heart failure	558 [b]	...	...	0.80 [b]	...	...	2008	5
	8. Septicemia	380 [b]	...	...	0.55 [b]	...	...	2008	5
	9. Respiratory tuberculosis	346 [b]	...	...	0.50 [b]	...	...	2008	5
	10. Stroke, not specified as haemorrhage or infarction	333 [b]	...	...	0.48 [b]	...	...	2008	5
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					68.8		2008	1
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					93.70		2009	6
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	...		...		...			
31	**Percentage of newborn infants weighing less than 2500 g at birth**	5.30		...		...		2008	5
32	**Immunization coverage for infants (%)**								
	- BCG	97.00		...		...		2009	6
	- DTP3	96.30		...		...		2009	6
	- Hepatitis B III	94.50		...		...		2009	6
	- MCV2	96.40		...		...		2009	6
	- POL3	96.60		...		...		2009	6
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			29 669			...	2007	7
	- Eclampsia			482			12	2008	5
	- Haemorrhage			2310			54	2008	5
	- Obstructed labour			...			...		
	- Sepsis			305			4	2008	5
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	8	...	...	...	...	...	2009	6
	- Measles	6582	...	...	...	...	...	2009	6
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	33	...	...	...	...	...	2009	6
	- Pertussis (whooping cough)	122	...	...	...	...	...	2009	6
	- Poliomyelitis	0	0	0	...	...	...	2009	6
	- Rubella	1573	...	...	...	...	...	2009	6
	- Total Tetanus	247	...	...	...	...	...	2009	6
	Health facilities								
35	**Facilities with HIV testing and counseling services**					244		2008	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	774	115 923	2008	5
		- Specialized hospitals	136	28 560	2008	5
		- District/first-level referral hospitals	609	52 060	2008	5
		- Primary health care centres	11 576	45 059	2008	5
	Private health facilities	- Hospitals	83	5429	2008	5
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			6600.46	2008p	8
	- total expenditure on health as % of GDP			7.30	2008p	8
	- per capita total expenditure on health (in US$)			75.78	2008p	8
	Government expenditure on health					
	- amount (in million US$)			2540.51	2008p	8
	- general government expenditure on health as % of total expenditure on health			38.50	2008p	8
	- general government expenditure on health as % of total general government expenditure			8.70	2008p	8
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			4.41	2008p	8
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			61.50	2008p	8
	- out-of-pocket expenditure on health as % of total expenditure on health			55.50	2008p	8
	Exchange rate in US$ of local currency is: 1 US$ =			16302.3	2008p	8
38	**Health insurance coverage as % of total population**			43.76	2008	5

	INDICATORS		DATA							Year	Source
39	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	...	...	...	...	...	56 258	...	2008	5
		- Ratio per 1000 population	...	...	...	...	...	0.65	...	2008	5
	Dentists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Pharmacists	- Number	...	...	...	...	...	10 524	...	2008	5
		- Ratio per 1000 population	...	...	...	...	...	0.22	...	2008	5
	Nurses	- Number	...	...	...	...	...	67 081	...	2008	5
		- Ratio per 1000 population	...	...	...	...	...	0.77	...	2008	5
	Midwives	- Number	...	...	...	...	...	22 943	...	2008	5
		- Ratio per 1000 population	...	...	...	...	...	0.27	...	2008	5
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	4287 [c]	...	...	...	...	...	...	2008	5
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	19.90	...	...	2008	5
43	Infant mortality rate (per 1000 live births)	15.00	...	...	2008 est	1
44	Under-five mortality rate (per 1000 live births)	25.50	...	...	2008 est	5
45	Proportion of 1 year-old children immunised against measles	97.00	...	...	2009	6
46	Maternal mortality ratio (per 100 000 live births)	75.00			2008	5
47	Proportion of births attended by skilled health personnel	94.70 [d]			2008	5
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	10.30			2008	5
	- Percentage of deliveries in health facilities (as % of total deliveries)	84.40			2008	5
48	Contraceptive prevalence rate	79.50	...	...	2008	1
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	94.20			2008	5
	- At least four visits	...				
51	Unmet need for family planning	4.80	...	...	2002 est	9
52	HIV prevalence among population aged 15-24 years	0.30	...	...	2005	10
53	Estimated HIV prevalence in adults	0.54	...	...	2007	11
54	Percentage of people with advanced HIV infection receiving ART	35.00 [e]	...	...	2007	12
55	Malaria incidence rate per 100 000 population	12.83	...	...	2008	6
56	Malaria death rate per 100 000 population	0.03	...	...	2008	6
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	280.00	...	...	2008	6
60	Tuberculosis death rate per 100 000 population	34.00	...	...	2008	6
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	62.00	...	...	2008	6
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	92.00	...	...	2007	6
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	94.00	99.00	92.00	2008	13
64	Proportion of population using an improved sanitation facility	75.00	94.00	67.00	2008	13
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure applies to population aged 10 years and above
b	Figure applies to public hospitals (51/63 provinces in the whole country)
c	Figure refers to physicians and pharmacists
d	Figure applies to public health facilities
e	Based on country reports as of end of December 2007

Sources:	
1	General Statistics Office of Viet Nam [http://www.gso.gov.vn]
2	World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision. Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, [http://esa.un.org/wup2009/unup/] Accessed on June 2010
3	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
4	Human Development Report 2009: Overcoming barriers: Human mobility and development. United National Development Programme.[http://hdr.undp.org/en/reports/global/hdr2009/]
5	Health Statistics Yearbook 2008: HSID. Planning and Finance Department, Ministry of Health, Viet Nam
6	WHO Regional Office for the Western Pacific, data received from the technical units
7	Health Statistics Yearbook 2007: HSID. Planning and Finance Department, Ministry of Health, Viet Nam
8	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
9	United Nations, Department of Economic and Social Affairs, Population Division (2007). World Contraceptive Use 2007. Wallchart (United Nations publication, Sales No. E.08.XIII.6).
10	Viet Nam Population and AIDS indicator Survey 2005
11	HIV estimates and projections, Ministry of Health, Viet Nam.
12	UNGASS Country Progress Report, 2008.
13	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

WALLIS AND FUTUNA

1. CONTEXT

1.1 Demographics

The Futuna and Wallis Islands are located in the Oceania Islands in the South Pacific Ocean, about two-thirds of the way from Hawaii to New Zealand. The total area is 142 square kilometres and includes Ile Uvea (Wallis Island), Ile Futuna, Ile Alofi 20 islets.

The estimated population of Wallis and Futuna was 13 341 in 2009. About 29.4% are 0-14 years old, 63.0% are 15-64 years old and 7.6% are 65 years and older.

1.2 Political situation

The Futuna island group was discovered by the Dutch in 1616 and Wallis by the British in 1767, but it was the French who declared a protectorate over the islands in 1842. In 1959, the inhabitants of the islands voted to become a French overseas territory. The Chief of State is President Nicolas Sarkozy of France (since 16 May 2007), represented by the High Administrator, who is appointed by the French President on the advice of the French Ministry of the Interior. The High Administrator has been Phillippe Paolantoni since 28 July 2008. The head of government is the President of the Territorial Assembly, currently Victor Brial (since 4 February 2009). The Council of the Territory consists of three kings with limited powers, appointed by the High Administrator on the advice of the Territorial Assembly. The presidents of the Territorial Government and the Territorial Assembly are elected by the members of the Assembly.

1.3 Socioeconomic situation

The economy is limited to traditional subsistence agriculture, with about 80% of the labour force involved in agriculture (coconuts and vegetables), livestock (mostly pigs) and fishing. About 4% of the population is employed by the Government. Revenues come from subsidies from the French Government, licensing of fishing rights to Japan and the Republic of Korea, import taxes and remittances from expatriate workers in New Caledonia. Gross domestic product (GDP) per capita was estimated at US$ 3800 in 2004.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The leading noncommunicable diseases are: diabetes, obesity, rheumatism/gout and dental caries. For communicable diseases, they are leptospirosis, brucellosis, dengue, filariasis, tuberculosis, leprosy, hepatitis B, shigellosis and salmonella.

2.2 Outbreaks of communicable diseases

In 2002/2003, 2045 cases of dengue were reported in Wallis and Futuna, including 1535 suspected cases, 166 confirmed cases, 280 hospitalized cases and two cases resulting in death.

2.3 Leading causes of mortality and morbidity

No available information.

2.4 Maternal, child and infant diseases

The estimated infant mortality rate was 5.9 per 1000 live births in 2003. In 2009, immunization coverage for infants was 100% for DTP3, POL3, hepatitis B III and BCG. Only 86% of infants received measles immunization in 2007. In 2002, about 70% of pregnant women were immunized with tetanus toxoid.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

No available information.

3.2 Organization of health services and delivery systems

In 2009, there were one hospital and three dispensaries in Wallis, and one hospital and two dispensaries in Futuna. All treatment, including inpatient care, is free of charge.

Wallis hospital comprises an emergency ward, one medical ward with 21 beds, one surgical ward with 16 beds and two operating rooms, one delivery ward with two delivery rooms, one laboratory, one X-ray unit, two ultrasound rooms, one outpatient ward, one education room, and one pharmacy.

Futuna hospital comprises one emergency ward, one internal medicine ward with 15 beds, one post-delivery ward with seven beds, one labour ward, one laboratory, one X-ray and ultrasound unit, one pharmacy, one dental unit, and one medical evacuation unit.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

The French Government provides funding to support the health services. In 2008, the Government spent an estimated US$ 35.2 million on health, 24% of total government expenditure.

3.5 Human resources for health

There are currently 125 medical staff in Wallis and Futuna.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

No available information.

4. PROGRESS TOWARDS THE HEALTH MDGs

No available information.

5. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Pacific Island Populations - Estimates and projections of demographic indicators for selected years, Updated April 2010.
Operator	:	Secretariat of the Pacific Community – Statistics and Demography Programme

Title 2	:	Pacific Regional Information System (PRISM)
Operator	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int/prism/
Title 3	:	SPC Statistics and Demographic Programme
Web address	:	http://www.spc.int/demog/en/stats/2006/Pacific%20Island%20Populations%202006-2015%20-%2030%
Title 4	:	Service territorial de la statistique
Web address	:	http://www.spc.int/prism/wf/
Title 5	:	*World factbook* – Wallis and Futuna
Web address	:	http://www.cia.gov/library/publications/the-world-factbook/geos/wf.html#Intro

6. ADDRESSES

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Fax	:	(679) 3234 166/ 3234 177
Office hours	:	0800 – 1700

WALLIS AND FUTUNA

WESTERN PACIFIC REGION HEALTH DATABANK, 2010 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.14						2010	1
2	Estimated population ('000s)	13.34 [a]		6.62 [a]		6.72 [a]		2009 est	2
3	Annual population growth rate (%)	-0.60		...		...		2010 est	1
4	Percentage of population								
	- 0–4 years	8.22 [b]		8.48 [b]		7.97 [b]		2009 est	2
	- 5–14 years	21.19 [b]		23.22 [b]		19.20 [b]		2009 est	2
	- 65 years and above	7.57 [b]		6.98 [b]		8.16 [b]		2009 est	2
5	Urban population (%)	0.00		...		...		2009 est	3
6	Crude birth rate (per 1000 population)	19.40		...		...		2003	4
7	Crude death rate (per 1000 population)	5.90		...		...		2003	4
8	Rate of natural increase of population (% per annum)	1.35 [b]		...		...		2003	4
9	Life expectancy (years)								
	- at birth	74.30		72.70		75.90		2005-08	1
	- Healthy Life Expectancy (HALE) at age 60	...		...		...			
10	Total fertility rate (women aged 15–49 years)	2.00						2008 est	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	78.80 [c]		78.20 [c]		78.20 [c]		2003	5
12	Per capita GDP at current market prices (US$)	3 800.00						2004	6
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	...							
	Environmental indicators	Total		Urban		Rural			
15	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
16	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	13	...	...	...	...	...	2009	7
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	1	1	0	0	0	0	C: 2009 D:2007	7
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	...	...	...	...	...	...		
17	Acute respiratory infections	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Diarrhoeal diseases**	...	...	...	...	...	...		
	- Among children under 5 years	...	...	...	...	...	...		
19	**Tuberculosis**								
	- All forms	2 [d]	...	...	...	...	...	2007	7
	- New pulmonary tuberculosis (smear-positive)	1 [d]	...	...	...	...	...	2007	7
20	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Oesophagus	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
21	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
22	**Diabetes mellitus**	...	...	...	...	...	...		
23	**Mental disorders**	...	...	...	...	...	...		
24	**Injuries**								
	All types	...	...	...	...	...	...		
	- Drowning								
	- Homicide and violence	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Road traffic accidents	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
25	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1.	...	...	...	...	...	...		
	2.	...	...	...	...	...	...		
	3.	...	...	...	...	...	...		
	4.	...	...	...	...	...	...		
	5.	...	...	...	...	...	...		
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
26	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1.	...	...	...	...	...	...		
	2.	...	...	...	...	...	...		
	3.	...	...	...	...	...	...		
	4.	...	...	...	...	...	...		
	5.	...	...	...	...	...	...		
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
27	**Percentage of women in the reproductive age group using modern contraceptive methods**					...			
28	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					69.50		2002	7
29	**Percentage of pregnant women with anaemia**					...			
30	**Neonatal mortality rate (per 1000 live births)**	...		...		...			
31	**Percentage of newborn infants weighing less than 2500 g at birth**	...		...		...			
32	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2009	7
	- DTP3	100.00		...		...		2009	7
	- Hepatitis B III	100.00		...		...		2009	7
	- MCV2	...		...		...			
	- POL3	100.00		...		...		2009	7
		Number of cases			Number of deaths				
33	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
34	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2007	7
	- Diphtheria	0	0	0	...	...	...	2007	7
	- Measles	0	0	0	...	...	...	2009	7
	- Mumps	0	0	0	...	...	...	2007	7
	- Neonatal tetanus	0	0	0	...	...	...	2007	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2007	7
	- Poliomyelitis	0	0	0	...	...	...	2009	7
	- Rubella	0	0	0	...	...	...	2007	7
	- Total Tetanus	0	0	0	...	...	...	2007	7
	Health facilities								
35	**Facilities with HIV testing and counseling services**					...			

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Health infrastructure**					
	Public health facilities	- General hospitals	2	59	2009	6
		- Specialized hospitals	0	0	2008	6
		- District/first-level referral hospitals	0	0	2008	6
		- Primary health care centres	5 [e]	0	2009	6
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
37	**Total health expenditure**					
	- amount (in million US$)			...		
	- total expenditure on health as % of GDP			...		
	- per capita total expenditure on health (in US$)			...		
	Government expenditure on health					
	- amount (in million US$)			35.20	2008	6
	- general government expenditure on health as % of total expenditure on health			...		
	- general government expenditure on health as % of total general government expenditure			24.00	2008	6
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	- out-of-pocket expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			...		
38	**Health insurance coverage as % of total population**			...		

	INDICATORS		DATA							Year	Source
39	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	16 [f]	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	1.10 [b]	...	...	...	...	...	...	2008	6
	Dentists	- Number	3	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	0.21 [b]	...	...	...	...	...	...	2008	6
	Pharmacists	- Number	1	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	0.07 [b]	...	...	...	...	...	...	2008	6
	Nurses	- Number	43 [g]	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	2.97 [b]	...	...	...	...	...	...	2008	6
	Midwives	- Number	10 [h]	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	0.69 [b]	...	...	...	...	...	...	2008	6
	Paramedical staff	- Number	52	...	...	...	...	...	...	2003	6
		- Ratio per 1000 population	3.48 [b]	...	...	...	...	...	...	2003	6
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
40	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
40	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
41	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
42	Prevalence of underweight children under five years of age	...	...	...		
43	Infant mortality rate (per 1000 live births)	5.90	...	...	2003 est	8
44	Under-five mortality rate (per 1000 live births)	...	...	...		
45	Proportion of 1 year-old children immunised against measles	86.00	...	...	2007	7
46	Maternal mortality ratio (per 100 000 live births)	...				
47	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
48	Contraceptive prevalence rate	...	...	...		
49	Adolescent birth rate	...				
50	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
51	Unmet need for family planning	...	...	...		
52	HIV prevalence among population aged 15-24 years	...	...	...		
53	Estimated HIV prevalence in adults	...	...	...		
54	Percentage of people with advanced HIV infection receiving ART	...	...	...		
55	Malaria incidence rate per 100 000 population	...	...	...		
56	Malaria death rate per 100 000 population	...	...	...		
57	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
59	Tuberculosis prevalence rate per 100 000 population	2.00	...	...	2008	7
60	Tuberculosis death rate per 100 000 population	0.00	...	...	2008	7
61	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	0.00	...	...	2008	7
62	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	50.00	...	...	2006	7
		Total	Urban	Rural		
63	Proportion of population using an improved drinking water source	96.00	NA	96.00	2008	9
64	Proportion of population using an improved sanitation facility	...	...	...		
65	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
est	Estimate
NA	Not applicable
a	Estimated population as of 1 July 2009
b	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific.
c	Figure applies to aged 19 years and above.
d	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO
e	Figure refers to dispensaries.
f	Figure refers to physicians and specialists.
g	Figure includes 1 anaesthesiology nurse and excludes unauthorized nurses
h	Figure excludes 1 unauthorized midwife

Sources:	
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3	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision. [http://esa.un.org/wup2009/unup/]
4	Service de la statistique de wallis et futuna. Accessed from http://www.spc.int/prism/country/wf/stats/Social/demography.htm.
5	Service territorial de la statistique (http://www.spc.int/prism/wf/).
6	Information furnished by the WHO Representative to the South Pacific, 3 June 2009.
7	WHO Regional Office for the Western Pacific, data received from technical units.
8	Service territorial de la statistique (http://www.spc.int/prism/wf/).
9	Progress on Sanitation and Drinking Water: 2010 Update. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). UNICEF, New York and WHO, Geneva, 2010. [http://www.wssinfo.org/en/welcome.html]

Statistical Tables

Table 1. Demographic Indicators

	Country/ area	Population							
		Year	Total Population [1] ('000s)	Area [1] (1000 km ^{2})	Density [k] (per sq. km.)	Year	Urban [1] (%)	Year	Growth Rate [1] (%)
1	American Samoa	2009 est	65.11	(2006) 0.20	325.57	2009 est	92.70		...
2	Australia	2009 est	22 065.67 [a]	(2008) 7692.02	2.85	2009 est	88.90	2008p	2.12
3	Brunei Darussalam	2008	398.00	5.77	68.98	2009 est	75.20	2008	2.10
4	Cambodia	2008	13 395.68 [b]	181.04	73.99	2009 est	19.80	2008	1.54
5	China	2009	1 334 740.00	(2007) 9600.00	139.04	2009	46.60	1996-2006	0.80
6	Cook Islands	2009p	22.90	(2006) 0.24	95.42	2009 est	74.50	2006	1.70
7	Fiji	2010 est	854.00	(2009) 18.33	46.59	2009 est	51.50	2005-10	0.82
8	French Polynesia	2009 est	265.65 [c]	(2010) 3.52	75.47	2009 est	51.50	2002-07	1.20
9	Guam	2009 est	178.29 [d]	(2008) 0.54	330.16	2009 est	93.10		...
10	Hong Kong (China)	2009	7003.70	1.10	6367.00	2009	94.85	2009	0.37
11	Japan	2010	127 360.00 [e]	(2008) 377.94	336.98	2009 est	66.60		...
12	Kiribati	2009 est	98.99	(2010) 0.81	122.21	2009 est	43.80	2010 est	1.80
13	Lao People's Democratic Republic	2007 est	5874.00	236.80	24.81	2009 est	32.00	1995-2005	2.10
14	Macao (China)	2009	542.20 [f]	0.03	18 073.33	2009 est	100.00	2009	- 1.30
15	Malaysia	2009	28 310.00	329.96	85.80	2009 est	71.30	2009p	2.10
16	Marshall Islands	2009	54.07	0.18	300.36	2009 est	71.40	2009	1.00
17	Micronesia, Federated States of	2009 est	107.97	(2010) 0.70	154.25	2009 est	22.60	2009 est	0.25
18	Mongolia	2009	2735.78	1567.00	1.75	2009	63.23	2009	1.96
19	Nauru	2009 est	9.77 [g]	(2010) 0.02	488.50	2009 est	100.00	2010 est	2.10
20	New Caledonia	2009p	245.50	(2008) 18.58	13.21	2007 est	64.40	2006	2.50
21	New Zealand	2009	4318.06 [h]	270.69 [j]	15.95	2009	86.10 [j]	1991-2009	1.18 [l]
22	Niue	2009 est	1.51	0.26	est 5.82	2009 est	37.10		...
23	Northern Mariana Islands	2009 est	63.11	(2010) 0.46	137.20	2009 est	91.20	2010 est	- 0.10
24	Palau	2009 est	20.40	(2010) 0.44	46.36	2009 est	82.40	2010 est	0.60
25	Papua New Guinea	2009 est	6603.13	462.84	est 14.27	2009 est	12.50	2009	2.70
26	Philippines	2007	88 574.61	299.76	295.49	2009 est	48.70	2000-07	2.04
27	Pitcairn Islands	2009	0.06	0.04	1.50		...		...
28	Republic of Korea	2008	48 607.00 [c]	(2007) 99.70	487.53	2009 est	82.70	2008	0.31
29	Samoa	2009 est	183.20	(2010 est) 2.79	65.66	2009 est	20.86 [k]	2010 est	2.50
30	Singapore	2009p	3733.90 [i]	0.71	5259.01	2009 est	100.00	2009p	2.50 [i]
31	Solomon Islands	2009 est	549.57	(2008) 30.40	18.08	2009 est	18.20	2010 est	2.70
32	Tokelau	2006	1.47	(2008) 0.01	147.00	2009 est	0.00		...
33	Tonga	2009 est	103.02	(2008) 0.65	158.49	2009 est	23.30	2008	0.40
34	Tuvalu	2009 est	11.09	(2008) 0.03	369.67	2009 est	49.90	2008	0.30
35	Vanuatu	2009	234.02	(2010) 12.28	19.06	2009	24.45 [k]	2009	2.30
36	Viet Nam	2008 est	86 210.80	331.21	260.29	2009 est	29.80	2008 est	1.24
37	Wallis and Futuna	2009 est	13.34 [c]	(2010) 0.14	95.29	2009 est	0.00	2010 est	-0.60

% Distribution of Population [1]												
				Aged 60 years or older by gender[k] [2] (2010)								
Year	0-4 years (%)	5-14 years (%)	65+ years (%)	Male	Female	Year	Crude Birth Rate [1] (per 1000 popn)	Crude Death Rate [1] (per 1000 popn)	Year	Dependency Ratio[r] (%)	Year	Total Fertility Rate (women 15-49 years) [1]
2009 est	11.73	24.08	4.33	(2008) 6.90	8.30	2010 est	23.50	4.50	2009 est	67.06	2000	4.00
2009p	6.50	12.62	13.34	18.38	20.65	2008	13.84	6.72	2009	47.84	2008	1.97
2008	8.80	17.80	3.30	6.25	5.58	2008	16.10	2.70	2008	42.65	2008	1.70
2008	10.25	23.45	4.30	4.60	7.07	2004	25.00	6.70	2008	61.29	2008	3.10
2009	...	18.50 [m]	8.50	11.59	13.05	2009	12.13	7.08	2009	36.99	2005	1.74
2009 est	9.21	19.39	7.87	(2008) 7.00	8.30	2009p	19.20 [o]	5.60 [o]	2009 est	57.41	2009	2.60
2010 est	10.07	20.84	4.92	7.13	9.03	2008	21.50	7.40	2010 est	55.84	2003	2.60
2009 est	7.76 [k]	17.34 [k]	6.02 [k]	7.97	9.09	2008	17.53	4.48	2009 est	45.18	2008	2.18
2008 est	8.96 [b,k]	18.81 [b,k]	7.21 [b,k]	10.00	10.34	2008	19.71 [b,k]	4.41 [b,k]	2008 est	53.80 [a]	2008	2.55
2009	3.27	9.20	12.76	18.40	18.29	2009	11.84 [p]	5.86 [p,q]	2009	33.74	2009p	1.03
2010	4.23	9.06	23.00	27.61	33.20	2008	8.70	9.10	2010	56.96	2008	1.37
2009 est	12.35 [k]	23.18 [k]	3.46 [k]	(2008) 7.50	8.30	2010 est	27.80	8.30	2009 est	63.88	2008 est	3.40
2007 est	13.20	25.50	3.80	4.98	6.14	2007p	32.60	9.10	2007 est	73.91	2007p	4.20
2009	3.90	8.80	7.70	12.26	11.19	2009	8.80	3.10	2009	25.63	2009	0.99
2009	...	31.80 [m]	4.60	7.39	8.18	2008p	17.80	4.70	2009	57.23	2008p	2.30
2009	14.82	26.95	2.21	(2008) 7.50	8.30	2009 est	32.60	6.00	2009	78.51	2006	4.40
2009 est	12.64 [k]	23.95 [k]	4.00 [k]	3.70	7.27	2009 est	19.90	3.80	2009 est	68.33	2009	3.90
2009	9.69	17.93	4.06	5.31	6.59	2009	25.30	5.73	2009	46.37	2009	2.70
2009 est	12.87 [k]	23.05 [k]	1.25 [k]	(2008) 7.50	8.20	2008 est	13.10	6.70	2009 est	59.14	2008	4.00
2008 est	8.40	18.40	6.20	11.02	11.90	2008p	16.20 [b]	4.70	2008 est	49.25	2005	2.20
2009	7.08 [n]	13.56 [n]	12.80 [n]	17.04	19.32	2009	14.48	6.71	2009	50.23	2009	2.12 [s]
2009 est	8.55	16.63 [k]	11.93 [k]	(2008) 6.90	8.30	2010 est	14.80	9.70	2009 est	59.01	2006 est	2.60
2009 est	9.30 [k]	16.90 [k]	3.05 [k]	(2008) 7.50	8.20	2010 est	18.44	2.35	2009 est	41.34	2010 est	1.12
2009 est	6.39 [k]	14.72 [k]	5.73 [k]	(2008) 7.50	8.30	2009	13.16	8.68	2009 est	36.68	2007	2.00
2009 est	14.05 [k]	24.38 [k]	2.46 [k]	4.06	4.46	2000	35.00	12.00	2009 est	69.18	2005-10	4.10
2010 est	11.47	22.28	4.40	6.15	7.19	2004	20.50	4.80	2010 est	61.68	2008	3.30
2009	...	17.30 [m]	21.20	(2008) 36.60	41.00		...	...	2009	62.60		...
2008	4.64	12.76	10.32	13.46	17.69	2008	9.40	4.98	2008	38.35	2008	1.19
2009 est	12.91 [k]	25.76 [k]	4.96 [k]	5.38	8.24	2006	27.30	4.00	2009 est	77.39	2006	4.20
2009p	...	17.88 [l,m]	8.84 [i]	14.97	17.03	2008	10.20 [i]	4.40 [i]	2009p	36.46	2008	1.28 [i]
2009 est	15.63 [k]	25.06 [k]	3.14 [k]	4.69	5.04	2008 est	34.90	7.60	2009 est	78.04	2004-07	4.60
2006	11.32	23.74	7.37	(2008) 6.80	8.10	2009	15.00	5.00	2006	73.70	2008	4.50
2009 est	13.00	24.93 [k]	5.77 [k]	7.55	7.84	2008 est	28.50	6.80	2009 est	77.62	2008	3.70
2009 est	10.91 [k]	21.37 [k]	5.36 [k]	(2008) 6.90	8.20	2008 est	21.80	9.50	2009 est	60.35	2007	3.90
2009 est	13.97 [k]	24.00 [k]	3.50 [k]	5.60	4.92	2008 est	31.10	5.50	2009 est	70.82	2005-10	4.00
2008 est	7.69	17.36	7.47	7.40	10.04	2008 est	16.70	4.90	2008 est	48.19	2008 est	2.08
2009 est	8.22 [k]	21.19 [k]	7.57 [k]	(2008) 7.00	8.30	2003	19.40	5.90	2009 est	58.71	2008 est	2.00

Table 2. Socioeconomic Indicators

	Country/ area	Adult Literacy Rate [1]						Health Expenditure [1]			General Government Expenditure on Health as % of Total General Government Expenditure [1]
		Year	Total (%)	Male (%)	Female (%)	Year	Per capita GDP [1] (in US$)	Year	Per capita (US$)	As % of GDP (%)	2008
1	American Samoa		...	...	...	2005est	9041.00	2003	500.00	...	(2003) 14.00
2	Australia	2006	86.60 [a]	81.60 [a]	91.70 [a]	2008-09	39659.60 [n]	2008p	4301.00	8.80	17.60
3	Brunei Darussalam	2007	94.90	96.50	93.10	2008	35839.90	2008p	884.72	2.40	6.70
4	Cambodia	2008	77.60	85.10	70.90	2008	640.00 [o]	2008p	50.85	6.60	11.20
5	China	2007	91.60	95.65	87.56	2008	22698.00 [p]	2008p	157.60	4.83	11.60
6	Cook Islands	2009	100.00	...	...	2007p	9 991.18 [q]	2008p	457.75 [q]	4.30	12.40
7	Fiji	2005	94.40 [b]	...	...	2008	3 184.53 [r]	2008p	162.45 [q]	3.80	9.80
8	French Polynesia	2007	94.70 [c]	93.70 [c]	95.60 [c]	2006	16 803.36	2008	3 361.57	13.09	29.00
9	Guam		...	...	...	2005	22 661.00	2000	1 032.36	...	8.71 [ac]
10	Hong Kong (China)	2009	94.76 [d]	97.40 [d]	92.44 [d]	2009p	30 087.59	FY2005/06	1 351.00 [y]	5.10 [ab]	FY2005/06 15.10 [ad]
11	Japan	2000est	99.00	...	...	2008	38 559.00	2008p	3 101.88	8.10	17.90
12	Kiribati	2005	91.00	...	...	2008	1 368.91 [s]	2008	136.97 [q]	15.00	8.20
13	Lao People's Democratic Republic	2005	73.00	...	...	2008	740.00 [t]	2008p	34.11	4.00	3.70
14	Macao (China)	2009	95.20 [e]	97.60 [e]	93.00 [e]	2009	38 968.34	2008	738.20	1.87	8.22
15	Malaysia	2008	92.10	94.70	89.50	2009p	7 188.24	2008p	353.21	4.30	6.90
16	Marshall Islands		...	...	...	2007	2851.00	2008p	351.00	13.40	14.60
17	Micronesia, Federated States of	2009	92.40	92.90	91.90	2008	2 223.00	2008p	304.00	13.60	18.80
18	Mongolia	2007	97.80	98.00	97.50	2008	1 649.00 [u]	2008p	75.93	3.80	9.10
19	Nauru	2007	...	95.90	99.30	2006-07	2 071.00	2008p	707.00	15.20	32.10
20	New Caledonia	2007	91.00	92.00	90.00	2007 est	38 300.14 [v]	2006	3 226.11 [z]	9.66	...
21	New Zealand	2006	86.00 [f]	...	...	2008	30 026.04	2008p	3 819.74	8.96	17.97
22	Niue	2003	100.00	100.00	100.00	2006	8 208.20	2008p	1 408.45 [q]	17.90	14.30
23	Northern Mariana Islands	1990	...	99.30	98.80	2005	12 638.00		...	...	(FY 2007) 25.40
24	Palau	2005	99.90 [g]	99.90 [g]	99.80 [g]	2007 est	8 423.00	2008p	957.00 [q]	10.80	12.70
25	Papua New Guinea	1999-2007	57.80	62.10	53.40	2007	969.23 [q]	2008p	39.02	3.20	7.30
26	Philippines	1995-2005	92.60	...	...	2007	1 638.60	2008p	71.08	3.80	6.50
27	Pitcairn Islands		...	...	...		...		...	...	...
28	Republic of Korea	2002	97.90	99.20	96.60	2008	19 106.30 [q]	2008p	1 254.81 [q]	6.60	12.60
29	Samoa	2006	...	89.00 [h]	92.00 [h]	2009-10	2 881.81 [w]	2008p	153.86	5.15	12.64
30	Singapore	2009	96.30 [i]	...	...	2009p	36 537.00	FY2008p	1 932.55	4.04	6.98
31	Solomon Islands	1999-2007	76.60	...	...	2008	1 014.00	2008p	67.51	5.26	16.04
32	Tokelau	2009	96.00	...	...	2003	612.50 [x]	2001-09	3 705.64 [aa]	...	(FY 2001-09) 10.46
33	Tonga	1995-2005	99.00	98.80	99.00	2006 est	2 319.00	2008p	109.04 [q]	4.00	8.50
34	Tuvalu	2007	...	92.70	97.10 [j]	2002	1 139.32	2008p	295.37 [q]	9.00	14.80
35	Vanuatu	2007	78.10 [k]	...	...	2007	2 218.00	2008p	96.94	4.06	11.37
36	Viet Nam	2008	93.60 [l]	96.10 [l]	91.30 [l]	2008	1 034.00	2008p	75.78	7.30	8.70
37	Wallis and Futuna	2003	78.80 [m]	78.20 [m]	78.20 [m]	2004	3 800.00		...	...	(2008) 24.00

Table 3. Health and Human Rights Instruments

	Country/ area	Convention on the rights of the child [3]		Convention on the elimination of all forms of discrimination against women [3]		International covenant on economic, social and cultural rights [3]	
		Year of ratification [a]	Latest submission of report (as of July 2010)	Year of ratification [a]	Latest submission of report (as of July 2010)	Year of ratification [a]	Latest submission of report (as of July 2010)
1	American Samoa	…	…	…	…	…	…
2	Australia	1990	2008	1983	2008	1975	2007
3	Brunei Darussalam	1995	2001	2006	…	…	…
4	Cambodia	1992	2007	1992	2004	1992	2008
5	China	1992	2003	1980	2004	2001 [b]	2003 [c]
6	Cook Islands	1997	…	2006	2006	…	…
7	Fiji	1993	1996	1995	2008	…	…
8	French Polynesia	…	…	…	…	…	…
9	Guam	…	…	…	…	…	…
10	Hong Kong (China)	…	…	…	…	…	…
11	Japan	1994	2008	1985	2008	1979	1999
12	Kiribati	1995	2005	2004	…	…	…
13	Lao People's Democratic Republic	1991	2008	1981	2008	2007	…
14	Macao (China)	…	…	…	…	…	…
15	Malaysia	1995	2006	1995	2004	…	…
16	Marshall Islands	1993	2004	2006	…	…	…
17	Micronesia, Federated States of	1993	1996	2004	…	…	…
18	Mongolia	1990	2008	1981	2007	1974	1998
19	Nauru	1994	…	…	…	…	…
20	New Caledonia	…	…	…	…	…	…
21	New Zealand	1993	2008	1985	2006	1978	2008
22	Niue	1995	…	…	…	…	…
23	Northern Mariana Islands	…	…	…	…	…	…
24	Palau	1995	1998	…	…	…	…
25	Papua New Guinea	1993	2002	1995	2008	2008	…
26	Philippines	1990	2008	1981	2004	1974	2006
27	Pitcairn Islands	…	…	…	…	…	…
28	Republic of Korea	1991	2008	1984	2006	1990	2007
29	Samoa	1994	2005	1992	2003	…	…
30	Singapore	1995	2008	1995	2008	…	…
31	Solomon Islands	1995	2001	2002	…	1982	2001
32	Tokelau	…	…	…	…	…	…
33	Tonga	1995	…	…	…	…	…
34	Tuvalu	1995	…	1999	2008	…	…
35	Vanuatu	1993	1997	1995	2005	…	…
36	Viet Nam	1990	2008	1982	2005	1982	1992
37	Wallis and Futuna	…	…	…	…	…	…

Table 4. Poverty- and Gender-related Development Indicators

	Country/ area	Human Development Index (HDI) value [1,4]	Population below income poverty line (%) [4]		Gender-related development index (GDI) value [4]	Gender-empowerment measure (GEM) value [4]	Seats in parliament held by women [4]	Ratio of estimated female to male earned income [4]
			$1.25 a day	National poverty line				
		2007	2000-2007 [a]	2000-2006 [a]	2007	2005-2007 [e]	(% of total) [f]	1996-2007 [j]
1	American Samoa	...	...	...	...	...	...	...
2	Australia	0.97	...	...	0.97	0.87	30.00 [g]	0.70
3	Brunei Darussalam	0.92	...	...	0.91	...	...	0.59
4	Cambodia	0.59	40.20	35.00	0.59	0.43	16.00	0.68
5	China	0.77	15.90 [b]	2.80	0.77	0.53	21.00 [g]	0.68
6	Cook Islands	...	...	...	...	...	...	...
7	Fiji	0.74	...	...	0.73	...	... [h]	0.38
8	French Polynesia	0.87	...	...	...	...	...	...
9	Guam	...	...	...	...	...	...	...
10	Hong Kong (China)	0.94	...	...	0.93	...	...	0.73
11	Japan	0.96	...	...	0.95	0.57	12.00	0.45
12	Kiribati	...	...	...	...	...	4.00	...
13	Lao People's Democratic Republic	0.62	44.00	33.00	0.61	...	25.00	0.76
14	Macao (China)	0.94	...	...	...	...	...	...
15	Malaysia	0.83	<2.00	...	0.82	0.54	15.00	0.42
16	Marshall Islands	...	...	...	...	...	3.00	...
17	Micronesia, Federated States of	...	...	...	...	...	0.00	...
18	Mongolia	0.73	22.40	36.10	0.73	0.41	4.00	0.87
19	Nauru	...	...	...	...	...	0.00	...
20	New Caledonia	...	...	...	...	...	...	...
21	New Zealand	0.95	...	...	0.94	0.84	34.00	0.69
22	Niue	...	...	...	...	...	...	...
23	Northern Mariana Islands	...	...	...	...	...	...	...
24	Palau	...	...	...	...	...	7.00	...
25	Papua New Guinea	0.54	35.80 [c]	37.50 [c]	...	...	1.00	0.74
26	Philippines	0.75	22.60	25.10 [c]	0.75	0.56	20.00 [g]	0.58
27	Pitcairn Islands	...	...	...	...	...	...	...
28	Republic of Korea	0.94	<2.00 [c,d]	...	0.93	0.55	14.00 [g]	0.52
29	Samoa	0.77	...	...	0.76	0.43	8.00	0.40
30	Singapore	0.94	...	...	...	0.79	24.00	0.53
31	Solomon Islands	0.61	...	...	...	...	0.00	0.51
32	Tokelau	...	...	...	...	...	...	...
33	Tonga	0.77	...	...	0.77	0.36	3.00 [i]	0.57
34	Tuvalu	...	...	...	...	...	0.00	...
35	Vanuatu	0.69	...	...	0.69	...	4.00	0.69
36	Viet Nam	0.73	21.50	28.90	0.72	0.56	26.00	0.69
37	Wallis and Futuna	...	...	...	...	...	...	...

Table 5. Health Status Indicators

	Country/ area	Life expectancy at birth [1]				Mortality rates [1]					
		Year	Total (years)	Male (years)	Female (years)	Year	Neonatal (per 1000 live births)	Infant (per 1000 live births)	Under-five (per 1000 live births)	Maternal mortality ratio Year	Maternal mortality ratio (per 100 000 live births)
1	American Samoa	2000	72.50	69.30	75.90	2007	6.20	(2006-08) 11.30 [h]	(2002) 4.90	2002	123.00
2	Australia	2006-08	81.40	79.20	83.70	2008	2.88	4.10	4.92	2003-05	8.40 [n]
3	Brunei Darussalam	2008	78.20	76.60	79.80	2008	4.80	7.00	9.50	2008	0.00
4	Cambodia	2008	...	60.50 [a]	64.30 [a]	2005	28.00	(2008) 60.00	83.00	2008	461.00
5	China	2000	71.40	69.60	73.70	2008	10.20 [d]	14.90 [i]	18.50 [i]	2008	34.20 [i]
6	Cook Islands	2009 est	72.00 [b]	70.00 [b]	73.00 [b]	2009	7.10	7.10	7.10	2009	0.00
7	Fiji	2007	...	68.00	72.00	2008	9.00	13.10	23.60	2008	27.50
8	French Polynesia	2008	75.40	73.00	78.20	2008	3.00	5.00	6.48	2007	22.55 [o]
9	Guam	2009 est	79.20	76.82	81.91	2008p	4.33	(2005-07est) 11.7	(2005est) 10.00	2003	0.00
10	Hong Kong (China)	2009p	...	79.81	86.09	2009p	0.95 [e]	1.65 [e]	2.16 [m]	2009p	2.41 [e]
11	Japan	2008	...	79.29	86.05	2008	1.20	2.60	3.40	2008	3.60
12	Kiribati	2008 est	67.00 [a]	65.00 [a]	70.00 [a]	2008 est	...	(2005) 52.00	48.00	2005	158.00
13	Lao People's Democratic Republic	2007p	62.50	...	...	2007 est	(2005) 26.00	64.40	88.60	2005	405.00
14	Macao (China)	2006-09p	82.40	79.40	85.20	2009	1.70	2.10	2.70	2009	0.00
15	Malaysia	2008p	...	71.56	76.40	2007	3.80	(2008p) 6.40	7.90 [a]	2007	30.00
16	Marshall Islands	2004	...	67.00	70.60	2009	15.00	34.00	46.00	2009	324.15
17	Micronesia, Federated States of	2005-10est	68.50	67.70	69.30	2009	9.30	13.50 [j]	39.00	2009	0.00
18	Mongolia	2009	67.96	64.33	71.79	2009	9.96	20.16	23.65	2009	81.40
19	Nauru	2008	55.40	52.50	58.20	2003-07	26.80	37.90	37.90	2002	300.00
20	New Caledonia	2007	75.90	71.80	80.30	2005	2.50	...	(2002) 9.06	2008	0.00
21	New Zealand	2008p	80.40	78.40	82.40	2007	2.53	4.79	6.05	2006	11.61
22	Niue	2001-06	71.60	67.00	76.00	2006	(2005) 0.00	0.00	0.00	2006	0.00
23	Northern Mariana Islands	2010 est	76.90	74.27	79.68	2006-08	...	5.00 [k]	...	2000	0.00
24	Palau	2005	69.00	66.30	72.10	2009	10.98	21.97	25.64	2009	366.30 [p]
25	Papua New Guinea	2007	60.70	58.70	63.00	2006	29.10 [f]	56.70	74.70	2006	733.00
26	Philippines	2004	67.00	64.00	70.00	2008	16.00	25.00	34.00	2006	162.00
27	Pitcairn Islands		...	...	...		...	...	...		...
28	Republic of Korea	2007	79.56	76.13	82.73	2006	2.50	(2008) 3.40	5.70	2008	8.40
29	Samoa	2006	73.20	71.50	74.20	2002	4.20	(2006) 20.40 [l]	(2003-04) 13.00	2005-06	3.00 [q]
30	Singapore	2009	81.40 [c]	79.00 [c]	83.70 [c]	2008p	1.50	2.10 [c]	3.40	2007	7.50 [a]
31	Solomon Islands	2007	65.80	64.90	66.70	2002	12.00 [g]	(2008) 44.30 [a]	(2007) 37.20	2007	103.00
32	Tokelau	2008	...	67.80	70.40	2009	0.00	0.00	...	2005-09	0.00
33	Tonga	2008 est	...	67.30	73.00	2008	10.20	16.40	26.00	2008	76.10
34	Tuvalu	1997-2002	63.60	61.70	65.10	2003-07	29.00	31.00	36.00	2003	0.00 [r]
35	Vanuatu	2008 est	69.00	68.00	70.00	2008	(2006) 30.00	27.00 [a]	31.00	2006	70.04
36	Viet Nam	2008	...	71.00	75.00	2008 est	...	15.00	25.50	2008	75.00
37	Wallis and Futuna	2005-08	74.30	72.70	75.90	2003 est	...	5.90	...		...

Table 6. Maternal, Child Care and Nutritional Indicators

	Country/ area	Maternal and Child Care					
		% of women in reproductive age group using modern contraceptive methods [1]		% deliveries attended by skilled health personnel [1]		% of deliveries in health facilities [1]	% deliveries at home attended by skilled health personnel [1]
		Year	(%)	Year	(%)	(%)	(%)
1	American Samoa	2000	33.00	2002	100.00	99.00	1.00
2	Australia	2001	65.00 [a]	2007	...	99.20	...
3	Brunei Darussalam		...	2008	99.72	99.67	0.05
4	Cambodia	2009	28.00	2009	63.00	44.00	19.00
5	China	2006	89.60	2009	...	96.30	...
6	Cook Islands	2007	29.00 [b]	2009	100.00	99.60	0.40
7	Fiji	2005	42.29	2008	98.80	...	...
8	French Polynesia	2005	62.00 [c]	2004	100.00 [h]	99.00 [h]	1.00 [h]
9	Guam		...	2004	...	87.22	...
10	Hong Kong (China)		...	2009	100.00	100.00 [k]	0.00 [n]
11	Japan	2005 est	44.40 [d]	2008	99.95 [i]	99.77 [i]	0.18 [i]
12	Kiribati	2005	18.46	2005	89.65 [f]	85.00 [l]	4.65 [l]
13	Lao People's Democratic Republic	2005	36.60 [e]	2005	18.50	11.00	7.50
14	Macao (China)		...	2009	100.00	100.00	0.00
15	Malaysia	2009	1.14	2009	100.00	98.61	1.39
16	Marshall Islands	2009	14.54	2009	98.70	93.44	5.35
17	Micronesia, Federated States of	2009	66.00	2009	100.00 [f]	80.00	20.00
18	Mongolia	2009	53.20	2009	99.80	99.60	0.40
19	Nauru	2007	25.10	2007	97.40 [h]	...	...
20	New Caledonia	2007	37.50	2005	91.97	87.60	4.37
21	New Zealand	2002 est	72.00	2001	100.00	(2004 est) 95.30	...
22	Niue	2005	22.00	2006	100.00	100.00	0.00
23	Northern Mariana Islands	2000	64.00		...	...	...
24	Palau	2006	22.83	2009	100.00	100.00	0.00
25	Papua New Guinea	2008	35.70 [f]	2006	53.00	52.00 [h]	1.00 [h]
26	Philippines	2008	22.00	2008	62.20	44.00	18.20
27	Pitcairn Islands		...		...	...	...
28	Republic of Korea	2006	79.90	2007	100.00	98.90	1.10
29	Samoa	1997-2005	30.00 [g]	2004	100.00	91.00	9.00
30	Singapore	2003	72.50	2008p	...	99.74 [m]	...
31	Solomon Islands	2005	25.00	2007	86.00	85.00	1.00
32	Tokelau		...	2009	...	100.00	...
33	Tonga	2008	27.70	2008	99.90	98.00	1.90
34	Tuvalu	2007	22.40	2007	97.90	93.00	...
35	Vanuatu	2007	37.00	2006	92.90	91.08	1.82
36	Viet Nam	2008	68.80	2008	94.70 [j]	84.40	10.30
37	Wallis and Futuna		...		...	...	...

Maternal and Child Care							
% of women given at least 2 doses of tetanus toxoid TT2+ [1]		% of newborn babies weighing less than 2500 grams at birth [1]				Proportion of 1-year old children protected against neonatal tetanus through immunization of their mothers [5]	
Year	*%*	*Year*	*Total*	*Male*	*Female*	*Year*	
	...	2006	2.85 [o]	...	...		...
	...	2007	6.20	5.70	6.70		...
2009	75.00	2008	11.10	...	...	2008	65.00
2009	62.10	2005	8.00 [p]	...	...	2008	87.00
	...	2008	2.35	...	...		...
2009	100.00	2009	3.90	...	...	2008	83.00 [6]
2009	28.70	2005	9.00	...	...	2008	94.00
	...	2004	6.20	...	...		...
2006	NR	2004	8.46 [o]	...	...		...
	...	2008	5.22 [q]	4.59 [q]	5.94 [q]		...
2007	42.90	2008	9.60	8.50	10.70		...
2009	79.00	2005	8.20	7.70	8.60		...
2009	31.00		...	...	...	2006	56.00 [7]
	...	2009	7.20	6.60	7.80		...
2009	77.00	2007p	10.50	...	...	2008	87.00
2009	73.68	2009	15.40	...	...		...
	...	2009	11.10	...	...		...
	...	2009	4.20	3.90	4.50		... [s]
2008	34.00	2007	27.00	...	...		...
	...	2008	9.10	...	...		...
	...	2008	5.90	...	...		...
2008	100.00	2005	0.00	0.00	0.00		100.00 [6]
2006	NR	2000	18.99 [r]	...	...		...
2009	100.00		...	...	...		...
2009	35.00	2006	10.00	...	...	2006	69.60 [8]
2008	47.70 [h]	2008	19.60	...	...	2008	75.60 [8]
	...		...	...	...		...
	...		...	...	...		...
2008	27.00	2004	1.20	...	...		...
	...	2007	9.30	...	...		...
2008	60.00		...	...	...	2008	85.00 [h]
2009	100.00	2009	0.00	0.00	0.00		...
2009	98.00	2008	3.00	...	...		...
2009	100.00	2007	6.10	...	...	2008	100.00 [6]
2009	95.00	2007	10.20	...	...	2008	73.00
2009	93.70	2008	5.30	...	...	2008	84.08
2002	69.50		...	...	...		...

Table 6. Maternal, Child Care and Nutritional Indicators

	Country/ area	Maternal and Child Care				
		Proportion of infants <12 months of age with breastfeeding initiated within one hour of birth [7,8]		Proportion of infants less than six months exclusively breastfed [6]	Proportion of infants aged 6-9 months receiving breastmilk and complementary food [8]	Proportion of children 6-59 months old who had received vitamin A in the past six months [8]
		Year	*(%)*	*(%)*	*(%)*	*(%)*
1	American Samoa		…	…	…	…
2	Australia	2001	…	46.00	…	…
3	Brunei Darussalam	2003	…	14.60	…	…
4	Cambodia	2008	(2005) 35.00 [9]	66.00 [9]	82.00	59.00
5	China	2000	…	48.70 (urban) 60.40 (rural) [t]	(2003) 32.00 [13]	…
6	Cook Islands		…	…	…	…
7	Fiji	2004	57.00 [10]	39.80 [10]	…	…
8	French Polynesia	2001	…	19.00	…	…
9	Guam		…	…	…	…
10	Hong Kong (China)		…	…	…	…
11	Japan	2000	…	41.00 [t]	97.90	…
12	Kiribati	1995-2003	…	80.00 [t]	…	…
13	Lao People's Democratic Republic	2006	30.00	26.40 [7]	70.00	…
14	Macao (China)		…	…	…	…
15	Malaysia	1995-2003	…	29.00 [t]	…	…
16	Marshall Islands	2007	73.00	27.30	77.00 [8]	(2003) 23.00
17	Micronesia, Federated States of	1995-2003	…	60.00 [t]	…	(2003) 95.00 [u]
18	Mongolia	2008	81.00 [11]	79.00 [12]	82.00 [12]	64.60 [7]
19	Nauru	2007	76.00	67.20	65.00 [8]	…
20	New Caledonia		…	…	…	…
21	New Zealand		…	…	…	…
22	Niue		…	…	…	…
23	Northern Mariana Islands		…	…	…	…
24	Palau	1995-2003	…	59.00 [t]	…	…
25	Papua New Guinea	2006	NA	56.00 [8]	78.00	42.0
26	Philippines	2008	53.50	34.00 [8]	57.90 [8]	75.90
27	Pitcairn Islands		…	…	…	…
28	Republic of Korea		…	…	…	…
29	Samoa		…	…	…	…
30	Singapore		…	…	…	…
31	Solomon Islands	2006-07	75.00	73.70	81.40	(2007) 62.00
32	Tokelau		…	…	…	…
33	Tonga		…	…	…	…
34	Tuvalu	2007	…	34.70	40.00 [8]	…
35	Vanuatu	2007	72.00	40.10	62.00 [7]	…
36	Viet Nam	2006	57.80	16.90	68.00 [h]	53.10 [v]
37	Wallis and Futuna		…	…	…	…

Maternal and Child Care				National underweight, stunting and wasting prevalence (age 0-59 months)			
Year	Proportion of children aged 0-59 months who had diarrhoea in the past 2 weeks and were treated with ORT [7,8] (%)	Year	Proportion of children aged 0-59 months who had suspected pneumonia in the past 2 weeks and were taken to an appropriate health care provider [7,8] (%)	Year	≤2 SD weight/ age [1] (%)	≤2 SD height/ age [14] (%)	≤2 SD weight/ height [14] (%)
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
2005	58.40	2005	48.30	2008	29.00	39.50	8.90
	…		…	2005	6.90	(2008) 13.70 [w]	(2008) 3.10 [w]
	…		…		…	…	…
	…		…	2004	7.00	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
2006	48.00 [h]	2006	32.30	2006	37.10	47.60 [h]	7.30 [h]
	…		…		…	…	…
	…		…	2006	7.70	…	…
	…		…		…	…	…
	…		…		…	…	…
2005	83.00 [h]	2005	63.00 [h]	2007	6.30	(2005) 27.00 [x,7]	(2005) 3.00 [x,7]
	…	2007	69.00	2007	4.80	24.00 [8]	1.00 [8]
	…		…		…	…	…
	…		…		…	…	…
	…		…	2005	0.00	…	…
	…		…		…	…	…
	…		…		…	…	…
2006	8.00	2006	62.90	2007	28.00	…	…
2008	59.00 [h]	2008	50.00 [h]	2008	26.20	27.90 [1]	6.10 [1]
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…	1995-2003	14.00	(2000) 2.20	(2000) 2.40
	…	2007	73.00	2007	11.80	33.00 [8]	4.00 [8]
	…		…		…	…	…
	…		…		…	…	…
	…		…	2007	1.60	10.00	3.30
	…		…	2007	19.50	25.90	5.90
2006	65.00 [h]	2006	83.00 [h]	2008	19.90	(2006) 36.00 [7]	(2006) 8.00 [f]
	…		…		…	…	…

Table 7. Environmental Health and Prevalence of Tobacco Use Indicators

	Country/ area	Percentage of population using:				Estimated smoking prevalence among adults [6]				Smoking prevalence among youth (student aged 13-15 years) [6]			
		Improved drinking water source [1]		Improved sanitation facility [1]									
		Year	(%)	Year	(%)	Year	Total (%)	Male (%)	Female (%)	Year of survey	Total (%)	Boys (%)	Girls (%)
1	American Samoa	2004	99.00	2004	99.00	2006	29.90	38.10	21.60	2005	16.70	18.30	15.10
2	Australia	2008	100.00	2008	100.00	2007	...	22.00	19.00		...	...	...
3	Brunei Darussalam	2008	99.90	2002	80.00	1997	...	36.10	6.40		...	...	...
4	Cambodia	2008	61.00	2008	29.00	2005	...	49.00	7.00	2003	2.50	4.60	0.20
5	China	2008	89.00	2008	55.00	2002	...	59.00	4.00	2005	1.70 [a]	2.70 [a]	0.80 [a]
6	Cook Islands		...	2008	100.00	2004	...	42.00	34.00	2008	30.00	28.20	31.50
7	Fiji	2006	47.00	2006	71.00	2002	...	22.00	4.00	2009	8.50	12.80	5.80
8	French Polynesia	2008	100.00	2008	98.00	1995	...	36.00	36.00		...	...	...
9	Guam	2008	100.00	2008	99.00	1999	...	37.70	26.90	2002	22.60	25.30	19.70
10	Hong Kong (China)	2009	100.00	2009	99.00	1998	...	27.10	2.90	2009	7.50	7.50	7.60
11	Japan	2008	100.00	2008	100.00	2006	...	42.00	13.00		...	...	...
12	Kiribati	2006	65.00	2006	33.00	1999	42.00	56.50	32.30	2009	19.80	26.30	13.90
13	Lao People's Democratic Republic	2008	57.00	2008	53.00	2003	...	64.00	15.00	2007	7.40 [b]	12.10 [b]	1.70 [b]
14	Macao (China)	2009	100.00	2009	100.00	1997	...	31.58	4.18	2005	10.40	11.00	9.80
15	Malaysia	2008	100.00	2008	96.00	2006	...	53.00	3.00	2009	18.20	30.90	5.30
16	Marshall Islands	2008	94.00	2008	73.00	2002	...	36.00	6.00	2009	13.30	17.00	10.60
17	Micronesia, Federated States of		...	2006	25.00	2002	...	30.00	18.00	2007	28.30	36.90	19.80
18	Mongolia	2008	76.00	2008	50.00	2006	...	46.00	6.00	2003	8.50	14.40	4.00
19	Nauru	2008	90.00	2008	50.00	2004	...	47.00	54.00		...	...	...
20	New Caledonia		...		...	1992	...	28.00	34.00		...	...	...
21	New Zealand	2010p	100.00	2010p	100.00	2007	...	22.00	20.00	2008	17.70	14.50	20.70
22	Niue	2008	100.00	2008	100.00	1980	...	58.00	17.00	2009	10.50	...	...
23	Northern Mariana Islands		...	2008	98.00		...	...	...	2004	29.10	26.60	31.50
24	Palau	2006	89.00		...	1998	...	38.00	9.00	2009	34.40	41.90	27.00
25	Papua New Guinea	2008	40.00	2008	45.00	1990	...	76.00	80.00	2007	43.80	52.10	35.80
26	Philippines	2008	91.00	2008	76.00	2009	28.30	47.70	9.00	2007	17.30	23.40	11.80
27	Pitcairn Islands		...		...		...	...	...		...	...	...
28	Republic of Korea	2008	98.00	2008	100.00	2005	...	53.00	6.00	2008	7.90	9.00	6.30
29	Samoa	2006	88.00	2008	100.00	1995	...	58.00	23.00	2007	15.20	16.00	12.70
30	Singapore	2008	100.00	2008	100.00	2007	...	36.00	6.00	2000	9.10	10.50	7.50
31	Solomon Islands	2007	84.20		...	1989	...	...	33.00	2008	24.20	24.30	23.40
32	Tokelau	2008	97.00	2008	93.00	2006	46.40	47.30	45.60		...	...	...
33	Tonga	2008	100.00	2008	96.00	2006	...	62.00	15.00		...	...	...
34	Tuvalu	2008	97.00	2008	84.00	2002	...	54.00	21.00	2007	26.60	33.20	22.10
35	Vanuatu	2008	83.00	2008	52.00	1998	...	50.00	7.00	2007	18.20	28.20	11.40
36	Viet Nam	2008	94.00	2008	75.00	2003	...	44.00	2.00	2007	3.30	5.90	1.20
37	Wallis and Futuna	2008	96.00		...	1996	...	42.00	18.00		...	...	...

Table 8. Summary of 2009 Emergencies in the Western Pacific Region

	Country/ area	Emergency [15] (GLIDE number [a]) *Month*	Casualties [15] Dead	Injured	Missing	Number of individuals affected [15]	Health facilities damaged/ destroyed/ affected [15]	Estimated cost of damages (in million USD) [15]	Health priorities and impact (reported) [15]
1	Cambodia	**Typhoon** TC-2009-000205-KHM *September*	17 [b]	17	20	178 091	…	…	Safe water supply, water- and vector-borne diseases
2	Fiji	**Cyclone** TC-2009-000258-FIJI *December*	2	…	…	3 845	…	13.30	Safe water supply; No outbreaks reported
		Tropical Depression *January*	11	…	1	> 6000	…	…	Safe water supply, nutrition, disease surveillance Increase of dengue cases
3	Lao People's Democratic Republic	**Typhoon** TC-2009-000215-LAO September	16 [b]	91	1	128 887	5 district hospitals flooded	100.00 [b]	Water- and vector- borne diseases, communicable diseases, safe water supply and sanitation
4	Mongolia	**Floods** FL-2009-000140-MNG *July*	26	…	…	> 10 000 [b]	…	…	Safe water supply
5	Philippines	**Floods** *July*	22	2	1	505 102	…	25.00	Safe water and food supply
		Complex Emergency *September* *Since mid-August 2008*	> 300	…	…	350 000 to 400 000 displaced	…	…	Safe water and food supply, malnutrition, diarrhoea, respiratory illness, Mental Health and Psychosocial Support (MHPSS)
		Floods, Typhoons TC-2009-000205-PHL TC-2009-000214-PHL September,October	464	…	38	1.9 million families	US$ 13.8M [c]	237.00	Safe water supply, food supply, displacement, clothing and shelter, communicable diseases, water & vector-borne diseases, leptospirosis
6	Samoa	**Tsunami** TS-2009-000219-WSM September	148	310	6	20 000	1 clinic destroyed	150.00	Displacement, safe water supply, sanitation, hygiene shelter, health care for the injured, Management of the Dead and Missing (MDM), MHPSS, communicable disease prevention, risk for vector-borne & water-borne diseases, respiratory tract infections (RTI), infected wounds, scabies

Table 8. Summary of 2009 Emergencies in the Western Pacific Region

Country/ area *Month*	Emergency [15] (GLIDE number [a])	Casualties [15]			Number of individuals affected [15]	Health facilities damaged/ destroyed/ affected [15]	Estimated cost of damages (in million USD) [15]	Health priorities and impact (reported) [15]
		Dead	Injured	Missing				
7 Solomon Islands	Floods FL-2009-000032-SLB *February*	21	1	11	10 556 [b]	…	43.20 [b]	Increase in cases of diarrhoea, eye infection, and respiratory diseases. Priorities were safe water supply, rehabilitation of water facilities, disease prevention, and food supply
8 Tonga	Tsunami TS-2009-000210-TON *September*	9	9	…	500 were displaced; 335 families affected	1 hospital seriously damaged	9.50	Safe water supply, waste disposal, sanitation, vector-borne diseases, displacement
9 Vanuatu	Volcaninc eruption VO-2009-000086-VUT *April*	…	…	…	9000	…	…	Acid rain threatened safe water and food supply. Increase in cases of diarrhoea, eye redness, stomach pain and other symptoms due to consumption of acidic water
	Earthquake EQ-2009-000114-VUT *May*	…	…	10	3000-5000	1	…	Safe water supply
10 Viet Nam	Typhoons TC-2009-000205-VNM *September*	286 [d]	774 [d]	12 [d]	40 000	561	0.90 [e]	Communicable diseases, environmental pollution, safety of vulnerable groups, safe water supply, health facilities repair, water- and vector- borne diseases. Increase in cases of diarrhoea (335), conjunctivitis (1300), influenza (4200), and skin disease (23 000)

Table 9. Health Workforce and Infrastructure Indicators

	Country/ area	Health workforce [1]				
		Physicians			Nurses	
		Year	Number	Rate per 1000 population	Number	Rate per 1000 population
1	American Samoa	2003	49	0.78	127	2.03
2	Australia	2009p	62 800 [a]	2.93 [a]	188 300 [a,k]	8.79 [a,k]
3	Brunei Darussalam	2008	564	1.42	1 426	3.58
4	Cambodia	2009	3 351	0.25	8 720	0.65
5	China	2009	2 435 901 [b]	1.83	2 457 256	1.84
6	Cook Islands	2004	22	1.08	52	2.56
7	Fiji	2008	337	0.38 [c]	1 784	2.03 [c]
8	French Polynesia	2009	565	2.13 [c]	1 111	4.18 [c]
9	Guam	2007	141 [d]	0.84 [c]	…	…
10	Hong Kong (China)	2009	12 424 [e]	1.77 [e]	38 641 [l]	5.50 [l]
11	Japan	2008	286 699	2.25	1 295 670 [m]	10.15
12	Kiribati	2009	35	0.35 [c]	329	3.32 [c]
13	Lao People's Democratic Republic	2005	1 283	0.23	5 291 [n]	0.93
14	Macao (China)	2009	1 765 [f]	3.26	1 491	2.75
15	Malaysia	2009	31 273	1.10	59 375	2.10
16	Marshall Islands	2008	38	0.71	172	3.23
17	Micronesia, Federated States of	2009	63	0.58 [c]	229	2.12 [c]
18	Mongolia	2009	7 140	2.61	9 017	3.30
19	Nauru	2008	10	1.00	64 [o]	6.40
20	New Caledonia	2009	542	2.22 [c]	1 103	4.51 [c]
21	New Zealand	2008	10 552	2.47	44 762	10.48
22	Niue	2006p	4	2.58	13	8.39
23	Northern Mariana Islands		…	…	…	…
24	Palau	2009	29	1.42 [c]	112	5.49
25	Papua New Guinea	2008	333	0.05	2 844	0.44
26	Philippines	2004	93 862	1.14	352 398	4.26
27	Pitcairn Islands		…	…	…	…
28	Republic of Korea	2008	95 013	1.95	246 837	5.08
29	Samoa	2005	50	0.27 [g]	136	0.75 [g]
30	Singapore	2009	8 323	1.60	26 792	5.38
31	Solomon Islands	2009	118	0.21 [c]	934	1.70
32	Tokelau	2009	3	2.57 [c]	11	9.43 [c]
33	Tonga	2008	57 [h]	0.55 [c]	345	3.36 [c]
34	Tuvalu	2008	10 [g]	1.03 [g]	54 [p]	5.55
35	Vanuatu	2008	26	0.11	332	1.42
36	Viet Nam	2008	56 258 [i]	0.65 [i]	67 081 [q]	0.77 [q]
37	Wallis and Futuna	2008	16 [j]	1.10 [c]	43 [r]	2.97 [c]

Table 9. Health Workforce and Infrastructure Indicators

	Country/ area	Health workforce [1]					Health infrastructure [1]		
		Midwives			Total	Density [c]	Hospital beds		
		Year	Number	Rate per 1000 population	(physicians, nurses, midwives)	(per 1000 population)	Year	Number	Rate per 1000 population [c]
1	American Samoa	2003	1	0.02	177	2.91	2003	128 [z]	2.04
2	Australia	2009p	13 000 [a]	0.61 [a]	264 100	12.03	2008-09	83 944 [aa]	3.82
3	Brunei Darussalam	2008	515	1.29	2 505	6.29	2008	1 078 [ab]	2.71
4	Cambodia	2009	3 322	0.24	15 393	1.15		…	…
5	China		…	…	…	…	2009	5 423 790 [ac]	4.06
6	Cook Islands	2004	11	0.54	85	4.19 [x]	2005	127 [ad]	6.29
7	Fiji		…	…	… [y]		2008	1 743 [ae]	2.08 [x]
8	French Polynesia	2009	129	0.49 [c]	1 805	6.79	2009	793 [af]	2.99
9	Guam		…	…	… [y]		2008	187 [z]	1.06
10	Hong Kong (China)	2009	4 525 [s]	0.64 [s]	55 590	7.94	2009	31 489 [ag]	4.50
11	Japan	2008	27 789	0.22	1 610 158	12.64 [x]	2008	1 755 971 [ah]	13.75
12	Kiribati	2009	48	0.48	412	4.16	2009	144 [z]	1.45
13	Lao People's Democratic Republic		…	…	… [y]		2005	6 739 [ai]	1.20
14	Macao (China)		…	…	… [y]		2009	1 294 [aj]	2.39
15	Malaysia	2009	20 127	0.71	110 775	3.91	2009	51 398 [ak]	1.82
16	Marshall Islands		…	…	… [y]		2009	146 [z]	2.70
17	Micronesia, Federated States of	2009	20	0.19 [c]	312	2.89	2009	348 [al]	3.22
18	Mongolia	2009	668	0.24	16 825	6.15	2009	16 120 [ak]	5.89
19	Nauru	2008	5 [t]	0.50 [t]	79	8.59	2007	51 [z]	3.51
20	New Caledonia	2009	106	0.43 [c]	1 751	7.13	2006	46 [am]	0.19
21	New Zealand	2008	2 468 [u]	0.58	57 782	13.54	2002	23 825 [aj]	6.18 [x]
22	Niue	2006p	2	1.29	19	12.34	2006	8 [z]	5.19
23	Northern Mariana Islands		…	…	…	…	2000	94 [g,an]	1.20 [x]
24	Palau	2006	1	0.05 [c]	142	6.96	2009	100 [ao]	4.90
25	Papua New Guinea	2008	315	0.05	3 492	0.54		…	…
26	Philippines	2004	136 036	1.65	582 296	7.04	2006	44 296 [ap]	0.50
27	Pitcairn Islands		…	…	…	…		…	…
28	Republic of Korea	2008	8 565	0.18	350 415	7.21	2008	596 956 [aq]	12.28
29	Samoa	2005	37	0.20 [g]	223	1.22 [x]	2005	177 [ar]	0.97 [x]
30	Singapore	2009	294	0.06	35 409	9.48	2008	11 431 [ak]	3.14
31	Solomon Islands	2009	146	0.26	1 198	2.18		…	…
32	Tokelau	2009	3	2.57 [c]	17	11.56 [x]	2009	18 [z]	12.24 [x]
33	Tonga	2008	19	0.18 [c]	421	4.10	2008	266 [an]	2.44
34	Tuvalu	2008	10	1.03	74	7.61	2001	56 [ao]	5.56
35	Vanuatu	2008	48	0.21	406	1.74	2008	393 [g,aa]	1.69 [g]
36	Viet Nam	2008	22 943 [v]	0.27 [v]	146 282	1.70	2008	247 031 [as]	2.87
37	Wallis and Futuna	2008	10 [w]	0.69 [c]	69	4.76	2009	59 [z]	4.42

Table 10. Morbidity and Mortality Indicators

	Country/ area	Communicable Diseases [1]									
		Cholera			Dengue fever/ DHF			Leprosy		Malaria		
		Year	Cases	Deaths	Year	Cases	Deaths	Year	Cases	Year	Confirmed Cases	Deaths
1	American Samoa	2003	0	0	2009	419	...	2009	3		...	...
2	Australia	2009p	4	(2007) 0	2009p	1399 [g]	(2007) 0	2009p	4	2009p	530 [i]	(2007) 0
3	Brunei Darussalam	2008	0	0	2009	33	0	2009	2	2008	18	0
4	Cambodia	2009	38 [a]	0	2009	11 699	38	2009	351	2009	83 777	279
5	China	2009	85	0	2009	305 [h]	0	2009	1597	2009	14 491	12
6	Cook Islands	2005	0 [b]	0	2009	170	0	2009	0 [b]	2009	0 [b]	0
7	Fiji	2008	0	...	2009	374	...	2009	2	2008	1	...
8	French Polynesia	2009	0	0	2009	2 479	0	2009	9	2009	1	0
9	Guam	2007	1	...	2009	0	0	2009	6	2007	1 [j]	...
10	Hong Kong (China)	2009p	0 [c]	0 [d]	2009p	43 [c]	0 [d]	2009p	4 [c]	2009p	23 [c]	0 [d]
11	Japan	2008	45	...	2009	92	...	2009	2	2008	56	1
12	Kiribati	2005	0	0	2009	7	...	2009	96		...	...
13	Lao People's Democratic Republic	2002	1 272	...	2009	7 214	12	2009	101	2008	17 648 [k]	13
14	Macao (China)	2009	0	0	2009	4	0	2009	0	2009	0	0
15	Malaysia	2009	276	2	2009	41 486	88	2009	187	2009	7 010	26
16	Marshall Islands	2005	0	0	2009	0	0	2009	44		...	...
17	Micronesia, Federated States of	2009	0	0	2009	37	0	2009	122	2009	1	0
18	Mongolia	2009	0	0	2009	0	0	2009	0	2009	3	0
19	Nauru	2008	0	0	2009	0	0	2009	3	2008	0	0
20	New Caledonia		...	...	2009	8410	...	2009	7	2008	2	...
21	New Zealand	2009	0	0	2009	140	0	2009	3	2009	50	0
22	Niue	2005	0	0	2009	0	...	2009	0	2005	0	0
23	Northern Mariana Islands		...	...	2009	0	0	2009	0		...	...
24	Palau	2009	0	0	2009	4	...	2009	4	2009	0	0
25	Papua New Guinea		...	...		...	...	2009	435	2008	84 452	628
26	Philippines	2009	5521 [e]	38 [e]	2009	57 819	548	2009	1795	2008	23 655 [l]	56 [i]
27	Pitcairn Islands		...	...		...	...		...		...	...
28	Republic of Korea	2007	7	0	2007	97	...	2009	5	2008	1 052	0
29	Samoa	2004	0	0	2008	677	1	2009	5		...	...
30	Singapore	2009	4	0	2009	4 187	8	2009	8	2009	131	2
31	Solomon Islands		...	...	2009	0	0	2009	30	2009	30 597	53
32	Tokelau		...	...	2009	0	...	2009	0		...	...
33	Tonga	2008	0	0	2009	273	...	2009	0	2008	0	0
34	Tuvalu	2005	0	0	2009	0	0	2009	0		...	...
35	Vanuatu	2006	1 [f]	...	2009	45	0	2009	5	2008	3 477 [m]	1
36	Viet Nam	2008	886	0	2009	105 370	87	2009	413	2009	11 355	25
37	Wallis and Futuna		...	...	2009	13	...	2009	1		...	...

Table 10. Morbidity and Mortality Indicators

	Country/ area	Vaccine preventable diseases --- Number of reported cases						
		AFP [6] 2009	Congenital rubella [1] 2009	Diptheria [1] 2009	Measles [1] 2009	Measles incidence rate [6] per 1 000 000	Mumps [1] 2009	Neonatal tetanus [1] 2009
1	American Samoa	0	(2008) 0	(2008) 0	0	0.00	(2008) 0	(2008) 0
2	Australia	48	0	0	105	4.92	165	0
3	Brunei Darussalam	1	0	0	2	4.92	1	0
4	Cambodia	66	...	3	4779	319.51	...	27
5	China	4 954	...	0	52 461	39.04	299 329	1 412
6	Cook Islands	0	0	0	0	0.00	0	0
7	Fiji	8	0	0	1	1.18	0	0
8	French Polynesia	0	0	0	0	0.00	0	0
9	Guam	0	0	0	0	0.00	1	0
10	Hong Kong (China)	11	0 [c]	0 [c]	26 [c]	2.99	158 [c]	0 [c]
11	Japan	0	2	0	741	5.80	104 568	...
12	Kiribati	0	0	0	0	0.00	0	0
13	Lao People's Democratic Republic	46	...	0	78	12.86	...	8
14	Macao (China)	1	0	0	0	0.00	71	0
15	Malaysia	106	...	0	57	2.07	...	4
16	Marshall Islands	0	0	0	0	0.00	0	0
17	Micronesia, Federated States of	0	0	0	0	0.00	17	0
18	Mongolia	6	0	0	8	2.99	1990	0
19	Nauru	0	0	0	0	0.00	0	0
20	New Caledonia	2	0	0	0	0.00	...	0
21	New Zealand	9	0	0	253	46.59	63	0
22	Niue	0	0	0	0	0.00	0	0
23	Northern Mariana Islands	0	0	0	0	0.00	0	0
24	Palau	0	0	0	0	0.00	0	0
25	Papua New Guinea	24	...	...	0	0.00	...	125
26	Philippines	610	...	118	1469	16.08	...	172
27	Pitcairn Islands	...	...	...	...		...	...
28	Republic of Korea	20	...	0	11	0.23	6 524	...
29	Samoa	1	0	0	0	0.00	0	0
30	Singapore	7	0	0	13	3.52	631	0
31	Solomon Islands	3	0	0	0	0.00	0	0
32	Tokelau	0	0	0	0	0.00	0	0
33	Tonga	1	0	0	0	0.00	0	0
34	Tuvalu	0	0	0	0	0.00	0	0
35	Vanuatu	0	...	0	0	0.00	...	0
36	Viet Nam	353	...	8	6582	73.38	...	33
37	Wallis and Futuna	0	(2007) 0	(2007) 0	0	0.00	(2007) 0	(2007) 0

Vaccine preventable diseases --- Number of reported cases					Immunization coverage (%)			
Pertussis [1]	Poliomyelitis [1]	Rubella [1]	Total tetanus [1]	Yellow fever [6]	BCG [1]	DTP1 [6]	DTP3 [1]	HepB birth dose[6]
2009	*2009*	*2009*	*2009*	*2009*	*2009*	*2009*	*2009*	*2009*
(2008) 0	0	(2008) 0	(2008) 0	...	...	...	(2008) 94.00	...
29 739 [i]	0	26	3	...	...	...	(2009) 92.10 [o]	...
0	0	1	0	0	100.00	96.50	99.40	100.00
513	0	528	...	...	100.00	100.00	95.00	55.00
1612	0	69 860	...	...	99.50	99.20	99.27	92.90
0	0	0	0	...	100.00	100.00	82.00	100.00
0	0	1	0	0	88.90	69.80	70.40	...
30	0	0	0	0	99.00	98.00	98.00	...
0	0	0	0	0	...	...	(2006) 89.00	100.00
15 [c]	0 [c]	44 [c]	1 [c]	0	(2008) >95.00 [n]	95.00	(2008) >95.00 [n]	95.00
5 208	0	148	113	0	94.00	105.60	100.00	...
0	0	0	0	0	76.00	90.00	86.00	52.00
12	0	124	15	...	67.00	76.00	67.00	...
0	0	16	0	0	99.80	94.60	91.80	100.00
36	0	...	14	0	98.00	95.00	95.00	95.00
2	0	0	0	...	98.37	...	96.03	...
0	0	0	0	0	75.00	...	91.00	88.00
0	0	3	3	0	97.80	95.00	94.80	97.80
0	0	0	0	0	100.00	100.00	100.00	100.00
1	0	...	0	0	(2008) 98.00	81.00	(2008) 100.00	99.00
1399 [l]	0	4 [l]	1	0	...	94.00	92.00	...
0	0	0	0	0	100.00	100.00	100.00	100.00
0	0	0	0	0	...	98.00	94.00	100.00
0	0	0	0	0	...	100.00	49.00	100.00
2932	0	19	125	...	80.00	84.00	62.00	27.00
2	0	578	1022	0	90.00	90.00	87.00	34.00
...	...	...	...	...	...	...	...	...
42	0	37	17	0	96.00	96.00	94.00	95.00
0	0	0	0	0	94.00	91.00	72.00	75.00
13	0	178	0	0	99.51	97.80	94.37	...
0	0	0	0	0	58.00	...	81.00	45.00
0	0	0	0	0	100.00	100.00	100.00	100.00
5	0	0	0	0	99.00	99.00	99.00	99.00
0	0	0	0	...	100.00	34.00	5.00	100.00
0	0	...	0	...	95.00	95.00	95.00	95.00
122	0	1573	247	...	97.00	97.40	96.30	40.30
(2007) 0	0	(2007) 0	(2007) 0	...	100.00	100.00	100.00	100.00

Table 10. Morbidity and Mortality Indicators

	Country/ area	Immunization coverage (%)					
		HepB3 [1] 2009	Hib3 [6] 2009	MCV1 [1] 2009	MCV2 [6] 2009	POL3 [1] 2009	VitA1 [6] 2009
1	American Samoa	(2008) 89.00	...	(2008) 86.00	...	(2008) 92.00	...
2	Australia	(2009) 91.60 [o]	...	93.80 [p]	...	(2009) 92.00 [o]	...
3	Brunei Darussalam	100.00	99.40	(2008) 99.70	99.30	99.50	...
4	Cambodia	...	...	92.00	...	95.00	98.00
5	China	99.13	...	98.62	97.76	99.30	...
6	Cook Islands	82.00	82.00	78.00	61.00	82.00	...
7	Fiji	70.40	70.40	55.90	56.80	68.60	...
8	French Polynesia	99.00	98.00	99.00	84.00	98.00	...
9	Guam	(2006) 91.00	...	(2006) 85.00	...	(2006) 85.00 [s]	...
10	Hong Kong (China)	(2008) >95.00 [n]	...	(2008) >95.00	(2008) >95.00 [r]	(2008) >95.00 [n]	...
11	Japan	...	...	94.30	91.80	99.60	...
12	Kiribati	86.00	86.00	81.50	35.00	84.00	76.50
13	Lao People's Democratic Republic	67.00	...	59.00	...	67.00	88.00
14	Macao (China)	92.00	90.40	88.10	88.10	91.80	...
15	Malaysia	95.00	95.00	95.00	95.00	95.00	...
16	Marshall Islands	99.77	...	78.11	65.52	100.00	...
17	Micronesia, Federated States of	89.00	73.00	86.00	82.00	88.00	...
18	Mongolia	97.00	97.00	93.80	97.30	95.80	...
19	Nauru	100.00	100.00	100.00	92.00	100.00	...
20	New Caledonia	(2008) 97.80	100.00	(2008) 98.60	...	(2008) 100.00	...
21	New Zealand	93.00	98.00	89.00	...	92.00	...
22	Niue	100.00	100.00	100.00	100.00	100.00	...
23	Northern Mariana Islands	93.00	100.00	87.00	84.00	91.00	...
24	Palau	69.00	48.00	75.00	...	48.00	...
25	Papua New Guinea	62.00	62.00	60.00	...	75.00	52.00
26	Philippines	85.00	...	58.00	88.00	86.00	91.00
27	Pitcairn Islands	...	...	...	...	...	...
28	Republic of Korea	94.00	...	93.00	100.00	95.00	...
29	Samoa	72.00	72.00	(2008) 45.00	29.00	72.00	79.00
30	Singapore	93.90	...	NA [q]	NA [q]	94.32	...
31	Solomon Islands	81.00	76.60	60.00	...	81.70	...
32	Tokelau	100.00	100.00	100.00	100.00	100.00	...
33	Tonga	99.00	99.00	(2008) 99.00	98.00	99.00	...
34	Tuvalu	8.00	84.00	90.00	84.00	85.00	...
35	Vanuatu	95.00	95.00	95.00	...	95.00	...
36	Viet Nam	94.50	...	97.00	96.40	96.60	88.20
37	Wallis and Futuna	100.00	100.00	(2007) 86.00	...	100.00	...

HIV/AIDS					Lymphatic filariasis	
HIV prevalence among population aged 15-24 years [1]		Estimated HIV prevalence in adults (%) [1]	% of people with advanced HIV infection receiving ART (2009)		Reported MDA coverage among total population at risk (%) [6]	Number of MDA rounds [6]
Year	*Data*	*2009*	*Data* **[16]**	*Data* **[1]**	*2009*	*2009*
	…	…	…	…	(2008) 52.90	(2008) 7
2008	<0.08	(2008) 0.08	…	(2008 est) 61.00 [v]	… [z]	…
	…	(2005) <0.10	…	…	…	…
2005	84.40	0.70	94.00	100.00	84.60	5
	…	0.06	…	62.40	… [z]	…
	…	…	…	…	(2008) 79.20	(2008) 6
	…	(2007) 0.10	30.00	…	88.97	7
2009	0.15	0.20	…	95.00	(2008) 83.60	(2008) 7
	…	…	…	…	… [z]	…
	…	<0.01	…	(2008) 89.60 [k,w]	… [z]	…
2009	0.00	0.01	…	95.90	… [z]	…
	…	…	…	…	(2008) 57.80	(2008) 5
	…	(2007) 0.20	67.00	(2007) 100.00	61.00	2
2009	<0.10 [t]	<0.10 [u]	…	…	… [z]	…
2006-07	0.10	(2007) 0.30	23.00	(2007) 35.00	(2008) 85.95	(2008) 5
	…	0.03	…	50.00	(2008) 62.15	…
2009	31.00	34.60	…	8.30	(2008) 3.10	(2008) 1--3
2009	0.00	<0.02	8.00	76.92	… [z]	…
	…	…	…	…	… [z]	…
2009	0.00	…	…	…	…	(2008) 0
	…	(2007) 0.10	…	…	… [z]	…
	…	…	…	…	(2008) 88.05	(2008) 5
	…	…	…	…	… [z]	…
2007	0.00	(2007) 0.15	…	(2007) 0.15 [x]	…	…
2009	0.79	0.95	52.00	(2008) 0.95	49.00	3
2009	< 1.00	< 1.00	37.00	0.82	65.00	4-5
	…	…	…	…	… [z]	…
	…	…	…	…	… [z]	…
	…	…	…	…	(2008) 74.20	(2008) 7
	…	0.10	…	…	… [z]	…
	…	2.40	…	…	… [z]	..
	…	…	…	…	… [z]	…
	…	…	…	…	(2008) 83.60	(2008) 6
	…	…	…	…	(2008) 69.20	(2008) 5
2007	0.00	(2007) 0.00	…	(2007) 100.00	(2008) 77.90	(2008) 6
2005	0.30	(2007) 0.54	34.00	(2007) 35.00 [y]	(2008) 83.80	(2008) 5
	…	…	…	…	(2008) 59.30	(2008) 6

Table 10. Morbidity and Mortality Indicators

Country/ area	Tuberculosis				
	Estimated Prevalence rate (per 100 000 population) 2008 [1]	Estimated Incidence rate (per 100 000 population) 2008 [6]		Estimated Mortality rate (all cases per 100 000 population) [1]	Cure rate (smear positive cases in DOTS areas, %) [1]
	All forms	*All forms*	*Smear-positive*	*2008*	*2007*
1 American Samoa	1.00	3.00	2.00	0.00	…
2 Australia	5.00	7.00	2.00	0.00	85.00
3 Brunei Darussalam	43.00	65.00	39.00	4.00	76.00
4 Cambodia	680.00	490.00	240.00	79.00	94.00
5 China	88.00	97.00	48.00	12.00	94.00
6 Cook Islands	32.00	20.00	10.00	4.00	100.00
7 Fiji	25.00	20.00	10.00	3.00	81.00
8 French Polynesia	(2009) 20.07	22.00	9.00	(2009) 1.13	(2009) 73.00
9 Guam	61.00	58.00	20.00	4.00	89.00
10 Hong Kong (China)	(2009p) 76.36 [c]	91.00	24.00	(2009p) 2.78 [d]	66.00
11 Japan	12.00	22.00	8.00	1.00	46.00
12 Kiribati	110.00	360.00	180.00	25.00	93.00
13 Lao People's Democratic Republic	260.00	150.00	74.00	32.00	92.00
14 Macao (China)	(2009) 123.80	78.00	30.00	(2009) 4.60	(2008) 92.90
15 Malaysia	120.00	100.00	51.00	15.00	72.00
16 Marshall Islands	59.00	210.00	100.00	14.00	96.00
17 Micronesia, Federated States of	(2009est) 168.00	93.00	46.00	(2009) 15.00	20.00
18 Mongolia	(2009) 70.20	210.00	100.00	(2009) 2.80	(2009) 84.00
19 Nauru	10.00	12.00	6.00	1.00	100.00
20 New Caledonia	10.00	21.00	4.00	1.00	77.00
21 New Zealand	(2009) 7.10	8.00	3.00	1.00	86.00
22 Niue	(2007) 0.00	…	…	(2007) 0.00	…
23 Northern Mariana Islands	11.00	38.00	18.00	2.00	92.00
24 Palau	110.00	63.00	31.00	14.00	…
25 Papua New Guinea	130.00	250.00	120.00	21.00	39.00
26 Philippines	550.00	280.00	140.00	52.00	89.00
27 Pitcairn Islands	…	…	…	…	…
28 Republic of Korea	50.00	88.00	26.00	6.00	82.00
29 Samoa	36.00	18.00	9.00	4.00	92.00
30 Singapore	(2007) NA	39.00	13.00	(2009) 1.77	(2009) 69.00
31 Solomon Islands	(2009) 70.00	120.00	60.00	19.00	(2008) 93.00
32 Tokelau	…	…	(2007) 0.00	(2007) 0.00	…
33 Tonga	22.00	24.00	12.00	3.00	93.00
34 Tuvalu	44.00	160.00	79.00	11.00	75.00
35 Vanuatu	88.00	74.00	37.00	11.00	93.00
36 Viet Nam	280.00	200.00	99.00	34.00	92.00
37 Wallis and Futuna	2.00	6.00	3.00	0.00	(2006) 50.00

Tuberculosis				Noncommunicable diseases	
Case detection rate of smear-positive cases (2008, %) [1]	TB Notification rate (per 100 000 population) 2008 [6]		Estimated HIV prevalence among TB cases (%) [6]	Cancer [1]	
Smear-positive	*All cases*	*Smear-positive*	*2008*	*Year*	*Deaths*
0.00	5.00	0.00	100.00	2002	37
89.00	6.00	1.00	2.30	2007	39 323
86.00	55.00	34.00	0.00	2008	201
57.00	267.00	136.00	15.00		…
72.00	73.00	35.00	1.70	2004-05	1 885 500 [aa]
102.00	10.00	10.00	…	2009	19
95.00	13.00	9.00	3.30		…
(2009) 94.33	19.00	8.00	…	2007	307 [k]
88.00	51.00	18.00	3.30	2003-07	720
87.00	79.00	21.00	0.51	2008	12 456 [d]
87.00	19.00	7.00	0.49	2008	342 963
74.00	304.00	133.00	0.00	2009	24
67.00	69.00	53.00	2.00		…
104.00	75.00	29.00	0.25	2009	551
76.00	65.00	39.00	12.00	2008	5 150
46.00	206.00	46.00	0.00	2009	38
85.00	165.00	39.00	0.00	2009	40
(2009) 74.10	170.00	70.00	0.15	2009	3 145
351.00	50.00	20.00	…	2008	4
87.00	18.00	4.00	…		…
88.00	7.00	2.00	1.00	2006	7 997
…	0.00	0.00	…		…
85.00	33.00	15.00	0.00		…
0.00	…	…	…	2008	31
29.00	213.00	35.00	3.80	2008	31
67.00	155.00	94.00	0.26	2004	42 686
…	…	…	…		…
88.00	77.00	23.00	0.53	2007	67 561
37.00	7.00	3.00	…	2006	66
(2007) NA	34.00	11.00	2.50	2009	4 990
46.00	76.00	27.00	…		…
…	0.00	0.00	…		…
88.00	13.00	11.00	0.00		…
114.00	170.00	90.00	0.00	2004	0
52.00	44.00	19.00	…	2006	58 [f]
62.00	112.00	61.00	3.80	2008	398
0.00	…	…	…		…

Table 10. Morbidity and Mortality Indicators

Country/ area	Noncommunicable diseases		Estimated road traffic death rate (per 100 000 population [ac]) [17]	Suicide rate (per 100 000 population) [1]		
	Diseases of the circulatory system [1]					
	Year	*Deaths*	*2007*	*Year*	*Male*	*Female*
1 American Samoa	2002	88	…		…	…
2 Australia	2007	46 626	7.80	2007	6.89	2.02
3 Brunei Darussalam	2008	336	13.80	2008	2.84	1.60
4 Cambodia		…	12.10		…	…
5 China		…	16.50		…	…
6 Cook Islands	2009	30	45.00	2007	10.07 [ad]	10.37 [ad]
7 Fiji		…	7.00		…	…
8 French Polynesia	2007	292	…	2007	17.31	6.33
9 Guam	2000	246	…	2005	29.37	6.13
10 Hong Kong (China)	2008	11 333 [d]	…	2008	16.22	9.32
11 Japan	2008	334 971	5.00	2008	34.61	13.27
12 Kiribati	2009	70	7.40	2009	14.27	2.00
13 Lao People's Democratic Republic		…	18.30		…	…
14 Macao (China)	2009	441	…	2009	14.16	8.19
15 Malaysia	2008	11 890	23.60	2008	0.47	0.16
16 Marshall Islands		…	1.70		…	…
17 Micronesia, Federated States of	2009	74	14.40	2009	12.90	3.72
18 Mongolia	2009	5 892	19.30	2009	26.09	6.08
19 Nauru	2008	29	9.90	2008	0.00	0.00
20 New Caledonia		…	…		…	…
21 New Zealand	2006	10 840	10.10	2006	19.74	6.69
22 Niue		…	…		…	…
23 Northern Mariana Islands		…	…		…	…
24 Palau		…	14.80	2009	18.28	0.00
25 Papua New Guinea		…	14.20		…	…
26 Philippines	2004	54 045	20.00	2004	3.36	1.02
27 Pitcairn Islands		…	…		…	…
28 Republic of Korea	2007	57 574	12.80	2007	31.92 [ad]	18.42 [ad]
29 Samoa	2006	175 [ab]	12.80		…	…
30 Singapore	2009	5 550	4.80	2009	9.87	4.45
31 Solomon Islands		…	16.90		…	…
32 Tokelau		…	…		…	…
33 Tonga	2008	144	7.00	2008	0.00	0.00
34 Tuvalu		…	9.50		…	…
35 Vanuatu	2006	53 [f]	18.60		…	…
36 Viet Nam	2008	2 465	16.10		…	…
37 Wallis and Futuna		…	…		…	…

Table 11. Risk factors for noncommunicable diseases

	Country/ area	Behavioural measures									
		Daily smokers (%) [18]					Current drinkers [18]				
		Year	Age group	Total	Male	Female	Year	Age group	Total	Male	Female
1	American Samoa	2007	25-64	29.90 [19]	38.10 [19]	21.60 [19]	2007	25-64	63.50 [19]	72.70 [19]	41.30 [19]
2	Australia	2007	14+	16.60	18.00	15.20			…	…	…
3	Brunei Darussalam			…	…	…			…	…	…
4	Cambodia	2010	25-64	26.40 [33]	49.30 [33]	4.80 [33]	2010	25-64	53.50 [j,33]	76.30 [j,33]	31.90 [j,33]
5	China	2004	13-15	6.40 [a,b]	8.00	4.80			…	…	…
6	Cook Islands			…	…	…			…	…	…
7	Fiji	2002	15+	…	26.00 [20]	3.90 [20]	2002	15+	23.80 [20]	39.90 [20]	5.50 [20]
8	French Polynesia			…	…	…			…	…	…
9	Guam			…	…				…	…	…
10	Hong Kong (China)	2008	15+	11.80 [21]	20.50 [21]	3.60 [21]			…	…	…
11	Japan	2006	20+	…	39.90 [c]	10.00 [c]			…	…	…
12	Kiribati	2006	25-64	59.00 [22]	74.00 [22]	45.40 [22]	2006	25-64	25.50 [22]	46.90 [22]	6.10 [22]
13	Lao People's Democratic Republic	2008	25-64	18.80 [23]	42.90 [23]	2.00 [23]	2008	25-64	50.00 [g,23]	72.00 [g,23]	35.60 [g,23]
14	Macao (China)			…	…	…			…	…	…
15	Malaysia	2005	25-64	21.20 [24]	39.00 [24]	2.10 [24]	2005	25-64	12.20 [24]	20.00 [24]	3.90 [24]
16	Marshall Islands	2002	15-64	19.80	…	…			…		
17	Micronesia, Federated States of	2002	25-64	25.50 [d,25]	34.80 [d,25]	16.10 [d,25]	2002	25-64	28.70 [d,25]	47.50 [d,25]	9.90 [d,25]
18	Mongolia	2009	15-64	27.50 [26]	…	…	2005	15-64	66.50 [32]	75.00 [32]	57.40 [32]
19	Nauru	2004	15-64	48.20 [27]	45.50 [27]	50.80 [27]	2004	15-64	46.20 [27]	60.70 [27]	32.10 [27]
20	New Caledonia			…	…	…			…	…	…
21	New Zealand	2007	15+	18.10	19.30	17.00			…	…	…
22	Niue	2002	15+	26.10 [e]	…	…			…	…	…
23	Northern Mariana Islands			…	…	…			…	…	…
24	Palau	2001	13-15	58.50 [b]	…	…			…	…	…
25	Papua New Guinea			…	…	…			…	…	…
26	Philippines	2009	10-18	22.50 [28]	…	…			…	…	…
27	Pitcairn Islands			…	…	…			…	…	…
28	Republic of Korea	2005	20+	29.10 [c]	52.80 [c]	5.80 [c]			…	…	…
29	Samoa			…	…	…			…	…	…
30	Singapore	2007	18-69	13.60 [29]	…	…			…	…	…
31	Solomon Islands	2006	25-64	30.60 [30]	43.90 [30]	16.90 [30]	2006	25-64	33.50 [30]	51.50 [30]	14.90 [30]
32	Tokelau	2005	15-64	59.30 [31]	55.40 [31]	63.30 [31]	2005	15-64	94.50 [31]	97.10 [31]	90.40 [31]
33	Tonga	2000	15+	…	52.90 [e]	10.50 [e]	2000	15+	…	25.80	3.60
34	Tuvalu	2002	15+	37.90 [c]	54.60 [c]	22.70 [c]			…	…	…
35	Vanuatu			…	…	…			…	…	…
36	Viet Nam	2005	25-64	…	58.00 [f]	0.50 [f]			…	…	…
37	Wallis and Futuna			…	…	…			…	…	…

Table 11. Risk factors for noncommunicable diseases

	Country/ area	Behavioural measures									
		Binge drinkers [18]					Physically inactive [18]				
		Year	Age group	Total	Male	Female	Year	Age group	Total	Male	Female
1	American Samoa	2007	25-64	…	49.60 [19]	33.90 [19]	2007	25-64	62.20 [19]	58.60 [19]	66.00 [19]
2	Australia			…	…	…	2005	18+	…	33.60 [i]	34.40 [i]
3	Brunei Darussalam			…	…	…			…	…	…
4	Cambodia	2010	25-64	NA	45.10 [t,33]	4.60 [t,33]	2010	25-64	10.60 [33]	10.90 [33]	10.30 [33]
5	China			…	…	…	2003	10-18	71.00 [k,l,m]	67.10 [k,l,m]	74.90 [k,l,m]
6	Cook Islands			…					…	…	…
7	Fiji	2002	15+	77.30 [20]	79.50 [20]	58.60 [20]	2002	15+	37.40 [20]	24.90 [20]	51.90 [20]
8	French Polynesia			…	…	…			…	…	…
9	Guam			…	…	…			…	…	…
10	Hong Kong (China)	2009	18-64	8.40 [21]	13.80 [21]	3.80 [21]	2008	18-64	21.00 [21]	19.80 [21]	22.00 [21]
11	Japan	2003	20+	6.40	11.10	2.30	2004	15+	79.40 [o]	74.90 [o]	83.10 [o]
12	Kiribati			…	…	…	2006	25-64	50.10 [22]	41.80 [22]	57.30 [22]
13	Lao People's Democratic Republic	2008	25-64	…	59.30 [23]	65.20 [23]	2008	25-64	14.20 [23]	10.40 [23]	16.70 [23]
14	Macao (China)			…	…	…			…	…	…
15	Malaysia			…	…	…	2005	25-64	60.10 [24]	55.40 [24]	65.10 [24]
16	Marshall Islands			…	…	…			…		
17	Micronesia, Federated States of			…	…	…	2002	25-64	64.30 [d,25]	55.70 [d,25]	73.50 [d,25]
18	Mongolia	2005	15-64	…	27.30 [32]	10.30 [32]	2005	15-64	23.10 [32]	20.10 [32]	26.10 [32]
19	Nauru	2004	15-64	…	29.80 [27]	25.60 [27]	2004	15-64	16.50 [27]	14.30 [27]	18.50 [27]
20	New Caledonia			…	…	…			…	…	…
21	New Zealand			…	…	…	2004	15+	13.10	11.40	14.70
22	Niue			…	…	…			…	…	…
23	Northern Mariana Islands			…	…	…			…	…	…
24	Palau			…	…	…			…	…	…
25	Papua New Guinea			…	…	…			…	…	…
26	Philippines			…	…	…	2008	10-18	60.00 [28]	…	…
27	Pitcairn Islands			…	…	…			…	…	…
28	Republic of Korea			…	…	…	2005	20+	78.20 [p]	77.50 [p]	79.00 [p]
29	Samoa			…	…	…			…	…	…
30	Singapore			…	…	…	2007	18-69	23.60 [29]	…	…
31	Solomon Islands			…	…	…	2006	25-64	41.90 [30]	36.50 [30]	47.40 [31]
32	Tokelau	2006	15-64	…	37.50 [31]	20.00 [31]	2006	15-64	41.20 [31]	24.20 [31]	55.90 [31]
33	Tonga			…	…	…			…	…	…
34	Tuvalu			…	…	…			…	…	…
35	Vanuatu			…	…	…			…	…	…
36	Viet Nam	2003	18+	1.00 [h]	2.30 [h]	0.00 [h]	2003	18-69	8.20 [l]	7.70 [l]	8.80 [l]
37	Wallis and Futuna			…	…	…			…	…	…

Behavioural measures					Physical measures				
Low fruit and vegetable consumption (<5 servings/day) [18]					Raised blood pressure [18]				
Year	*Age group*	*Total*	*Male*	*Female*	*Year*	*Age group*	*Total*	*Male*	*Female*
2007	25-64	86.70 [19]	87.90 [19]	85.60 [19]	2007	25-64	34.20 [19]	40.90 [19]	27.5 [19]
2005	12+	…	…	…	2005	18+	14.00 [s]	13.50 [s]	14.40 [s]
		…	…	…			…	…	…
2010	25-64	84.30 [33]	83.30 [33]	85.30 [33]	2010	25-64	11.20 [33]	12.80 [33]	9.60 [33]
2003	10-12	66.2 [k]	67.4 [k]	65.10 [k]	2002	18+	18.80	…	…
		…	…	…					…
2002	15+	65.00	…	…	2002	15-64	19.10 [20]	6.50 [20]	12.40 [20]
		…	…	…			…	…	…
		…	…	…			…	…	…
2009	18-64	…	85.20 [21]	73.80 [21]			…	…	…
		…	…	…	2000	30+	…	56.20	39.70
2006	25-64	99.30 [22]	99.20 [22]	99.40 [22]	2006	25-64	17.30 [22]	20.90 [22]	14.00 [22]
2008	25-64	36.60 [23]	40.20 [23]	34.50 [23]	2008	25-64	22.30 [23]	24.90 [23]	20.50 [23]
		…	…	…			…	…	…
2005	25-64	72.80 [q,24]	70.30 [q,24]	75.50 [q,24]	2005	25-64	25.70 [24]	26.30 [24]	25.00 [24]
		…	…	…			…	…	…
2002	25-64	81.80 [d,25]	81.30 [d,25]	82.40 [d,25]	2002	25-64	21.20 [d,25]	26.80 [d,25]	15.60 [d,25]
2005	15-64	77.70 [r,32]	80.90 [r,32]	74.20 [r,32]	2009	15-64	58.50	…	…
2004	15-64	91.60 [r,27]	92.20 [r,27]	91.10 [r,27]	2004	15-64	17.20 [27]	23.10 [27]	11.50 [27]
		…	…	…			…	…	…
		…	…	…	2004	15+	20.80 [u]	19.90 [u]	21.80 [u]
		…	…	…			…	…	…
		…	…	…			…	…	…
		…	…	…			…	…	…
		…	…	…			…	…	…
2007	10-18	78.20	78.1	78.20	2008	20-65	25.00 [28]	…	…
		…	…	…			…	…	…
		…	…	…	2005	30+	27.90	30.20	25.60
		…	…	…			…	…	…
		…	…	…	2004	18-69	24.90 [29]	…	…
2006	25-64	93.60 [30]	93.30 [30]	93.90 [30]	2006	25-64	10.70 [30]	11.00 [30]	10.50 [30]
2005	15-64	92.30 [31]	93.70 [31]	91.00 [31]	2005	15-64	13.60 [31]	13.30 [31]	13.90 [31]
		…	…	…			…	…	…
		…	…	…	2001	10-70	31.00 [a,v]	…	…
		…	…	…			…	…	…
2003	18+	84.00	87.00	81.40	2005	25-64	…	23.90 [f]	18.80 [f]
		…	…	…			…	…	…

Table 11. Risk factors for noncommunicable diseases

	Country/ area	Physical measures									
				Mean BMI [18]			Overweight [18]			Obese [18]		
		Year	Age group	Total	Male	Female	Total	Male	Female	Total	Male	Female
1	American Samoa	2007	25-64	34.90 [19]	33.70 [19]	36.20 [19]	18.90 [19]	23.50 [19]	14.20 [19]	74.60 [19]	69.30 [19]	80.20 [19]
2	Australia	2008	18+	...	...	...	...	67.70 [r]	54.90 [r]	...	25.60	24.00
3	Brunei Darussalam	2005	15+	26.30 [w]	25.80 [w]	26.90 [w]	...	56.40 [w]	63.20 [w]	...	15.20 [w]	27.40 [w]
4	Cambodia	2010	25-64	21.80 [33]	21.70 [33]	22.00 [33]	15.40 [33]	11.60 [33]	19.00 [33]	1.90 [33]	1.10 [33]	2.70 [33]
5	China	2005	15+	23.20 [w]	23.70 [w]	22.80 [w]	...	33.10 [w]	24.70 [w]	...	1.60 [w]	1.90 [w]
6	Cook Islands	2005	15+	33.40 [w]	32.80 [w]	34.00 [w]	...	92.60 [w]	89.20 [w]	...	69.50 [w]	70.80 [w]
7	Fiji	2005	15+	26.10 [w]	24.50 [w]	27.60 [w]	...	43.90 [w]	65.60 [w]	...	8.70 [w]	32.50 [w]
8	French Polynesia			...	...	...	...	...	...	...	...	...
9	Guam			...	...	...	...	...	...	...	...	...
10	Hong Kong (China)	2009	18-64	...	...	...	38.70 [x]	49.20 [x]	29.70 [x]	...	...	...
11	Japan	2005	15+	22.50 [w]	23.10 [w]	21.90 [w]	...	27.00 [w]	18.10 [w]	...	1.80 [w]	1.50 [w]
12	Kiribati	2006	25-64	30.50 [22]	29.40 [22]	31.50 [22]	81.50 [22]	78.20 [22]	84.60 [22]	50.60 [22]	41.70 [22]	58.90 [22]
13	Lao People's Democratic Republic	2008	25-64	23.50 [23]	23.10 [23]	23.70 [23]	27.40 [23]	23.80 [23]	29.90 [23]	5.80 [23]	4.50 [23]	6.60 [23]
14	Macao (China)			...	...	...	...	...	...	...	...	...
15	Malaysia	2005	25-64	25.20 [24]	24.70 [24]	25.60 [24]	31.60	30.90 [24]	32.40 [24]	16.30	13.90	18.80
16	Marshall Islands	2005	15+	...	...	...	...	...	51.80	...	...	...
17	Micronesia, Federated States of	2005	15+	33.50 [w]	32.20 [w]	34.70 [w]	...	92.10 [w]	90.10 [w]	...	66.20 [w]	72.90 [w]
18	Mongolia	2005	15-64	23.80 [32]	23.30 [21]	24.50 [32]	(2009) 53.60 [26]	18.20 [32]	25.50 [32]	9.80 [32]	7.20 [32]	12.50 [32]
19	Nauru	2005	15-64	32.10	31.70 [r]	32.50 [r]	24.10	26.50 [r]	21.80 [r]	58.10	55.70 [r]	60.50 [r]
20	New Caledonia			...	...	...	...	...	...	...	...	...
21	New Zealand	2005	15+	27.30 [w]	27.10 [w]	27.60 [w]	...	68.70 [w]	68.20 [w]	...	23.00 [w]	31.50 [w]
22	Niue	2005	15+	30.30 [w]	28.60 [w]	32.10 [w]	...	78.50 [w]	85.00 [w]	..	36.80 [w]	61.00 [w]
23	Northern Mariana Islands			...	...	...	...	...	...	...	...	...
24	Palau			...	...	...	...	...	...	...	...	...
25	Papua New Guinea			...	...	...	...	...	...	...	...	...
26	Philippines			...	...	...	...	...	...	...	...	...
27	Pitcairn Islands			...	...	...	...	...	...	...	...	...
28	Republic of Korea	2005	20+	23.60	24.00	23.30	31.80	35.20	28.30	7.10 [y]	4.10 [y]	10.10 [y]
29	Samoa	2005	15+	30.30 [w]	28.80 [w]	31.80 [w]	...	78.70 [w]	82.10 [w]	...	38.40	57.30
30	Singapore	2004	18-69	...	...	...	32.50 [rev]	35.00 [r]	29.90 [r]	6.90	6.40	7.30
31	Solomon Islands	2006	25-64	28.10 [30]	27.20 [30]	29.00 [30]	67.40 [30]	62.50 [30]	72.70 [30]	32.80 [30]	25.80 [30]	40.40 [30]
32	Tokelau	2005	15-64	32.40 [31]	31.50 [31]	33.20 [31]	86.20 [31]	82.90 [31]	89.30 [31]	63.40 [31]	58.60 [31]	67.80 [31]
33	Tonga			...	...	...	...	...	...	...	...	...
34	Tuvalu			...	...	...	...	...	...	...	...	...
35	Vanuatu	2005	15+	26.30 [w]	25.70 [w]	26.80 [w]	...	56.30 [w]	62.90 [w]	...	13.40 [w]	26.30 [w]
36	Viet Nam	2005	25-64	...	...	...	3.50 [f]	3.00 [f]	4.00 [f]	..	...	...
37	Wallis and Futuna			...	...	...	...	...	...	...	...	...

Biochemical measures									
Raised blood cholesterol/lipids [18]					Raised blood glucose [18]				
Year	*Age group*	*Total*	*Male*	*Female*	*Year*	*Age group*	*Total*	*Male*	*Female*
2007	25-64	23.40 [19]	23.10 [19]	23.70 [19]	2007	25-64	41.10 [19]	45.80 [19]	36.40 [19]
2005	18+	8.90 [z]	9.30 [z]	11.40 [z]	2000	35+	...	7.80 [ag]	6.80 [ag]
		...	...	...			...	...	...
2010	25-64	20.70 [ah,33]	17.00 [ah,33]	24.20 [ah,33]	2010	25-64	2.90 [33]	2.50 [33]	3.30 [33]
		...	...	...	2002	18+	2.60 [ai]	...	...
		...	...	...			...	...	...
2002	25+	...	49.10 [r,20]	37.80 [r,20]	2002	25+	...	12.90 [20]	15.20 [20]
		...	...	...			...	...	...
		...	...	...			...	...	...
		...	...	...			...	...	...
2000	30+	...	25.70 [aa]	34.10 [aa]	2000	30+	...	2.70 [aj]	1.70 [aj]
2006	25-64	27.70 [ab,22]	23.80 [ab,22]	30.60 [ab,22]	2006	25-64	28.10 [ak,22]	29.60 [ak,22]	26.70 [ak,22]
		...	...	...			...	...	...
		...	...	...			...	...	...
2005	25-64	53.50 [24]	53.10 [24]	53.90 [24]	2005	25-64	11.00 [24]	9.80 [24]	12.40 [24]
		...	...	...			...	...	...
2002	25-64	46.60 [ac,25]	48.40 [ac,25]	44.80 [ac,25]	2002	25-64	32.10 [a,al,25]	26.40 [a,al,25]	37.10 [a,al,25]
2009	15-64	40.50 [26]	...	...	2005	15-64	5.70 [r,32]	7.80 [r,32]	3.60 [r,32]
2004	15-64	17.90 [27]	14.90 [27]	20.80 [27]	2004	15-64	16.20 [al,27]	16.10 [al,27]	16.30 [al,27]
		...	...	...			...	...	...
2004	15+	15.50 [ad]	16.30 [ad]	14.70 [ad]			...	...	
		...	...	...			...	...	...
		...	...	...			...	...	...
		...	...	...			...	...	...
		...	...	...			...	...	...
2002	15-74	2.20 [k]	0.80 [k]	2.90 [k]	2002	20-65	5.30 [a,ag]	4.40 [a,ag]	5.80 [a,ag]
		...	...	...			...	...	...
2005	30+	8.20 [ae]	7.50 [ae]	8.80 [ae]	2005	30+	8.10 [am]	9.00 [am]	7.20 [am]
		...	...	...				...	
2004	18-69	18.70 [af]	19.50 [af]	17.50 [af]	2004	18-69	8.20 [an]	8.90 [an]	7.60 [an]
2006	25-64	24.60 [ab,30]	19.60 [ab,30]	28.50 [ab,30]	2006	25-64	13.50 [ak,30]	15.30 [ak,30]	11.70 [ak,30]
2005	15-64	35.60 [ac,31]	33.80 [ac,31]	37.00 [ac,31]	2005	15-64	33.60 [ak,31]	35.20 [ak,31]	32.20 [ak,31]
		...	...	...	2000	15+	...	9.50 [ao]	11.00 [ao]
		...	...	...	2001	10-80	9.00 [ap]	...	...
		...	...	...			...	...	...
2001	25+	18.20 [k,af]	6.50 [k,af]	11.70 [k,af]	2001	15+	6.60 [aq]	...	...
		...	...	...			...	...	...

Table 12. Millennium Development Goals Indicators

	Country/ area	Goal 1: Eradicate extreme poverty and hunger		Goal 4: Reduce child mortality					
		Target 1C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger		Target 4A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate					
		Year	Prevalence of underweight children under five years of age [1]	Year	Under-five mortality rate [1]	Year	Infant mortality rate [1]	Year	Proportion of 1 year-old children immunised against measles [1,6]
1	American Samoa		...	2002	4.90	2006-08	11.30 [e]	2008	86.00
2	Australia		...	2008	4.92	2008	4.10	2009	93.80 [k]
3	Brunei Darussalam		...	2008	9.50	2008	7.00	2008	99.70
4	Cambodia	2008	29.00	2005	83.00	2008	60.00	2009	92.00
5	China	2005	6.90	2008	18.50 [a]	2008	14.90 [a]	2009	98.62
6	Cook Islands		...	2009	7.10	2009	7.10	2009	78.00
7	Fiji	2004	7.00	2008	23.60	2008	13.10	2009	55.90
8	French Polynesia		...	2008	6.48	2008	5.00	2009	99.00
9	Guam		...	2005 est	10.00	2005-07 est	11.70	2006	85.00
10	Hong Kong (China)		...	2009p	2.16 [b,c]	2009p	1.65 [b]	2008	>95.00
11	Japan		...	2008	3.40	2008	2.60	2009	94.30
12	Kiribati		...	2008 est	48.00	2005	52.00	2009	81.50
13	Lao People's Democratic Republic	2006	37.10	2007 est	88.60	2007 est	64.40	2009	59.00
14	Macao (China)		...	2009	2.70	2009	2.10	2009	88.10
15	Malaysia	2006	7.70	2007	7.90 [d]	2008p	6.40	2009	95.00
16	Marshall Islands		...	2009	46.00	2009	34.00	2009	78.11
17	Micronesia, Federated States of		...	2009	39.00	2009	13.50 [f]	2009	86.00
18	Mongolia	2007	6.30	2009	23.65	2009	20.16	2009	93.80
19	Nauru	2007	4.80	2003-07	37.90	2003-07	37.90	2009	100.00
20	New Caledonia		...	2002	9.06		...	2008	98.60
21	New Zealand		...	2007	6.05	2007	4.79	2009	89.00
22	Niue	2005	0.00	2006	0.00	2006	0.00	2009	100.00
23	Northern Mariana Islands		...		...	2006-08	5.00 [g]	2009	87.00
24	Palau		...	2009	25.64	2009	21.97	2009	75.00
25	Papua New Guinea	2007	28.00	2006	74.40	2006	56.70	2009	60.00
26	Philippines	2008	26.20	2008	34.00	2008	25.00	2009	58.00
27	Pitcairn Islands		...		...		...		...
28	Republic of Korea		...	2006	5.70	2008	3.40	2009	93.00
29	Samoa		...	2003-04	13.00	2006	20.40 [h]	2008	45.00
30	Singapore	1995-2003	14.00	2008p	3.40	2008p	2.10 [i]	2009	NA [l]
31	Solomon Islands	2007	11.80	2007	37.20	2008	44.30 [j]	2009	60.00
32	Tokelau		...		...	2009	0.00	2009	100.00
33	Tonga		...	2008	26.00	2008	16.40	2009	99.00
34	Tuvalu	2007	1.60	2003-07	36.00	2003-07	31.00	2009	90.00
35	Vanuatu	2007	19.50	2008	31.00	2008	27.00 [j]	2009	95.00
36	Viet Nam	2008	19.90	2008 est	25.50	2008 est	15.00	2009	97.00
37	Wallis and Futuna		...		...	2003 est	5.90	2007	86.00

Goal 5: Improve maternal health					
Target 5A: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio					
Year	Maternal mortality ratio [1]	Year	Proportion of births attended by skilled health personnel [1]	% of deliveries at home by skilled health personnel (as % of total deliveries) [1]	% of deliveries in health facilities (as % of total deliveries)[1]
2002	123.00	2002	100.00	1.00	99.00
2003-05	8.40 m	2007	…	…	99.20
2008	0.00	2008	99.72	0.05	99.67
2008	461.00	2009	63.00	19.00	44.00
2008	34.20 a	2009	…	…	96.30
2009	0.00	2009	100.00	0.40	99.60
2008	27.50	2008	98.80	…	…
2007	22.55 n	2004	100.00 j	1.00 j	99.00 j
2003	0.00	2004	…	…	87.22
2009p	2.41 b	2009	100.00	0.00 r	100.00 s
2008	3.60	2008	99.95 t	0.18 t	99.77 t
2005	158.00	2005	89.65 u	4.65 v	85.00 v
2005	405.00	2005	18.50	7.50	11.00
2009	0.00	2009	100.00	0.00	100.00
2007	30.00	2009	100.00	1.39	98.61
2009	324.15	2009	98.70	5.35	93.44
2009	0.00	2009	100.00 u	20.00	80.00
2009	81.40	2009	99.80	0.40	99.60
2002	300.00	2007	97.40 j	…	…
2008	0.00	2005	91.97	4.37	87.60
2006	11.61	2001	100.00	…	(2004 est) 95.30
2006	0.00	2006	100.00	0.00	100.00
2000	0.00		…	…	…
2009	366.30 o	2009	100.00	0.00	100.00
2006	733.00	2006	53.00	1.00 j	52.00 j
2006	162.00	2008	62.20	18.20	44.00
	…		…	…	…
2008	8.40	2007	100.00	1.10	98.90
2005-06	3.00 p	2004	100.00	9.00	91.00
2007	7.50 j	2008p	…	…	99.74 w
2007	103.00	2007	86.00	1.00	85.00
2005-09	0.00	2009	…	…	100.00
2008	76.10	2008	99.90	1.90	98.00
2003	0.00 q	2007	97.90	…	93.00
2006	70.04	2006	92.90	1.82	91.08
2008	75.00	2008	94.70 x	10.30	84.40
	…		…	…	…

Table 12. Millennium Development Goals Indicators

Country/ area	Goal 5: Improve maternal health								
	Target 5B: Achieve, by 2015, universal access to reproductive health								
	Year	Contraceptive prevalence rate [1]	Year	Adolescent birth rate [1]	Antenatal care coverage [1]			Year	Unmet need for family planning [1]
					Year	At least 1 visit	At least 4 visits		
1 American Samoa		…		…	2002	70.00	…		…
2 Australia	2001	65.00	2007	4.30	2001	99.60 [ab]	…		…
3 Brunei Darussalam		…	2008	17.40	2008	100.00	100.00		…
4 Cambodia	2009	29.00	2005	5.20	2009	83.00	(2005) 27.00	2005	25.00
5 China	2007	89.74		…	2009	92.20	…		…
6 Cook Islands	2007	29.00 [y]		…	2005	100.00	…		…
7 Fiji	2008	44.70	2007	8.50	2005	100.00	…		…
8 French Polynesia	2005	62.00 [z]	2008	50.08	2004	100.00 [n]	(2004 est) 95.00		…
9 Guam		…		…	2001	92.05	…		…
10 Hong Kong (China)		…	2008	3.83		…	…		…
11 Japan		…	2008	5.20		…	…		…
12 Kiribati		…		…	2005	100.00	…		…
13 Lao People's Democratic Republic	2005	38.40		…	2005	28.50	…		…
14 Macao (China)		…	2009	3.30	2009	99.30 [x]	…		…
15 Malaysia	2008	1.36		…	2009	90.71	…		…
16 Marshall Islands	2009	15.00	2009	63.50	2004-07p	2.00 [ac]	77.10 [ac]	2009	2.36
17 Micronesia, Federated States of	2009	55.00	2009	22.00		…	…		…
18 Mongolia	2009	53.20	2009	6.10	2009	…	84.10 [ad]		…
19 Nauru	2007	35.60		…	2007	53.50 [j]	40.20 [j]	2007	23.50
20 New Caledonia		…		…		…	…		…
21 New Zealand		…	2009	29.39	2005	100.00	…		…
22 Niue	2001	22.60		…	2005	10.00	…		…
23 Northern Mariana Islands	2000	64.00		…	2000	75.67	…		…
24 Palau	2007	12.08	2007	18.40	2006	95.00	79.00		…
25 Papua New Guinea	2006	25.50	2006	12.90	2008	60.00	28.76		…
26 Philippines	2008	34.00	2008	7.30	2008	95.80	77.80	2008	22.00
27 Pitcairn Islands		…		…		…	…		…
28 Republic of Korea	2006	79.60		…	2006	99.90	98.60		…
29 Samoa		…		…	2004	100.00	…		…
30 Singapore		…		…	2006	100.00	…		…
31 Solomon Islands	2007	34.60	2007	7.00	2009	90.60	…	2007	11.10
32 Tokelau		…	2009	3.00		…	…		…
33 Tonga		…	2000-03	4.10	2008	> 98.00	…		…
34 Tuvalu	2002	32.00	2007	8.00	2007	77.20	67.30	2007	24.20
35 Vanuatu	2007	38.40 [j]	2003	21.00	2007	98.10	…		…
36 Viet Nam	2008	79.50		…	2008	94.20	…	2002 est	4.80
37 Wallis and Futuna		…		…		…	…		…

Goal 6: Combat HIV/AIDS, malaria and other diseases						
Target 6A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS				Target 6B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it		
HIV prevalence among population aged 15-24 years [1]		Estimated HIV prevalence in adults [1]		% of people with advanced HIV infection receiving (ART)		
Year	*Data*	*Year*	*Data*	**Year**	*Data* **[16]** [ag]	*Data* **[1]**
	…		…		…	…
2008	<0.08	2008	0.08 [aa]	2008 est	…	61.00 [ah]
	…	2005	<0.10		…	…
2005	84.40	2009	0.70	2009	94.00	100.00
	…	2009	0.06	2009	…	62.40
	…		…		…	…
	…	2007	0.10	2009	30.00	…
2009	0.15	2009	0.20	2009	…	95.00
	…		…		…	…
	…	2009	<0.01	2008	…	89.60 [j,ai]
2009	0.00	2009	0.01	2009	…	95.90
	…		…		…	…
	…	2007	0.20	2009	67.00	(2007) 100.00
2009	<0.10 [ae]	2009	<0.10 [af]		…	…
2006-07	0.10	2007	0.30	2009	23.00	(2007) 35.00
	…	2009	0.03	2009	…	50.00
2009	31.00	2009	34.60	2009	…	8.30
2009	0.00	2009	<0.02	2009	8.00	76.92
	…		…		…	…
2009	0.00		…		…	…
	…	2007	0.10		…	…
	…		…		…	…
	…		…		…	…
2007	0.00	2007	0.15	2007	…	0.15 [aj]
2009	0.79	2009	0.95	2009	52.00	(2008) 0.95
2009	< 1.00	2009	< 1.00	2009	37.00	0.82
	…		…		…	…
	…		…		…	…
	…		…		…	…
	…	2009	0.10		…	…
	…	2009	2.40		…	…
	…		…		…	…
	…		…		…	…
	…		…		…	…
2007	0.00	2007	0.00	2007	…	100.00
2005	0.30	2007	0.54	2009	34.00	(2007) 35.00 [ak]
	…		…		…	…

Table 12. Millennium Development Goals Indicators

	Country/ area	Goal 6: Combat HIV/AIDS, malaria and other diseases				
		Target 6C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases				
		Year	Incidence rate of confirmed malaria cases per 100 000 population [1]	Malaria death rate per 100 000 population [1]	Proportion of children under 5 sleeping under insecticide-treated bednets [1]	Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs [1]
1	American Samoa		...	...	...	...
2	Australia	2009p	NR [al]	NR [al]	NR [al]	NR [al]
3	Brunei Darussalam	2008	...	0.00	...	...
4	Cambodia	2009	616.00	2.05	...	...
5	China	2009	1.06	0.00	...	100.00
6	Cook Islands	2007	2.00	0.00	...	...
7	Fiji		...	...	...	...
8	French Polynesia	2009	0.00	0.00	NR	NR
9	Guam		...	...	...	...
10	Hong Kong (China)	2009p	0.33 [am,an]	0.00 [b]	...	...
11	Japan		...	...	...	...
12	Kiribati		...	...	...	...
13	Lao People's Democratic Republic	2008	295.96 [j]	0.22 [j]	85.00	...
14	Macao (China)	2009	0.00	0.00	...	...
15	Malaysia	2009	24.80	0.10	...	...
16	Marshall Islands		...	...	...	...
17	Micronesia, Federated States of		...	...	...	...
18	Mongolia		...	...	...	...
19	Nauru		...	...	...	...
20	New Caledonia	2006	0.00	0.00	0.00	0.00
21	New Zealand	2009	1.16 [ao]	0.00 [ao]	...	...
22	Niue		...	...	...	...
23	Northern Mariana Islands		...	...	...	...
24	Palau	2009	NR	NR	NR	NR
25	Papua New Guinea	2008	473.32	9.72	(2008-09) 32.50	(2008-09) 38.80
26	Philippines	2008	26.39	0.06	(2007) 67.00	85.00
27	Pitcairn Islands		...	...	...	...
28	Republic of Korea	2008	1.12	0.00	...	...
29	Samoa		...	...	...	...
30	Singapore	2009	2.60	0.04	...	...
31	Solomon Islands	2009	5 666.00	9.80	(2007) 40.40	(2007) 19.00
32	Tokelau		...	...	...	...
33	Tonga		...	...	...	...
34	Tuvalu		...	...	...	...
35	Vanuatu	2008	1498.71	0.43	(2007) 56.00 [j]	...
36	Viet Nam	2008	12.83	0.03	...	...
37	Wallis and Futuna		...	...	...	...

Goal 6: Combat HIV/AIDS, malaria and other diseases							
Target 6C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases							
Year	TB incidence rate per 100 000 [6]	Year	TB prevalence rate per 100 000 [1]	Year	TB death rate per 100 000 [1]	Proportion of TB cases detected under directly observed treatment short course (DOTS) (2008) [1]	Proportion of TB cases cured under directly observed treatment short course (DOTS) (2007) [1]
2008	3.00	2008	1.00	2008	0.00	0.00	…
2008	7.00	2008	5.00	2008	0.00	89.00	85.00
2008	65.00	2008	43.00	2008	4.00	86.00	76.00
2008	490.00	2008	680.00	2008	79.00	57.00	94.00
2008	97.00	2008	88.00	2008	12.00	72.00	94.00
2008	20.00	2008	32.00	2008	4.00	102.00	100.00
2008	20.00	2008	25.00	2008	3.00	95.00	81.00
2008	22.00	2009	20.07	2009	1.13	(2009) 94.33	(2009) 73.00
2008	58.00	2008	61.00	2008	4.00	88.00	89.00
2008	91.00	2009p	76.36 [am]	2009p	2.78 [b]	87.00	66.00
2008	22.00	2008	12.00	2008	1.00	87.00	46.00
2008	360.00	2008	110.00	2008	25.00	74.00	93.00
2008	150.00	2008	260.00	2008	32.00	67.00	92.00
2008	78.00	2009	123.80	2009	4.60	104.00	(2008) 92.90
2008	100.00	2008	120.00	2008	15.00	76.00	72.00
2008	210.00	2008	59.00	2008	14.00	46.00	96.00
2008	93.00	2009est	168.00	2009	15.00	85.00	20.00
2008	210.00	2009	70.20	2009	2.80	(2009) 74.10	(2009) 84.00
2008	12.00	2008	10.00	2008	1.00	351.00	100.00
2008	21.00	2008	10.00	2008	1.00	87.00	77.00
2008	8.00	2009	7.10	2008	1.00	88.00	86.00
	…	2007	0.00	2007	0.00	…	…
2008	38.00	2008	11.00	2008	2.00	85.00	92.00
2008	63.00	2008	110.00	2008	14.00	0.00	…
2008	250.00	2008	130.00	2008	21.00	29.00	39.00
2008	280.00	2008	550.00	2008	52.00	67.00	89.00
	…		…		…	…	…
2008	88.00	2008	50.00	2008	6.00	88.00	82.00
2008	18.00	2008	36.00	2008	4.00	37.00	92.00
2008	39.00	2007	NA	2009	1.77	(2007) NA	(2009) 69.00
2008	120.00	2009	70.00	2008	19.00	46.00	(2008) 93.00
	…		…	2007	0.00	…	…
2008	24.00	2008	22.00	2008	3.00	88.00	93.00
2008	160.00	2008	44.00	2008	11.00	114.00	75.00
2008	74.00	2008	88.00	2008	11.00	52.00	93.00
2008	200.00	2008	280.00	2008	34.00	62.00	92.00
2008	6.00	2008	2.00	2008	0.00	0.00	(2006) 50.00

Table 12. Millennium Development Goals Indicators

Country/ area	Goal 7: Ensure environmental sustainability						Goal 8. Develop a global partnership for development	
	Target 7C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation						Target 8E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	
	Proportion of population using an improved drinking water source [1]			Proportion of population using an improved sanitation facility [1]				
	Year	Urban	Rural	Year	Urban	Rural	Year	Proportion of population with access to affordable essential drugs on a sustainable basis [1]
1 American Samoa	2004	99.00	99.00	2004	99.00	99.00		...
2 Australia	2008	100.00	100.00	2008	100.00	100.00		...
3 Brunei Darussalam		...	...		...	...	2008	100.00
4 Cambodia	2008	81.00	56.00	2008	67.00	18.00		...
5 China	2008	98.00	82.00	2008	58.00	52.00		...
6 Cook Islands	2008	98.00	...	2008	100.00	100.00	2009	100.00
7 Fiji	2006	43.00	51.00	2006	87.00	55.00		...
8 French Polynesia	2008	100.00	100.00	2008	99.00	97.00	2007	99.97
9 Guam	2008	100.00	100.00	2008	99.00	98.00		...
10 Hong Kong (China)		...	...		...	...		...
11 Japan	2008	100.00	100.00	2008	100.00	100.00		...
12 Kiribati	2006	77.00	53.00	2006	46.00	20.00		...
13 Lao People's Democratic Republic	2008	72.00	51.00	2008	86.00	38.00		...
14 Macao (China)		...	...		...	...		...
15 Malaysia	2008	100.00	99.00	2008	96.00	95.00		...
16 Marshall Islands	2008	92.00	99.00	2008	83.00	53.00		...
17 Micronesia, Federated States of	2008	95.00	...	2006	61.00	14.00		...
18 Mongolia	2008	97.00	49.00	2008	64.00	32.00	2009	80.00
19 Nauru	2008	90.00	...	2008	50.00	...		...
20 New Caledonia		...	...		...	...		...
21 New Zealand	2010p	100.00	100.00	2010p	100.00	100.00	2010	100.00 [ap]
22 Niue	2008	100.00	100.00	2008	100.00	100.00		...
23 Northern Mariana Islands	2008	...	96.00	2008	98.00	97.00		...
24 Palau	2006	79.00	94.00	2008	96.00	...		...
25 Papua New Guinea	2008	87.00	33.00	2008	71.00	41.00	2008	50.00
26 Philippines	2008	93.00	87.00	2008	80.00	69.00		...
27 Pitcairn Islands			...		...			...
28 Republic of Korea	2008	100.00	88.00	2008	100.00	100.00		...
29 Samoa	2006	90.00	87.00	2008	100.00	100.00		...
30 Singapore		...	...		...	...		...
31 Solomon Islands	2007	94.00	82.60	2008	98.00	...		...
32 Tokelau	2008	NA	97.00	2008	NA	93.00	2009	100.00
33 Tonga	2008	100.00	100.00	2008	98.00	96.00	2008	>95.00
34 Tuvalu	2008	98.00	97.00	2008	88.00	81.00	2008	100.00
35 Vanuatu	2008	96.00	79.00	2008	66.00	48.00		...
36 Viet Nam	2008	99.00	92.00	2008	94.00	67.00		...
37 Wallis and Futuna	2008	NA	96.00		...	...		...

Notes

Table 1. Demographic indicators

a Estimated figure includes Other Territories comprising Jervis Bay Territory, Christmas Island and the Cocos (keeling) Islands

b Revised data

c Estimated population as of 1 July 2009

d Mid-year projected population using 2000 Census percentages

e Population as of 1 May 2010.

f End-year estimate

g Estimated mid-year population.

h Figure refers to the estimated resident population for the mean year ended December 2009. The estimated resident population is based on the census usually resident population count, with adjustments for residents missed or counted more than once by the census (net census undercount), and for residents temporarily overseas on census night.

i Figure applies or refers to resident population

j Figure excludes inland waters and oceanic areas

k Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.

l Average using estimated resident mean populations for year ended December

m Figure refers to 0-14 years

n Figure refers to the estimated resident population for the mean year ended December 2009. The estimated resident population is based on the census usually resident population count, with adjustments for residents missed or counted more than once by the census (net census undercount), and for residents temporarily overseas on census night.

o Figure is computed per thousand resident population as of 1992

p The figure is compiled based on registered deaths and/or registered births.

q The figure includes unknown sex.

r Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific using data in columns 10-12 of this table.

s Sum of age specific fertility rates between 11 and 49

Table 2. Socioeconomic indicators

a Data for 15-year-old schoolchildren. Literacy defined as Levels 2-5 using OECD PISA (Programme for International Student Assessment) standards

b Figure should be interpreted with caution as it refers to estimates for 2005 from UNESCO Institute for Statistics (2003), based on outdated census or survey information.

c Figure refers to French as official language

d The figure refers to the percentage of population aged 15 and above with primary or above education attainment.

e Refers to land-based non-institutionalized population

f Figure refers to the proportion of the NZ population aged 16-65 years old above ALL (Adult Literacy and Life Skills Survey 2006) “document literacy” level 1

g Figure refers to 15-24 years old

h Figure refers to literacy rate in Samoan language of person aged 15-24 years

i Figure applies to residents aged 15 years and over

j Figure refers to women aged 15-49 years old at the time of the DHS survey.

k UNESCO Institute for Statistics estimates based on its Global Age-Specific Literacy Projections model, April 2009

l Figure applies to population aged 10 years and above

m Figure applies to aged 19 years and above.

n Revised figure refers to current prices based on Purchasing Power Parities (PPP) from <http://www.oecd.org/std/ppp> (accessed 19 May 2010)

o Revised data.

p Current market prices 2008.

q Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific

r Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using 2008 exchange rate=FJD 1.82 per USD

Notes

s Computed by IER Unit of the WHO Regional Office for the Western Pacific using the exchange rate of AUD 1.19 = US$1 from NHA

t Figure refers to Gross national income (GNI)

u Preliminary estimate at 2005 constant prices using World Bank atlas method and the 2008 absolute mean exchange rate

v Revised figure was converted using exchange rate for 2007 F.CFP 81.99 per US$

w Computed using GDP at current market prices for April 2009 to March 2010 and converted using exchange rate of 2.7150 Tala per USD (2009 period average from 2009 Statistical Abstract)

x Figure refers to per capita GNP at current market prices (US$)

y The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2005/06 per mid-2005 population.

z Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using 2007 exchange rate F.CFP 81.99= US$

aa Converted to USD using average UN exchange rates for 2009.

ab The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2005/06 as percentage of GDP in the FY 2005/06.

ac Figure refers to percentage total expenditure on public health as to total government expenditure

ad The figure refers to public health expenditure as percentage of overall public expenditure.

Table 3. Health and human rights instruments

a Ratification includes ratification, accession or succession

b Effective 1 July 1997 and 20 December 1999 respectively, Hong Kong and Macau became special administrative regions of China. Previously, Hong Kong have been administered by the United Kingdom of Great Britain and Northern Ireland (which had ratified CESCR on 19 May 1976), and Macau had been administered by Portugal (which had ratified CESCR on 30 July 1978). In official notifications to the Secretary General dated 20 June 1997 and 2 December 1999, respectively, the People's Republic of China advised that the CESCR would continue to be applicable to the territories of Hong Kong and Macau.

c Revised data

Table 4. Poverty- and gender-related development indicators

a Data refers to the most recent year available during the period specified.

b Estimates are weighted averages of urban and rural values.

c Data refer to an earlier year outside the range of years specified

d Estimates cover urban areas only

e Figures calculated based on various data with reference years 2007 and 2009.

f Data are as of 28 February 2009, unless otherwise specified. Where there are lower and upper houses, data refer to the weighted average of women's shares of seats in both houses.

g Countries with established quota systems for women. Quota systems aim at ensuring that women constitute at least a 'critical minority' of 30 or 40 percent. Today women constitute 16 percent of the members of parliaments around the world.

h Parliament was dissolved following a coup d'etat in December 2006.

i No woman candidate was elected in the 2008 elections. One woman was appointed to the cabinet. As cabinet ministers also sit in parliament, there was one woman out of a total of 32 members in October 2008.

j Estimates are based on data for the most recent year available between 1996 and 2007. Following the methodology implemented in the calculation of the GDI, the income component of the GEM has been scaled downward for countries whose income exceeds the maximum goalpost GDP per capita value of 40,000 (PPP US$). For more details, For more details see http://hdr.undp.org/en/statistics/tn1

Table 5. Health status indicators

a Revised data

b Figures were estimated using complete life table method - health stats.

c Figure applies or refers to resident population

d Figure refers to Surveillance Region (per 1000 live births)

Notes

e The figure is compiled based on registered deaths and/or registered births.
f Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
g Estimates derived by regression and similar estimation methods
h Revised data and reference year
i Figure include TCM hospitals and and other specialized hospitals
j Hospital-reported infant deaths
k Data published by the Secretariat of the Pacific Community.
l Figure derived from total number of children born to women aged 15-49 and number of live births in the 12 months preceding the 2006 census
m The figure is compiled based on registered deaths and/or registered births and includes unknown sex.
n This is the latest data for both direct and indirect maternal deaths
o Figure refers to 1 maternal death out of 4434 births
p Figure refers to 1 maternal death.
q Figure refers to hospital reported MMR
r There is only one maternal death in the last 5 years

Table 6. Maternal, childcare and nutritional indicators

a Percentage of women aged 18-49 (or their partners) reporting using contraceptive methods (including hysterectomy, tubal ligation and partner vasectomy)
b Figure refers to percentage of women of child-bearing ages (15-44 years old) who are current users of any type of family planning contraceptive.
c Figure refers to women aged 15-39 years old.
d Figure refers to woman married or in union
e Figure refers to married women
f Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
g Data refer from the standard definition or refer to only part of a country.
h Revised data
i Figure refers to the percentage of live births (except fetal deaths).
j Figure applies to public health facilities.
k Figrue refers to cases known to the maternity homes, public and private hospitals.
l Best estimated figure
m Figure refers to livebirths
n Nearly all newborns were delivered in health facilities.
o Figure refers to birthweight less than 2501 grams
p Among 40% of the infants who were weighed at birth
q The figure excludes those with unknown birthweight.
r Figure derived from percentage of newborn infants weighing at least 2500 g at birth.
s Neonatal tetanus eliminated.
t Figure appliees to infants less than four months
u Identifies countries that have achieved a second round of Vitamin A coverage≥70%.
v Figure includes only children less than 3 years old.
w Figure applies to national rural
x Revised figure was re-analyzed by UNICEF HQ in November 2007.

Table 7. Environmental health and prevalence of tobacco use indicators

a Data applies to China Shanghai only
b Data applies to Luang Prabang province, Lao People's Democratic Republic.

Table 8. Summary of 2008 Emergencies in the Western Pacific Region

a Global Identifier Number (GLIDE) is based in http://www.glidenumber.net/glide/public/about.jsp

Notes

b	Figure from [http://www.emdat.be/search-details-disaster-list]
c	Figure applies results of initial surveys which reported 14 major hospitals damaged in Metro Manila
d	Figure applies to two typhoons
e	Total amount of damages to health facilities
	Table 9. Health Workforce and Infrastructure Indicators
a	These data are subject to sampling variation and may not directly correspond to other Australian labour force data.
b	Licensed doctors
c	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific
d	Figure refers to physicians in Guam Memorial Hospital and includes licensed military physicians working on part-time basis
e	Figure refers to the number of doctors/dentists, regardless of whether they are actually working in the profession or not, with full registration on the local and overseas lists and are assumed all to be in urban area
f	Figure refers to general practitioners and practicitioners of Chinese medicine
g	Revised data
h	Figure refers to government doctors.
i	Figure refers to public physicians.
j	Figure refers to physicians and specialists.
k	Figure refers to registered nurses.
l	Figure refers to the number of registered nurses and enrolled nurses, regardless of whether they are actually working in the profession or not, assumed all to be in urban area
m	Figure includes nurses, public nurses and assistant nurses
n	Includes medical assistants
o	Figure includes five midwives
p	Figure refers to bachelor and diploma graduate nurses.
q	Figure refers to public nurses.
r	Figure includes 1 anaesthesiology nurse and excludes unauthorized nurses.
s	The number of healthcare professionals regardless of whether they are actually working in the profession or not.
t	Figure is already included in the figure for nurses.
u	Figure based on survey responses (approximately 98% response rate). Of these respondents, 12 did not specify their gender, 146 did not specify their location, and 256 did not specify their employer type.
v	Figure refers to public midwives.
w	Figure excludes 1 unathorized midwife.
x	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the western Pacific using available population data nearest the reference year needed.
y	Incomplete data.
z	Figure refers to beds in public general hospitals as classified in the health databank.
aa	Figure refers to beds in public general, specialized, and private hospitals as classified in the health databank.
ab	Figure refers to beds in public general, district/first-level referral, and private hospitals as classified in the health databank.
ac	Figure refers to beds in public and private health facilities as classified in the health databank.
ad	Figure refers to beds in public general, specialized, and district/first-level referral hospitals as classified in the health databank.
ae	Figure refers to beds in public specialized and district hospitals as classified in the health databank.
af	Figure refers to public general and district/first level referral, and private hospitals as classified in the health databank.
ag	Figure refers to beds in public general hospital and primary health care centres, and private hospitals as classified in the health databank.
ah	Figure refers to public general hospitals and private hospitals and outpatient clinics as classified in the health databank.
ai	Figure refers to beds in public health facilities as classified in the health databank.

Notes

aj Figure refers to beds in public general and private hospitals as classified in the health databank.

ak Figure refers to beds in public general, specialized and district/first-level referral hospitals, and private hospitals as classified in the health databank.

al Figure refers to beds in public district/first-level referral and private hospitals as classified in the health databank.

am Figure refers to beds in public district/first-level referral as classified in the health databank. Not included are the 184 beds in 2005 in specialized hospitals.

an Figure refers to beds in public general and district/first-level referral hospitals as classified in the health databank.

ao Figure refers to beds in public general hospitals and primary health care centers as classified in the health databank.

ap Figure refers to beds in private hospitals as classified in the health databank.

aq Figure refers to beds in public general and specialized hospitals, and private hospitals and outpatient clinics.

ar Figure refers to beds in public general hospitals as classified in the health databank. Figure does not include the 55 (2004) beds in the district/first-level referral hospitals and the 21 (2004) beds in the private hospitals.

as Figure refers to beds in public health facilities and private hospitals as classified in the health databank.

Table 10. Morbidity and Mortality Indicators

a Based on data reported by Ministry of Health as part of their outbreak report

b Figure refers to registered positive cases

c The figure refers to the cases reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases.

d The figure is compiled based on registered deaths and/or registered births.

e Suspected cases

f Figure refers to hospital data only

g Figure includes records where sex was unknown/not reported, and includes imported and locally acquired cases

h Figure refers to dengue fever

i Not endemic; absence of local transmission, and figure includes records where sex was unknown/not reported.

j Disease contracted "off island"

k Revised data

l Figure refers to hospital data only

m Data is not reflective of actual case numbers as laboratory confirmation is limited

n Immunization coverage rates, an official estimate mainly based on the latest survey results of the immunization coverage survey, refer to the percentages of local live births on the year who have received the vaccinations.

o Percentage of children 12-<15 months of age (age calculated at 31 March 2010) assessed as fully immunized. Date of processing 30 June 2010

p Figure refers to children aged 24-27 months

q The first and second dose of MMR vaccine is administered to 1-2 years and 6-7 years of age, respectively.

r Under the Hong Kong Childhood Immunisation Programme, the second dose of measles vaccine is given as measles, mumps and rubella vaccine at Primary 1.

s Given as inactivated polio vaccine (IPV)

t Estimated figure is 0.0011% and refers to Macao population

u Estimated figure is 0.0053% and refers to Macao population

v The estimate is for all people living with diagnosed HIV infection rather than for people with advanced HIV infection.

w Figure only reflects those attending Department of Health's specialist clinic

x Total of 3 cases

y Based on country reports as of end of December 2007

z Non-endemic for lymphatic filariasis

aa The number of death is calculated according to the rates but not reported data.

ab Figure was computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific and refers to deaths due to heart problems (80), diabetes/hypertension (46) and stroke/tuaula (51).

ac Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2007). World population Prospects: The 2006

Notes

	Revision, Highlights. New York: United Nations.
ad	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific using available population nearest to reference year.
	Table 11. Risk factors for noncommunicable diseases
a	Figure refers to subnational data.
b	Figure refers to current users of any tobacco product on >= 1 occasion on the 30 days preceding the survey.
c	Figure refers to current users of any cigarette product.
d	Figure applies to subnational data (Pohnpei)
e	Not specified if figure refers to current or daily user of any cigarette product.
f	Figure refers to subnational data from rural area.
g	Refers to those who drank alcohol in the past 30 days
h	Figure refers to heavy drinker which is defined as drinking alcohol amounting to ≥20g/day for females and ≥40g/day for males.
i	Figure refers to physical inactivity during leisure times with energy expenditure of 100 MET-minutes/2 weeks in the last two weeks.
j	Figure refers to those who drank alcohol in the past 30 days
k	Figure refers to subnational data from urban area.
l	Figure refers to IPAQ inactive which is defined as not meeting any of the following criteria: (1) 3 or more days of vigorous activity of at least 20 minutes per day OR, (2) 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day OR, (3) 5 or more days of any combination of walking, moderate-intensity or vigorous intensity activities achieving a minimum of at least 600 MET-min/week
m	Figure refers to inadequately inactive which includes those classified as inactive during leisure times.
o	Figure refers to those walking <10 000 steps a day.
p	Figure refers to moderate intensity.
q	Figure refers to inadequate vegetables and fruits intake
r	Revised data.
s	Figure refers to population group (self-reported) previously diagnosed or on hypertensive medication.
t	Figure refers to men who had 5 or more/ women who had 4 or more drinks on any day in the past 30 days
u	Figure refers to patients previously diagnosed by physician, other than during pregnancy, not necessarily treated.
v	Figure excludes group with SBP=140mmHg.
w	Estimated figure
x	Figure refers to obese/overweight
y	Figure applies to 15-100 agegroup
aa	Figure refers to population group having total cholesterol ≥5.7 mmol/L (240 mg/dl)
ab	Figure refers to raised blood cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dL
ac	Figure is subnational data (Pohnpei) and refers to raised blood cholesterol ≥ 5.2 mmol/L or ≥ 200 mg/dL
ad	Figure refers to population group (self-reported) previously diagnosed by physician, not necessarily treated.
ae	Figure refers to population group having total cholesterol ≥6.2 mmol/L (240 mg/dL) or currently using lipid lowering medication.
af	Figure refers to population group having total cholesterol ≥6.2 mmol/L (240 mg/dl).
ag	Figure refers to results of fasting glucose blood sample and oral glucose tolerance test performed according to WHO specifications.
ah	Figure refers to those with raised total cholesterol 5.0mmol/L or ≥190 mg/dl or currently on medication for raised cholesterol.
ai	Figure refers to those diagnosed by doctors and are being treated based on results of fasting glucose blood sample and oral glucose tolerance test performed according to WHO specifications.
aj	Figure refers to population group having plasma value of ≥200 mg/dl after not eating for 3 hours prior to fasting glucose blood sample exam.
ak	Figure refers to raised fasting blood glucose ≥ 6.1 mmol/L or ≥ 126 mg/dL (plasma venous value)
al	Figure refers to raised fasting blood glucose ≥ 7.0 mmol/L or ≥ 126 mg/dL (plasma venous value)
am	Figure refers to population group having blood value (fasting glucose blood sample) of 126 mg/dl (not specified, whole blood or plasma) or were taking

Notes

	antidiabetic medication.
an	Figure refers to population group having results of oral glucose tolerance test with blood value ≥11.10 mmol/l.
ao	Figure refers to population group having fasting blood glucose value ≥11.10 mmol/l and an elevated HbA1c diagnosed as having diabetes.
ap	Figure refers to population group having results of oral glucose tolerance test with blood value ≥11.0 mmol/l.
aq	Figure refers to those detected by finger prick and qualifiers returned on different day for fasting plasma glucose. Refer to cited source for the cut-off of blood glucose.
	Table 12. Millennium Development Goals Indicators
a	Figure includes TCM hospital and other specialized hospitals
b	The figure is compiled based on registered deaths and/or registered births
c	The figure includes unknown sex
d	Revised data
e	Revised data and reference year
f	Hospital-reported infant deaths
g	Data published by the Secretariat of the Pacific Community
h	Figure derived from total number of children born to women aged 15-49 and number of live births in the 12 months preceding the 2006 census
i	Figure refers or applies to resident population.
j	Revised data.
k	Figure refers to children aged 24-27 months
l	The first and second dose of MMR vaccine is administered to 1-2 years and 6-7 years of age, respectively.
m	This is the latest data for both direct and indirect maternal deaths
n	Figure refers to 1 maternal death out of 4434 births
o	Figure refers to 1 maternal death.
p	Figure refers to hospital reported MMR
q	There is only one maternal death in the last 5 years
r	Nearly all newborns were delivered in health facilities.
s	The figure refers to the cases known to the maternity homes, public and private hospitals.
t	Figure refers to the percentage of live births (except fetal deaths).
u	Computed by Information, Evidence and Research (IER) Unit of the WHO Regional Office for the Western Pacific
v	Best estimated figure
w	Figure refers to livebirths
x	Figure applies to public health facilities
y	Figure refers to women currently practicing any type of family planning contraceptives.
z	Figure refers to women aged 15-39 years old.
aa	Based on all persons living with HIV (rather than just adults)
ab	Incidence rate
ac	Figure applies to births in the last three years
ad	Figure refers to pregnant women with antenatal care for at least six times during pregnancy
ae	Estimated figure is 0.0011% and refers to Macao population
af	Estimated figure is 0.0053% and refers to Macao population
ag	Data have different reference years.
ah	The estimate is for all people living with diagnosed HIV infection rather than for people with advanced HIV infection.
ai	The figure only reflects those attending Department of Health's specialist clinic.
aj	Total of 3 cases.
ak	Based on country reports as of end of December 2007

Notes

al	Not endemic, absence of local transmission.
am	The figure refers to the cases reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases.
an	All are imported cases
ao	Computed by Information, Evidence and Research Unit of the WHO Regional Office for the Western Pacific using data from number of malaria cases and deaths
ap	Ministry of Health: the entire population has access to essential medicines at affordable prices due to pharmaecuticals co-payments limiting most out-of-pocket payments to no more than NZ$3 per drug where patients are enrolled with a Primary Health Care Organisation; in NZ approximately 2000 prescription medicines and therapeutic products are listed on the New Zealand Pharmaceuticals Schedule and attract government subsidies and this includes essential medicines; and while the entire population would not be within 1 hour walking time of the nearest pharmacy or dispensing outlet, the bulk of the population would be within 1 hour access time frame to receive essential medicines (e.g. walking, driving, public transport, home delivery of medication, ambulance transfer to an acute care facility) especially when living in urban areas

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30 Solomon Islands NCD Risk factors STEPS report 2010 [http://www.who.int/chp/steps/2006_Solomon_Islands_STEPS_Report.pdf]

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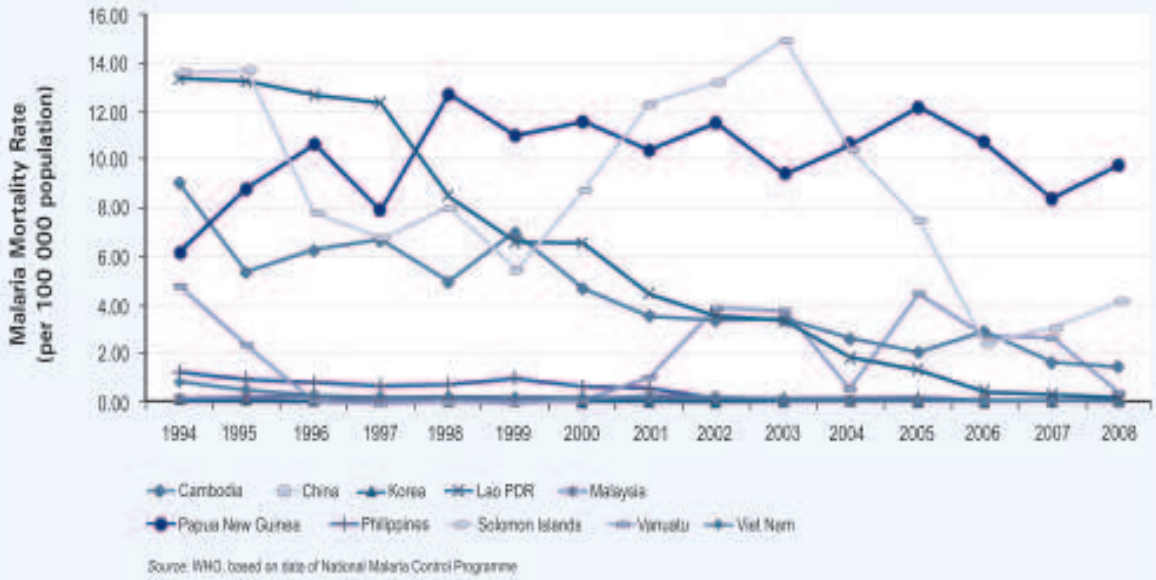
33 Noncommunicable disease prevalence and risk factors in Cambodia, STEPS survey country report, September 2010.

Annex Charts

Figure 1: Incidence rate of confirmed malaria cases (per 1000 population) in the Western Pacific Region, 1994-2008

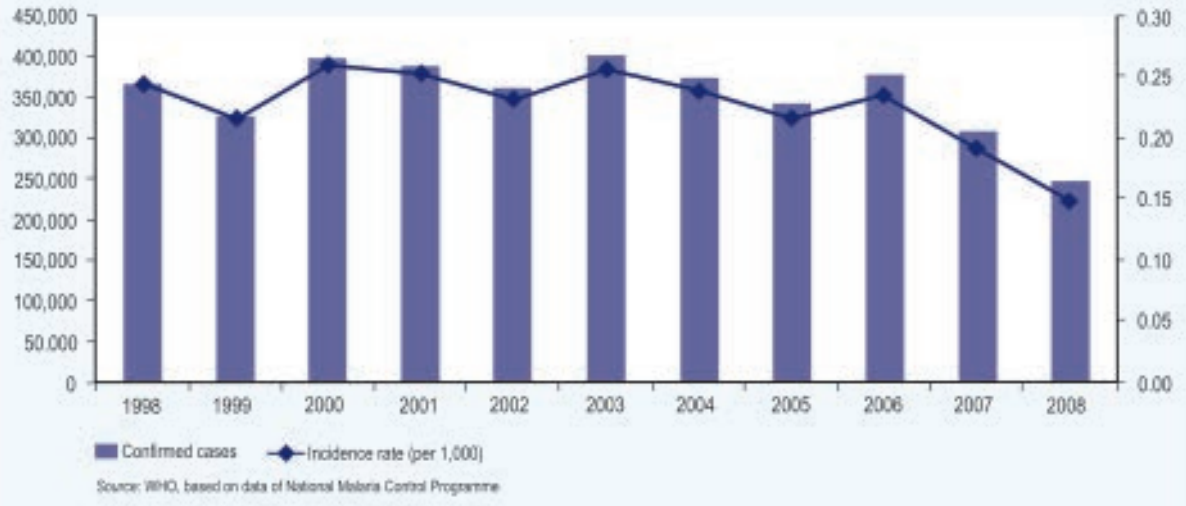
*Number of confirmed cases is not reflective of actual case numbers as laboratory confirmation is limited.
Source: WHO, based on data of National Malaria Control Programme

Figure 2: Malaria mortality rate (per 100 000 population) in the Western Pacific Region, 1994-2008



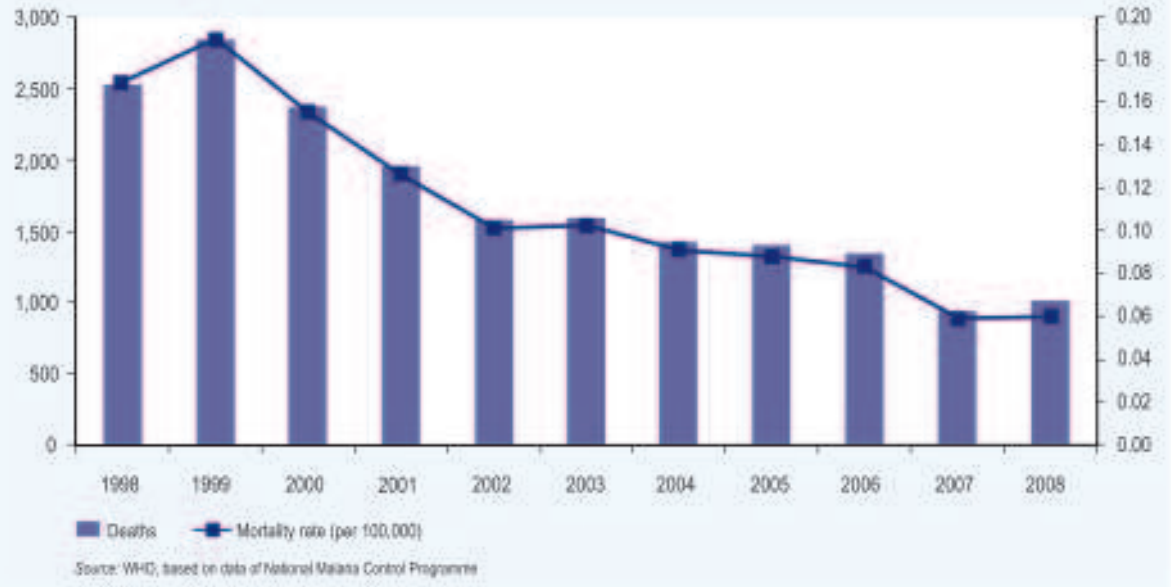
Source: WHO, based on data of National Malaria Control Programme

Figure 3: Number of confirmed malaria cases and incidence rates (per 1000 population) in the Western Pacific Region, 1998-2008



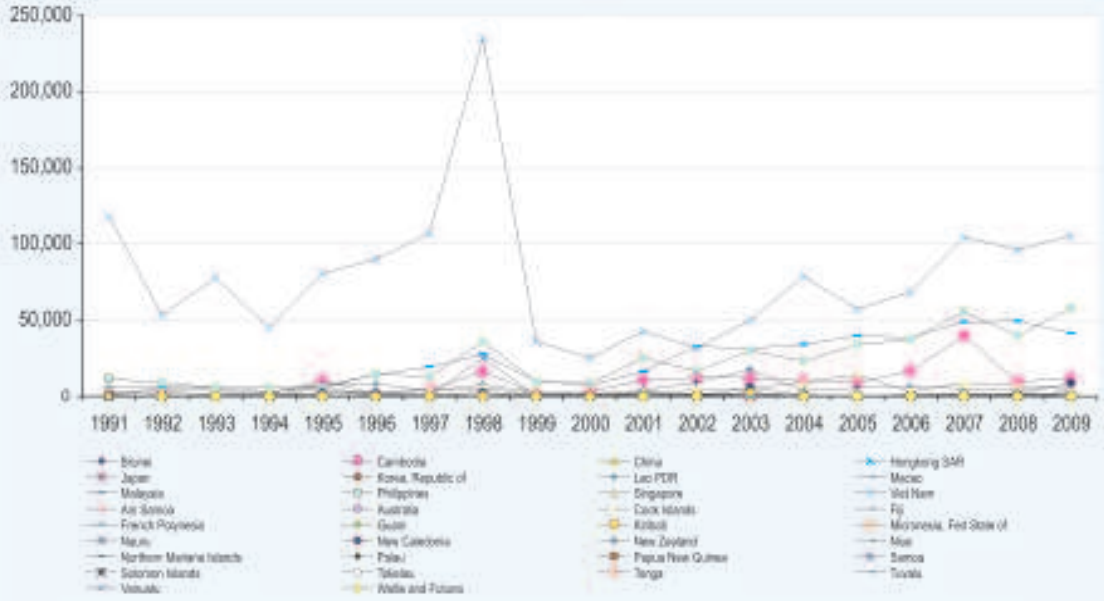
Source: WHO, based on data of National Malaria Control Programme

Figure 4: Malaria mortality rates (per 100 000 population) in the Western Pacific Region, 1998-2008



Source: WHO, based on data of National Malaria Control Programme

Figure 5: Number of reported dengue cases in WPR countries and areas, 1991-2009

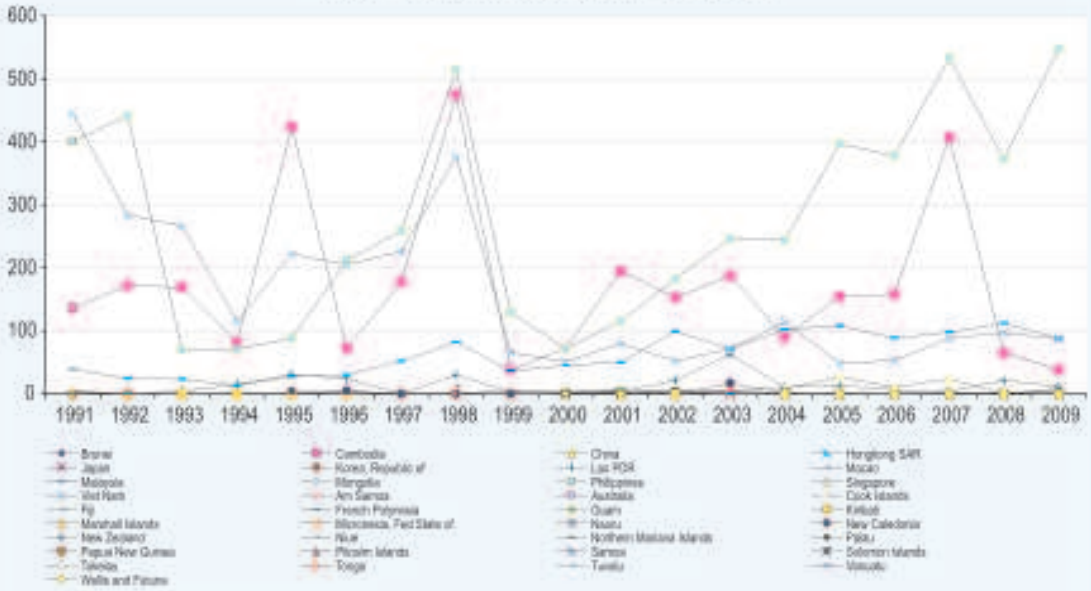


Note: Graph shows countries that have annual data available between 1991 and 2009. Mongolia and Pitcairn Islands have no reported dengues cases since 1991.
Source: I-Country reports to WHO, II-Country websites

Figure 6: Dengue incidence rate (per 100 000 population) in WPR countries and areas, 1991-2009

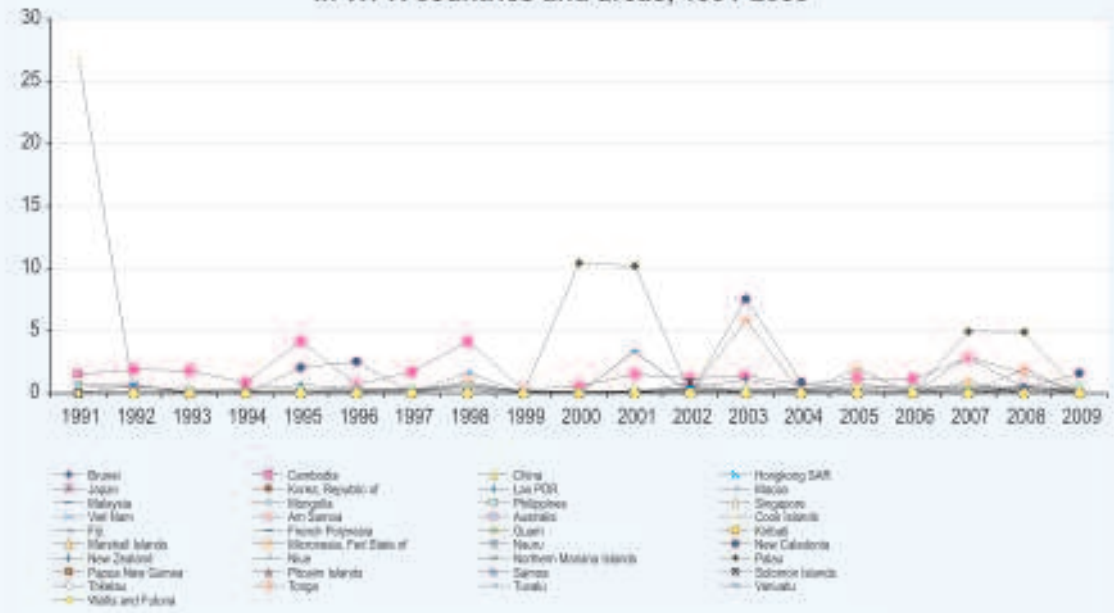
Note: Graph shows the trend of dengue incidence rate per 100, 000 from the countries that have annual data available between 1991 and 2009.
Source: i-Country reports to WHO, i-Country websites

Figure 7: Number of reported dengue deaths in WPR countries and areas, 1991-2009



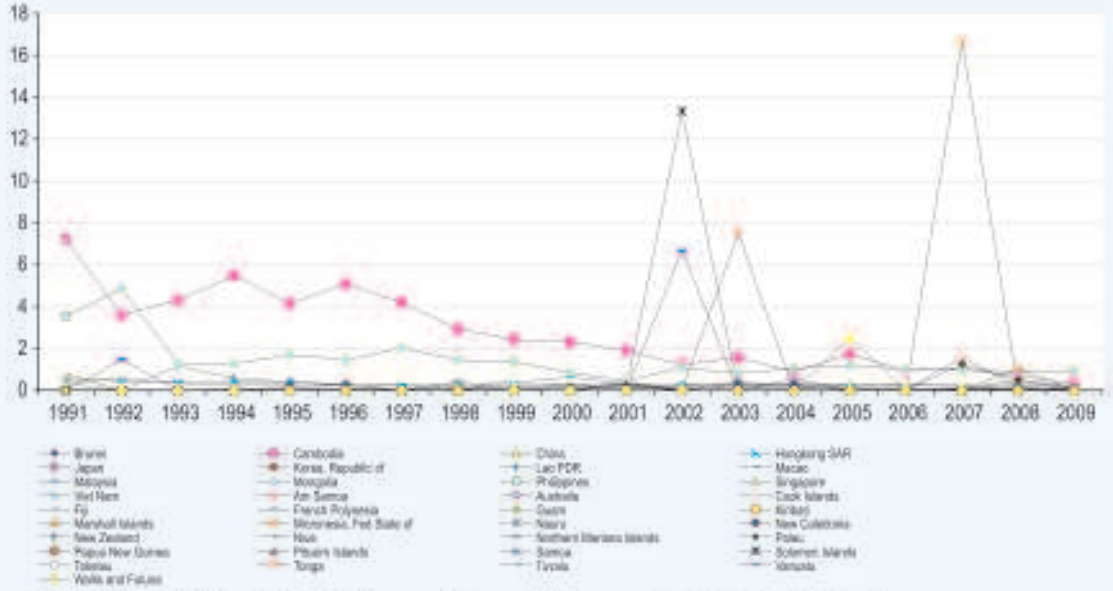
Source: Country reports to WHO and, country websites

Figure 8: Dengue mortality rates (per 100 000 population) in WPR countries and areas, 1991-2009



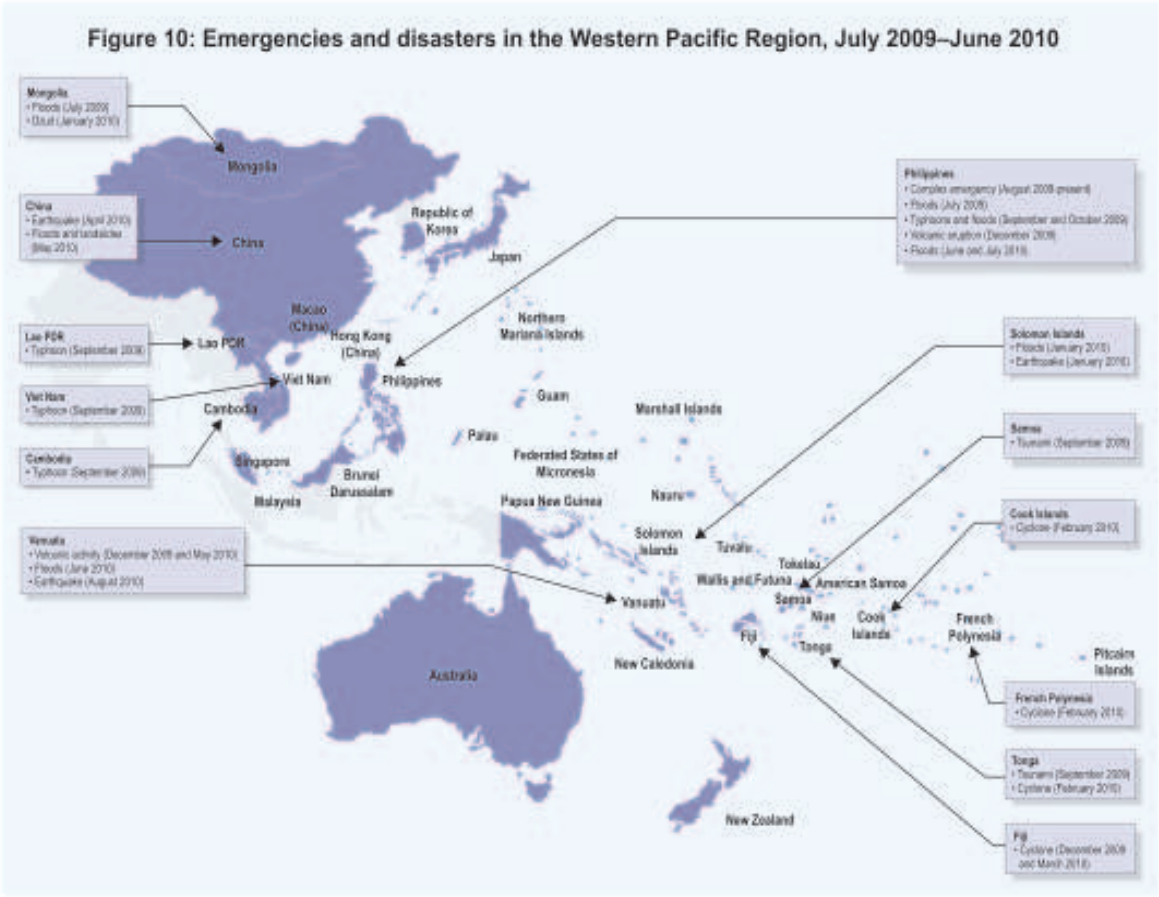
Note: Graph shows the trend of dengue mortality rates per 100 000 from the countries that have annual data available between 1991 and 2009.
Source: Country reports to WHO and, country websites

Figure 9: Dengue case fatality rates in WPR countries and areas, 1991-2009



Note: Graph shows the trend of case fatality rate of all dengue cases from the countries that have annual data available between 1991 and 2009.
Source: Country reports to WHO and country websites

Figure 10: Emergencies and disasters in the Western Pacific Region, July 2009–June 2010



Definition of Terms

Acute respiratory infections, cases and deaths. The recorded and estimated number of new cases of and deaths due to respiratory infections during the most recent year for which valid statistics are available. Disaggregated by age (all ages and among under-fives), and gender.

Admission. Formal acceptance, by a health facility, of a patient who is to receive medical or paramedical care while occupying a health-facility bed. Healthy babies born in hospital should not be counted if they do not require special care.

Adolescent birth rate. Annual number of live births to girls aged 15-19 years, per 1000 girls aged 15-19 years.

Adult literacy rate. The percentage of the total population aged 15 years and over who can, with understanding, both read and write a short simple statement on their everyday lives. Disaggregated by gender. Notes are made when a country has a different definition.

Annual number of graduates. Includes all students in the health-education sector duly conferred with an academic degree or diploma signifying advancement to a new level of skill, achievement or activity.

Annual population growth rate. (See Population growth rate)

Antenatal care. Includes recording of medical history, assessment of individual needs, provision of advice and guidance on pregnancy and delivery, performance of screening tests, education on self-care during pregnancy, identification of conditions detrimental to health during pregnancy, first-line management and referral if necessary.

Antenatal care coverage.

- **At least one visit.** Percentage of women who utilized antenatal care provided by skilled birth attendants for reasons related to pregnancy at least once during pregnancy as a percentage of live births in a given time period.

- **At least four visits.** Percentage of women who utilized antenatal care provided by skilled birth attendants for reasons related to pregnancy at least four times during pregnancy as a percentage of live births in a given time period.

Area. The total surface area, comprising land area and all inland waters. Presented in 1000 square kilometres or actual value.

Beds. The number of beds regularly maintained and staffed for the accommodation and full-time care of a succession of inpatients and situated in wards or a part of the hospital where continuous medical care for inpatients is provided. The total number of such beds constitutes the normally available bed complement of the hospital. Cribs and bassinets maintained for use by healthy newborn babies who do not require special care are not included.

Body mass index (BMI). Calculated as weight in kilograms (kg) divided by height in square metres (m^2).

Cancers, cases and deaths. The number of new cases detected due to all types and specific types of cancer during the most recent year for which valid data are available. The number of deaths due to all types and specific types of cancer that occurred during the most recent year for which valid data are available. Disaggregated by gender.

Causes of morbidity. (See Leading causes of morbidity)

Causes of mortality. (See Leading causes of mortality).

Circulatory system diseases, cases and deaths. The number of cases and deaths resulting from any form of circulatory disease. Disaggregated by gender.

Contraceptive prevalence rate. Percentage of women aged between 15-49 years who are practising, or whose sexual partners are practising, any form of contraception.

Crude birth rate. The registered number of live births for every 1000 population in a given year or period of time. Disaggregated by gender.

Crude death rate. The registered number of deaths for every 1000 population in a given year or period of time. Disaggregated by gender.

Dependency ratio. The ratio of persons in the 'dependent' age groups (under 15 years plus 65 years and above) to those in the 'economically productive' age group (15-64 years), expressed as a percentage.

Diabetes mellitus, cases and deaths. The number of existing cases and deaths due to diabetes mellitus during the most recent year for which valid statistics are available. Disaggregated by gender.

Diarrhoeal diseases, cases and deaths. The number of new cases of and/or recorded or estimated deaths due to all types of diarrhoeal disease during the most recent year for which valid statistics are available. Disaggregated by age (all ages and among under-fives), and gender.

Disaster. A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Discharges (including deaths). The number of persons, living or dead, whose stay in a health care facility has terminated and whose departure has been officially recorded.

Diseases of the circulatory system. (See Circulatory system diseases)

DOTS. Directly observed treatment, short-course (DOTS) is the recommended strategy for tuberculosis control. It comprises:

(1) government commitment to ensuring sustained, comprehensive tuberculosis-control activities;
(2) case detection by sputum-smear microscopy among symptomatic patients self-reporting to health services;
(3) standardized short-course chemo-therapy, using regimens of six to eight months, for at least all confirmed smear-positive cases (Good case management includes DOTS during the intensive phase for all new sputum-smear-positive cases, the continuation phase of rifampicin-containing regimens and the whole re-treatment regimen.);
(4) a regular, uninterrupted supply of all essential antituberculosis drugs; and
(5) a standardized recording and reporting system that allows assessment of case-finding and treatment results for each patient and of the tuberculosis control programme's performance overall.

DOTS coverage. (See Tuberculosis DOTS coverage)

Emergency. A state in which normal procedures are suspended and extraordinary measures are taken in order to avert the impact of a hazard on the community. Authorities should be prepared to respond effectively to an emergency. If not managed properly, some emergencies will become disasters.

Estimated population. (See Population)

Estimated HIV prevalence in adults. Percentage of persons with HIV infection among persons aged 15-49 years.

Estimated HIV prevalence among TB cases. Estimated percentage of HIV-positive cases among TB cases.

External source of government health expenditure. Pertains to government expenditure on health coming from external sources, mainly in the form of grants passing through the Government or loans channelled through the national budget.

External resources for health as a percentage of general government expenditure on health. The ratio of external resources for health to total general government expenditure on health, expressed as a percentage.

Facilities with HIV testing and counselling services. Number of facilities where HIV testing and counselling is available, including both health and non-health facilities.

GDP per capita annual growth rate (%). Least squares annual growth rate,

calculated from constant price GDP in local currency units.

Gender empowerment measure (GEM) value. A composite index measuring gender inequality in three basic dimensions of empowerment— economic participation and decision-making, political participation, and decision-making, and power over economic resources.

Gender-related development index (GDI) value. A composite index measuring average achievement in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living— adjusted to account for inequalities between men and women.

General government expenditure on health (excluding social security). General government expenditure on health refers to expenditures incurred by central, state/regional and local government authorities, excluding social security schemes. Included are non-market, non-profit institutions that are controlled and mainly financed by government units.

Government expenditure on health. The sum of outlays by government entities to purchase health care services and goods, notably by ministries of health and social security agencies. The revenue base may comprise multiple sources, including external funds. (See also External source of government health expenditure)

(1) **Amount.** Government expenditure on health expressed in million US dollars or another indicated currency.

(2) **General government expenditure on health as a percentage of total expenditure on health.** The ratio of government expenditure on health to total expenditure on health, expressed as a percentage.

(3) **General government expenditure on health as a percentage of total general government expenditure.** The ratio of government expenditure on health to total government expenditure, expressed as a percentage.

Growth rate. (See also Population growth rate)

Growth rate of per capita GDP (%). Least squares annual growth rate, calculated from constant price GDP in local currency units.

Gross domestic product (GDP). The total output of goods and services for final use produced by residents and non-residents, regardless of the allocation to domestic and foreign claims.

Gross national income (GNI). The sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.

Gross national product (GNP). Comprises the gross domestic product (GDP), plus net factor income from abroad, which is the income residents receive from abroad for factor services (labour and capital) less similar payments made to non-residents who contributed to the domestic economy.

Hazard. A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impact, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Healthy life expectancy (HALE). The average number of years in full health a person (usually at age 60) can expect to live based on current rates of ill-health and mortality. Disaggregated by gender.

Health expenditure per capita. (See Total health expenditure - Per capita total expenditure on health)

Health facilities. (See Health infra-structure)

Health infrastructure. Public (state/ government) health facilities

- **General hospital**. Hospital providing a range of different services for patients of various age groups and with varying disease conditions.

- **Specialized hospital**. Hospital admitting primarily patients suffering from a specific disease or affection of one system, or reserved for the diagnosis and treatment of conditions affecting a specific age group or of a long-term nature.

- **District/first-level referral hospital.** Hospital at the first referral level responsible for a district or a defined geographical area containing a defined population and governed by a politico-administrative organization, such as a district health management team. The role of a district hospital in primary health care has been expanded beyond being dominantly curative and rehabilitative to include promotional, preventive and educational roles as part of a primary health care approach.

- **Primary health care centre**. Centre that serves as first point of contact with a health professional and provides outpatient medical and nursing care. Services are provided by general practitioners, dentists, community nurses, pharmacists and midwives, among others.

Health infrastructure. Private facilities.

- **Hospital.** Hospital not owned by government or parastatal organizations (includes both private not-for profit, e.g. owned by religious organizations, and private for-profit).

- **Outpatient clinic.** Clinic not owned by government or parastatal organizations (includes both private not-for-profit, e.g. owned by religious organizations, and private for-profit).

Health insurance coverage as a percentage of total population. The percentage of the population covered by health insurance, both private and public health insurance schemes.

Health workforce.

- **Physicians**. Graduates of any faculty or school of medicine, licensed or registered to work in the country as medical doctors who apply preventive or curative measures and/or conduct research. Also expressed as number of physicians per 1000 population. Disaggregated by gender, area and sector.

- **Dentists**. Graduates of any faculty or school of dentistry, odontology or stomatology, duly licensed or registered to practise dentistry, and actually working in the country in any dental field to apply medical knowledge in the field of dentistry and/or conduct research. Also expressed as number of dentists per 1000 population. Disaggregated by gender, area and sector.

- **Pharmacists**. Graduates of any faculty or school of pharmacy, duly licensed or registered to practise pharmacy and actually working in the country in pharmacies, hospitals, laboratories, industry, etc. applying pharmaceutical concepts and theories by preparing and dispensing or selling medicaments and drugs. Also expressed as number of pharmacists per 1000 population. Disaggregated by gender, area and sector.

- **Nurses**. Persons who have completed a programme of basic nursing education and are qualified and registered or authorized to provide responsible and competent service for the promotion of health, prevention of illness, care of the sick, and rehabilitation, and are actually working in the country. Also expressed as number of nurses per 1000 population. Disaggregated by gender, area and sector.

- **Midwives**. Persons who have completed a programme of midwifery education and have acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery, and are actually working in the country. The persons may or may not have prior nursing education. Also expressed as number of midwives per 1000 population. Disaggregated by gender, area and sector.

- **Paramedical staff.** Health care assistants, laboratory technicians,

technologists, therapists, nutritionists, sanitarians, among others, who are actually working in the country and are graduates of 2- to 5-year health courses in recognized health training institutions. Also expressed as number of paramedical staff per 1000 population. Disaggregated by gender, area and sector.

- **Community health workers**. Lay members of communities who have a period of on-the-job training, sometimes formalized in apprenticeships, who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status and life experiences with the community members they serve. Also expressed as number of community health workers per 1000 population. Disaggregated by gender, area and sector.

Area.

- **Urban**. Those working in urban areas or in planned metropolitan communities in developed areas designed to be self-sufficient, with their own housing, education, commerce and recreation.

- **Rural**. Those working in rural areas or in areas outside cities and metropolitan areas generally regarded as underdeveloped in terms of infrastructure and specialized services.

Sector.

- **Public.** Those who are employed in the public sector, which is the portion of society controlled by national, state or provincial and local governments.

- **Private.** Those who are employed in the private sector, which comprises private corporations, households and non-profit institutions serving households.

HIV prevalence among population aged 15–24 years. The percentage of the population aged 15–24 whose blood samples tested positive for HIV.

Hospital beds. (See Beds)

Human Development Index (HDI). The HDI measures the average achievements in a country in three basic dimensions of human development—longevity, knowledge and a decent standard of living. A composite index, the HDI thus contains three variables: life expectancy, educational attainment (adult literacy and combined primary, secondary and tertiary enrolment) and real GDP per capita (in purchasing power parity or PPP$).

Immunization coverage for infants. (See Percentage of infants fully immunized with BCG, DTP3, POL3, measles (MCV1 and MCV2), hepatitis B3, Hib3, and DTP1, HepB birth dose, and VitA1).

Infant mortality rate. The number of registered deaths among infants (below one year of age) per 1000 live births in a given year or period of time. Disaggregated by gender.

Injuries, all types. Recorded or estimated number of diseases/injuries and deaths related to drowning, homicide and violence; road traffic accidents; work accidents; and suicide. Disaggregated by gender.

- **Drowning, cases and deaths.** Total number of cases and deaths resulting from drowning (conditions that fall under W65-W74 in the ICD10). Disaggregated by gender.

- **Homicide and violence, cases and deaths.** Total number of cases and deaths from injuries resulting from homicides and other forms of violence. Disaggregated by gender.

- **Road traffic accidents, cases and deaths.** The total number of cases refers to injuries (non-fatal and fatal) from road traffic accidents (Conditions that fall under V01-V80, V82 and V87 only in the ICD10), while the total number of deaths refers only to the fatal injuries. Disaggregated by gender.

  Traffic accident. Any vehicle accident occurring on the public highway {i.e. originating on, terminating on, or involving a vehicle partially on the highway}. A vehicle accident is assumed to have occurred

on the public highway unless another place is specified, except in the case of accidents involving only off-road motor vehicles, which are classified as nontraffic accidents unless the contrary is stated

- **Occupational injuries, cases and deaths.** Total number of cases and deaths due to injuries arising out of or in the course of work. Disaggregated by gender.

- **Suicide, cases and deaths.** Total number of cases and deaths from self-inflicted injuries with the intention of taking one's life. Also expressed as a proportion of the general population. Disaggregated by gender.

Inpatient. A person admitted to a health care facility and who usually occupies a bed in that health care facility.

Leading causes of morbidity. The most frequently occurring causes of morbidity (usually 10) among inpatients for which the greatest number of cases have been reported during a given year. The crude morbidity rate is usually expressed as the number of cases of disease per 100 000 population for a given year, disaggregated by gender.

Leading causes of mortality. The most frequently occurring causes of mortality (usually 10) under which the greatest number of deaths have been reported during a given year. Causes of mortality are all those diseases, morbid conditions, or injuries which either resulted in or contributed to death, and the circumstances of the accident or violence that produced any such injuries. The crude mortality rate is usually expressed as the number of deaths from a specific cause per 100 000 population for a given year. Disaggregated by gender.

Life expectancy at birth. The average number of years a newborn baby is expected to live if mortality patterns at the time of its birth were to prevail throughout the child's life. Disaggregated by gender.

Live birth. The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered liveborn.

Malaria death rate. The number of malaria deaths per 100 000 population. Disaggregated by gender.

Malaria incidence rate. The number of cases of malaria per 100 000 population. Disaggregated by gender.

Maternal causes, cases and deaths. The number of cases and deaths due to abortion, eclampsia, haemorrhage, obstructed labour and sepsis among women while pregnant or within 42 days of termination of pregnancy, irrespective of the duration or site of the pregnancy. Maternal causes of death may be subdivided into two groups:

(1) **direct obstetric death**, resulting from obstetric complications of the pregnant state (pregnancy, labour and the puerperium), from interventions, omissions, incorrect treatment or from a chain of events resulting from any of the above; and

(2) **indirect obstetric death,** resulting from previous existing disease or disease that developed during pregnancy and that was not due to direct obstetric causes, but was aggravated by the physiological effects of pregnancy.

Maternal mortality ratio. The number of registered deaths among women, from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy, childbirth or within 42 days of termination of pregnancy, irrespective of the duration or site of the pregnancy, for every 100 000 live births in a given year or period of time.

Measles incidence rate. The number of measles cases per 1 000 000 population.

Mental disorders, cases and deaths. The number of cases and deaths from any form of mental disorder, i.e. clinical, behavioural or psychological syndrome, characterized by the presence of distressing symptoms or significant impairment of functioning. Disaggregated by gender.

Mortality rate. An estimate of the proportion of a population that dies during a specified period. The numerator is the number of persons dying during the period; the denominator is the total number of people in the population, usually estimated as the mid-year population. This rate is an estimate of the person-time death rate, i.e., the death rate per 10^n person-years. If the rate is low, it is also a good estimate of the cumulative death rate. This rate is also called the **crude death rate**.

Multidrug-resistant tuberculosis (MDR-TB). Describes strains of tuberculosis that are resistant to at least the two main first-line TB drugs—isoniazid and rifampicin.

National poverty line. The percentage of the population living below the poverty line deemed appropriate for a country by its authorities. National estimates are based on population-weighted subgroup estimates from household surveys.

National underweight, stunting and wasting prevalence.

- **Underweight**. Low weight for age or weight for age more than a standard deviation of 2 below the median value of the reference (healthy) population.

- **Stunting.** Low height for age or height for age more than a standard deviation of 2 below the median value of the reference (healthy) population.

- **Wasting.** Low weight for height or weight for height more than a standard deviation of 2 below the median value of the reference (healthy) population.

Natural rate of increase. A measure of population growth (in the absence of migration) comprising addition of newborn infants to the population and subtraction of deaths. Expressed as a percentage per annum. Disaggregated by gender.

Neonatal mortality rate. The number of registered deaths in the neonatal period per 1000 live births in a given year or period of time. Disaggregated by gender.

Neonatal period. Commences at birth and ends 28 completed days after birth.

Noncommunicable risk factors.

- **Behavioural measures.**
  (1) **Daily smokers**. Those who smoke any tobacco product every day.

  (2) **Current drinkers**. Those who have consumed a drink containing alcohol in the last 12 months.

  (3) **Binge drinkers**. Consuming ≥5 (males) or ≥4 (females) standard drinks in a sitting on at least one day in the past week. Standard drinks defined as: beer (285 ml), spirits (30 ml), wine (120 ml), aperitif (60 ml).

  (4) **Physically inactive**. Low level of physical activity with less than 600 MET minutes per week of total physical activity. MET is defined as the Activity Metabolic Rate divided by the Resting Metabolic Rate (=1 MET) across three domains (work, leisure and transport) and two levels (moderate and vigorous).

  (5) **Low fruit and vegetable consumption**. Those who consume less than five combined servings of fruit or vegetables per day of the week.

- **Physical measures.**
  (1) **Raised blood-pressure**. Those with Systolic BP≥140 mmHg and/or diastolic BP≥90 mmHG or currently on medication for raised blood pressure.

  (2) **Overweight**. Those with BMI≥ 25

  (3) **Obese**. Those with BMI≥30

- **Biochemical measures.**
  (1) **Raised blood-cholesterol/ lipids**. Those with Total cholesterol ≥5.2 mmol/L or ≥200 mg/dl whole blood. Notes are made when a country uses a different cut-off value.

  (2) **Raised blood glucose**. Those with BG≥110 mg/dl or 6.1 mmol/L of whole blood without having known diabetes or being on treatment. Diabetes as diagnosed by a medical doctor. Notes are made when a country uses a different cut-off value.

Number of mass drug administration (MDA) rounds for lymphatic filariasis. Number of rounds of mass drug administration of diethylcarbamazine or ivermectin in combination with albendazole conducted for prevention of lymphatic filariasis.

Obese. A person whose calculated body mass index (BMI) is greater than or equal to 30 kg/m^2.

Outpatient. A person who goes to a health care facility for consultation, is not admitted to the facility and does not occupy a hospital bed for any length of time.

Overweight. A person whose calculated body mass index (BMI) is greater than or equal to 25 kg/m^2 but less than 30 kg/m^2.

Out-of-pocket expenditure on health as percentage of total expenditure on health. Ratio of out-of-pocket expenditure on health to total expenditure on health expressed as a percentage.

Per capita gross domestic product (GDP) at current market prices. Gross domestic product divided by mid-year population (or population size if mid-year population is not available).

Per capita gross national income (GNI). Gross national income divided by mid-year population (or population size if mid-year population is not available).

Per capita gross national product (GNP). The per capita GNP is obtained by dividing the total gross national product by the total population.

(1) the gross domestic product (GDP), which measures the total output of goods and services for final use produced by residents and non-residents, regardless of the allocation to domestic and foreign claims, plus
(2) net factor income from abroad, which is the income residents receive from abroad for factor services (labour and capital) less similar payments made to non-residents who contributed to the domestic economy.

Per capita health expenditure (US$). The average health expenditure (in United States dollars) per person in a year.

Per capita income. Income per person in a population. Per capita income is often used to measure a country's standard of living.

Percentage distribution of population aged 60 years or older by gender. The percentage of the male and the female populations aged 60 years or older in a given period of time.

Percentage distribution of population less than 15 years. (See Percentage of the population below 15 years of age or above 65 years of age.)

Percentage distribution of population above 65 years. (See Percentage of the population below 15 years of age or above 65 years of age.)

Percentage of deliveries attended by skilled health personnel. The percentage of deliveries attended by personnel trained: to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period; to conduct deliveries on their own; and to care for newborn infants. Estimated in this CHIPS publication using two indicators:

- **Percentage of deliveries at home attended by skilled health personnel.** Percentage of deliveries that take place at home and are attended by personnel trained: to give the necessary supervision, care and

advice to women during pregnancy, labour and the postpartum period; to conduct deliveries on their own; and to care for newborn infants. Expressed as a percentage of total deliveries.

- **Percentage of deliveries in health facilities.** Percentage of total deliveries in public and private hospitals, clinics and health centres, irrespective of who attended the delivery at those facilities.

Percentage of infants fully immunized with BCG, DTP3, POL3, measles (MCV1 and MCV2), hepatitis B3, Hib3, and DTP1, HepB birth dose, and VitA1. Percentage of children under one year of age who have received immunization against tuberculosis (BCG), diphtheria, pertussis, tetanus (DTP3 and DTP1), poliomyelitis (POL3), measles (at least one dose and two doses) and hepatitis B3 and HepB birth dose. Also includes coverage with vitamin A1.

Percentage of confirmed *P. falciparum* malaria cases receiving an ACT. The proportion of confirmed *P. falciparum* cases receiving artemisinin-based combination therapy (ACT) at public, private and community levels according to national guidelines among confirmed *P. falciparum* malaria cases.

Percentage of confirmed *P. vivax* malaria cases receiving appropriate antimalarial treatment, including radical treatment. The proportion of confirmed *P. vivax* malaria cases receiving appropriate treatment, including radical treatment, at a health facility according to national guidelines among confirmed *P. vivax* malaria cases.

Percentage of newborn infants weighing less than 2500 grams at birth. The percentage of newborn infants whose birth weight is less than 2500 grams, the measurement being taken preferably within the first hours of life before significant postnatal weight loss has occurred. Disaggregated by gender. Notes are made when a country has a different definition.

Percentage of people with advanced HIV infection receiving ART. Percentage of people with advanced HIV infection who are receiving antiretroviral therapy (ART) according to a nationally approved treatment protocol (or WHO/Joint United Nations Programme on HIV and AIDS standards) among the estimated number of people with advanced HIV infection.

Percentage of population: 0- 4 years of age; 5-14 years old; or 65 years and older. The percentage of the total population aged 0 to 4 years, 5 to 14 years, or 65 years and above in a given period of time. Disaggregated by gender.

Percentage of population with access to safe water. (See Proportion of the population using improved drinking-water source.)

Percentage of population with access to excreta disposal facilities. (See also Proportion of the population using improved sanitation facilities.)

Percentage of pregnant women immunized with tetanus toxoid (TT2). The percentage of pregnant women adequately immunized against tetanus, having received at least two doses of tetanus toxoid during pregnancy. Expressed as a percentage of all live births since the number of pregnant women is generally not available.

Percentage of pregnant women with anaemia. Percentage of pregnant women aged 15 to 49 years with a blood concentration of haemoglobin below 110 grams per litre (or 6.83 millimoles per litre) or haematocrit below 33%.

Percentage of women given at least 2 doses of TT2+. (See also Percentage of pregnant women immunized with tetanus toxoid (TT2).

Percentage of women in the reproductive age group using modern contraceptive methods. The percentage of women aged 15-49 in marital or consensual unions who are practising, or whose male partners are practising, any form of modern contraception, including female and male sterilization, oral contraceptives, injectables or implants, intrauterine devices, condoms, spermicidal foams, jelly, cream, sponges, among others. Notes are made when specific female populations

are pertained to, such as only married women.

Person with midwifery skills. A person who has successfully completed the prescribed course in midwifery and is able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries alone, to provide lifesaving obstetric care, and to care for the newborn infant.

Population. All the inhabitants of a given country or area considered together. Estimates are based on a recent census, official national data or United Nations projections. Presented in thousands or actual value. Disaggregated by gender.

Population density. Population per square kilometre.

Population growth rate. The average exponential population growth of the population in a given period of time. Expressed as a percentage. Disaggregated by gender.

Prevalence of underweight children under five years of age. Percentage of children under five years of age whose weight for age is less than a standard deviation of 2 from the median for the international reference population (often referred to as the National Centre for Health Statistics/ WHO reference population) aged 0-59 months. Disaggregated by gender.

Prevalence rate. The proportion of the population with the health condition or disease in a given time. Expressed in 100, 1000, 10 000 or 100 000 population.

Private health expenditure. The sum of total outlays on health by private entities, notably commercial insurance, non-profit institutions and households acting as complementary funders to the previously cited institutions or disbursing unilaterally on health commodities. This includes out-of-pocket health expenditure, patient co-payments, private health insurance premiums, and health expenditures by nongovernmental organizations.

Private expenditure on health as a percentage of total expenditure on health. Ratio of private expenditure on health to total expenditure on health, expressed as a percentage.

Proportion of infants less than six months of age exclusively breast-fed. Proportion of infants less than six months of age exclusively breast-fed, i.e. given only breast milk except for drops or syrups consisting of vitamins, minerals or medicines.

Proportion of infants aged 6-9 months receiving breastmilk and complementary food. Proportion of infants aged 6-9 months receiving breastmilk and complementary food, i.e. any food, whether home prepared or industrially processed, suitable as a complement to breast milk to satisfy the nutritional requirements of the infant.

Proportion of infants less than 12 months of age with breast-feeding initiated within one hour of birth. Proportion of infants less than 12 months of age who were breast-fed by their mothers within one hour after birth, based on mother's recall.

Proportion of children 6-59 months of age who received vitamin A in the past six months. Proportion of children aged 6-59 months who received vitamin A in the six months preceding the survey.

Proportion of children 0-59 months of age who had diarrhoea in the past two weeks and were treated with ORT. Proportion of children aged 0-59 months with diarrhoea in the two weeks preceding the survey who received oral rehydration therapy (oral rehydration therapy solutions or recommended homemade fluids).

Proportion of children 0-59 months of age who had suspected pneumonia in the past two weeks and were taken to an appropriate health care provider. Proportion of children aged 0-59 months with suspected pneumonia in the two weeks preceding the survey taken to an appropriate health care provider. An appropriate health care provider is defined as any provider trained in standard case management of children with suspected pneumonia. This may include midwives, nurses, doctors trained in IMCI (integrated management of childhood illness) or a community-based health

worker trained in a simplified version of IMCI and who are permitted to give antimicrobials.

Proportion of one-year-old children immunized against measles. Percentage of children under one year of age who have received at least one dose of measles vaccine.

Proportion of one-year-old children protected against neonatal tetanus through immunization of their mothers. Proportion of infants whose mothers had two tetanus toxoid doses during the last pregnancy or had received at least TT2 (3 years protection), TT3 (5 years protection), TT4 (10 years protection) or TT5 (lifetime protection).

Proportion of population in malaria-risk areas using effective malaria prevention measures. Percentage of children aged 0–59 months in the survey who slept under an insecticide-treated net the previous night.

Proportion of population in malaria-risk areas using effective malaria treatment measures. Proportion of children aged 0–59 months who were ill with fever in the two weeks before the survey and who received appropriate antimalarial drugs.

Proportion of population with access to affordable essential drugs on a sustainable basis. The percentage of the population that has access to a minimum of 20 of the most essential drugs. Access is defined as having drugs continuously available and affordable at public or private health facilities or drug outlets that are within one hour's walk of the population. Essential drugs are drugs that satisfy the health care needs of the majority of the population.

Proportion of population using an improved sanitation facility. Percentage of the population with access to facilities that hygienically separate human excreta from human, animal and insect contact. Facilities such as sewers or septic tanks, pour-flush latrines and simple pit or ventilated improved pit latrines are assumed to be adequate provided that they are not public, according to the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) *Global Water Supply and Sanitation Assessment 2000 Report*. To be effective, facilities must be correctly constructed and properly maintained. Disaggregated by location: urban or rural.

Proportion of population using an improved drinking-water source. The percentage of the population who use any of the following types of water supply for drinking: piped water, public tap, borehole or pump, protected well, protected spring or rainwater. Improved water sources do not include vendor-provided waters, bottled water, tanker trucks or unprotected wells and springs. Disaggregated by location: urban or rural.

Proportion of tuberculosis cured under directly observed treatment short-course (DOTS). The proportion of new smear-positive tuberculosis cases registered under DOTS in a given year that successfully completed treatment, whether with bacteriological evidence of success ('cured') or without ('treatment completed'). Expressed as a percentage.

Proportion of tuberculosis detected under directly observed treatment short-course (DOTS). The percentage of estimated new infectious tuberculosis cases under the DOTS strategy. Expressed as a ratio of the number of DOTS-detected cases to the estimated number of new cases.

Proportion of vehicles using unleaded gasoline (%). The percentage of total motor vehicles that use unleaded gasoline as their primary fuel. Disaggregated by location: urban or rural.

Public expenditure on health. (See Government expenditure on health.)

Public health facilities. (See Health infrastructure.)

Purchasing power parity (PPP). The rates of conversion that equalize purchasing power across the full range of goods and services contained in total expenditure and gross domestic product of a country.

Rate of growth of per capita GDP (%) (See Growth rate of per capita GDP.)

Rate of natural increase of population. (See Natural rate of increase.)

Reported mass drug administration (MDA) coverage for lymphatic filariasis among total population. Proportion of the population in identified filaria-endemic areas covered by MDA.

Risks. Potential consequences of a hazard affecting communities (deaths, injuries, disease, disabilities, displacement, damage, destruction, contamination, unemployment, etc.).

Road traffic death rate. Estimated number of road traffic deaths per 100 000 population.

Selected communicable diseases, cases and deaths. The number of new cases and deaths due to hepatitis (types A, B and C, E and unspecified), cholera, dengue fever/dengue haemorrhagic fever (DHF), encephalitis, gonorrhoea, leprosy, malaria, plague, syphilis and typhoid fever in a given year. Disaggregated by gender.

Selected diseases under the WHO expanded programme on immunization (EPI), cases and deaths. The number of reported cases and deaths due to a specific disease among selected preventable diseases (acute flaccid paralysis [AFP], congenital rubella syndrome, diphtheria, measles, mumps, neonatal tetanus, pertussis [whooping cough], poliomyelitis, rubella, total tetanus and yellow fever) in a specific country or area over a given year.

Skilled health personnel or skilled birth attendants. Those who are properly trained and who have appropriate equipment and drugs. Excludes traditional birth attendants, even if they have undergone short training courses.

Smoking prevalence among adults. Proportion of the adult population (15 years and over) who are smokers (both daily and occasional) at a point in time.

Smoking prevalence among youth. Proportion of young people (aged 13-15 years) who smoked during one or more of the 30 days preceding the survey (regardless of amount used).

Surface area. (See Area.)

Total fertility rate. The number of children who would be born per woman if the woman were to live to the end of her child-bearing years and bear children at each age in accordance with prevailing age-specific fertility rates.

Total health expenditure. The sum of general government expenditure on health (commonly called public expenditure on health) and private expenditure on health. (See also Government expenditure on health and Private health expenditure.)

(1) **Amount.** Total health expenditure expressed in million United States dollars or another indicated currency.

(2) **Total expenditure on health as a percentage of GDP (or GNP).** The percentage share of total expenditure on health with respect to a country's GDP (or GNP).

(3) **Per capita total expenditure on health.** Total expenditure on health divided by the mid-year population (or population size if mid-year population is not available).

Traditional birth attendant. A traditional birth attendant (TBA) who initially acquired her ability by delivering babies herself or through apprenticeship to other TBAs and who has undergone subsequent extensive training and is now integrated into the formal health care system.

Tuberculosis case. A patient in whom tuberculosis has been bacteriologically confirmed or has been diagnosed by a clinician.

- **All forms, cases and deaths**. The sum of new smear-positive pulmonary, relapse, new smear-negative pulmonary, and extrapulmonary tuberculosis cases and deaths.

- **New pulmonary tuberculosis (smear-positive), cases**. Patients who have never received treatment for tuberculosis or have taken antituberculosis drugs for less than 30 days and who have one of the following:
  (1) two or more initial sputum-smear examinations positive for acid fast bacilli (AFB);

(2) one sputum examination positive for AFB plus radiographic abnormalities consistent with active pulmonary tuberculosis, as determined by a clinician; or
(3) one sputum specimen positive for AFB and at least one sputum specimen that is culture-positive for AFB.

Tuberculosis case detection. Tuberculosis is diagnosed in a patient and is reported within the national surveillance system, and then to WHO.

Tuberculosis case detection rate, total. The ratio of new smear-positive cases notified to the estimated number of new smear-positive cases for a given year.

Tuberculosis case detection rate under directly observed treatment, short-course (DOTS). The percentage of estimated new infectious tuberculosis cases detected under the DOTS strategy. Expressed as a ratio of the number of DOTS-detected cases to the estimated number of new cases. (See also Tuberculosis case detection.)

Tuberculosis case notification rate, all cases. The number of tuberculosis cases reported per 100 000 population in a given year. Includes all forms of TB.

Tuberculosis case notification rate, sputum smear-positive. The number of new smear-positive pulmonary tuberculosis cases reported per 100 000 population in a given year.

Tuberculosis cure rate. (See Proportion of tuberculosis cured under directly observed treatment short-course (DOTS).)

Tuberculosis death rate. Estimated number of deaths due to TB for a given year. Includes deaths from all forms of TB and deaths from TB in people with HIV. Expressed as deaths per 100 000 population per year.

Tuberculosis DOTS coverage. The percentage of the national population living in areas where health services have adopted the DOTS strategy.

Tuberculosis incidence rate, all forms. Estimated number of tuberculosis cases arising in a given period of time. Includes all forms of TB, including cases of people co-infected with HIV. Expressed as a per capita rate.

Tuberculosis prevalence, all forms. Estimated number of cases of tuberculosis in a population in a year or given period of time. Includes all forms of TB, including cases co-infected with HIV. Expressed as number of cases per 100 000 population in a given year.

Tuberculosis prevalence, sputum-smear-positive. Estimated number of sputum-smear-positive cases of tuberculosis in a population in a year or given period of time. Expressed as the number of sputum-smear-positive cases per 100 000 population in a given year.

Tuberculosis success rate under directly observed treatment, short-course (DOTS). (See Proportion of tuberculosis cured under directly observed treatment short-course (DOTS).)

Under-five mortality rate. The probability (expressed as a rate per 1000 live births) of a child born in a specified year dying before reaching the age of five if subject to current age-specific mortality rates. Disaggregated by gender.

Urban population. The total population living in areas termed as 'urban' by that country. Typically, the population living in towns of 2000 or more or in national or provincial capitals is classified as 'urban'. Expressed as a percentage. Disaggregated by gender.

Unmet need for family planning. Percentage of currently married women aged 15-49 who want to stop having children or to postpone the next pregnancy for at least two years, but who are not using contraception.

Vulnerabilities. Factors that determine the severity of the risks a community faces from hazards. Vulnerabilities are described in terms of people, property/ infrastructure, services, livelihoods and environment.

Women of reproductive age (or women of child-bearing age). Refers to all women aged 15 to 49 years, unless otherwise specified.

Workforce losses/ attrition. Number of persons who have left the local health workforce due to retirement, death, outmigration or resignation in a given period of time. Disaggregated by gender, area and sector.

The **Western Pacific Country Health Information Profiles** (CHIPS) is an annual publication comprising country profiles and health databanks for each country and area in the WHO Western Pacific Region. All data and information are either supplied by the respective health ministry or compiled from national surveys, reports and publications, or international databases.

Each **country profile** provides readers with background on the country's demographic, political and socioeconomic conditions as related to health-seeking behaviour and prevailing health groups and the population as a whole, as well as a description of the health system, with an emphasis on analysis of health issues. It also provides information regarding the country's priorities, policies, strategies and resources to address health problems and improve the health and lives of its people. The 2010 profiles include a section on progress towards achieving the health-related Millennium Development Goals (MDGs). It describes the challenges encountered in achieving the MDG targets and identifies priority areas for action. Where possible, an assessment is given on whether or not the targets are likely to be met.

Annexed to each country profile is a **health databank**, a summary table of indicators on the country's demographic and socioeconomic conditions; health status regarding leading causes of morbidity and mortality, and the number of cases and deaths from selected diseases; the health system as regards health workforce and infrastructure; health service coverage, such as immunization of infants; and status in relation to the health-related Millennium Development Goals.

A **statistical annex** is made available at the end of the publication. This is a summary of most information in the health databanks and includes other indicators on selected health conditions and practices, such as HIV and obesity, smoking and drinking behaviour, and child care. It also contains human-rights, poverty and gender-related development indicators, as well as information on major emergencies in the Region over the last two years. However, as data reliability and data coverage may vary for each indicator and from country to country, caution is advised when making intercountry comparisons.

Individual country profiles and the CHIPS volume as a whole are accessible on the website of the WHO Regional Office for the Western Pacific (http://www.wpro.who.int/).

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