

02



HEALTH

CHILD SURVIVAL
MATERNAL MORTALITY
IMMUNIZATION
NUTRITION
WATER AND SANITATION

For every child
Health, Education, Equality, Protection
ADVANCE HUMANITY

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SITUATION REVIEW ON CHILD SURVIVAL

Trends

Most of the countries in the region are showing improvements in their under-five mortality rates (U5MR), although the overall slow pace of U5MR reduction is a cause for concern. This slowness arguably echoes problems that have been encountered in reducing maternal mortality and under-nutrition over the past decade.

Two countries (Cambodia and DPR Korea) have shown an increase in U5MR and have also shown increases in their infant mortality rates (IMR). Countries with little change in U5MR (Papua New Guinea, Myanmar) reached a plateau over ten years ago and have apparently not been able to define new strategies or approaches to make progress. Even some countries that are showing a decline are still not on track to achieve the fourth Millennium Development Goal (MDG). Countries with a U5MR below 10 have different problems; their persistent problems are related to inequities in society, and to the difficulties of finding solutions to the problems of non-communicable diseases, which predominate at this transitional stage.

The less impressive changes seen in IMR compared to U5MR reflect the significance of deaths in the perinatal and neonatal periods, which are characteristically the last to improve when mortality rates are declining. In general, to reduce U5MR to below about 70, a basic national-scale public health infrastructure is required that includes improved water and sanitation, accessible health services including immunization, and good public nutrition. Once below this threshold, more than half of all deaths occur in the first month of life, a period directly related to conditions of safe

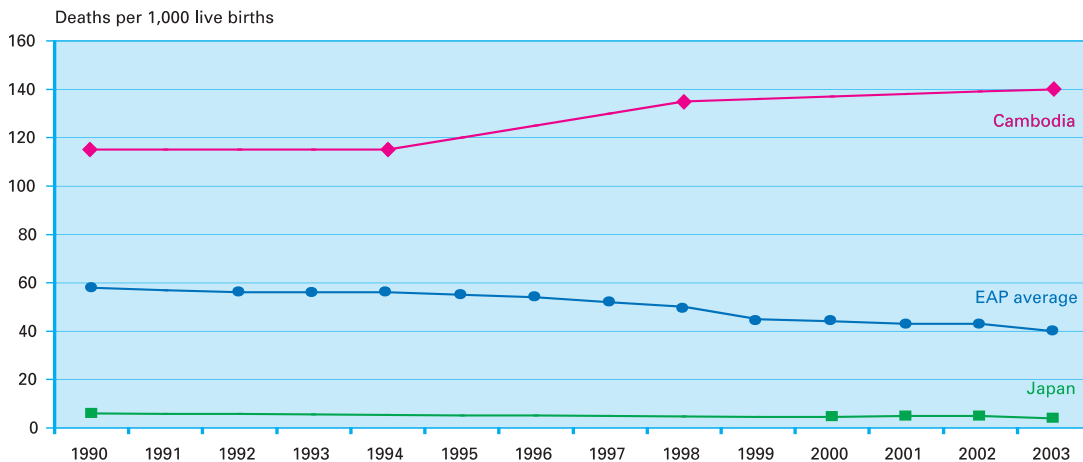
motherhood and delivery practices, and indirectly to maternal health and nutrition. These indicators – for safe motherhood and maternal health and nutrition – are among the worst health indicators in the region. Once U5MR drops lower (below about 20 to 30) non-communicable diseases, including congenital abnormalities, genetic disorders and unintentional injuries become significant.

Clearly, the analysis of these trends depends on the quality and availability of data. Although there is more data on mortality than, say, on nutrition, data at sub-national level is frequently missing and for some countries even national-level data is unavailable.

Causes of death

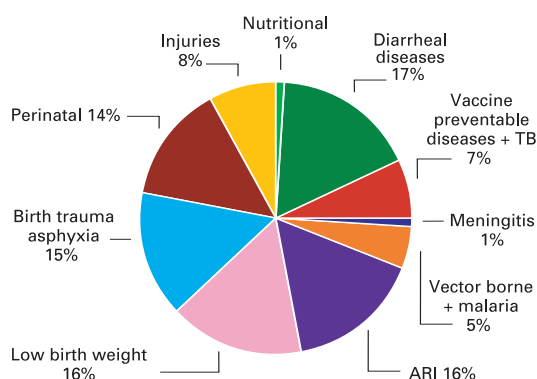
In this context, data on causes of death give a general profile of the major health problems facing children and families in the region. **Figure 2.2** is drawn from WHO data from the two WHO regions in East Asia and the Pacific (excluding the industrialized countries) on causes of death in 0 to 4 year old children. Of approximately 1.1 million deaths in 2002, the major causes relate to perinatal events (45 per cent), diarrhoea (17 per cent), and acute respiratory infections (16 per cent). Vaccine-preventable diseases (including tuberculosis) and unintentional injuries account for another 15 per cent. Other causes of death (i.e., vector-borne diseases, meningitis and HIV/AIDS) are less significant. AIDS, however, remains a serious threat since many infected people still remain undiagnosed. Fifty-three per cent of all deaths are attributed to underlying nutritional deficiencies, related in part to the decreased immune and non-immune host defences in underweight and micronutrient-deficient children.

Figure 2.1 Under-five mortality rate in East Asia and Pacific, 1990-2003 or latest year available



Source: UNICEF. The State of the World's Children 2005 and previous issues

Figure 2.2 Causes of death (2002), 0-4 year olds, East Asia and Pacific



Source: World Health Organization

Diarrhoea, pneumonia, perinatal and neonatal causes, and particularly under-nutrition, are diseases of impoverishment. As mentioned above, they relate to unclean environments, the low status of women, and a lack of knowledge about, and access to, both preventive and curative care. If one were to add the under-five deaths from the higher income countries in the region, this profile would remain largely the same since the overall *numbers* of deaths added from the better off populations would be relatively small, and the distribution in the indigenous or under-served populations in each country would have the same profile as that depicted here. However, within the better off communities in higher income countries, the *proportion* of deaths

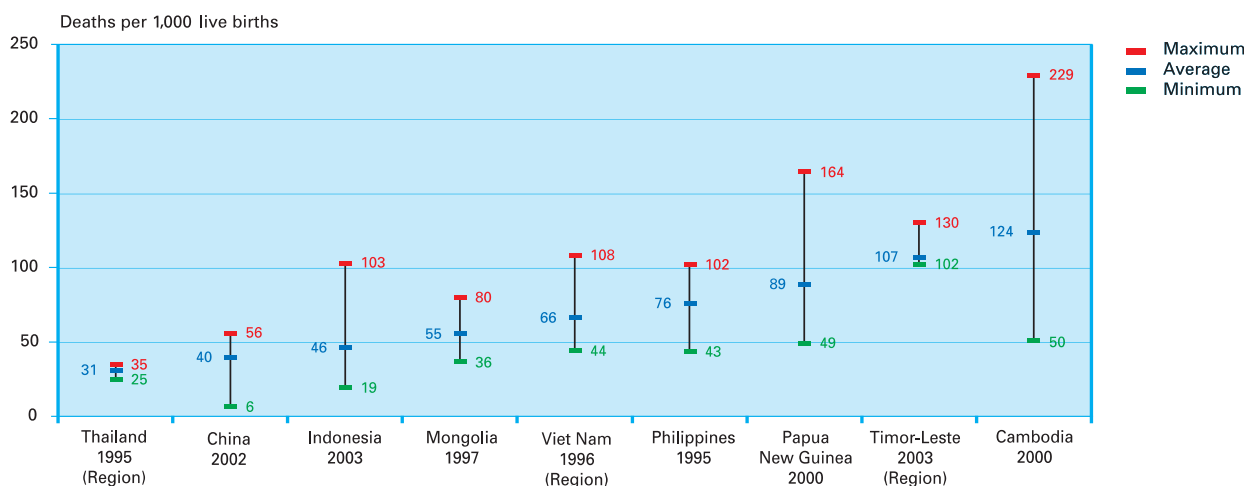
from non-communicable diseases (e.g., congenital abnormalities, genetic problems, injuries, etc.) would assume greater importance.

Disparities

In regard to disparities, the overall trend in the region shows improvement. However, national data reveal enormous disparities between countries in the region, and, as the graph below shows, the differences in U5MR clearly distinguish between the best-off countries (e.g., Thailand, with a U5MR of 31) and the worst-off (e.g., Cambodia, where U5MR is 140 in 2003). As the better off countries continue to improve, some of the poorest countries are getting worse or showing no improvement – an indication that disparities, even at the national level of reporting, are widening.

The paradox is that despite economic growth and the overall appearance of improvements that characterize East Asia, there are large intra-national disparities. **Figure 2.3** clearly shows that in many cases, national averages are well below U5MR in provincial areas. However, figures are often limited by the inadequacies of available data, and may not even show the situation in worst-off areas where data collection is limited or unavailable. Taking only the lower point for each country shown we can see that every country, with the exception of Timor-Leste where U5MR rates are consistently high throughout the country, has at least one area where health care delivery is good. This is often the national capital, an industrial hub or a major tourist centre. Studying the range shows that each country, with the exception of Thailand, remains challenged by significant problem areas. Even Thailand, where the variance of U5MR around the average is very slight, shows a level of disparity: the central regions, including Bangkok, are below 30

Figure 2.3 Sub-national variability in under-five mortality rates



Sources: Cambodia: Cambodia Demographic and Health Survey 2000; China: National Programme of Action, Provincial Working Committees on Children/Provincial Bureaus of Statistics. Provincial Reports on Indicators of NPA Goals, 2002; Indonesia: Demographic and Health Survey 2002-2003; Mongolia: Ministry of Health and Social Welfare. Statistical Yearbook, 1998; Papua New Guinea: National Statistical Office 2000 Census: Recent Fertility and Mortality Indices and Trends in Papua New Guinea, April 2003; Philippines: Maternal and Child Mortality Estimates 1990-1995, 1995; Thailand: Report on the 1995-1996 Survey of Population Change, 1996; Timor-Leste: Demographic Health Survey, 2003; Viet Nam: Ministry of Health. Estimated, 1996

where as the north, northeast and south are above 30. Another example is neighbouring Cambodia where the variance is greatest: Phnom Penh and a nearby province have an U5MR of 50, which is not so far from Thailand’s and better than the average of the Philippines and Indonesia, while two provinces in the northeast have rates above 200.

In each case, the areas with the highest U5MR or the areas with the most under reached children are areas where the density of disease and under-nutrition is greatest. They offer challenges that will require more innovative interventions, probably implying a greater unit cost to implement. However, they may offer a bonus in efficiency in regard to achieving MDGs since the reduction of U5MR will be more significant in these areas and have a greater impact on national averages. Programmatically, for difficult to reach populations, a greater emphasis on prevention of diseases through improved maternal nutrition and health, along with improvements in water, sanitation and personal and environmental hygiene, could prove to be more cost-effective than reliance only on the more expensive provision of curative care.

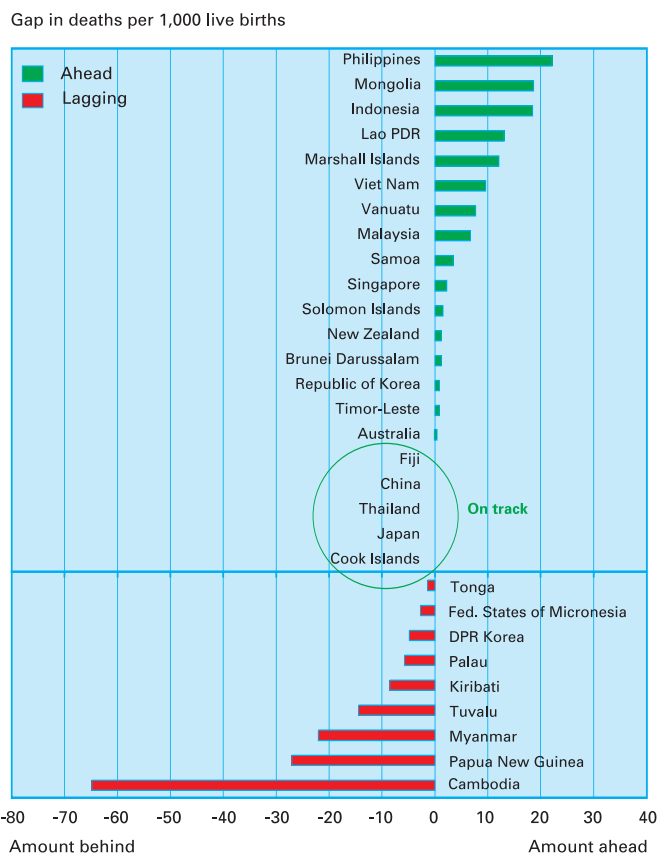
Toward the Millennium Development Goals

Percentage improvements since 1990 will determine the achievements towards the MDGs. **Figure 2.4** shows the performance of countries in relation to the amount of progress that is required by 2005 to be on track for reaching the U5MR goal by 2015. In **figure 2.4** the green bar shows by how much a country is ahead of where it needs to be, and the lag for countries where progress is insufficient to reach the MDG by 2015 is shown in red. Despite the fact that the general trend of U5MR in the region is towards an improvement, there are still nine countries that are lagging.

Analysis

The status of each country’s progress toward achievement of this Millennium Development Goal is the most important marker for the region in as much as it equalizes all nations in terms of expectations of results, identifies those that need the most assistance and forces countries to look to their areas of greatest disparity – whether they are geographical or social. It underlines the importance of health as a public good, since no nation rich or poor, can achieve these rigorous goals if they leave any significant segment of society behind.

Figure 2.4 Under-five mortality: towards the MDG, East Asia and Pacific, 2003



Sources: UNICEF. The State of the World’s Children 2005; DPR Korea: Analysis of Situation of Children and Women in the DPR Korea 2003; Laos PDR: MDG Report 2004; Mongolia: Child and Development Survey-2000 (MICS-2), National Report, 2001

The East Asia and Pacific region can be characterized by disparities, analysis of which should form the core of every survey and assessment. While only geographic disparities are described in this situation review, there are children being left behind in many areas of each country as the benefits of economic advances leave many of the poor behind. Although difficult to show on a country-by-country basis, the growing concern is that the disparities are growing as poverty gaps widen, as the incidence of conflict increase and as natural disasters exacerbate already poor living conditions. As planned economies move toward market economies and fees for services replace free care, the more disadvantaged who are unable to pay for health care are left behind. When poor people are compelled to pay, either for routine illnesses left untreated too long, or for catastrophic illnesses or injury, the out-of-pocket expenses incurred are the greatest cause of debt in families from the lowest socio-economic groups.

Disparities are important not only because they reveal areas where children’s rights to health are being compromised, but also because they uncover epidemiological differences that can be used to design national and sub-national programmes and help in the targeting of resources to areas where they are needed most. Infectious diseases with environmental causes like respiratory illness and diarrhoeal diseases are the most prominent causes of death in countries with high U5MRs (i.e. above 70 to 100). As care practices and environments for children improve, the U5MR drops. Communicable diseases become, proportionally, less prominent and are replaced by conditions resulting from poor perinatal and neonatal care, which may be responsible

for more than 60 per cent of infant and young child deaths in some countries. Finally, when the U5MR is very low (less than 30) the background of unintentional injuries that is always present in every environment becomes *proportionately* more important although the absolute number of children dying may not be as great.

There are three important points that this Situation Review makes. These points are as follows: (1) the relatively low percentage (i.e., 7 per cent) of deaths that occur from vaccine preventable diseases is the result of the aggressive pursuit of high immunization coverage. However, as soon as this coverage falters (as it has in some countries in the region in cases where, for example, diphtheria, pertussis and tetanus persist) these classic diseases re-emerge. These germs remain in the environment as a constant threat to the unprotected child; (2) The improvement in child survival, which is the fourth MDG, cannot be achieved in isolation from maternal health and survival, or mother and child nutrition which requires significant improvement in both the quality and quantity of accessible water, sanitation, and personal and environmental hygiene. The areas where one deficiency is found are generally areas where multiple deficiencies co-exist and are interrelated and as such, all must be tackled simultaneously if the problem is to be solved; and (3) All analysis and action depends on knowing where and what the problem is, which requires high quality data. Unfortunately, the poorest quality data is usually found in areas where the highest level of deprivation occurs and this contributes to the “invisibility” of the most disadvantaged. In order to give the disadvantaged a greater voice, the state and condition of their lives must be more comprehensively assessed and measured and subsequently brought to the attention of decision makers.

Most governments in the region do not yet recognize child health, nutrition, and development as national public goods and therefore they tolerate an environment that is inequitable. Social-sector spending continues to lag behind other sectors, and few governments have committed to guarantee

access to higher quality services for the poor. While governments continue to look to outside support for health programmes through either bilateral funds, global funds, or through sector wide contributions, health ministries remain among the least supported within government budgets. On average, only 4.9 per cent of GDP and 8.7 per cent of total government spending is spent on health in countries within the East Asia and Pacific region.^{1,2} With figures this low, it is hard to imagine reaching the 20/20 goal for government spending on basic social services. As a result, the present policy environment inherently discriminates against the poor as both public and private services are accessed more readily by the rich. The maxim of inverse care, articulated in an article in *The Lancet* more than 30 years ago still applies: “The availability of good medical care tends to vary inversely with the need for it in the population served.”^{3,4}

Action points

- **Improve data collection systems and quality** in order to identify and target those who have been left behind.
- **Place greater emphasis on prevention** through improved maternal health and nutrition, better sanitation and improved water quality and improved hygiene.
- **Create stronger links between programmes** for safe motherhood and nutrition in order to reduce neonatal and perinatal deaths and deaths in early infancy,
- In relation to epidemiological and sociological evidence, **attack the problem of persistently high U5MR** through the convergence of inputs related to health, nutrition, water, sanitation and hygiene. Review the non-communicable causes of diseases, such as unintentional injuries, for preventive interventions in countries with very low U5MR.
- Examine and **increase the proportion of government spending** on health and nutrition as a means of serving the greater public good of each nation, and guarantee free and equal access to health care for all sectors of society.
- **Advocate for policy development** that supports preventive and primary health care.

¹ National Health Accounts Indicators: measured levels of expenditure on health, 1997-2001.

² There are of course exceptions: Timor-Leste has made an effort to maintain a high investment in social sectors in line with commitment in the prioritized agendas of the National Development Plan where 12 per cent of the Government expenditures were allocated for the health sector in 2004.

³ Lancet, 1971; 1: 405

⁴ Here, aspiring countries like Malaysia and Singapore who spend 6.5 and 5.9 per cent of their total government expenditures on health, should look to the example of Australia, New Zealand, and Japan whose 16.8, 14.8 per cent and 16.4 per cent of government expenditures spent on health are the highest in the region (2001 figures). Of course, these data must be interpreted in the local context taking into consideration percentage of expenditure that is in the private vs the public sector, size of government budgets, percentage of expenditures that come from external sources, and so on.

SITUATION REVIEW ON MATERNAL MORTALITY

Trends

Of all the health and nutrition indicators in the region, the maternal mortality ratio (MMR) has, over the last decade, proven the most resistant to improvement. There are more countries in the East Asia and Pacific region that are “off target” for achieving the MMR MDG than for most other indicators in health and nutrition (11 countries): disparities are wider across provinces and between countries; and the highest number of countries are either showing no improvement (nine countries) or are getting worse (three countries). Mongolia and Myanmar are showing worsening conditions, while Cambodia, Indonesia, Malaysia, Papua New Guinea, Philippines, Vanuatu, and the Republic of Korea have shown no or little improvement.

Clearly, reducing maternal mortality represents an enormous challenge to the region if the positive trends found in countries like the Lao People’s Democratic Republic (PDR), China, Thailand and Viet Nam are to be accelerated, and if the stagnation or worsening trends in other countries are to be reversed. Furthermore, an improvement in these trends will be essential if child survival rates are to improve, particularly if deaths in the perinatal and neonatal period are to be averted. Also, it is important to compare the unyielding rates of maternal deaths with those for under-nutrition of women and children. Finally, monitoring and measuring the MMR is a difficult task, both because maternal deaths are relatively rare in individual communities and the deaths themselves – measured as the number of women who die as a result of childbearing during pregnancy or within 42 days of delivery or termination of pregnancy – may not always be clearly diagnosed or identified.

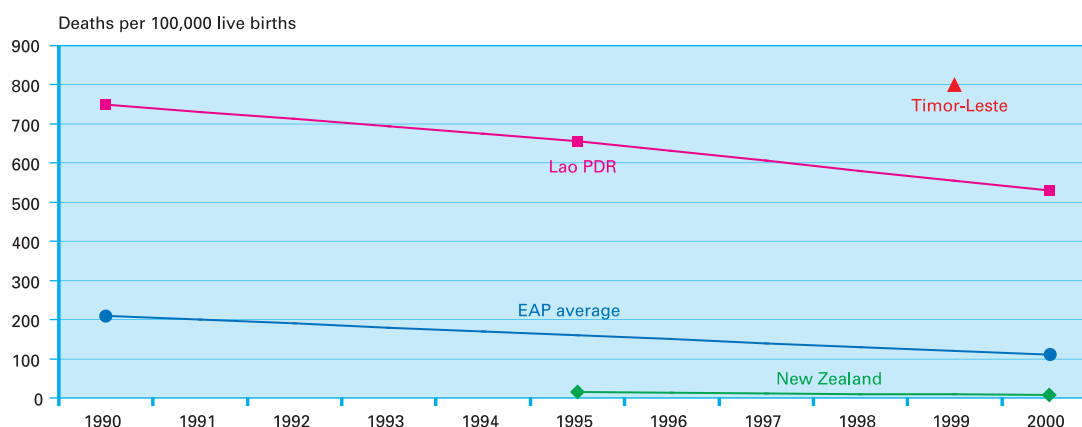
Causes of death

Causes of maternal deaths in East Asia and the Pacific are essentially the same as the causes of maternal death in the rest of Asia. The majority are not predictable (e.g., haemorrhage, sepsis, hypertensive disorders and obstructed labour), therefore, successful and safe management depends on the presence of skilled attendants at birth who are capable of diagnosing conditions quickly and intervening in a way that will stabilize a woman so she can safely reach a basic or comprehensive emergency obstetric care facility. Antenatal diagnosis of hypertensive disorders can also be effective in identifying women requiring emergency hospital-based care.

There are other causes that are preventable and that can be treated with an improved focus on health care delivery and on the nutrition of pregnant and pre-pregnant women. Any infection has the potential to lead to overwhelming sepsis in a pregnant woman, particularly if her normal decrease in immunity is exacerbated by under-nutrition. For this reason, infections like malaria, tuberculosis, urinary tract infections, HIV and other sexually transmitted diseases lead to higher mortality rates during pregnancy. The danger is enhanced if a woman is anaemic or if she is deficient in vitamin A, vitamin C or other micronutrients. Vitamin A supplements given to pregnant women have led to a 40 per cent reduction of maternal deaths.¹

Frequent and closely spaced pregnancies may also lead to depletion of iron, calcium and other nutrients as the mother is unable to restore levels of these vital nutrients in the short time between pregnancies. Birth spacing and meeting unmet contraceptive needs

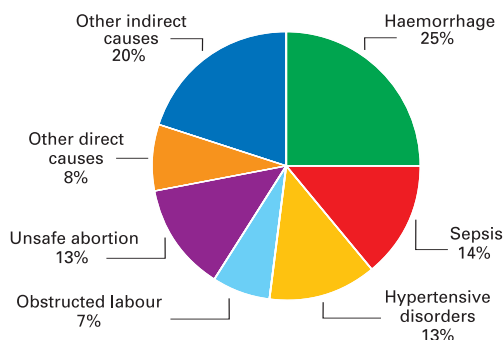
Figure 2.5 Maternal mortality ratio in East Asia, 1990-2002 or latest year available



Sources: UNICEF. The State of the World’s Children 2005; WHO. The World Health Report 2004 – changing history, 2004; Lao PDR: Reproductive Health Survey Report, March 2001; and MDG Report 2004

¹ West, KP, Katz, J., Double blind, cluster randomised trial of low dose supplementation with Vitamin A or B carotene on mortality related to pregnancy in Nepal. *British Medical Journal*. 1999 Feb 27; 318(7183):570-575

Figure 2.6 Causes of maternal deaths, East Asia and Pacific



Source: WHO/World Bank. Maternal Health around the World, 1997

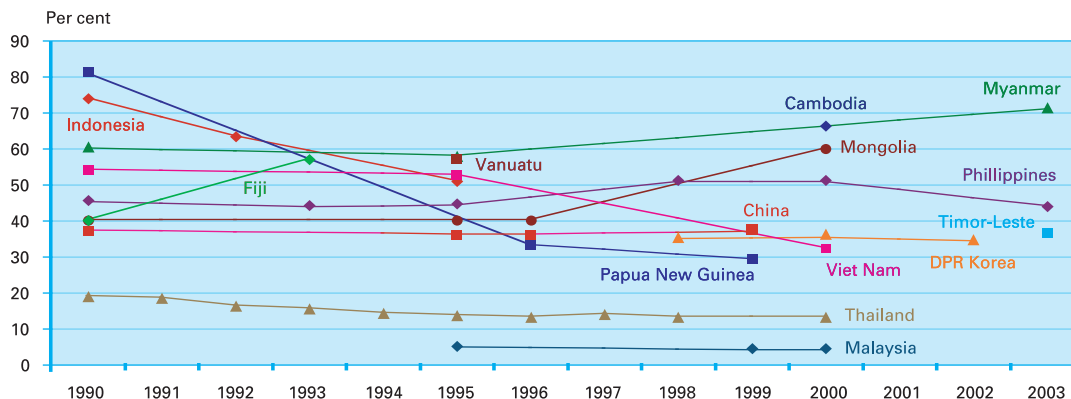
can also reduce mortality. Adolescent pregnancies and pre-marital sexual encounters among the young can also add to the incidence of death and complications particularly in relation to unsafe abortions. Unsafe abortions are estimated to be responsible for about 13 per cent of pregnancy related deaths. Due to the under reporting of deaths in early pregnancy this is likely a sizeable under-estimation. In one recent study, unsafe abortion accounted for as much as 20 to 40 per cent of all maternal deaths. There is growing evidence supporting the role of aspirin, and vitamins C and E and other antioxidants in the reduction of hypertensive diseases of pregnancy by as much as 50 per cent. Finally, severe stunting (maternal height less than 150 cm) is also associated with an increased number of caesarean deliveries. Short stature is the result of many factors including under-nutrition in the first trimester of pregnancy, inadequate postnatal feeding practices and pregnancy in adolescence before the girl has completed her own growth.

Disparities

The lifetime risk of dying due to pregnancy for a woman in the developing world can be as much as 30 times more than for a woman in the developed world. In addition, persistent malnutrition in the East Asia and Pacific region is reflected in high levels of underweight children, short stature in women and widespread anaemia, particularly among pregnant women. This is not coincidental and these problems are not parallel but inextricably linked by inter-generational patterns of the neglect of both women’s access to health services and to adequate nutrition and care. Maternal anaemia serves as a good indicator of women’s status over all. Moderate to severe anaemia is usually the result of inadequate iron and inter current infection. So a woman with haemoglobin of 9 grams or below has been deprived of both a good diet and basic health care. Both of these conditions can be mitigated by better care and improved access to health services. Anaemia levels in the East Asia and Pacific region are very high.

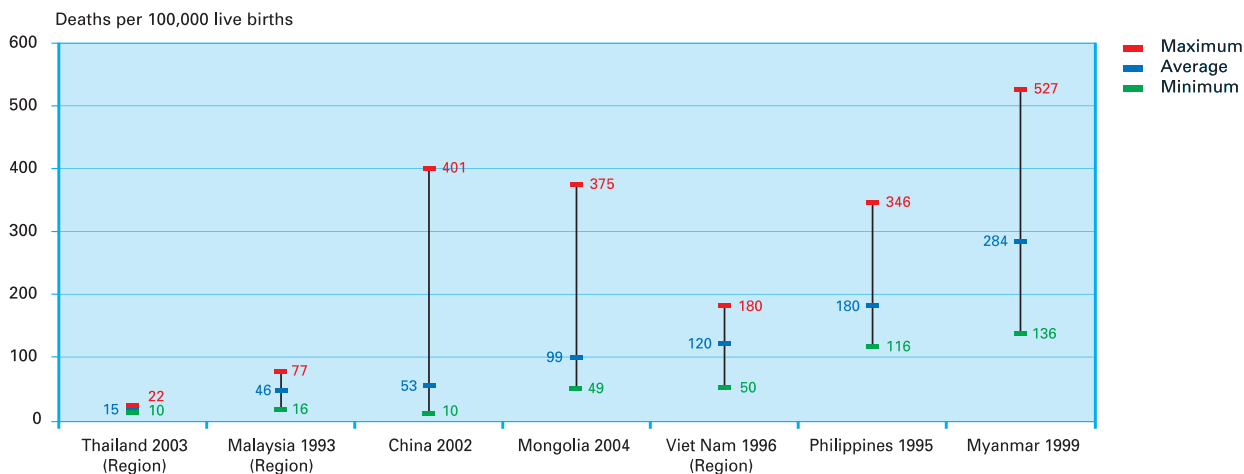
Differences between countries are clearly evident within this region with MMR ranging from 24 in Thailand (as low as 8 in some provinces) to Timor-Leste with an MMR of 800. Within countries disparities also exist. China’s average MMR of 53 is bracketed by ratios as low as 10 and as high as 401 in Tibet, and Mongolia the MMR ranges from 49 to 375. However, geographic disparities should not take attention away from the gender disparity that is at the core of the problem of persistently elevated maternal mortality ratios in this region. Elevated levels of anaemia in women of child-bearing age and in pregnancy; total fertility rates above 3.0 in two countries (Myanmar and Philippines), above 4.0 in four others (Papua New Guinea, Solomon Islands, Cambodia and Lao PDR), and as high as 7.8 in Timor-Leste in 2003; low levels of secondary education

Figure 2.7 Anaemia in pregnant women in EAP region



Sources: Cambodia: Demographic and Health Survey 2000; China: National Survey on low birth weight and Anaemia in Women of Child-bearing Age; DPR Korea: Nutrition Assessment Survey; Indonesia: National Household Health Survey Series; Malaysia: Department of Health; Mongolia: Child Nutrition Survey 1999; Myanmar: National Anaemia Survey 2003; Papua New Guinea: ADB 2000 (Port Moresby General Hospital) EDR report; Philippines: 6th National Nutrition Survey FNRI; Thailand: Department of Health. Routine Reporting; Timor-Leste: Demographic and General Health Survey 2003; Viet Nam: National Anaemia Survey; Fiji: Presentation by country representative at PrepCom; Vanuatu: National Nutrition Survey 1996

Figure 2.8 Maternal mortality ratio



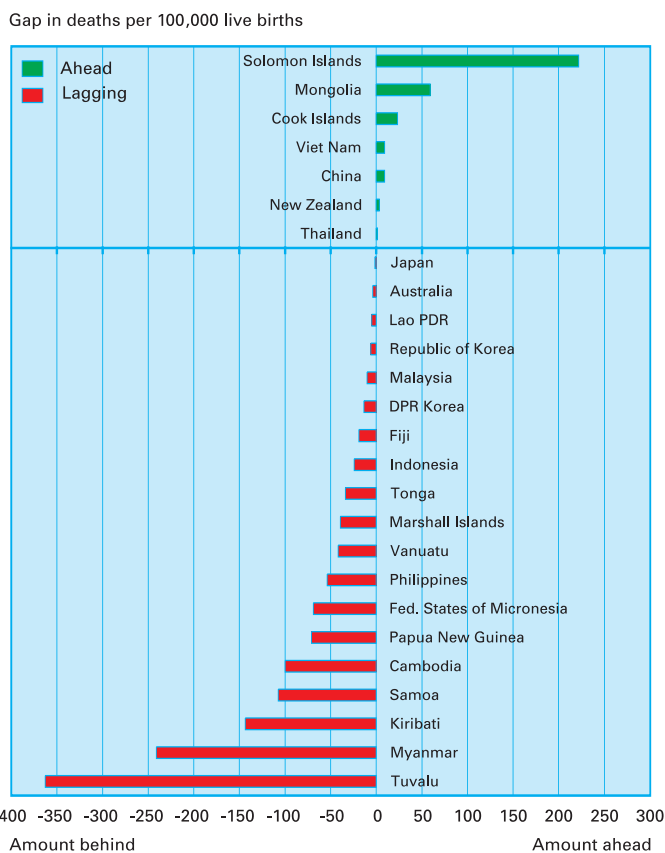
Sources: China: Provincial Reports on Indicators of NPA Goals, 2002; Malaysia: Ministry of Health, Family Health Unit, 1993; Mongolia: Ministry of Health; Myanmar: National Mortality Survey, 2000; Philippines: Maternal and Child Mortality Estimates 1990-1995; Thailand: Bureau of Health Policy and Strategy; Viet Nam: Ministry of Health

for girls; adolescent marriages and subsequent pregnancies in the more remote regions of various countries; violence toward women in pregnancy; and inadequate birth spacing – all point to a significant gender disparity in women’s and girls’ access to nutrition, health facilities, education and safety in many countries, and in regions within countries.

Toward the Millennium Development Goals

The full significance of the problem of persistently high MMRs in this region is shown in **figure 2.9** which indicates the status of countries in the region in terms of their expected progress towards the achievement of the MDG in 2015. The percentage improvement from 1990 will determine the extent of achievement of the MMR MDG. **Figure 2.9** shows the performance of countries in relation to the amount of progress that is needed by 2005 to be on track for reaching the MMR MDG. If the country is ahead of where they need to be, the green bar shows to what extent they are ahead, where as the red bar shows the extent of lag among those countries whose progress is not sufficient to reach the MMR MDG in 2015. Of the 19 countries depicted, only seven (China, Cook Islands, Mongolia, New Zealand, Solomon Islands, Thailand and Viet Nam) are on target, or ahead of target to achieve the MMR MDG goal. The countries to focus on are those where the red bar is largest i.e. Tuvalu, Myanmar, Kiribati, Samoa, Cambodia and Papua New Guinea.

Figure 2.9 Maternal mortality ratio: towards the MDG in East Asia and Pacific, 2000



Sources: UNICEF. The State of the World Children 2005; Australia: The World Health Report 2004, changing history, 2004; Cambodia: National Institute of Statistics. Cambodge Profile Demographique, 1995; China: Ministry of Health; DPR Korea: Reproductive Health Survey 2002; Indonesia: Indonesia Progress Report on the Millennium Development Goals, February 2004, Ministry of Health. Households Health Survey 1992; Japan: The World Health Report 2004 – changing history, 2004; Lao PDR: Reproductive Health Survey Report, March 2001, MDG Report 2004; Malaysia: Ministry of Health; Mongolia: Ministry of Health, 2004; Myanmar: The World Health Report 2004 – changing history, 2004; New Zealand: The World Health Report 2004 – changing history, 2004; Philippines: The World Health Report 2004 – changing history, 2004, National Statistical Office; Republic of Korea: The World Health Report 2004 – changing history, 2004; Thailand: MDG Report for Thailand, March 2004; Viet Nam: Ministry of Health. Research on Maternal Mortality in Viet Nam the Year 2002-2003, MDG Report 2003; Cook Islands: Country Health Information Profile; Federated States of Micronesia: Country Health Information Profiles; Fiji: SPC MDG database; Samoa: UNICEF. The State of the World’s Children 2004; Solomon Islands: The World Health Report 2004; Tonga: UNDP. Pacific Human Development Report 1999, Country Health Information Profile, 1995; Tuvalu: SPC MDG database; Vanuatu: Country Health Information Profile, 1997

Analysis

The problem of maternal deaths manifests itself differently in countries with an MMR that is: very low (less than 50); low (between 50 and 100); high (above 100 but less than 200); or very high (greater than 200). The experience of Malaysia illustrates how stages of improvement correspond to a progressive introduction of interventions. Malaysia's first drop in MMR from over 600 deaths per 100,000 live births in 1947 to 230 in 1959 occurred at a time before hospitalised deliveries were the norm (there were only seven health centres in the country). The first order of improvement came from preventive measures directed at diagnosing and treating malaria in pregnancy. Next, the emphasis was on skilled attendants at birth and improved community-based care, which subsequently carried Malaysia to an MMR of 50-100. In 1986 the emphasis shifted to institutional care and the MMR dropped further to the present level of 41. It is possible that the implementation of institutional deliveries at an earlier phase could have further accelerated Malaysia's decline in mortality, but nevertheless the country's experience is a useful example for those countries and areas within countries where access to institutional emergency obstetric care may still be years away. Malaysia's success in reducing maternal mortality preceded its economic success and was largely the result of government commitment towards prevention through health care, nutrition, environmental improvements, including improved access to clean water and the increased utilization of skilled birth attendants – all of which yielded significant gains in mortality reduction.²

The reduction of very low mortality rates in, for example, Australia present different challenges as the number of deaths is already very low and over half of the causes are either indirect (e.g., cardiovascular) or incidental (e.g., injuries, neoplasm, etc.) However, in the case of Australia significant returns might be derived from continuing to focus resources on reduction of maternal mortality in indigenous communities, where the MMR remains about three times that of the rest of the country, even though rates in those communities are falling sharply.³

In all cases, a combination of preventive and curative approaches is needed. Adequate nutrition (including micronutrients), along with early diagnosis and treatment of underlying diseases in the period before pregnancy will reduce the incidence of malaria, tuberculosis, sexually transmitted infections, urinary tract infections, anaemia and even pre-eclampsia all known to cause or to be associated with increased maternal mortality. Efforts to limit adolescent pregnancies (which remain the highest cause of unsafe abortions) will also significantly contribute to a reduction in MMR.

Action points

- **Introduce a balanced programme of preventive and emergency obstetric care services**, including:
 - (i) early or pre-pregnancy diagnosis of underlying infections known to be associated with a higher incidence of mortality in pregnancy;
 - (ii) early or pre-pregnancy (peri-conception) provision of nutritional inputs aimed at reducing anaemia, increasing the level of essential vitamins and minerals, and improving immune status;
 - (iii) increased access to existing essential (i.e., skilled attendants at birth) and comprehensive (i.e., hospital-based) emergency obstetric care. This implies expanded advocacy with governments and donors to increase the number of such facilities.
- **Improve birth spacing**, particularly in countries or sub-national regions where pregnancies are too early or too frequent.
- **Reduce deaths from abortions by increasing women's access to contraception**, in particular reduce adolescent pregnancies through the development of youth-friendly service centres that provide counselling and reproductive health services.
- In all cases, **target additional health and nutritional resources toward adolescents and young people** in order to prepare them physically and psychologically for pregnancy and parenthood.

Underlying all of these points is the need for a strong political will that, with appropriate policies coupled with community-based programmes, will improve the status and position of women in society.

² Costello, A. *BMJ* 2004

³ Walters, WAW, Ford, JB, et al. Maternal Deaths in Australia, *The Medical Journal of Australia*, 6 May 2002 176(9) 413-414

SITUATION REVIEW ON IMMUNIZATION

Introduction

The Expanded Programme on Immunization (EPI) in the East Asia and Pacific region achieved certification of poliomyelitis-free status in October 2000. In addition, EPI has delivered other important health benefits to the region including: a more than 95 per cent reduction in measles deaths (over past deaths); the inclusion of hepatitis B vaccine in every EPI programme (with the exception of Timor-Leste); and the elimination of neonatal tetanus in all but eight countries with an additional two likely to achieve this status by the end of 2005. Despite these successes, the region is not yet witnessing the full potential benefits of immunization and many children continue to miss out on life-saving vaccines for a variety of reasons. It will largely be up to governments to increase and maintain momentum in order to ensure that their populations have adequate access to, and knowledge of, vaccines and services. The actual absence, or reduced frequency of these vaccine-preventable diseases has resulted at times in a worrying level of complacency, which has led in a few countries to diminished investments in immunization. It is imperative that immunization remains a robust part of services delivered and owned by governments. Immunization remains a low-cost public health intervention which benefits not only individuals, but whole societies, irrespective of borders and boundaries.

Trends

Diphtheria, pertussis and tetanus (DPT) coverage, using DPT3 coverage (reflecting at least three contacts before the age of 1 year), is increasingly being used as a proxy indicator for access to immunization. Trends in the region since 1990 have

been mixed. Those countries with exceptionally low coverage in the early years have achieved significantly higher coverage levels, while those that started out with exceptionally high coverage have shown some decline (with a few exceptions, primarily within the industrialized countries). A few countries with persistent low coverage (below 60 per cent), have begun to see outbreaks of pertussis and other vaccine-preventable diseases that, considering the availability of low-cost vaccines, should have been at negligible levels years ago. The Lao PDR, Papua New Guinea, Timor-Leste and Cambodia continue to report coverage at or below 70 per cent although trends for Cambodia are moving in a positive direction and are likely to achieve significant progress based on current coverage rates.

Progress towards achievement of the MDGs

Millennium Development Goal 4 sets a target for a two thirds reduction in under-five deaths by 2015. The incidence of measles, a major killer of children under five and, among the vaccine-preventable diseases, the largest contributor to the U5MR, has seen a dramatic decline in the East Asia and Pacific region, which has experienced a significant decline in U5MR compared with other regions.

However, despite this progress measles still remains a significant cause of child deaths. The WHO Western Pacific Regional Office in consultation with UNICEF and governments in the region have established 2012 as a target date for measles elimination. Efforts are underway to significantly reduce the incidence of measles and should thus contribute significantly to the achieving the MDG. However, this will not be

Figure 2.10 DPT3 immunization coverage, East Asia

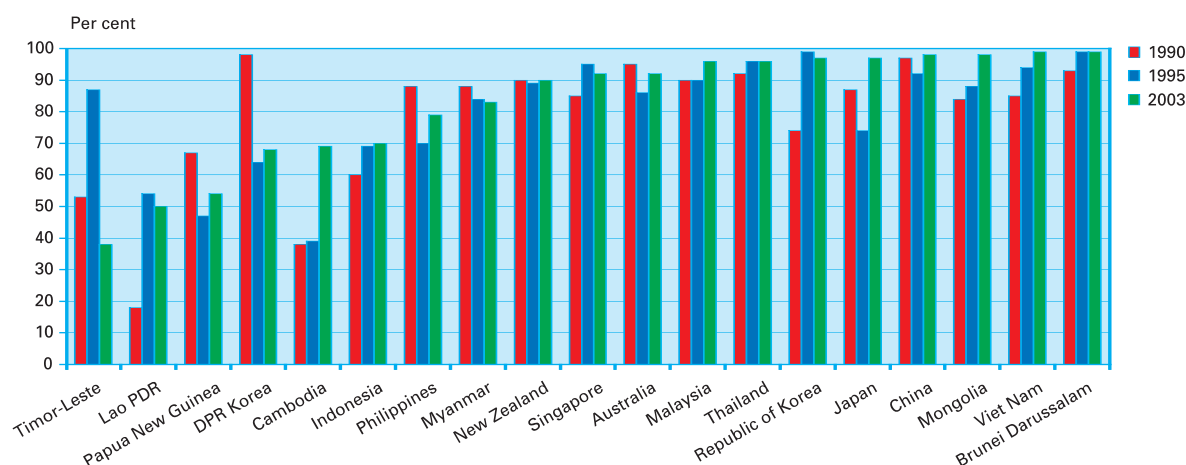
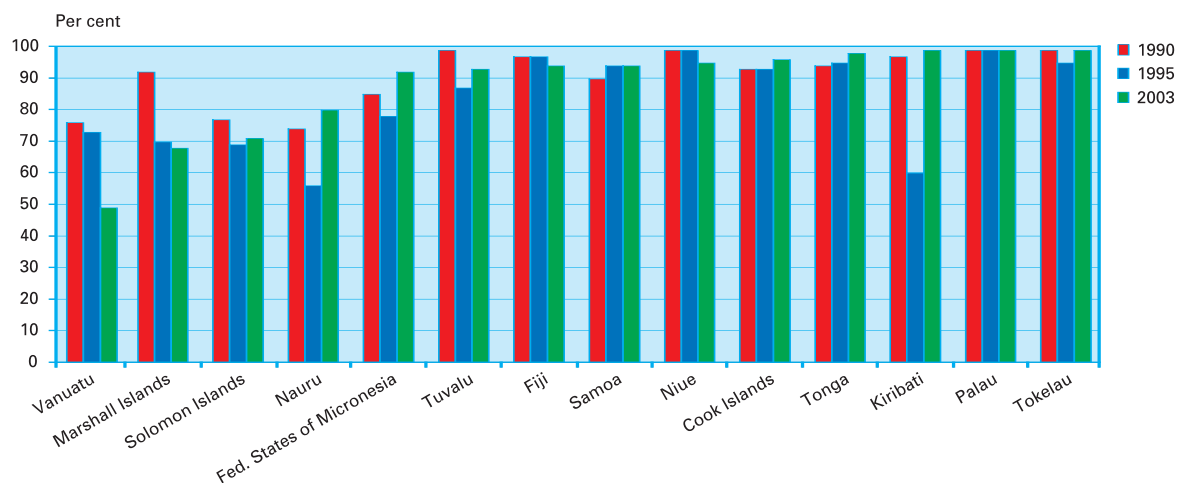


Figure 2.11 DPT3 immunization coverage, Pacific countries



Sources: WHO/UNICEF Review of National Immunization Coverage 1980-2003, August, 2004; UNICEF. The State of the World's Children 2005

easy as the vast majority of countries are far below the 95 per cent coverage level required to ensure measles control and eventual elimination.¹ The situation in the Pacific Island countries, while encouraging, is also below the 95 per cent level. In addition, recent large-scale outbreaks of measles in some Pacific countries are indicative of lower immunity levels than coverage figures currently indicate.

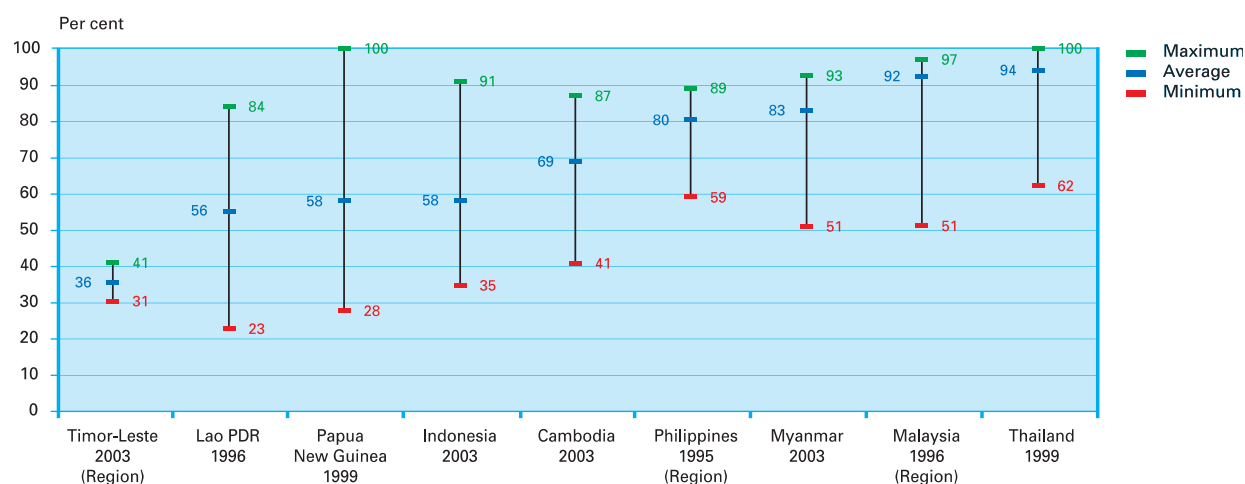
Equity: the gap between haves and have-nots

This region is characterized by vast differences in levels of development and therefore disparities. This is a reflection not only of poor or no access to regular services (of adequate quality), but also lack of knowledge and in many cases, an inability to afford even minimal charges levied for preventive

services. For most countries in the region, there is no charge for immunization services. China was one exception, though as of December 2004, the government had issued a decree to ensure that no charges are levied for immunization services. In some countries, campaigns are very successful in reaching children for immunization, while routine immunization remains a great challenge.

As can be seen from the figure below, Indonesia, Cambodia, Lao PDR and Papua New Guinea show wide variation among provinces or other sub-national units in DPT3 coverage. In the case of Timor-Leste, this is really a reflection of the need to establish outreach as part of routine service delivery to address the issue of access.

Figure 2.12 DPT3 immunization coverage



Sources: Cambodia: Health Management Information System Report 2004; Indonesia: Demographic and Health Survey 2002-2003; Lao PDR: Ministry of Health. Expanded Programme for Immunization, 1996; Malaysia: Ministry of Health, Information and Documentation System Unit, 1996; Myanmar: Multiple Indicators Cluster Survey 2003; Papua New Guinea: Ministry of Health; Philippines: Department of Health, Maternal and Child Health Service, 1995; Thailand: Provincial Health Survey II 1996, 1997; Timor-Leste: Demographic and Health Survey 2003

¹ Maintaining 95 per cent immunity to measles in each cohort in every district, as demonstrated by:
 a. at least 95 per cent coverage with two doses of measles-containing vaccine;
 b. importations leading only to small outbreaks (less than 100 cases, of less than three months' duration).

There is a definite need for strengthening the collection, reporting and analysis of sub-national data, which is a fundamental requirement for the identification and targeting of intra-country disparities. While most countries agree with the need to collect and use sub-national data, there are few for which sub-national data on immunization (as well as other areas) are regularly available.

Strengths and lessons for change

Many lessons have been gleaned from the experience of polio eradication in the East Asia and Pacific region, although, achievements in this area will be difficult to match as significant resource allocation and the concerted and diligent efforts of many partners may not be able to be replicated for other EPI activities. However, governments in the region are, by and large, committed to ensuring steady and reliable access to vaccines and services although this commitment needs to be tempered by an awareness of the infrastructure, maintenance and overhead costs associated with access and reliability.

In the 1980s and 1990s, UNICEF invested heavily in the establishment and maintenance of cold chain systems. These have served, and continue to serve as the backbone of an infrastructure that is able to deliver vaccines to the most remote locations. However, over the years, these capital goods have reached, or are soon to reach, the end of their life cycle and in many instances governments remain dependent on external assistance to replace aging equipment. In this context it will be essential for governments to better anticipate these needs, improve planning and respond with appropriate funding.

Weaknesses and experiences to learn from

Perhaps the primary area of weakness is the lack of routine collection, compilation and analysis of sub-national data. Without this information readily available, it is difficult to target weak-performing geographical sub-units.

A number of countries in the region have benefited from support provided by the Global Alliance for Vaccines and Immunization. With this support, countries were asked to prepare Financial Sustainability Plans, which was an attempt to have countries take a more forward looking approach to their funding requirements in order to ensure an uninterrupted provision of immunization services. Unfortunately, beyond the exercise of preparing the plans, some countries have not been able to take advantage of this tool. Even while there might be weaknesses with respect to the execution of the plans, the actual outputs remain a useful mechanism which countries can still utilize to address funding shortfalls.

The Bali Consensus (item 10) specifically identified a “concern about the lack of accurate data and information on the situation of children and young people in the region” and the foreword to *The Lancet’s* recent Child Survival papers² stated that “Ministers of health must have the capacity to take disease profiles into account when planning child survival interventions.” In this context continued weaknesses in the collection, analysis and use of valid epidemiological data at national and sub-national levels is an impediment to improving services and coverage and thus, by default, to achieving established goals and targets.

Summary analysis

The “regional picture” presents an overall image of a region doing relatively well when compared with other regions. Such a picture, however, offers little as a basis for targeting intra-regional disparities or for determining levels of risk posed to susceptible populations.

Low immunization coverage in some countries of the East Asia and Pacific region is the result of a combination of factors. These may include, but are not limited to: poor access; unmotivated staff; marginalized populations; weak infrastructure; vaccine shortages; poor data collection; and/or a myriad of other reasons.

Over the past 20 years, countries in this region have made significant progress with their immunization programmes. More and more newborns are being protected, and the more successful these programmes are at protecting succeeding cohorts, the less we will see of these diseases. The commitment by health ministers, through the joint UNICEF/WHO strategy to move towards measles control and elimination, will be a major contributing factor to child survival as well as to achieving the targets established as part of the Millennium Development Goal to reduce under-five mortality.

Action points

- **The collection of reliable sub-national data on immunization** is a crucial first step towards a fully effective immunization system and should be instituted immediately for planning and budgeting to facilitate action to address the deficits.
- **Financial sustainability** plans shall be developed to ensure uninterrupted supply of essential vaccines and immunization services. Budgets should also include the replacement of ageing cold chain equipment.

² *The Lancet* – June 2003 – (A series of 5 articles addressing “Child survival: The Unfinished Revolution”)

SITUATION REVIEW ON NUTRITION

Introduction

Good nutrition is necessary for optimal growth and development. Under-nutrition has been found to be an underlying cause of 53 per cent of all deaths in children less than five years of age.¹ In the foetus and in newborns, under-nutrition is believed to have a significant relationship with increased perinatal and neonatal mortality. Under-nutrition and infection combine to form a lethal combination that easily cycles down into mortality. Additionally, nutrition is also an important prerequisite for optimal cognitive development. For example, there is a clear association between anaemia, stunting and cognitive development. On another level, malnutrition is recognised as both a cause and a consequence of poverty. As such, reducing malnutrition is an essential component of several of the Millennium Development Goals.

Nutrition is most commonly measured by size:

- Wasting (weight for height), which measures thinness;
- Stunting (height for age), which measures height deficits according to age;
- Underweight (weight for age), which is a composite measure of stunting and wasting; and
- Body mass index a measure of weight vs. height; it is most often used with adults.

Malnutrition, or poor nutrition, encompasses both insufficient nutrition (under-nutrition) and over-nutrition, but in the majority of developing countries under-nutrition is the primary concern, reflecting a combination of inadequate food intake, poor health,

and inadequate and inappropriate care, such as the feeding practices of young children or the excessive workloads of women of reproductive age.

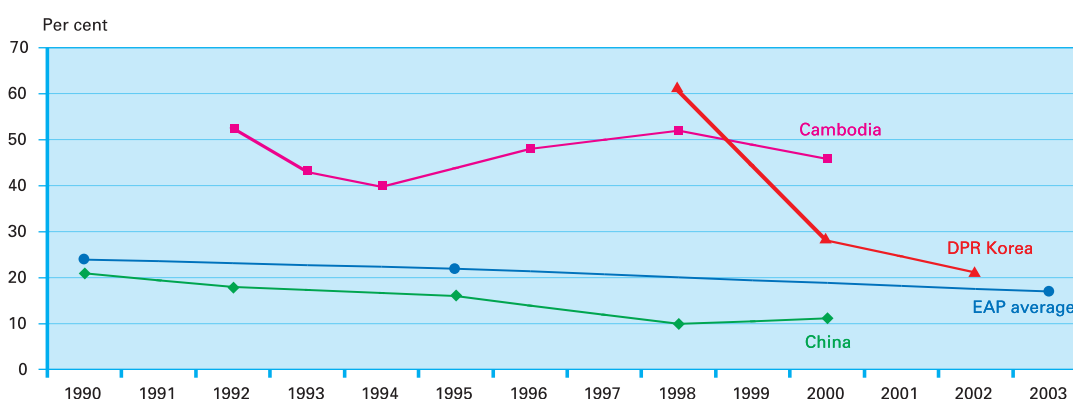
Trends

The under-nutrition trend in the East Asia and Pacific region is not encouraging. Few countries, except for DPR Korea, which in the mid-1990s had the highest level of malnutrition in the world, have seen significant falls in either stunting, wasting or underweight rates. China and Viet Nam have both had some success in reducing both underweight and stunting, but in both Cambodia and Mongolia prevalence has increased. In the majority of countries in the region, the overall trend is for little to no improvement. Meanwhile, another form of malnutrition is overnutrition or obesity and although it is not common, it appears to be on the increase, especially amongst adults. For example, in the Philippines, the proportion of adults who are overweight rose from 20 per cent in 1998 to 24 per cent in 2003.²

Progress towards achievement of the Millennium Development Goal

The first Millennium Development Goal is to **eradicate extreme poverty and hunger**, with "hunger" to be reduced by half from the baseline year of 1990. The official indicators of this goal are (i) the prevalence of underweight children and (ii) the proportion of the population below minimum levels of dietary energy consumption. **Figure 2.14** indicates in green where countries are ahead of where they need to be

Figure 2.13 Prevalence of underweight (moderate and severe), 1990-2003 or latest year available

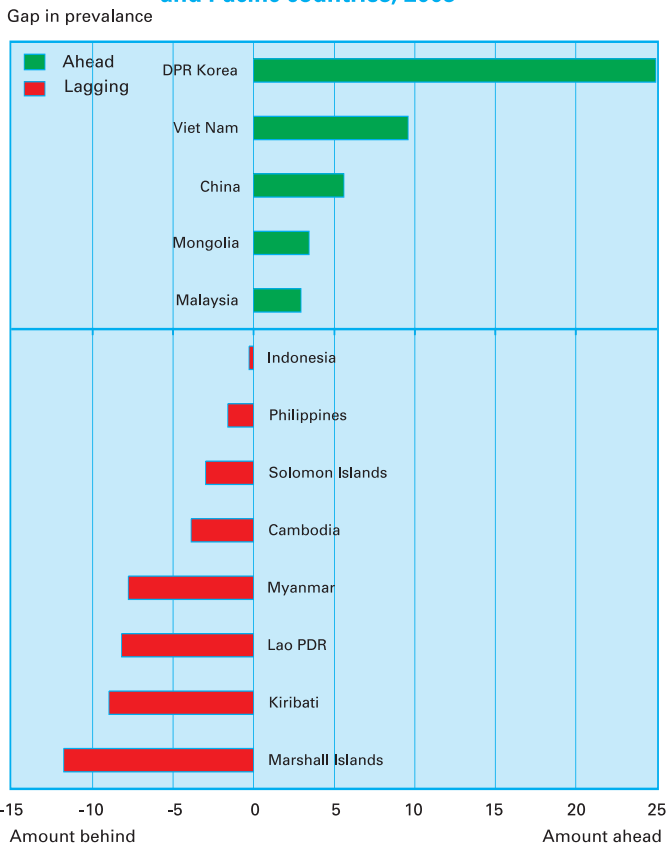


Sources: UNICEF. The State of the World's Children 2005 and previous issues; Cambodia: Cambodia Demographic and Health Survey 2000; China: National Bureau of Statistics, 2001; DPR Korea: National Statistics Office, 2002

¹ Where and why are 10 million children dying every year? - Robert E. Black et al Lancet 2003; 361: 2226-34

² Food and Nutrition Research Institute, Philippines. Sixth National Nutrition Survey (unpublished data)

Figure 2.14 Prevalence of underweight (moderate and severe): towards the MDG, East Asia and Pacific countries, 2003



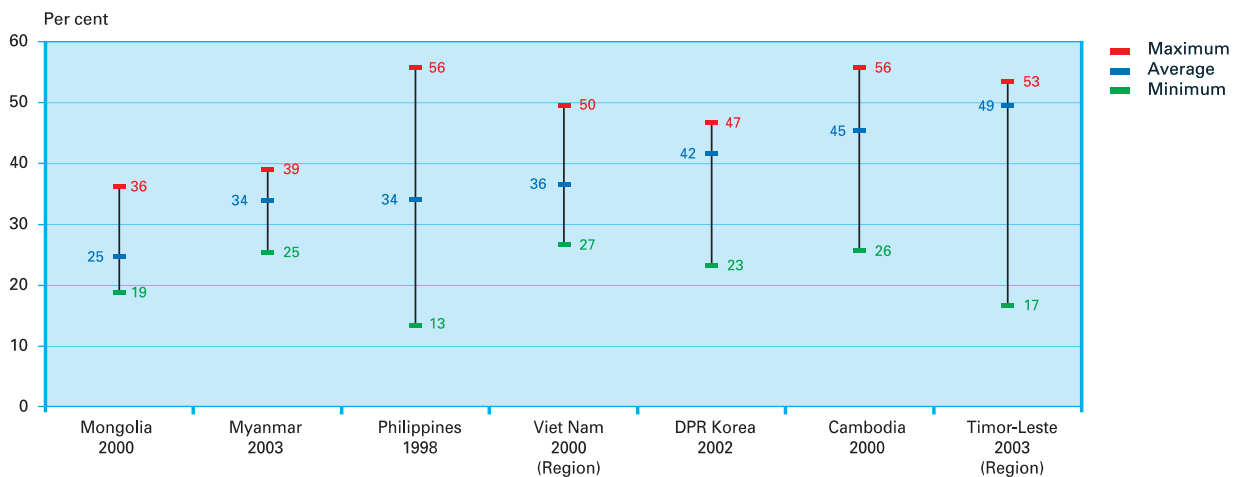
Sources: Cambodia: Cambodia Demographic and Health Survey 2000; China: National Bureau of Statistics; DPR Korea: Nutrition Assessment 2002; Indonesia: National Socio-Economic Survey, 2002; Lao PDR: Multiple Indicators Cluster Survey 2000; Malaysia: Report on Nutrition Status of Children; Mongolia: 2nd and 3rd National Nutrition Survey; Myanmar: Multiple Indicators Cluster Survey 2003; Philippines: 6th National Nutrition Survey 2003; Viet Nam: National PEM Survey; Kiribati, Marshall Islands, Solomon Islands: SPC MDG Database

to reach the goal in 2015, where as red indicates where they are behind. Evidently, several countries are very much on track to reach the goal. DPR Korea has in fact already reached it and Viet Nam, Mongolia, Malaysia and China are all doing well. Countries that remain off track are Cambodia, Kiribati, Lao PDR, the Marshall Islands, Myanmar, Philippines and the Solomon Islands. Papua New Guinea and Timor-Leste also fall in this category, although data from 1990 are not available to illustrate this.

Equity: the gap between haves and have-nots

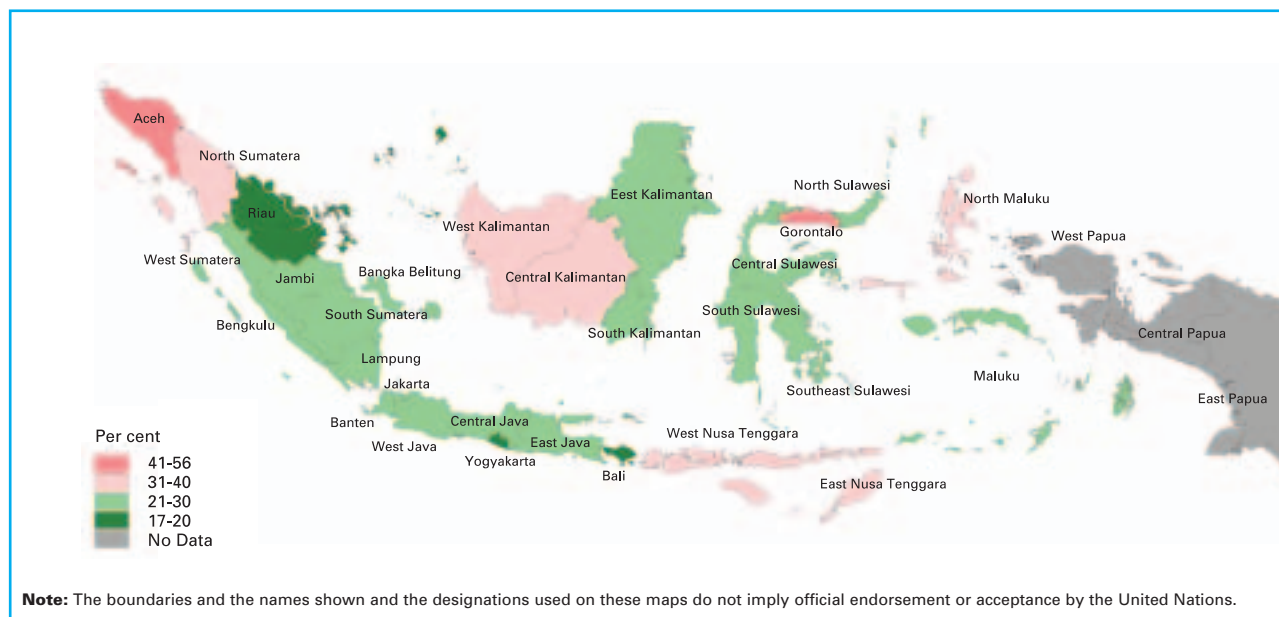
In the country with the highest rate of stunting (Cambodia), 45 per cent of children are too short, whereas in China, only 14 per cent are stunted. Similarly for underweight the prevalence is as high as 45 per cent in Cambodia but as low as 8 per cent in China. Other countries lie somewhere within this significant range. Similar disparities also exist within countries. Data from selected countries for which sub-national data are available shows substantial disparity. In the Philippines, for example, 56 per cent of children are stunted in the most disadvantaged province compared to just 13 per cent in the least. This range is similar to that across the whole region. Less internal variation is seen in other countries, even large ones such as Viet Nam, Cambodia and Myanmar. Similar disparities also exist for underweight in the Philippines, and the situation seems similar in Indonesia, another large, populous country. Only when such sub-national data are available can the worst-off areas be identified, through maps such as **figure 2.16** on the following page. Yet many countries do not have sufficiently detailed data to be able to target interventions to where they are most needed.

Figure 2.15 Prevalence of stunting (moderate and severe)



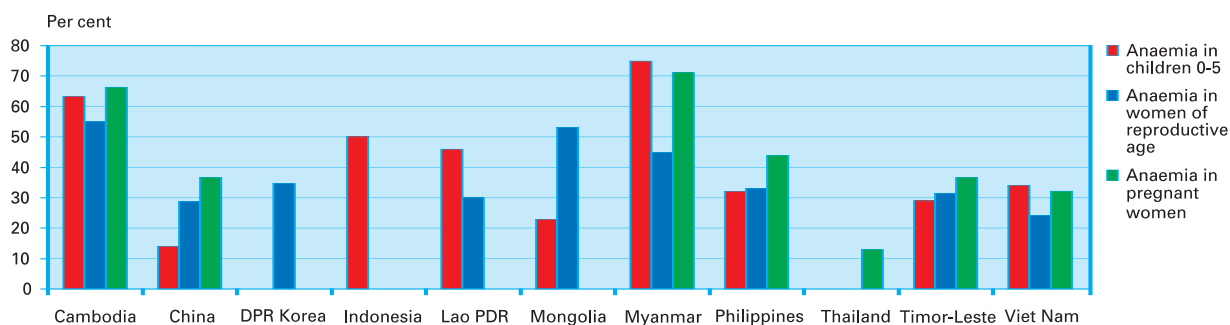
Sources: Cambodia: Cambodia Demographic and Health Survey 2000; DPR Korea: Analysis of the Situation of Children and Women in the Democratic People's Republic of Korea, October 2003; Mongolia: Nutrition Status of Population of Mongolia 2000; Myanmar: Multiple Indicators Cluster Survey 2003; Philippines: Philippines Nutrition Facts and Figures 2001; Timor-Leste: Demographic and Health Survey 2003; Viet Nam: Multiple Indicators Cluster Survey 2000

Figure 2.16 Underweight, moderate and severe, Indonesia, 2002



Source: BPS Statistics-Indonesia. National Socio-economic Survey 2002; Laporan Hasil Survei Konsumsi Garam Yodium Rumah Tangga 2002 (Iodized Salt Household Survey Report), 2002

Figure 2.17 Anaemia: a significant problem in the region



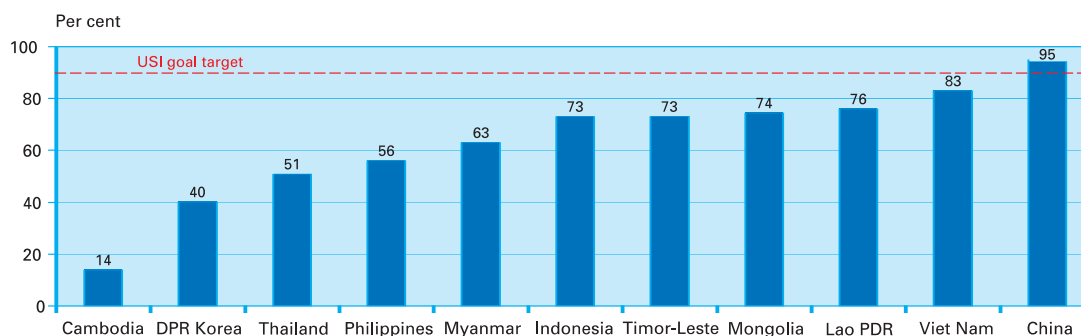
Sources: Cambodia: Cambodia Demographic and Health Survey 2000; DPR Korea: Analysis of the Situation of Children and Women in the Democratic People's Republic of Korea, October 2003; Mongolia: Nutrition Status of Population of Mongolia 2000; Myanmar: Multiple Indicators Cluster Survey 2003; Philippines: Philippines Nutrition Facts and Figures 2001; Timor-Leste: Demographic and Health Survey 2003; Viet Nam: Multiple Indicators Cluster Survey 2000

Micronutrient under-nutrition

Under-nutrition is also caused by individual micronutrient deficiencies. The human body requires a variety of nutrients in minute amounts, and when these are not available, normal functions such as immunity, physical growth and cognitive development can be affected. People in developing countries in particular are at risk of iodine, iron and vitamin A deficiencies, although several other micronutrients are probably also deficient. Data on these deficiencies are not always available and most often we only have data on proxy indicators or the physical or biochemical outcomes of deficiency.

Iron deficiency is the most common nutritional deficiency in the world. Population groups most at risk are those that have the highest requirements and/or the lowest intakes, in particular, women of reproductive age, women who are pregnant or lactating and children under five. The most widely available proxy for iron deficiency is anaemia, much of which is caused by iron deficiency. Many countries report 50 per cent or more of the at-risk populations affected by anaemia, and trend data (not shown here) indicates little improvement, despite the fact that the effects of iron deficiency are considerable. Documented effects include irreversibly impaired

Figure 2.18 Households using adequately iodized salt



Sources: Cambodia: Demographic and Health Survey 2000; China: China National Iodine Deficiency Disorders Survey Report 2002; DPR Korea: Health and Nutrition Survey Report 2004; Indonesia: Preliminary Susenas data (May 2004); Lao PDR: National Health Survey 2000; Mongolia: Ministry of health 2004; Myanmar: NNC national survey - 5 states in 2003 and remaining 11 in 2004; Philippines: HKI study; Thailand: Surveillance System for Tracking Progress Towards the Sustainability Elimination of Iodine Deficiency Disorders in Thailand; Timor-Leste: Multiple Indicators Cluster Survey 2002; Viet Nam: National IDD Survey 2003

cognitive development in children and poor pregnancy outcomes, including maternal mortality, in women of reproductive age.

By comparison, the situation is much better in regard to **iodine deficiency**. Thanks to national iodization programmes in most countries, urinary iodine levels reflect generally good iodine intakes. Several countries in the region are set to reach the World Fit for Children Goal of eliminating iodine deficiency through universal salt iodization by 2005 – a goal which China has already reached.

Analysis of the causes and directions for change

Under-nutrition is the result of a variety of factors, most immediately, the inadequate consumption of energy and nutrients, and ill health. The limited change in the under-nutrition situation reflects the slow down in infant and under-five mortality reduction, and the persistence of preventable diseases such as acute respiratory infections and diarrhoea as the principal causes of young children's deaths. It is also a reflection of poor infant and young child feeding, inadequate breastfeeding, poor quality complementary foods and infrequent feeding. Under-nutrition in young children is also the result of under-nutrition and ill health in their mothers, especially immediately before and during pregnancy, and during lactation. In turn, the poor status of women in this region is reflected in the continued high rates of anaemia in women of reproductive age and pregnant women, as well as in stagnant levels of maternal mortality. Interventions to reduce the

levels of underweight and stunted children in this region must address all of these contributing factors.

Action points

- **Prevent teenage pregnancy** and assist women to plan their pregnancies and reduce their fertility.
- **Ensure women enter pregnancy healthy and well-nourished**, including a "gift" of essential commodities and services
- **Protect women throughout pregnancy** (in particular during early pregnancy) from ill health, and supplement their diet.
- **Create a supportive environment for optimal feeding** of infants and young children, including: the promotion of exclusive breastfeeding; protecting families from the marketing of unsafe foods for infants and young children; and ensuring families have access to adequate and appropriate foods for young children and are feeding them in an optimal way.
- **Provide essential basic services** to protect children from illness, such as access to clean water and sanitation, immunization coverage and other preventive health services.
- **Increase children's access to vitamins and minerals** vital for growth and development. These vitamins should include vitamin A and iron through supplementation, and iodine and iron through fortification.
- **Ensure families have access to adequate curative care** for the main causes of child morbidity and mortality.

SITUATION REVIEW ON WATER SUPPLY AND SANITATION

Introduction

The Water Supply and Sanitation Decade (WSSD) started in 1980, with the very ambitious aim of provision of safe water and improved sanitation for all by the end of the 1980s. This timeframe was subsequently extended to the 1990s. However, coverage of safe water supply and sanitation was far from universal and progress has been far too slow. In September 2000, 189 UN Member States adopted the Millennium Declaration and subsequent Millennium Development Goals, setting clear timebound targets for making real progress on pressing development issues. Goal 7 is to ensure environmental sustainability and one of its targets (target 10 is to halve, by 2015, the proportion of people without sustainable access to safe drinking water. Subsequently, the World Summit on Sustainable Development agreed in Johannesburg (2002) “to halve, by 2015, the proportion of people who do not have access to basic sanitation”.

Trends: progress and health impacts

Water Supply: After more than two decades of interventions, an average of 78 per cent of people in this region are reported to have access to water supply, yet this leaves 418 million people without access. Overall, progress on water supply coverage in countries of this region has been slow, with only a six percentage point increase from 1990 to 2002. Moreover, the reported water supply coverage statistics do not indicate water quality or safety, or the adequacy of the water supply, which are often not reported and which limits actual access to safe water. Contamination of drinking water due to unsanitary environments and poor hygiene in developing countries contributes globally to 4 billion cases of diarrhoea and 2.2 million deaths annually, mostly among children under five. An estimated 187,000 children die from diarrhoea each year in the East Asia and Pacific region.

Arsenic contamination of groundwater has emerged recently as a major water quality issue. Such contamination has been detected in six countries in this region (Cambodia, China, Lao PDR, Mongolia, Myanmar and Viet Nam), and has resulted in a large number of inhabitants at risk of chronic arsenic poisoning and arsenicosis, that will gradually disable people both physically and mentally. The population at risk in these countries is still unclear, as new arsenic-affected areas are continually being discovered. Rural areas are the hardest hit. Surveys

in China have reported so far that more than three million rural inhabitants are at risk, and about 30,000 arsenicosis patients have been so far identified.

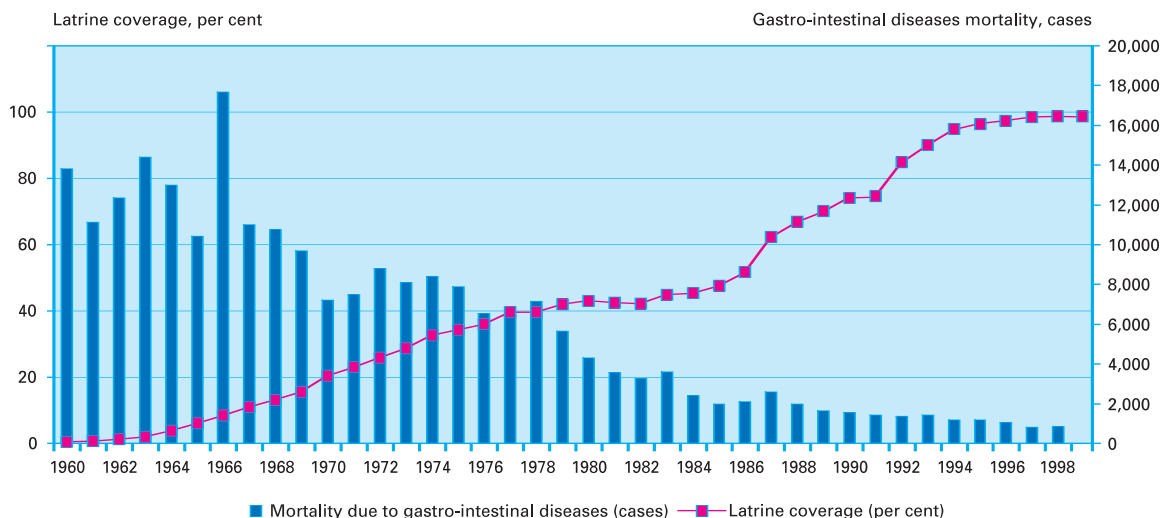
Fluoride contamination of groundwater also affects six countries in this region (China, Mongolia, Myanmar, Thailand and Viet Nam), causing dental and skeletal fluorosis. The only statistics on the population affected are for China, where 300 million people are at risk, with 27 million suffering from dental fluorosis and 2.7 million from skeletal fluorosis.

Sanitation: Sanitation coverage in the region increased 17 percentage points in the past decade, reaching half of the population. However, there are still 957 million inhabitants, mainly in rural areas, without access to safe sanitation. These people either defecate in the open or use unsanitary latrines. Open defecation and the traditional practice of using fresh or partially digested excreta as organic fertilizer (as in China and northern Viet Nam) pollute water sources, food and soil. Coupled with unhygienic practices, this results in high levels of childhood death from diarrhoea. Also, heavy intestinal worms infestation – a consequence of poor sanitation and hygiene practices – affect 110 million inhabitants, of which 26 million are school-age children, in Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam. Heavy worm loads in children are among the major causes of childhood malnutrition, high school absenteeism and slow cognitive development.

Although sanitation coverage has increased faster than safe water access, progress in most countries has been far too slow. Thailand is a notable exception where sanitation coverage has steadily increased over the past 40 years, from 0.2 per cent in 1960 to 98 per cent in 1999. Thailand is the only developing nation to achieve “universal sanitation” by the turn of the century. Health gains, in the form of a significant reduction in gastro-intestinal disease mortality, have been clearly demonstrated in Thailand.

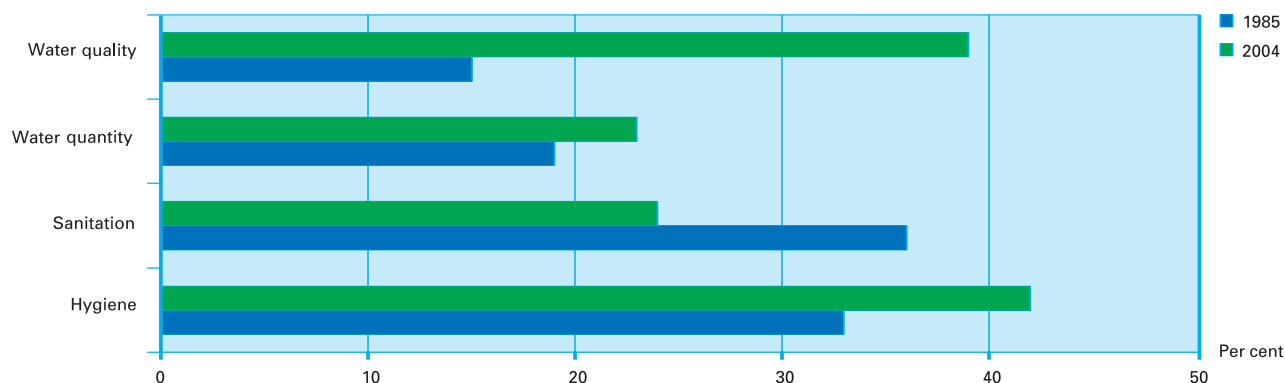
Improvements in water supply, sanitation and personal and environmental hygiene have been proven to be effective interventions to break transmission routes of water and filth-borne diseases, and can enhance curative interventions for better health, nutrition and well-being among children. Several studies have shown that washing hands with soap before eating and after defecation would reduce diarrhoea risk by 42 to 44 per cent.

Figure 2.19 Latrine coverage and gastro-intestinal diseases mortality, Thailand, 1960-1998



Source: Thailand Ministry of Public Health, 1999

Figure 2.20 Health impact: microbial contamination



Source: Mansoor Ali (Presentation at the Inter-regional Water Quality and Arsenic Conference, Taiyuan, China, 23-26 November 2004)

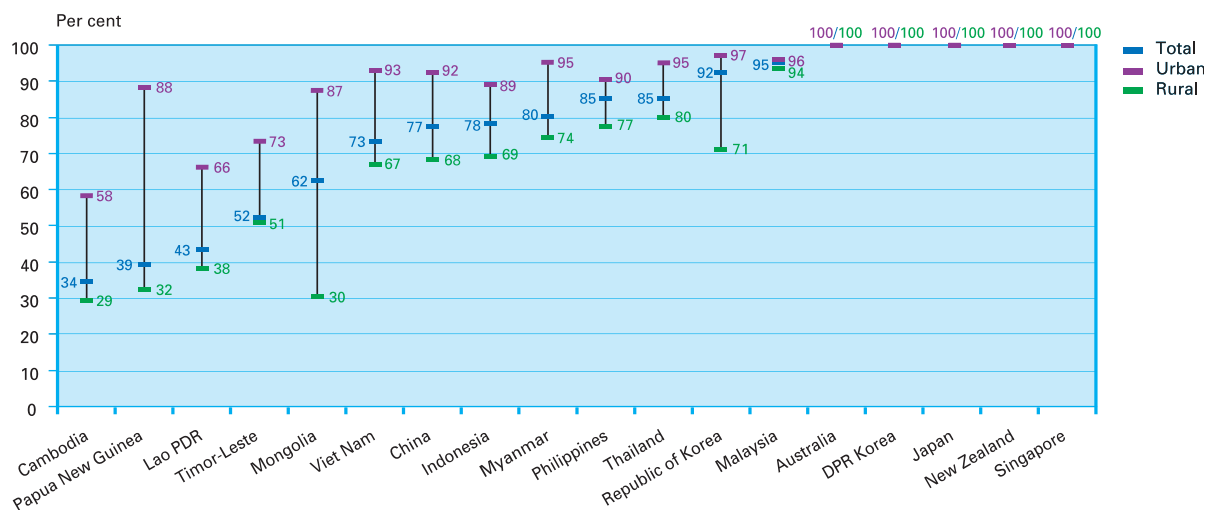
Equity: the gap between haves and have-nots

Water Supply: There is a very large gap in the availability of drinking water between urban and rural areas in almost all developing countries in this region except Malaysia. Urban water supply in 11 developing nations has reached above 80 per cent, while rural water supply in some of these countries is as low as 29 per cent. High coverage in urban areas can be attributed to sizeable financial inputs from governments, as is the case in China, and large loans by the World Bank and the Asian Development Bank in other developing nations. In rural areas, low government inputs, coupled with a significant

reduction in support from donors over the last decade, has resulted in low coverage and slow improvement, often providing inadequate quantities of water for family consumption and for maintaining minimum home and personal hygiene.

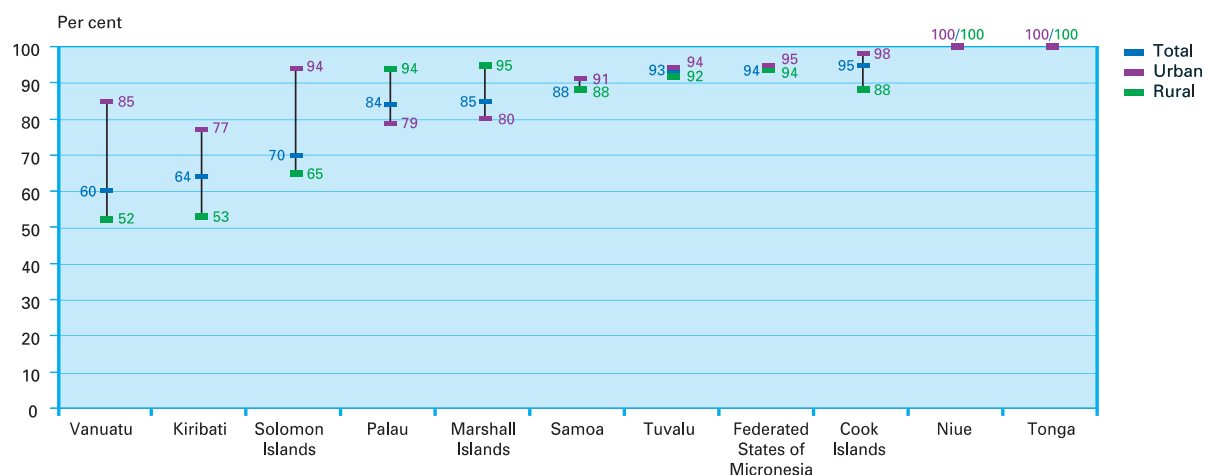
Sanitation: The gap between urban and rural areas on sanitation coverage is even larger than for water. While nine developing countries in this region have achieved urban sanitation coverage of over 90 per cent, many countries are still struggling to improve rural sanitation. For example, current coverage is as low as 16 per cent in Cambodia.

Figure 2.21 Proportion of the population with access to improved water supply, East Asia, 2002



Source: UNICEF/WHO. Meeting the MDG Drinking Water and Sanitation Target, A Mid-Term Assessment of Progress, 2004

Figure 2.22 Proportion of the population with access to improved water supply, Pacific Island countries, 2002



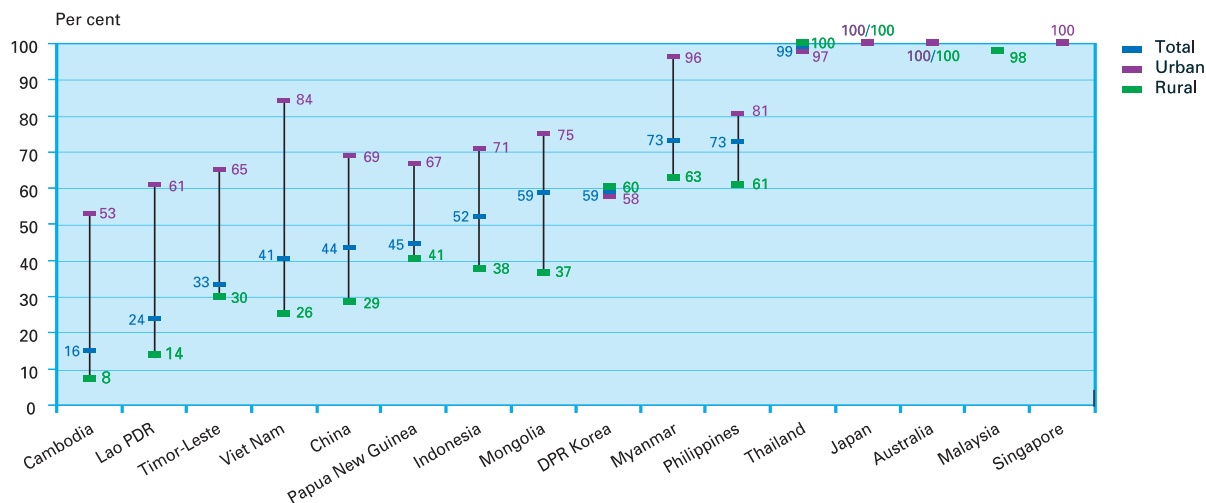
Source: UNICEF/WHO. Meeting the MDG Drinking Water and Sanitation Target, A Mid-Term Assessment of Progress, 2004

Towards the Millennium Development Goals

Figure 2.25 on page 21 shows whether a country is ahead or behind the necessary progress to reach the MDG for sanitation coverage. Viet Nam, Australia, Japan, Niue and Fiji are on track to reach the MDG or already have universal coverage. Countries above this group in figure 2.25 are ahead of the necessary rate of progress and the countries below need to accelerate progress to reach the MDG goal.

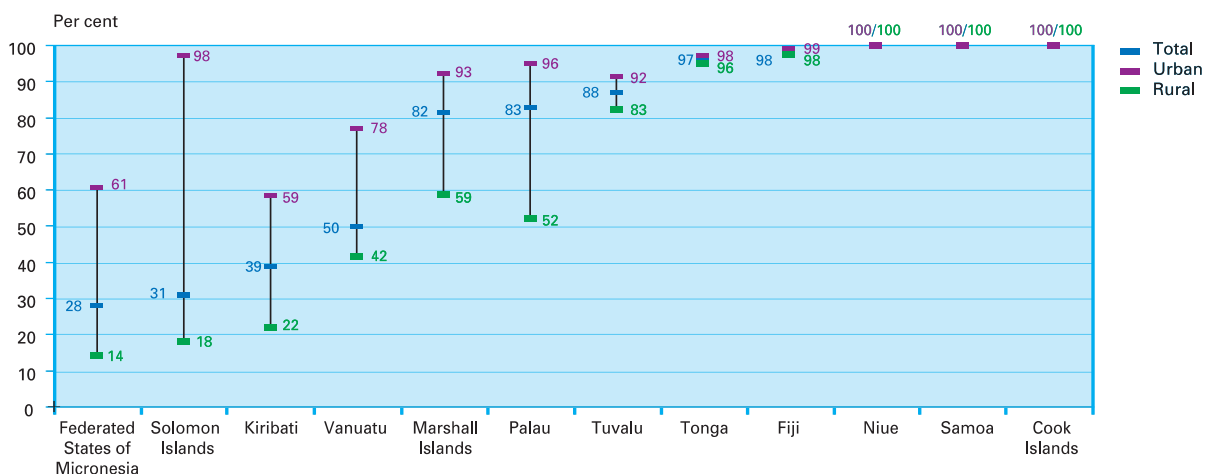
To achieve the MDGs on water and sanitation, countries in this region will have to provide a safe water supply and improved sanitation to at least 210 million and 480 million people respectively by 2015. Taking account of the population growth, the number will likely be considerably higher.

Figure 2.23 Proportion of the population with access to improved sanitation, East Asia, 2002



Source: UNICEF/WHO. Meeting the MDG Drinking Water and Sanitation Target, A Mid-Term Assessment of Progress, 2004

Figure 2.24 Proportion of the population with access to improved sanitation, Pacific Island countries, 2002



Source: UNICEF/WHO. Meeting the MDG Drinking Water and Sanitation Target, A Mid-Term Assessment of Progress, 2004

The challenge

Reaching unserved populations in the East Asia and Pacific region will be difficult and will require not only higher (government) investment but also behavioural change amongst the often hard-to-reach inhabitants of unserved communities. Furthermore, as noted above, the emerging arsenic and fluoride contamination of groundwater sources, as well as the heavy faecal/microbial pollution of surface and groundwater sources, negates some of the hard gained increases in water supply coverage over the past years.

Governments must start the effective monitoring of water quality and ensure the enforcement of water standards as well as continue to improve and strengthen existing infrastructure, giving high priority to the operation and maintenance of WES facilities. There is also an urgent need for new approaches to planning, monitoring and implementation that focus on finding solutions that fit the situation of communities and encourage their full participation in identifying their particular needs for a safe and adequate water supply and improved sanitation.



Good nutrition is necessary for optimal growth and development, both physical and cognitive. Under-nutrition has been found to be an underlying cause of 53 per cent of all deaths in children younger than five years of age.

Most countries in the region are showing improvement in their under-five mortality rates (U5MR), although an overall slow down in the pace of reduction is a cause for concern.

Of all the health and nutrition indicators in the region, maternal mortality ratios have proven the most resistant to change over the last decade.

After more than two decades of interventions, an average of 78 per cent of people in this region are reported to have access to water supply, yet this leaves 418 million people without access.



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