

## Country health and development challenges

### 2.1 Country context: A brief overview

The Union of Myanmar is a developing country with a significant annual economic growth rate of 12% of GDP in 2002-2003<sup>1</sup>. There are, however, some palpable disparities with rural areas (having about 70% of the population) benefiting from the economic advancement to a lesser degree than urban areas. There are also groups of highly vulnerable populations such as certain ethnic communities and migrant workers.

The population of Myanmar is estimated to be around 55 million, with an approximate annual growth rate of 2%. Life expectancy at birth is between 60 and 64 years<sup>2</sup>. Approximately one-third of the population is under 14 years of age, close to 60% is in the working age group (15-59 years) and around 8% are older than 60. Overall, 78.8% of the population has access to safe drinking water; 92.1% in urban areas and 74.4% in rural areas. The net school enrolment rate is lower for children from poor than non-poor households, at 80.1% and 87.2%, respectively, according to an unpublished integrated household living conditions assessment survey in 2006 of the UNDP. The Human Development Index for Myanmar is 0.581<sup>3</sup>.

Administratively, the nation is divided into 14 states and divisions, 65 districts, 325 townships, 59 sub-townships, 2759 wards and 64 976 villages. Myanmar falls into three well-distinguished natural divisions: the Western Hills, the Central Belt and the Shan Plateau in the East, which continues into the region of Tanintharyi. Three parallel chains of mountain ranges running from north to south divide the country into three river systems (the Ayeyarwaddy,



**Myanmar: Map of states and divisions**

Source: Health in Myanmar 2002.

Sittaung and Thanlwin). The nation has rich natural resources (oil, gas and coal), considerable climatic and ethnic diversity (135 national ethnic groups speaking over 100 languages and dialects) as well as breathtaking scenic beauty.

Myanmar's population density varies from 10 per square kilometre in Chin State to 390 per square kilometre in Yangon Division. The major ethnic groups are Bamar, Chin, Kachin, Kayah, Kayin, Mon, Rakkhine and Shan. A large majority are Buddhists (mainly Bamar, Shan, Mon, Rakkhine and some Kayin), while the rest are Christian, Hindu, Muslim or Animist. Certain areas of the country are hard to reach, especially in Kachin State, Kayah State, Shan State, Tanintharyi Division and Sagaing Division.

Myanmar enjoys a tropical climate with three distinct seasons: rainy, cold and hot. The hot season runs from mid-February to mid-May. The rainy season comes with the southwest monsoon, which lasts from mid-May to mid-October. The cold season commences from mid-October.

The private sector now plays a major role in all spheres of economic activity. The largest country in geographical mainland South-East Asia, Myanmar was admitted to the Association of South-East Asian Nations (ASEAN) in 1997.

Myanmar has adapted the Millennium Development Goals (MDGs) within the context of its National Development Plans. The country, without major assistance from external sources, has been cooperating with UN agencies to respond to basic needs of the people, especially in the social sectors at the grassroots level.

Since November 2005 all government ministries have been relocated to the new administrative capital of Myanmar, Nay Pyi Taw, located in Mandalay Division about 320 km. north of Yangon. The new capital can be accessed by air, train and road.

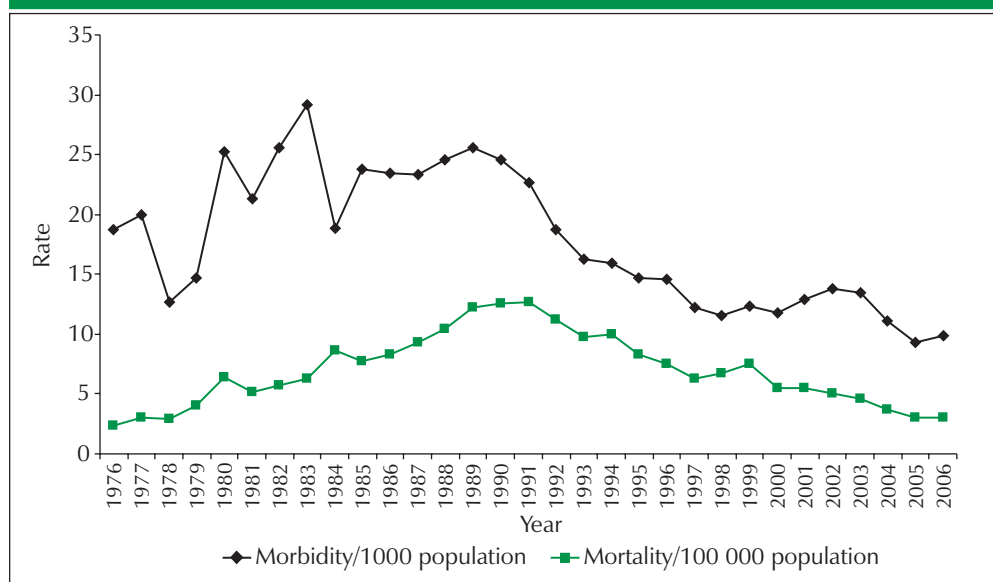
## 2.2 Health situation

### Disease pattern

About 70% of the population in 284 out of 325 townships live in malaria endemic areas<sup>4</sup>. Forest-related workers, new settlers in forest fringes, upland subsistence farmers, migrant workers and ethnic communities constitute high-risk groups. Children under five years of age and pregnant women are also at high risk due to their biological vulnerability. Malaria is the leading cause of reported morbidity and mortality in the country, with 538 110 cases and 1647 deaths due to the disease, both probable and confirmed, reported in 2006<sup>4</sup>. The total number of clinical malaria cases may be much higher, because self-treated cases and those treated by the private sector or by traditional healers are largely unreported<sup>5</sup>. *Plasmodium falciparum* accounts for 75% of malaria infections and is now highly resistant to commonly used anti-malaria drugs such as chloroquine and sulfadoxine-pyrimethamine<sup>6</sup>. In 2005, an external review<sup>7</sup> of the Malaria Control Programme confirmed that significant progress has been made

since 1990 in reducing malaria morbidity and mortality (around 9.51 per 1000 and 2.91 per 100 000, respectively, in 2006; see Figure 2.1). Despite this encouraging trend, serious challenges remain, including scaling up preventive measures like the use of insecticide-treated mosquito nets, addressing multi-drug resistance and improving equitable access to (and the quality of) diagnosis and treatment. The National Malaria Control Programme is well established and the strategies are in accordance with the Revised Malaria Control Strategy (2006-2010) in the SEA Region that was endorsed by the Sixtieth Regional Committee in 2007, as well as with the current WHO Global Malaria Programme strategies. Key partners such as WHO, UNICEF and the Japanese International Cooperation Agency (JICA) are providing funds for drugs, rapid diagnostic tests, equipment, training, operational research and technical assistance.

**Figure 2.1:** Malaria morbidity and mortality rate in Myanmar, 1976-2006



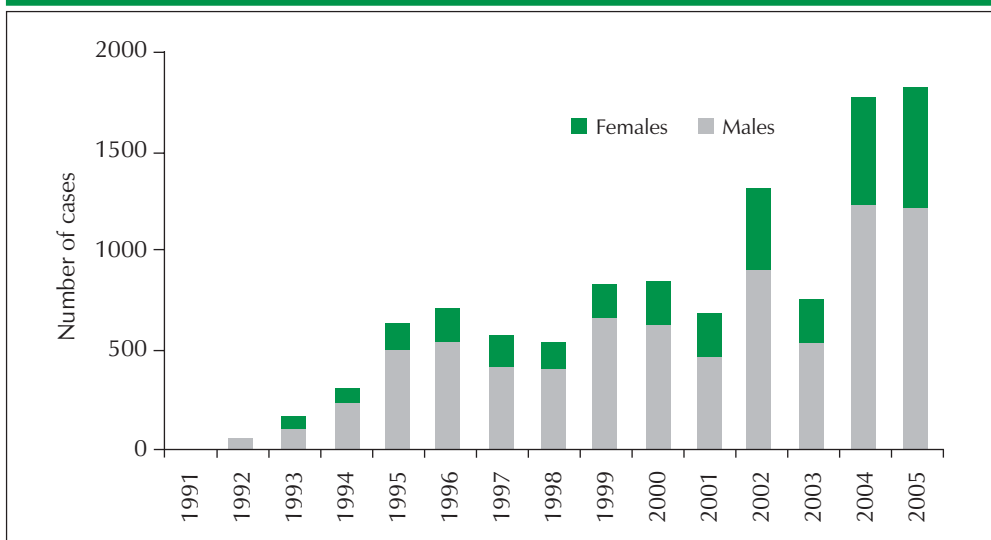
Source: National Malaria Control Program Reports.

Myanmar is one of the 22 high-TB burden countries globally, the number of deaths amounting to 5457 in 2006<sup>8</sup>. The Human Immunodeficiency Virus (HIV) prevalence in the general population is 0.67% (National AIDS programme) and the estimated HIV-prevalence among adult TB patients is 7.1%<sup>9</sup>. The first representative nationwide drug resistant survey, carried out and reported on in 2004, showed 4% and 15.5% of new and previously treated TB patients had multi-drug resistant TB (MDR-TB), respectively. A sound five-year strategic plan matched by good overall programme performance has enabled the National Tuberculosis Programme (NTP) to reach global TB control targets in 2006. However, current estimates for incidence and prevalence of TB in Myanmar are based on a prevalence survey conducted in 1994 and require updating through a new national TB prevalence survey.

In 2006, about 123 593 TB patients were reported, out of which 40 241 were sputum smear-positive new TB patients (infectious)<sup>8</sup>. The Global Fund to fight AIDS, TB and malaria (GFATM) supported activities in 2005 which lasted for one year until the GFATM termination plan was completed. While the National Tuberculosis Programme had been able to progress so far using domestic resources and limited external funding to maintain the core functions of the TB control programme, there is now a need to rapidly scale up additional necessary interventions to combat TB/HIV and emerging MDR-TB. Weaknesses in the laboratory network are being addressed and in-country capacity for cultures and drug sensitivity tests built. TB-HIV collaborative activities are being expanded from the initial pilot sites, given the extent of the HIV epidemic in the country. Private health-care providers are increasingly involved in order to allow greater access to services. The reporting system is being improved and operational research relevant to the programme conducted. A critical need is to guarantee the support of first-line anti-TB drug supply, which is granted by Global Drug Facility (GDF) since 2001 but will finish in 2009 (the support will end in 2009).

Under the National AIDS Programme (NAP), WHO and UNAIDS estimated that 240 507 adults were infected with HIV in Myanmar in 2007. The official number of deaths due to AIDS cumulatively till the end of 2006 was 5521 while 1483 AIDS cases and 69 872 HIV-positive cases were reported to the public health system. The overall prevalence among adults is 0.67% in Myanmar while the prevalence among populations at higher risk of exposure, such as sex workers and injecting drug users (IDUs), were 33.5% and 42.46%, respectively. In 2007, there was an estimated number of 14 439 new adult infections, drawing attention to urgency for scaling up HIV

**Figure 2.2:** Reported AIDS cases, distribution by sex, Myanmar, 1991-2005



Source: National AIDS Programme, Myanmar.

prevention activities, particularly among vulnerable groups. Myanmar has an estimated 71 912 people living with HIV who are in advanced stages of infection (WHO Stages 3 and 4), and thus in urgent need of antiretroviral therapy (ART).

In June 2005 the Ministry of Health launched ART in the public health sector; several programmes had been initiated by NGOs in 2003. By the end of 2007, it is estimated that approximately 11 500 patients were receiving ART. Although modest compared to the needs, this represents an increase of more than double compared to the previous year. Four TB-HIV pilot projects have started in Myanmar. The multisectoral National Strategic Plan that will lead the national response to HIV/AIDS in the next few years was completed in 2006. The plan highlights the need for strengthening the health system and involving communities to scale up prevention and care and support services. The new Three Diseases Fund (3D Fund) for HIV/AIDS, tuberculosis and malaria is expected to be a major source of funding (see Chapter 3).

Myanmar has been prepared for a possible outbreak of avian and human pandemic influenza since early 2006 and responded immediately to the first such outbreak in animals in the country in March 2006. The country has aligned its response with the WHO Global Action Plan for Pandemic Influenza, and a National Strategic Plan for Prevention and Control of Avian Influenza and Human Influenza Pandemic Preparedness and Response has been developed by the Ministry of Health. Efforts in the coming years will focus on establishing, training and retraining rapid response teams at all levels, including state/division, district and township. For early detection and diagnosis, the National Influenza Centre will be established at the National Health Laboratory in Yangon, with technical collaboration with the National Influenza Centre, Thailand. Currently, the country has the capacity to identify virus subtypes, including H5N1, in humans.

Myanmar is preparing for the implementation of the IHR (2005)<sup>10</sup>. The IHR (2005) were adopted by consensus at the Fifty-eighth World Health Assembly on 23 May 2005, and the new regulations came into force from 15 June 2007 for all Member countries, including Myanmar, who do not reject or make reservations to them within a stipulated period. The purpose and scope of the new IHR (2005) are “to prevent, protect against, control and provide a public health response to the international spread of disease in a way that is commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade”. The new regulations are not merely limited to certain diseases but are also applicable to new or evolving disease threats. The provisions also update and revise many of the technical and other regulatory functions, including certificates applicable to international travel and transport, and the requirements for international ports, airports and ground crossing points. Myanmar as a WHO Member country has agreed to the new requirements and obligations concerning the reporting, verification and assessment

of public health events of international concern, the implementation of WHO recommended control measures and the development of core capacities for surveillance and response. The Ministry of Health, in collaboration with other ministries concerned and WHO, has integrated IHR (2005) in the National Health Plan 2006-2011. A core capacity assessment was conducted with technical support from the WHO Regional Office for South-East Asia and the IHR national focal point.

Dengue and dengue haemorrhagic fever (**DHF**) appear to be an increasing problem, with seasonal epidemics in certain parts of the country, especially in Yangon, Mandalay and Bago Divisions and in Mon State. Leprosy, no longer a public health problem in Myanmar, still needs attention, in particular for issues such as sustaining control activities and providing quality services focusing on prevention of disability and the rehabilitation of affected persons.

**Noncommunicable diseases** (NCDs), previously labelled “diseases of affluence”, progressively proliferate across the social spectrum and affect the poorer and rural sections of the population as well. Cardiovascular diseases are emerging as important health problems on account of risk factors including hypertension, tobacco consumption, diabetes mellitus, a high salt intake, obesity and dyslipidaemia. The reported prevalence of hypertension per thousand population is 1.9/1 000, which is much lower than the rates of approximately 20% reported by surveys conducted in many parts of the country<sup>11</sup>. A study conducted in capital cities of all states and divisions (2001) showed that 14.6% of females aged between 18 to 60 years were over weight and 3.8% were obese. Among males, 7.2% were overweight and 1.4% were obese<sup>12</sup>.

Cancer is also a major public health problem, and most of the cases are identified in the late stages due to lack of public awareness and inadequate early detection programmes. According to the study utilizing the WHO STEP-wise approach to surveillance of NCD Risk Factors (STEPS) conducted in Yangon Division in 2003, it was found that the prevalence of diabetes was 14.42% in urban and 7.4% in rural areas. The overall prevalence for both urban and rural areas was found to be 12.14%. There is an urgent need to raise awareness levels on diabetes and to improve the existing diabetic care system. An information-based system for diabetes and other NCDs needs to be established. Old age, large waste-hip ratios, obesity, hypertension, stress factors caused by urbanization, and high cholesterol, triglyceride and HDL levels are potent risk factors for diabetes and pre-diabetes. Physical inactivity was found to be only a weak risk factor.

**Tobacco** use (both smoking and chewing nicotine) is fairly common and has likely implications for the development of NCDs in the future. A sentinel prevalence study in 2001 reported that 40% of adults currently use tobacco<sup>13</sup>. There have been significant developments since the launch of the Myanmar Tobacco Free Initiative Project in 2000, and Myanmar became a party to the WHO Framework Convention

on Tobacco Control in 2005. The Control of Smoking and Tobacco Products Consumption Law was enacted on 4 May 2006.

According to the 1998 ocular survey, the blindness rate in Myanmar is 0.6% (600 per 100 000 population) and the leading cause of blindness is cataract. The Trachoma Control and Prevention of Blindness Programme is functioning at 16 secondary centres with primary eye care training provided to basic health staff. Rapid assessments of trachoma in three districts have been conducted in one year. Regular village eye health examination and school eye health examination and treatment have been provided. During 2007, 640 cataract outreach surgical sessions were conducted and a total of 20 968 inpatient cataract surgeries were performed in these sites. However, there is still a further need to reduce avoidable blindness rate by increasing the cataract surgery rate for both outreach as well as inpatients. Implementation of activities aimed at prevention and early intervention against deafness are yet to be implemented on a countrywide basis. There is a lack of health staff trained in primary ear care strategies.

Mental illness is one of the major emerging health problems. Several community surveys conducted between 1976 and 2004 in urban and suburban areas found that mental disorders ranged from 56 to 86 per 1000 population. Psychoses ranged from five to six per 1000 population; mental retardation from one to four per 1000 population; and epilepsy from two to four per 1000 population. Mental health care has shifted from hospital care to community care. However, community-based mental health programmes are implemented in selected townships only.

Snakebites are also a cause for concern. However, it is difficult to estimate their exact occurrence because relatively few cases are referred to hospitals. Most snakebites are reported from the central part of Myanmar and Bago West Division. The total number of reported cases of snakebites for the whole country was 7682 in 2002. The number of deaths reported was 579, with a case fatality rate of 7.5%. Snakes commonly found in Myanmar include the viper, cobra, krait and sea snakes. Antivenom is available for the viper and the cobra<sup>12</sup>.

Official statistics show that injuries stand first among the leading reported causes of morbidity and third among the causes of mortality in Myanmar. Injury surveillance data reveals that most injuries occur in the age group of 21-30 years. Workplace and travel-related injuries represent the highest rate.

Disasters are also a major health concern. Myanmar has a long coastline (about 2400 kilometres) which runs along the eastern flank of the Bay of Bengal. According to the *Tsunami Risk Atlas*, most of the coastal areas of Myanmar fall within the risk zone. However, historical records show that very devastating tsunamis are rare in Myanmar and the neighbouring parts of the Bay of Bengal. Natural disasters common in Myanmar are floods, cyclones, storms, earthquakes and landslides. Floods occur

in areas traversed by rivers or large streams. Human-induced disasters include urban fires, which usually occur in the hot dry season.

## Newborn, child, adolescent and maternal health

Data from the “Overall and Cause-Specific Under-Five Mortality Survey 2002-2003” (MoH/UNICEF) data showed that the under-five mortality rate was 66.1, infant mortality rate (IMR) was 49.7 and Neonatal Mortality Rate (NMR) was 16.3. Infant deaths contribute about two-thirds of under-five mortality, while neonatal deaths are responsible for approximately one-third of mortality among infants. A recent stakeholder analysis in health found newborn care to be considerably neglected<sup>14</sup>. The same survey showed that the main causes of under-five mortality were due to acute respiratory infections, diarrhoea, brain infections, low birth weight, premature births and malaria.

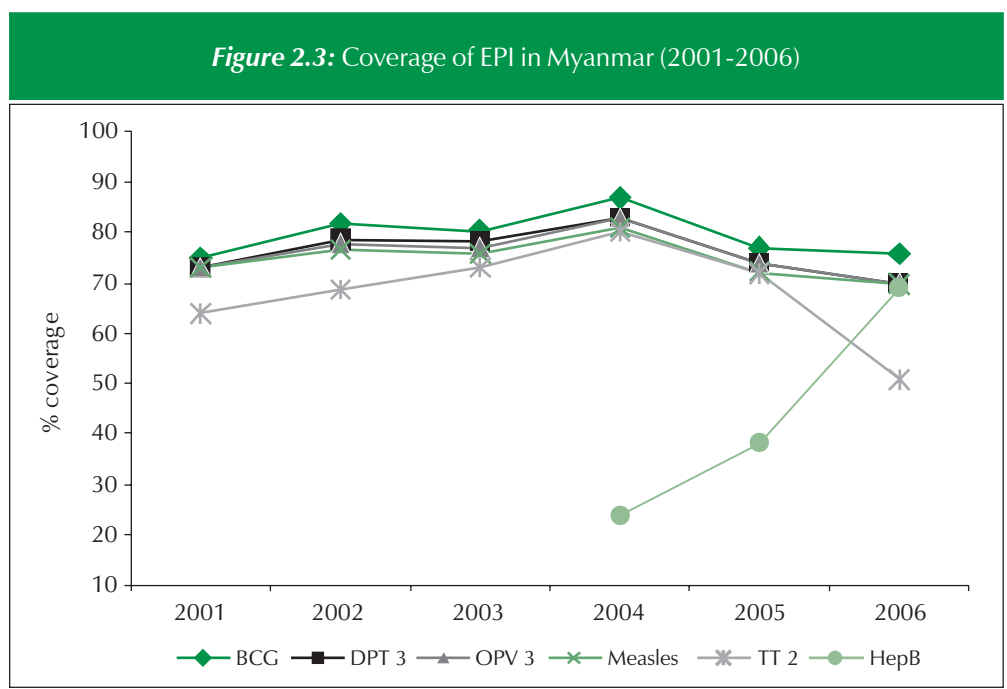
The five-year Strategic Plan for Child Health Development (2005-2009) takes into account the National Health Policy, National Health Plan, Health Development Plan and Myanmar Vision 2030. It considers the disease burdens of children in the country and available evidence-based interventions. Under-five mortality rate declined from 82.4 per 1000 live births in 1996 to 77.7 per 1000 live births in 1999 and to 66.1 per 1000 live births in 2003. Infant deaths accounted for 73% of all cases of under-five mortality, and neonatal deaths contributed to about one-third of infant deaths in the country. While morbidity and mortality from vaccine-preventable diseases had markedly declined, pneumonia, diarrhoea, malaria, malnutrition and neonatal conditions still remain major causes of ill health and child mortality in the country. Although improvements in the health status of children have been noted, much more needs to be done to sustain the gains made and contribute to the achievement of health-related Millennium Development Goals by 2015. The objective of the **five year strategic plan for child health development** is to improve the quality of health care in order to reduce morbidity and mortality of neonates, infants and children under five, and to achieve normal growth and development of children in Myanmar. The plan focuses on improving skills of all health-care providers with training in: standard case management procedure of integrated management of maternal and childhood illness (IMMCI) and essential newborn care training for skilled birth attendants (SBAs); strengthening the referral network and the existing supervision system; promoting normal growth and development of children; ensuring the availability of essential drugs and equipment; improving appropriate key community and family practices, field research and routine data collection, to obtain baseline data for prioritization of health problems; and evidence-based decision-making.

Following the review of the integrated management of maternal and childhood illness (IMMCI) programme (the term “integrated management of childhood illness”

was revised in the Myanmar context) in 2001 and 2002, a full-fledged National Strategic Plan for Child Health was developed during 2003 and 2004.

The Expanded Programme on Immunization (EPI) in Myanmar has made remarkable achievements since its start in 1978. EPI now reaches all 325 townships in Myanmar. Hepatitis B immunization was introduced in the routine immunization programme in 2003 in a phased manner, and the entire country was covered by 2005. The country completed the inventory of cold chain equipment in 2006, and a comprehensive multi-year plan (CMYP) for immunization covering 2007-2011 has been developed. Vaccine supply and routine services have been well maintained and there have been no stock-outs for any antigens at national, state and divisional level during 2007.

Although Myanmar was polio-free from 2000 to 2005, one polio case (VDPV) was reported in April 2006 from Pyin Oo Lwin township of Mandalay Division. In 2007, a major polio outbreak was reported from Northern Rakhine State with detection of 11 wild poliovirus cases and 4 cases of vaccine derived poliovirus have been reported from Kayin, Bago East, Yangon and Mon. In response to the polio outbreak, the DoH was assisted in the planning and implementation of a mop-up campaign in Rakhine and adjoining states targeting around 2.5 million children during May-July 2007, and two rounds of National Immunization Days have been conducted in November and December, in which more than 7 million children were immunized in each round.



Source: Expanded Programme on Immunization (EPI).

Measles is considered a major public health problem. Though the number of reported measles cases has significantly decreased from 2 291 in 2001 to 735 in 2006, measles outbreaks still occur despite a series of preventive campaigns. To reduce measles mortality, the Government of the Union of Myanmar conducted a nationwide Mass Measles Campaign from January to May in 2007, targeting about 7.2 million children in the age group of nine months to five years.

Malnutrition continues to be a public health concern in Myanmar, with four nutrient deficiency states identified with major nutrition problems. At the national level the percentage of children under five who are moderate to severely underweight (weight-for-age below -2SD) is 31.8%; the percentage of those moderate to severely stunted (height-for-age ratio below -2SD) is 32.2%; and those moderate to severely wasted (weight-for-height below -2SD) is 8.6%<sup>15</sup>. Approximately one in seven children under four months of age are exclusively breastfed (17.8% in urban areas and 13.6% in rural areas), a level considerably lower than recommended.

According to a survey conducted in 2003, the prevalence of anaemia among pregnant women was 71% and that among schoolchildren was 75%. A nationwide multiple micronutrients survey in 2004-2005 showed that the prevalence of anaemia among children under five was 76%. Anaemia was more common in the coastal and delta regions. This may be due to insufficient intake of iron-rich foods, poor knowledge on cooking methods that could enhance the absorption of iron from the gastrointestinal tract, and worm infestations. Endemic goitre, which has been identified in the hilly regions of Myanmar since 1896, has also been found in the plain and delta regions, and in particular in areas that experience floods every year. The Iodine Deficiency Disorders (*IDDs*) Elimination Programme is a collaborative effort between the Ministry of Health and Myanmar Salt and Marine Chemicals Enterprise of the Ministry of Mines. The visible goitre rate among six- to eleven-year-old children nationally is reported to have declined from 33% in 1994 to 12% in 2000, 5.5% in 2003 and less than 5% in 2006. The last xerophthalmia survey, in the year 2000 revealed that the prevalence of Bitot's spots among children aged under five was 0.03% in both urban and rural communities, far below the cut-off level for being a public health problem, which is 0.5%.

Very few programmes specifically address the issue of adolescent health. A recent review supported by WHO identified some of the main issues affecting the health of adolescents in the country, leading to the formulation of a draft five-year Strategic Plan for Adolescent Health (2008-2012).

The most recent estimates on maternal mortality prepared by WHO, UNICEF and UNFPA indicated a maternal mortality ratio (MMR) of 360 per 100 000 live births<sup>16</sup>, which translated into about 4300 maternal deaths in 2000. A recent study — *Nationwide Cause-Specific Maternal Mortality Survey* — undertaken by the DoH in 2005 estimated the MMR to be 316 per 100 000 live births. However, the range of

MMR even among the states and divisions, with 136 as the lower and 527 as the upper estimate, is considerable. Maternal mortality in rural areas was estimated to be about 2.5 times that in urban areas. The *Fertility and Reproductive Health Survey 2001* estimated that approximately 70% of deliveries are performed at home, and that 44% of all births in Myanmar are attended by midwives and nurses while about 43% are not attended by a skilled health worker. Since many deliveries occur at home, there is a need to improve the skills of those attending to these as well as to improve the referral system and the provisions for essential and emergency obstetric care at health-care facilities. Low contraceptive prevalence and unmet contraceptive needs were the likely significant factors contributing to the number of abortions being performed. It is estimated from the limited and unpublished hospital-based information available that unsafe abortions may account for approximately half of all maternal deaths. The five-year Strategic Plan for Reproductive Health was formulated and launched by the Ministry of Health in 2004.

The situation of women and girls in Myanmar is not very different from that of men and boys. Some research was conducted on the role of gender in the community and on the basic knowledge on gender issues that is imparted to health staff. There is still little information available about the gender situation in Myanmar. Gender analysis and actions, capacity building and gender health-related research would improve the quality of health care and access to health services. This would also help involving men in more family and community health needs and benefit women, children and adolescents.

Currently around 79% of the population in Myanmar has access to improved water supply while 83% has access to sanitary means of disposal of excreta. However, there are wide disparities in levels of access to improved water supply between different states or divisions of the Union and also between urban and rural areas. On an average, only 53% of rural schools have been provided with adequate water supply. In some townships, this figure may be as low as 10%. It must be noted that improved water supply does not necessarily imply safe supply. The sporadic outbreak of diarrhoeal disease indicates that there is a further need to promote good hygiene practices and ensure the continued supply of safe water. WHO has provided technical assistance in improving the quality of water by implementing water safety plans in pilot townships. However, putting these plans in place in other townships needs to be accelerated.<sup>17</sup>

### **2.3 The national health-care system**

Though comprehensive and disaggregated data on coverage and utilization of health services are not available, disparities remain a major concern. Access to health information and health services is very limited for some population groups particularly

vulnerable to health problems. These include people living in rural, remote and border areas, and low-income families in peri-urban areas.

## The national health administration

The National Health Committee, chaired by the Secretary (1) of the State Peace and Development Council, is a high-level interministerial and policy-making body for health matters concerning the country. Health committees exist at each administrative level, providing a mechanism for intersectoral collaboration and coordination.

The Ministry of Health has seven departments: for Health, Health Planning, Medical Sciences, three departments for Medical Research (for Lower Myanmar, Upper Myanmar and Central Myanmar) and Traditional Medicine. The largest of the seven is the Department of Health, which employs 93% of over 58 000 personnel employed by the Ministry of Health, and accounts for approximately 75% of the ministry's expenditure. It is responsible for the preventive, promotive, curative and rehabilitative components of Myanmar's health service, and for supervising the health departments at the state, division and township levels as well as the hospitals and clinics. Some other ministries are also involved with health care, mainly curative in nature, for their employees and families.

The health departments at the state or divisional level are charged with planning, coordinating, supervising and monitoring the health departments at district and township levels. Actual implementation of health services is undertaken by township health departments, each of which serves between 100 000 and 200 000 people on an average and is headed by a Township Medical Officer (TMO).

## Health services

At the township level, both curative and preventive health services are provided by the township health departments. Township hospital staff take part in curative aspects and training. Township health departments are staffed by health assistants (HA) of grade (1) and township health nurses who take care of the promotive and preventive aspects of the health services. There are also station hospitals situated in strategic areas of the townships and four to five rural health centres (RHCs) including an urban health centre. Rural health centres are staffed by a health assistant, a public health supervisor (PHS), lady health visitor (LHV) and a midwife (MW), who are trained mainly in public health and primary health care (PHC). Table 1 outlines the development of health facilities since 1988.

At the level below each rural health centre are, on an average, four to five sub-rural health centres, each of which are staffed by a midwife and a public health supervisor of grade (2). Health staff at the community level provide promotive, preventive, curative and rehabilitative services using the PHC approach.

Each sub-rural health centre provides health-care services to a cluster of five to ten villages in which there are usually voluntary health workers (auxiliary midwives and community health workers). Both auxiliary midwives and community health workers are volunteers and receive no remuneration. Home births may be attended by auxiliary midwives but they are not authorized to administer injectable medication.

Volunteers and members of local NGOs and faith-based organizations are also active in the field of health. For example, the Myanmar Maternal and Child Welfare Association (MMCWA) and Myanmar Red Cross Society (MRCSS) have members from many villages. With the support from health committees and local administrative authorities, these members can be mobilized to assist in and promote the delivery of health-care services in the villages they live in.

**Table 2.1:** *Development of health facilities*

<b>Health facilities</b>	<b>1988-1989</b>	<b>2002-2003</b>	<b>2003-2004</b>	<b>2004-2005</b>	<b>2005-2006</b>
Government hospitals	631	780	790	824	826
Total no. of hospital beds	25309	32770	33683	34654	34920
No of primary and secondary health centres	64	84	84	86	86
No of maternal and child health centres	348	348	348	348	348
No. of rural health centres	1337	1413	1424	1452	1456
No. of school health teams	80	80	80	80	80
No. of traditional medicine hospitals	2	12	14	14	14
No. of traditional medicine clinics	99	213	237	237	237

Source: Health in Myanmar 2006.

Traditional medicine also plays an important role in the public health system. The government accords high importance and provides considerable support to traditional medicine. Services and drugs are made available free of charge.

While private sector health care has expanded rapidly and is estimated to provide 75%-80% of ambulatory care currently, private service providers have had very limited involvement in public health programmes. A number of members of the Myanmar Medical Association from its branches in several cities and towns were provided training recently on issues such as reproductive health and malaria.

## Resources and support systems

Although government expenditure on health has increased three-fold between 2000-2001 and 2005-2006, the health sector is highly under-resourced. In 2003 the total expenditure on health as a percentage of Myanmar's Gross Domestic Product (GDP) was 2.8 while general government expenditure on health as a percentage of the total expenditure on health was 19.4<sup>18</sup>. While health services are free, drugs are often not available in adequate quantities in public health institutions. Patients are therefore compelled to purchase them from the market. Private expenditure on health as a percentage of total expenditure on health was 80.6% in 2003<sup>17</sup>. Consequently, households having to make high out-of-pocket payments for the treatment of ailments are faced with an onerous economic burden on account of health care.

Private and public health services present four major challenges for the health sector, that of affordability, availability, access and adequacy.

As seen in Table 2, there were a total of 18 725 practising medical doctors in Myanmar in 2005-2006, of whom 12 161 were engaged in private practice and 6564 in state service. This represents an increase from figures of 12 268 medical doctors, 7891 practising privately and 4377 in state service, in 1988-1989.

**Table 2.2:** Health manpower development in Myanmar

Health manpower	1988-1989	2002-2003	2003-2004	2004-2005	2005-2006
Total number of doctors	12268	16570	17081	17564	18725
-Public	4377	6180	6331	6473	6564
-Cooperative and private	7891	10390	10750	11091	12161
Dental surgeons	857	1227	1285	1365	1870
-Public	328	517	543	580	620
-Cooperative and private	529	710	742	785	1250
Nurses	8349	15502	16382	17864	19922
Dental nurses	96	109	123	158	162
Health assistants	1238	1728	1739	1767	1771
Lady health visitors	1557	2559	2679	2796	2908
Midwives	8121	14097	15130	16245	16699
Health supervisor (1)	487	529	529	529	529
Health supervisor (2)	674	1144	1199	1339	1359
Traditional medicine practitioners	279	563	769	769	889

Source: Health in Myanmar 2006.

Health-related universities in Myanmar include four medical, two dental, two nursing, two for medical technology, two pharmacological and one community health institutions. A university of public health was established in July 2007. In addition, there are 46 nursing schools and an Institute of Traditional Medicine. The University of Traditional Medicine was established in 2001. Basic training on traditional medicine has been included in the curriculum for the MBBS courses in universities of medicine. Introducing traditional medicine training in allopathic medicine courses was also a notable achievement.

The scope and quality of health information in the current scenario has some important limitations. Many units and sources, both within and outside the Ministry of Health, are involved in data generation. Some areas are also not easily accessible. In addition, transborder movement of population and internal migration for employment pose considerable challenges for the health system as well as dissemination of health information.

## National plans

The Government of Myanmar has, as one of its social objectives, committed itself to “the uplift of the health, fitness and educational standards of the entire nation”. According to the National Health Policy formulated in 1993, “health for all” and equitable access to basic health services represent the main principles guiding health and health system development. The “Myanmar Health Vision 2030” (2001-2002 to 2030-2031) represents an aspiring 30-year plan to meet present and future health challenges of the country encompassing a wide gamut of social, political and economic objectives.

The Rural Health Development Plan 2001-2006 seeks to address the disparities in health and health services between urban and rural areas. The project for upgrading hospitals has been adapted to include existing district, township and station hospitals in the country — including those in border areas — to increase access to referral-level health care by the population. The special four-year plan for promoting national education (in the health sector) aims to enhance the capacity of human resources for health and bolster medical institutions involved in the training of health personnel.

The MoH has formulated the National Health Plan 2006-2011<sup>12</sup> based on the PHC approach. The plan is interlinked with the four plans mentioned above — Myanmar Health Vision 2030, the Rural health Development Plan 2001-2006, the project for upgrading hospitals and the National Plan for promoting national education — and represents an integral part of the national economic and development blueprint. One of the main objectives of the National Health Plan is to strengthen health services in rural areas. Having adopted the WHO Framework for Health Systems Performance, the National Health Plan contains the following health system goals:

- Improving health (raise average levels of health and reduce inequalities).

- Improving responsiveness (to people's expectations).
- Improving fairness of financial contribution.

A number of national strategic plans also exist for particular domains such as reproductive health, child health, adolescent health, HIV/AIDS, TB and malaria, and for water supply, sanitation and hygiene.

## 2.4 Major strengths and challenges

In May 2006 the MoH conducted a workshop on developing the National Health Plan 2006-2011. The meeting identified the following problems relating to health and health services delivery that will have to be addressed in the coming years:

- Need to improve rural health-care coverage.
- Persistence of the disease burden.
- Persistence of maternal, infant and child mortality levels that need further reduction.
- Need of a financial mechanism that ensures adequacy, equity and efficiency.
- Need of a systematic plan for human resources for health.
- Excessive workload of basic health staff.
- Need for organizational expansion and to strengthen managerial capacity.
- Need to strengthen health research.
- Need of quality data for National Health Information Systems.

Myanmar has a structured health-care system based on the primary health-care approach. There are competent staff at all levels with the capacity to mobilize the workforce and the communities for short-term, intensive campaigns. The public health-care system, however, is critically under-resourced, with major problem areas concerning issues of access and coverage. While large regions and vulnerable population groups require attention, the current funding pattern is highly inequitable. A lack of human resources at the periphery, and paucity of drugs and of basic information for monitoring is critical. While the main disease control programmes (malaria, TB and HIV/AIDS) have registered success stories, they still face important challenges. In the absence of an overall strategy to improve health-care delivery, the momentum of positive results may not be sustained.

The health situation is characterized by a heavy burden of disease and injuries, high mother-and-child morbidity and mortality, and important disparities. Poverty, migration, access to water and sanitation, and accidents are important determinants of the standard of health.