

2008

STATISTICAL YEARBOOK  
FOR ASIA AND THE PACIFIC

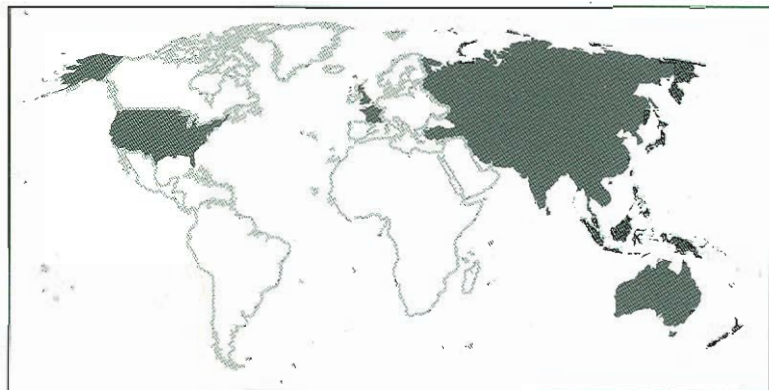


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*The shaded areas of the map represent ESCAP members and associate members.*



2008

# STATISTICAL YEARBOOK FOR ASIA AND THE PACIFIC



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# Preface

This is the second issue of the new *Statistical Yearbook for Asia and the Pacific*. The format was revised in 2007 and attracted encouraging feedback from readers. It is aimed at a non-specialized audience that is interested in this dynamic and diverse region and wishes to see how the economies, societies and environment of Asia and the Pacific are developing in comparison with other world regions.

Rich in information content, the *Yearbook* includes data, charts and a textual overview of well over 200 indicators, covering all spheres of the work of the Economic and Social Commission for Asia and the Pacific, as well as such cross-cutting issues as poverty and gender.

The baseline year for the data is 1990 – intentionally the same as that for the Millennium Development Goals, so the *Yearbook* can also be used for tracking progress towards the Goals. The *Yearbook* uses the internationally comparable data available at the time of publication. For more recent estimates and forecasts, readers can also consult another ESCAP publication, the *Economic and Social Survey of Asia and the Pacific*.

The publication can be downloaded, as a whole or in parts, from the ESCAP website at: [www.unescap.org/stat/data/syb2008/](http://www.unescap.org/stat/data/syb2008/). Bookmark the site for your future reference, not least because it has a link to the *Yearbook* database, which includes full-length time series, including those that were used to derive numerous indicators.

In an effort to keep the format user-friendly and readable, we have avoided some of the technical terms, complex charts and in-depth analysis that are a mainstay of some other ESCAP publications. But

the *Yearbook* compromises neither on statistical standards nor on methodologies.

In order to maximise the comparability of indicators across countries and regions and over time, the *Yearbook* uses annual data from the most respected international data sources. The countries of Asia and the Pacific, are defined as the 58 regional members and associate members of ESCAP. Because these countries are so diverse, the *Yearbook* publishes absolute numbers only for a limited number of series. Instead, it usually expresses indicators as ratios of two series, or in per capita terms, or by unit of land area or of output. Only then can economies as small as Niue be compared with such large ones as China or the Russian Federation.

Major improvements over last year include a wider and more balanced mix of indicators, fewer data gaps, more robust methods of aggregation and improved metadata. On the production side, additional subject-matter experts have contributed from within ESCAP and partner agencies, helping to improve the quality and focus of various chapters. Another major development, though invisible to readers, has been the implementation of a state-of-the-art database to host data for the *Yearbook*, along with other ESCAP statistical data and metadata.

If we are to continue to publish the *Statistical Yearbook for Asia and the Pacific*, we need to be sure that it is useful to readers. For this purpose, it is important to have feedback. If you find the current issue useful or have suggestions for improvements, please complete the readership survey form, inserted or online, and return it to ESCAP. Thank you.



# Acknowledgements

The *Statistical Yearbook for Asia and the Pacific* was prepared under the overall guidance of Pietro Gennari. Ilpo Survo managed the interdivisional project and acted as editor in chief. Substantive Divisions of ESCAP drafted most of the chapters based on data compiled by the Statistics Division.

The Statistical Information Services Section was responsible for compiling the data, calculating the indicators and most of the regional aggregates, for preparing the charts and tables, and compiling and pre-editing the manuscript. Eric Hermouet led the technical data compilation and output preparation, for which the team included Nongnuch Hiranyapaisansakul, Panyasri Phuvakiriyivat, Krisana Boonpriroje, Panpaka Supakalin, Supharat Kaewkhonkaen, Nixie Mabanag and Marisa Limawongpranee. Artur Andrysiak, Joel Jere, Andres Montes and Christian Stoff, of the Statistics Division, drafted substantive inputs and assisted in the review of the chapters. Pornrat Lertyosthanavath and Varaphorn Prapatsakdi provided administrative support.

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ESCAP gratefully acknowledges the contribution of all other agencies that compile and make available internationally comparable statistics on their websites. Without their substantial efforts the *Yearbook* would not have been possible. We hope that the *Yearbook* increases the use of their data and the original data, the sources of which are almost always national statistical systems. The individual data sources used in the *Yearbook* are mentioned after the text for each chapter among the respective indicator definitions and in a separate list of online data sources.

Peter Stalker drafted the overview and edited the whole manuscript, and Marie-Ange Sylvain Holmgren provided the cover and layout design.



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# Overview

## Across the region, fertility is decreasing and life expectancy is increasing...

The Asia-Pacific region is home to 4.1 billion people – more than 60 per cent of the world's population. But population growth has been slowing: since 2000, it has fallen to 1.1 per cent per year. Growth is higher in the landlocked developing countries at 1.9 per cent, in the least developed countries at 1.8 per cent, and in the small island developing States at 1.7 per cent. In the middle-income economies, on the other hand growth is only 1.0 per cent, and in the high-income economies only 0.2 per cent.

Slower population growth reflects a steady decline in the total fertility rate, which, between 2000 and 2005, fell from 2.9 to 2.4 children per woman. The steepest declines were generally in the landlocked developing countries, the least developed countries and in Central Asia. At the same time, people in the region are living longer. Between 1990-1995 and 2000-2005, life expectancy increased for females from 67 to 70 years and for males from 64 to 66 years. As a result, the population is ageing: between 1990 and 2008, the proportion of the population over 65 years of age increased from 5.1 to 7.0 per cent. In most countries the populations are equally divided between males and females, but several countries in South and South-West Asia have sex ratios below 100.

## ...and many more of these people are living in cities...

More than 40 per cent of the region's people now live in urban areas whose total population has been growing at 2.3 per cent per annum. However, the level of urbanization differs considerably between subregions. Most urbanized is the Pacific where over 70 per cent of the population live in cities and towns. At the other end of the scale is South and South-West Asia with only 33 per cent of the population living in urban areas. The Asia-

Pacific region has 11 of the world's 19 megacities, including 6 in the top 10. Across the region in 2005, on average one-third of the urban population lived in slums.

## ...but many are also migrating to other countries inside or outside the region

In 2005, countries in Asia and the Pacific had almost 50 million migrants, 1.2 per cent of the region's total population. The principal destinations were the richer countries, where 6.0 per cent of the population was foreign born. Annual migration rates have been particularly high to Macao, China (10.9 per 1,000 population), Singapore (9.6) and Hong Kong, China (8.7). Afghanistan and Timor-Leste also experienced a high rate of net in-migration owing to the return of former refugees. The main sources of migrants are the low-income and middle-income economies. In the Pacific, for example, countries with high negative migration rates include Fiji (-10.3 per 1,000 population), the Federated States of Micronesia (-17.9), Samoa (-16.6) and Tonga (-16.1).

## Although people are living longer, there are still major health concerns

One of the most sensitive indicators of health is the infant mortality rate. Between 1990 and 2006, the region's infant mortality rate fell from 62 to 43 deaths per thousand live births. A major contributor to child mortality is malnutrition, but here progress has been slower: in a number of countries at least one third of children are moderately or severely underweight. One of the most effective ways of protecting children is immunization. In 2006, 78 per cent of one-year-old children in the region had received at least one dose of measles vaccine.

Many countries are also concerned about high levels of maternal mortality. In 2005, 237,000 mothers across the region died from causes related to pregnancy – a maternal mortality rate of 317

deaths per 100,000 live births. Countries with high maternal mortality rates tend to have low proportions of births attended by skilled health personnel – 14 per cent in Afghanistan, for example, 20 per cent in Bangladesh, and 19 per cent in the Lao People's Democratic Republic.

Across the region, many people are vulnerable to infectious diseases, which in some countries account for more than half the years of life lost. Nevertheless, there have been significant advances. Between 1995 and 2000 the incidence of malaria declined from 155 to 112 per 100,000 population, and by 2005 was down to 80. The incidence is generally higher in the poorest tropical countries. A more widespread infectious disease in the region is tuberculosis – although here, too, there has been progress. Between 2000 and 2006 the prevalence per 100,000 population fell from 323 to 230. On the other hand, in the highly developed countries more deaths nowadays are mainly from non-communicable diseases, which in several countries account for 70 per cent of years of life lost.

Both rich and poor countries continue to be threatened by HIV. Between 2001 and 2007, the average adult HIV prevalence rate decreased slightly, from 0.28 to 0.25 per cent of people aged 15-49. The number of people living with HIV may be increasing as a result of an overall population rise: by 2007, the total number across Asia and the Pacific was 5.9 million, of whom around one third were women.

HIV is of particular concern in North and Central Asia, where between 2001 and 2007 the prevalence doubled, and in the Pacific, where it nearly tripled. In East and North-East Asia and in South-East Asia, over the same period the overall picture remained static – though the prevalence has been increasing in Viet Nam and Indonesia while coming down in Thailand, Cambodia, and Myanmar. Just under 40 per cent of those who need anti-retroviral therapy now receive it. Some of the highest coverage is in Thailand and Cambodia.

Efforts to improve health standards have benefited from greater health expenditure, which in 2005, for the region as a whole, averaged 6.4 per cent of GDP. As might be expected, total expenditure on health, public and private, is greater in richer countries. In five high-income economies, per capita expenditure in 2005 was more than \$PPP 1,000, while in several low-income economies it was less than \$PPP 100.

## More people have access to clean water and safe sanitation

Between 1990 and 2006, the proportion of the region's population with access to improved drinking water sources increased from 74 to 88 per cent, an increase of 1.2 billion people. In East and North-East Asia the increase was from 70 to almost 90 per cent. The lowest coverage is in some Pacific countries, such as Papua New Guinea with 40 per cent and Fiji with 47 per cent.

The greatest gains have been in rural areas: between 1990 and 2006, average access increased from 64 to 84 per cent. In Viet Nam, for example, coverage in the rural areas increased from 43 to 90 per cent. Georgia also saw a noteworthy increase from 58 to 97 per cent. In contrast, the lowest rural access, only 17 per cent, was in conflict-stricken and landlocked Afghanistan. Generally, access in urban areas is almost universal. However, in the least developed countries between 1990 and 2006, coverage dropped from 88 to 80 per cent, largely the result of urban population growth.

On average, across the region 55 per cent of people have access to safe sanitation. The most rapid progress has been in North-East Asia, which between 1990 and 2006 increased access by 18 percentage points, and in South-East Asia, where the increase was 15 percentage points. The situation in South and South-West Asia is more difficult: by 2006 average access was only 35 per cent.

## Many more children are now going to school

The Asia-Pacific region has made considerable progress in education. Between 2000 and 2006, the region's average primary net enrolment ratio (NER) increased from 86 to 89 per cent – though this still means that more than 29 million young children are still not in school. In 2006, the highest primary NERs – above 90 per cent – were in South-East Asia and in East and North-East Asia, as well as in high- and middle-income economies. The lowest rates – below 80 per cent – were in landlocked developing countries, Pacific developing economies, ECO member States and low-income economies.

However, the quality of education is often poor, and many children fail to complete primary school. Moreover, in South and South-West Asia, 1 in 4 children never make it to grade 5 of primary school. These children risk remaining illiterate.



Across the region, 513 million still lack basic skills in reading, writing and numeracy. Even those who complete primary education may go no further. In the Asia-Pacific region, while 9 out of 10 children are enrolled in school, for secondary school the proportion is only 6 out of 10. Fewer still benefit from tertiary education, though the numbers are rising. Between 1999 and 2006, the average tertiary gross enrolment ratio increased from 12 to 20 per cent. Another measure of educational attainment is school life expectancy. In 2006, the average across the region was 10.5 years – male 10.8, female 10.2 – indicating that most young people never reach the tertiary level.

If countries are to improve their education systems, they will need to spend more money. In 2005, on average the region was devoting 3.4 per cent of GDP to public education, which is below the world average of 4.7 per cent. The proportion was particularly low in the low-income and least developed countries – less than 2.5 per cent – and, disturbingly, in some countries the trend is downwards.

### **Asia and the Pacific has enjoyed robust economic growth...**

By 2007, the Asia-Pacific region's real GDP was nearly twice as high as in 1990. The best performers have been the middle-income economies. In 2001, their growth rate was 4.9 per cent but in 2007 reached a remarkable 9.1 per cent. Low-income economies are also making progress, but at a slower pace. Over this period, the region was also gradually changing the sectoral composition of its economies: the share of agriculture in value added declined from 9.5 to 8.1 per cent, that of services remained stable at 52.9 per cent, while that of industry grew from 37.6 to 39 per cent.

Economic growth has benefited from better fiscal management. Many countries have reduced budget deficits to below 1.0 per cent of GDP – levels not seen since the early 1990s. Between 1998 and 2007, overall government revenue went from 13.3 to 17.3 per cent of GDP, while government expenditure fell from 20.3 to 18.1 per cent of GDP – so the gap between the two has narrowed. Inflation on the other hand has increased – as a result of rising prices for food and energy, though rates remain significantly lower than during most of the 1990s.

### **...which has benefitted from increasing global integration...**

In some countries growth has been stimulated by significant flows of foreign direct investment (FDI). In 2007, FDI inflows to the region climbed a further 28 per cent, to reach a total of \$372 billion. The fastest FDI growth was in the low-income economies at 73 per cent, and in the LDCs at 42 per cent. Nevertheless the highest inflows at \$220 billion, and the highest annual increases, were to the middle- and high-income economies. There has also been a steady rise in FDI flows out of the region – with a 39 per cent increase in 2007, to \$291 billion. The internationalization of Asia-Pacific companies is also evident in the UNCTAD list of the top 100 non-financial transnational corporations from developing countries: in 2006, 61 were from Asia and the Pacific.

These and other companies have helped boost international trade. During the period 2000-2006, merchandise exports from Asia and the Pacific grew annually by 12.9 per cent. The leading exporters were China and Japan. But the economies trading most intensively were the smaller ones, such as Malaysia, Singapore and Hong Kong, China, where exports exceeded GDP.

Stronger trade performance has improved current account balances. China in 2007 had a current account surplus of 11.1 per cent of GDP, which contributed further to its massive build-up of foreign reserves. India, on the other hand, recorded another small deficit, of 1.8 per cent of GDP. Some other economies, however, had high current account deficits, in the 23-45 per cent range – as in Maldives, Solomon Islands, Kiribati and the Lao People's Democratic Republic.

Some developing countries in the region have become highly dependent on remittances from overseas migrants. In 2006, these accounted for 28 per cent of GNI in Tonga for example and over 26 per cent in Kyrgyzstan and Tajikistan. Remittances have also been growing steadily in Bangladesh and Sri Lanka, reaching 8.4 per cent of GNI.

For the poorest countries, another important source of foreign funds is overseas development assistance. In 2006, Asia and the Pacific received \$19.0 billion in grants and loans – a decline of 7.1 per cent from the previous year.



## ...and a more productive workforce

Asia and the Pacific accounts for around two thirds of global employment – with 6 of the 10 largest labour markets. Between 1991 and 2006, employment grew on average by 1.5 per cent per year. Growth was faster in the low-income economies at 2.5 per cent, compared with 1.5 per cent in middle-income economies and 0.6 per cent in the high-income economies. Since the 1990s, there has also been an increase in labour productivity, especially in North and Central Asia and China.

Participation rates vary considerably between men and women. For most of the past 17 years, women's participation rates have been consistently high – above 65 per cent – in East and North-East Asia, but they have been much lower in South and South-West Asia, below 35 per cent.

Unemployment over the past 17 years has generally been low and stable, averaging between 4 and 5 per cent. In developing countries, however, the concept of unemployment may be less useful. Here, large proportions of population are engaged in subsistence farming and informal-sector activities, where the issue is more likely to be underemployment. In 2007, in the Asia-Pacific region as a whole, own-account workers or contributing family workers accounted for 59 per cent of employment.

## Economic growth has helped reduce poverty...

The Asia-Pacific region has had some striking successes in poverty reduction. Of the 24 countries in the region for which data are available from both the 1990s and the 2000s, 20 managed to reduce the share of their population living below the revised international poverty line – \$PPP 1.25 at 2005 prices. Some of the faster reductions in poverty were in East and North-East Asia: between 1990 and 2005 the proportion of the population living on less than \$1.25 a day declined from 60.1 to 15.9 per cent. Although less spectacularly than in China, poverty also declined in South-East Asia; the best achievements were in Indonesia, where between 1990 and 2005 poverty declined from 54.3 to 21.4 per cent, and in Viet Nam, where between 1992 and 2006 the rate fell from 63.7 to 21.5 per cent. In South and South-West Asia, one of the most striking achievements was in Pakistan, where between 1990 and 2004 the share of the population living on less than \$1.25 a day declined from 64.7 to 22.6 per cent.

Poverty can also be assessed using a national poverty line. Of the countries for which data are available from both the 1990s and the 2000s, 11 reduced the share of their population living below the national poverty line. Another important measure is the poverty gap ratio, which measures the extent of extreme poverty, indicating how far the extreme poor fall below the national poverty line. In most Asian countries during the last decade, the poverty gap has narrowed.

## ...but done less to reduce inequality

Income inequality can be assessed by considering the proportion of national output consumed by the poorest 20 per cent of the population. This ranges from 10.6 per cent in Japan to 4.3 per cent in China. The poorest tend to receive a smaller share of national income in the middle- and higher-income economies, such as Turkey, the Islamic Republic of Iran, Thailand, Malaysia and Singapore. On the other hand, they do better in India with 8.1 per cent, in Pakistan with 9.1 per cent, and in Bangladesh with 8.8 per cent.

## To sustain growth, the region will need to invest in infrastructure, particularly transport...

More than 60 per cent of the world's container traffic passes through the region's ports. In 2006, of the world's top 25 container ports in terms of throughput, 17 were in Asia and the Pacific. Railway density, on the other hand, remains relatively low. Nevertheless, there has been a substantial increase in the demand for rail transport services. Between 2004 and 2005, total rail freight transport in Asia and the Pacific increased by 4.7 per cent, while the total rail passenger transport increased by 5.1 per cent.

Since 2007, there has been little change in the region's road densities. However, the quality of many roads, particularly those on the Asian Highway routes, has improved significantly. Between 2004 and 2006, 7 per cent, or about 10,000 kilometres, of the routes were upgraded to meet the minimum Asian Highway standards. The Asian Highway network now comprises over 141,000 kilometres of roads passing through 32 countries.

In 2005, the transport sector in Asia and the Pacific was responsible for 1,505 million tons of CO<sub>2</sub> emissions, most of which come from road transport, which in 2006 released 1,224 million tons. In contrast, railways emitted only 64.3 million



tons, a strong justification for a modal shift from road to rail.

### **...and in communications technology**

The main form of telecommunication for the majority of people in low-income economies is the mobile telephone. For the region as a whole, mobile telephone subscriptions have surpassed those for fixed-line systems. Nevertheless, the number of fixed-line connections has also been increasing, if more slowly: between 2003 and 2007, the number of lines per 100 people increased from 13 to 17. Although there has also been a rapid increase in broadband networking – the region's average broadband penetration is still low: in 2007, there were 3.5 broadband subscribers per 100 people. For this purpose, lower-income economies mostly use wired infrastructure – though they now have the option of peer-to-peer wireless.

### **Better transport and communications will increase opportunities for tourism**

For tourism, Asia and the Pacific has outperformed the rest of the world. Between 1990 and 2006, its share of global tourism increased from 17.4 to 24.7 per cent – 209 million arrivals. Some of the strongest growth in 2006 was in South-East Asia, where total international arrivals increased by 9.2 per cent. Some economies are highly dependent on tourism. In Macao, China, for example, revenues from tourism provide around two thirds of GDP. Dependence is also high in many small island States.

### **But rapid economic development has taken its toll on the environment**

In Asia and the Pacific, only 30 per cent of the land area is covered by forests – one of the lowest proportions among the global regions. For the

period 1990-2005, more than half the reporting countries lost more forest cover. In Viet Nam and Nepal the rate of deforestation accelerated. However, some countries were able to report increases in their cover of primary forest – notably Japan, Turkey and Kyrgyzstan.

Despite volatile oil prices, most countries continued to increase their total primary energy consumption. Of this, 80 per cent came from fossil fuels and the remainder predominantly from nuclear power, hydropower and traditional fuels, such as wood and animal dung.

Rising energy consumption has also increased greenhouse gas emissions – currently some 12 billion tons annually – though emissions per capita remain relatively low at 3.2 tons per person per year. The largest emitters are the middle-income economies, such as China, the Russian Federation, Indonesia, Thailand and Malaysia – which are important centres of world production. The region also contributes 50 per cent of global emissions of sulphur dioxide, mainly from burning fossil fuels, especially coal.

A further environment concern is over-extraction of water – of which around four fifths is for agriculture. The situation is particularly serious in North and Central Asia – in Turkmenistan, Uzbekistan and Azerbaijan. But India, Pakistan and Sri Lanka have also seen a surge in withdrawals, as has China.

Environmental changes may also be contributing to natural disasters. In the first nine months of 2008, a total of 28 disasters affected more than 101 million people, killed more than 223,000 and caused more than \$103 billion in economic damage. Among the most serious events were earthquakes, floods and typhoons.

For these and many other facts, read on.

# 1 Demographic trends

The Asia-Pacific region is home to 4.1 billion people – more than 60 per cent of the world's population. Fertility is decreasing and life expectancy is increasing.

The world's most populous countries are China, with 1.3 billion people, and India, with 1.2 billion. Together they account for 61 per cent of the population of the region and one-third of the population of the world. Indonesia, Pakistan, Bangladesh, the Russian Federation and Japan are also among the world's ten most populous countries.

The Asia-Pacific region is, however, demographically very diverse. It also has many of the world's smallest countries or areas. In the Pacific, nine small island developing States have populations of less than 100,000, including four with fewer than 15,000 people.

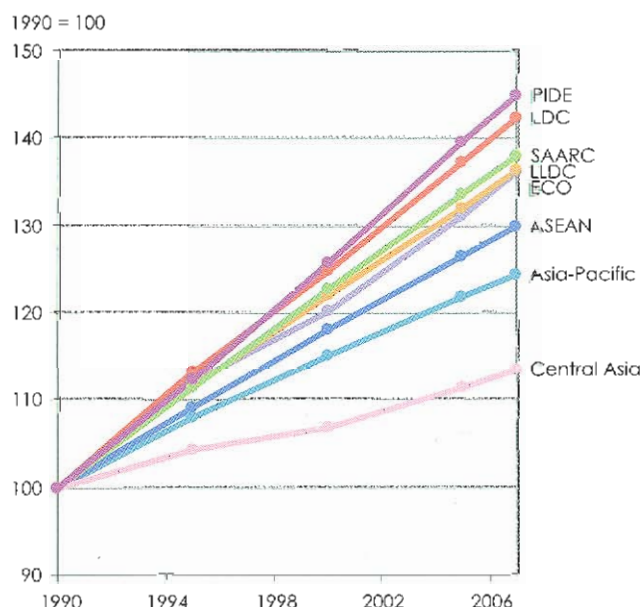
Since 1990, the region's population has been growing more slowly than that of the rest of the world. Between 1990 and 2008 it grew 1.3 per cent annually. This slowing has been even more marked in recent years: since 2000, annual growth has fallen to 1.1 per cent – the lowest rate among the world's developing regions. The average growth rate for 2000-2005 is composed, per 1,000 population, of a crude birth rate of 19.3, a crude death rate of 7.8 and a net migration rate of -0.3.

Because more than half the region's population are in China and India these two countries largely determine the region's statistical averages. This can obscure considerable variance among other countries or groups of countries. Thus, although the average population growth rate for Asia and the Pacific as a whole is 1.1 per cent, in the landlocked developing countries it is 1.9 per cent, in the least developed countries it is 1.8 per cent, in the small island developing States it is 1.7 per cent, in the high-income economies it is 0.2 per cent, and in the middle-income economies it is 1.0 per cent.

The region's highest population growth rates are in Afghanistan and Timor-Leste. Both countries have high rates natural increase (births minus

Figure 1.1

Population growth for selected Asia-Pacific groupings, 1990-2007



deaths) and have seen their overall growth rates boosted by the return of former refugees. Other countries currently experiencing population growth rates of 2.0 per cent or more are American Samoa, Brunei Darussalam, Marshall Islands, Nepal, Papua New Guinea, Solomon Islands and Vanuatu.

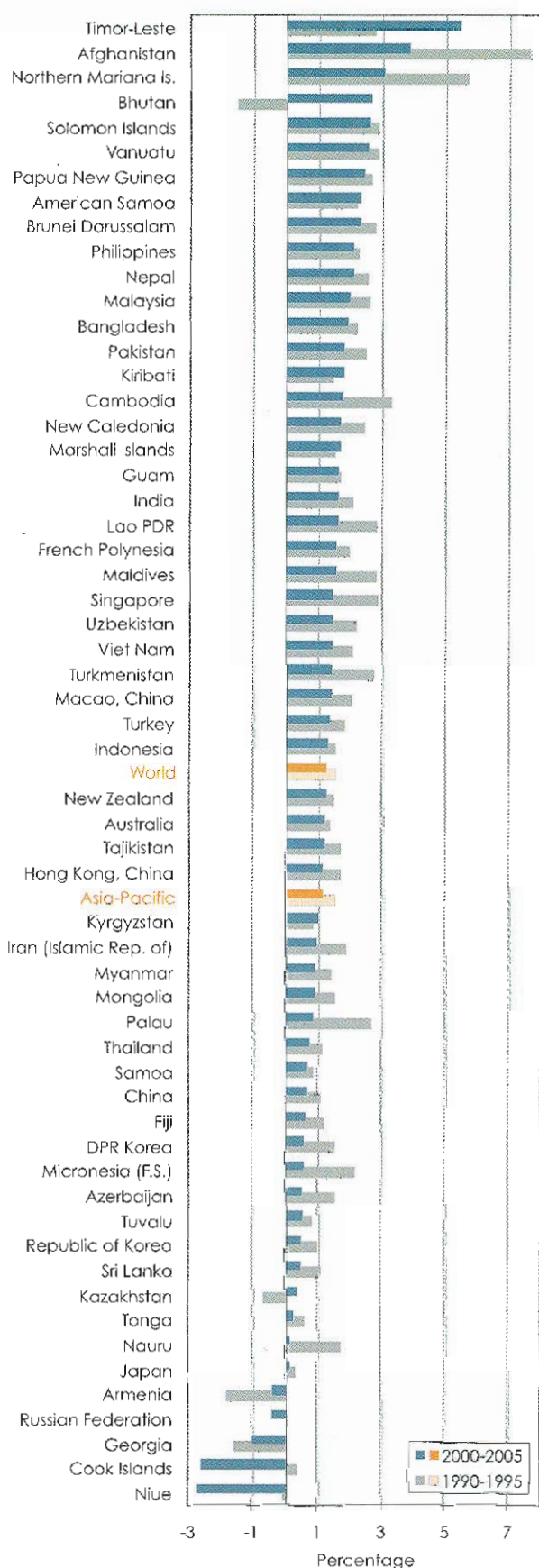
In East and North-East Asia, only in Hong Kong, China, is the population growth rate above 1.0 per cent, and two thirds of this growth results from net in-migration. Countries where growth rates are positive but low – less than 1.0 per cent a year – include Azerbaijan, Kazakhstan, Myanmar, Sri Lanka, Thailand, and several Pacific island developing economies whose growth rates have been reduced by net outmigration.

In Japan the population size has become essentially stationary, while in the Russian Federation the population is declining because death rates exceed birth rates. Armenia and Georgia also have negative population growth rates because natural increase is low and there is net outmigration. In the Pacific, the populations of Cook Islands



Figure 1.2

Average annual population growth, Asia and the Pacific, 1990-1995 and 2000-2005



and Niue are similarly declining because of out-migration.

The crude birth rate is calculated as the number of births in a year per 1,000 population. This is likely to be higher when a high proportion of women are of childbearing age. The most useful indicator for this is the total fertility rate (TFR) which is the number of children that a woman would bear in her lifetime if she followed current levels of fertility, and is calculated for five-year age groups of women aged 15-49. In Asia and the Pacific, the TFR has declined steadily and is significantly lower than the global average: in the decade between 1990-1995 and 2000-2005, it fell from 2.9 to 2.4 children per woman – a consequence of both government-supported reproductive health programmes and rapid economic and social growth.

Trends for TFRs vary widely across subregions. The steepest declines have generally been in countries that previously had the highest rates. Thus, between 1990-1995 and 2000-2005 the TFR for the region as a whole declined by 0.5 children per woman, but in the landlocked developing countries, the least developed countries and in Central Asia, the TFR fell by 0.9. In the SAARC countries the decline was 0.8, and in the ASEAN countries, it was 0.6.

In other countries the TFR remained high. In 2000-2005 it was above 3.0 children per woman in Afghanistan, Bangladesh, Cambodia, India, the Lao People's Democratic Republic, Nepal, Pakistan, the Philippines, Tajikistan and Timor-Leste.

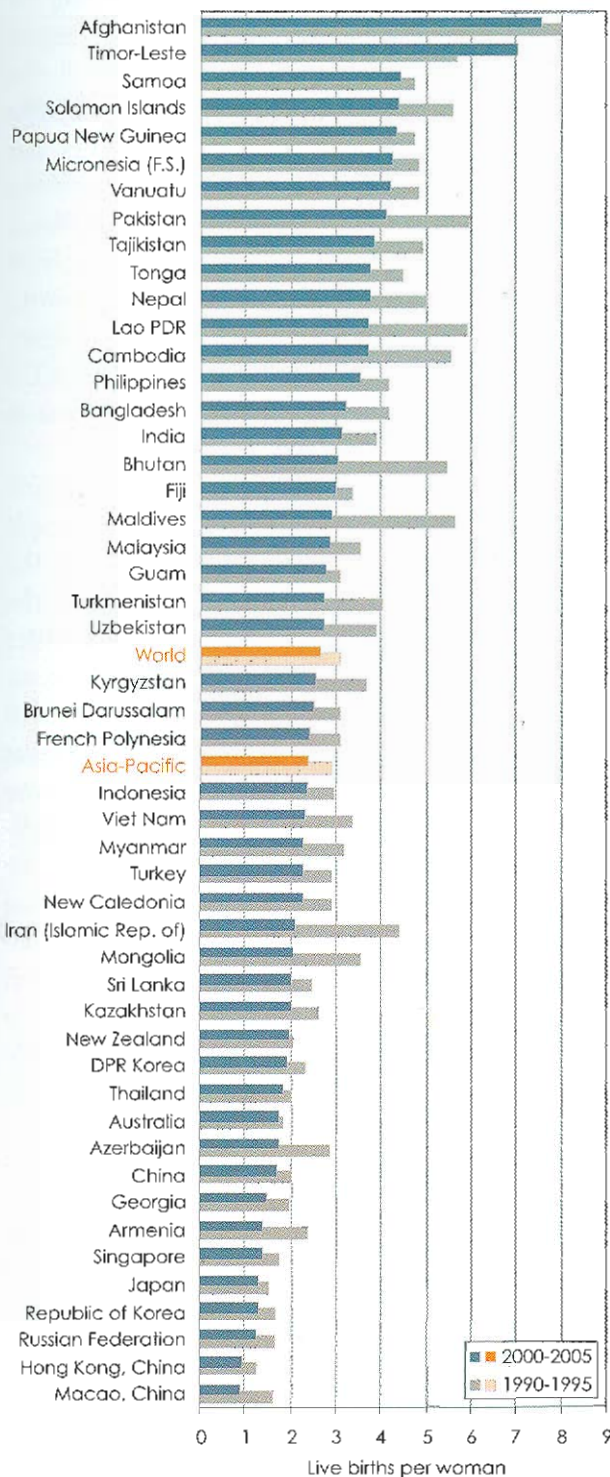
The population will remain stable if couples on average have 2.1 children. This is the "replacement rate", which is slightly higher than two to take into account the deaths of children or young people. In the absence of international migration, a sustained TFR of less than 2.1 will cause the total population to decline. In East and North-East Asia all countries or areas have TFRs below replacement level. Nevertheless, aside from Japan, their populations have yet to decline because their previously high fertility levels have bequeathed them high proportions of young adults. Fertility is also currently below replacement level in Australia, New Zealand, Singapore, Sri Lanka, Thailand and in several countries in North and Central Asia.

For both mothers and children, one major contributor to premature death is early child-bearing. Consequently, most reproductive health programmes attempt to raise the age at which women first give birth. For this purpose, one



Figure 1.3

Fertility rates in Asia and the Pacific, 1990-1995 and 2000-2005



valuable indicator is the adolescent fertility rate, which is the average number of live births annually per 1,000 women aged 15-19 years. For Asia and the Pacific as a whole, the rate for the period 2000-2005 was 40.6. In the least developed countries, however, it was 114.5 – the same as for the African region. A number of countries had very high rates – more than 100 births – as in Afghanistan, Bangladesh and Nepal. The rate was also quite high

– greater than 60 – in India, the Lao People's Democratic Republic, Papua New Guinea and Timor-Leste.

As with the crude birth rate, the crude death rate is also influenced by the population's age composition. For that reason, a more useful indicator for comparing mortality levels is the expectation of life at birth. Asia and the Pacific has already had relatively high life expectancies for some time, so over the past decade the increases have been modest. Between 1990-1995 and 2000-2005, female life expectancy increased from 67 to 70 years and male life expectancy from 64 to 66 years. Both are around two years more than the global average. Generally, life expectancies are strongly influenced by levels of economic development. Thus in the period 2000-2005, female life expectancy in the region's low-income economies was only 64.4 years, while in the middle-income economies it was 73.0 years, and in the high-income economies it was 83.8 years. Among the countries with the lowest female life expectancies – below 60.0 years – were Afghanistan, Cambodia, Papua New Guinea and Timor-Leste.

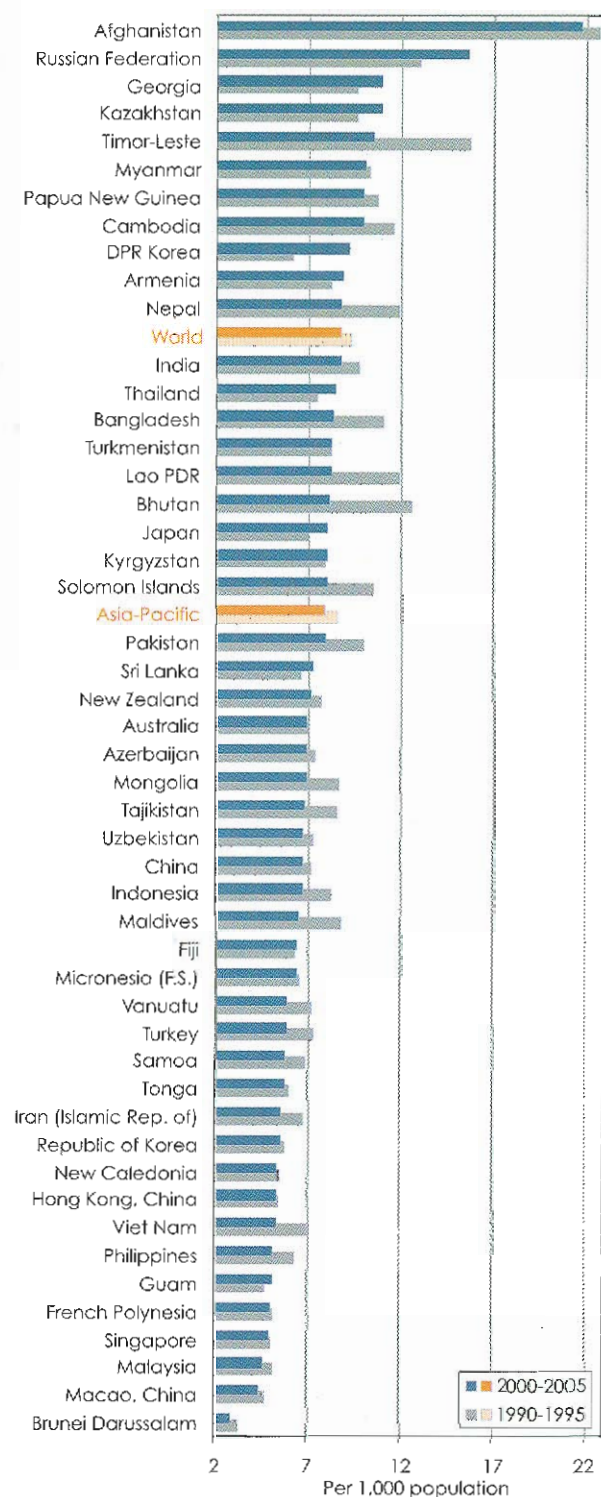
In nearly all countries in Asia and the Pacific, women live longer than men. This is partly because of genetic differences that favour females, but also because men face occupational hazards, and are more likely to die in road accidents or make more risky lifestyle choices. Women's advantage does, however, differ from one country to another. For the region as whole the female advantage in life expectancy is about four years, but in a number of countries/areas it is five years or more: in Cambodia; Hong Kong, China; Japan; Mongolia; Myanmar; the Republic of Korea; Thailand; and in all the countries in North and Central Asia and in several Pacific island States. By far the greatest disparity, however, is in the Russian Federation, where in the period 2000-2005 women on average lived 13.3 years longer than men. Here male life expectancy, at 58.5 years, was on a par with that in the land-locked developing countries and the least developed countries.

As populations progress through the demographic transition, from high to low fertility and mortality, their age composition shifts from one with a relatively high proportion of young people to one with a lower proportion of young people but a higher percentage of older people. However in the middle stages of such a transition, there is a "window of demographic opportunity" – when the proportion of younger people has declined but



Figure 1.4

Crude death rates, Asia and the Pacific, 1990-1995 and 2000-2005



the proportion of older people has not yet increased significantly. With large numbers of young people working, dependency rates are thus quite low. A country at this stage should have a couple of decades of high productivity, and should also be able either to reduce expenditures on health and education or invest in higher quality services.

As a result of the demographic transition, countries will also have fewer children. Between

1990 and 2008, the proportion of the region's population aged 0-14 years declined steadily, from 32.7 to 26.0 per cent in 2008 – slightly below the world average – reflecting lower fertility during the previous 15 years. But it does vary according to the level of economic development. In 2008 the proportion of the population aged 0-14 years was 25.5 per cent in the middle-income economies, but only 15.2 per cent in the high-income economies. On the other hand, in the low-income economies, the landlocked developing countries, the least developed countries and in the small island developing States, the proportion was much higher – about one third. In these countries, both families and governments have the opportunity to invest in the potential of young people.

Over the same period, the high-income economies have gained many more older people who are dependent on younger workers. For the region as a whole, between 1990 and 2008 the proportion of the population age 65 or older increased relatively slowly, from 5.1 to 7.0 per cent. But this proportion varied greatly by country income level. Among low-income economies it was only 4.4 per cent, and among middle-income economies it was 6.8 per cent, but among high-income economies it was 17.3 per cent. Japan is the most striking example. For five decades it has had low fertility – since around 1955 the TFR has been below replacement level. By 2008, 21.3 per cent of the population was over 65. No other country or area in the region has a proportion of older people above 15 per cent, although a number have proportions between 10 and 15 per cent – Armenia; Australia; Georgia; Hong Kong, China; New Zealand and the Russian Federation.

In most countries, the populations are equally divided between males and females, but some countries have a lower proportion of women. The female-to-male sex ratio, the number of females per 100 males, can be low for a number of reasons: a low percentage of female births; lower female life expectancy; a preponderance of in-migration of males or a preponderance of out-migration of females. Conversely, a high proportion of females can result from lower male life expectancy, higher rates of male in-migration or higher rates of female out-migration.

The Asia-Pacific region has examples of both cases. Thus in several countries in South and South-West Asia the sex ratio is considerably below 100, while in most countries in North and Central Asia it is above 100. The low sex ratios in South and



Figure 1.5

Proportion of population aged 0-14, Asia and the Pacific, 1990 and 2007

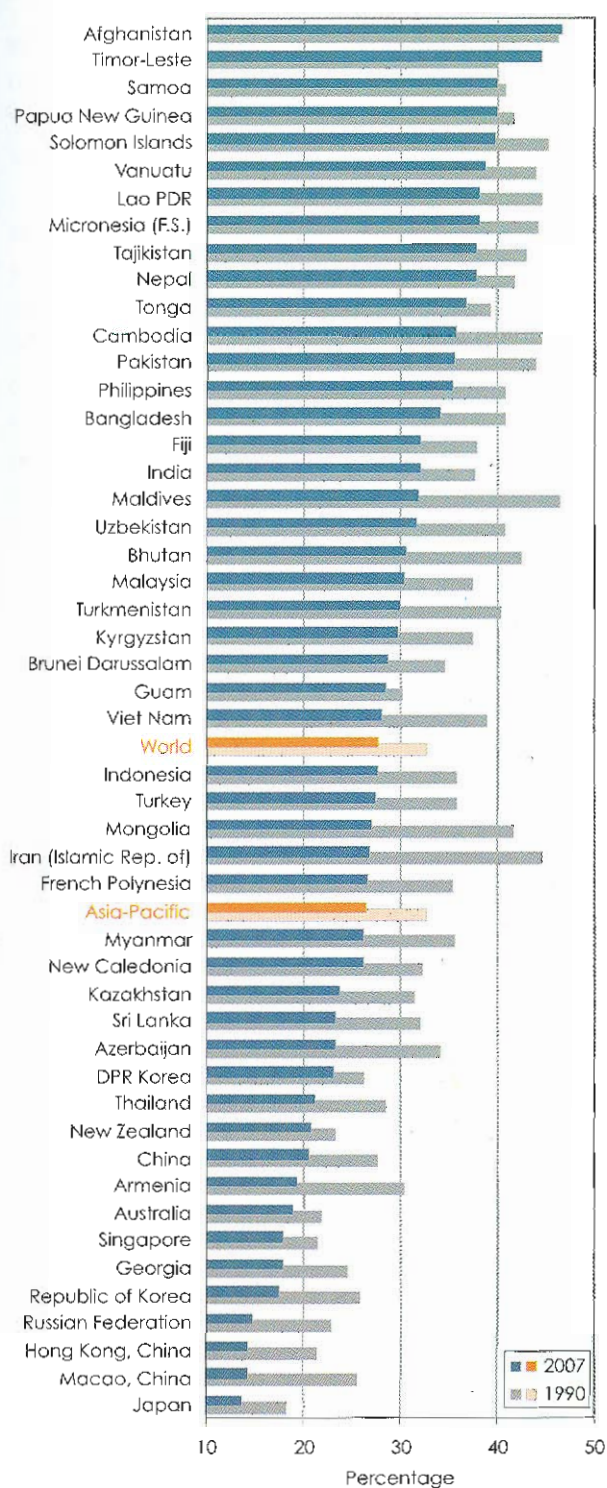


Figure 1.6

Females per hundred males, in Asia and the Pacific, 1990 and 2006

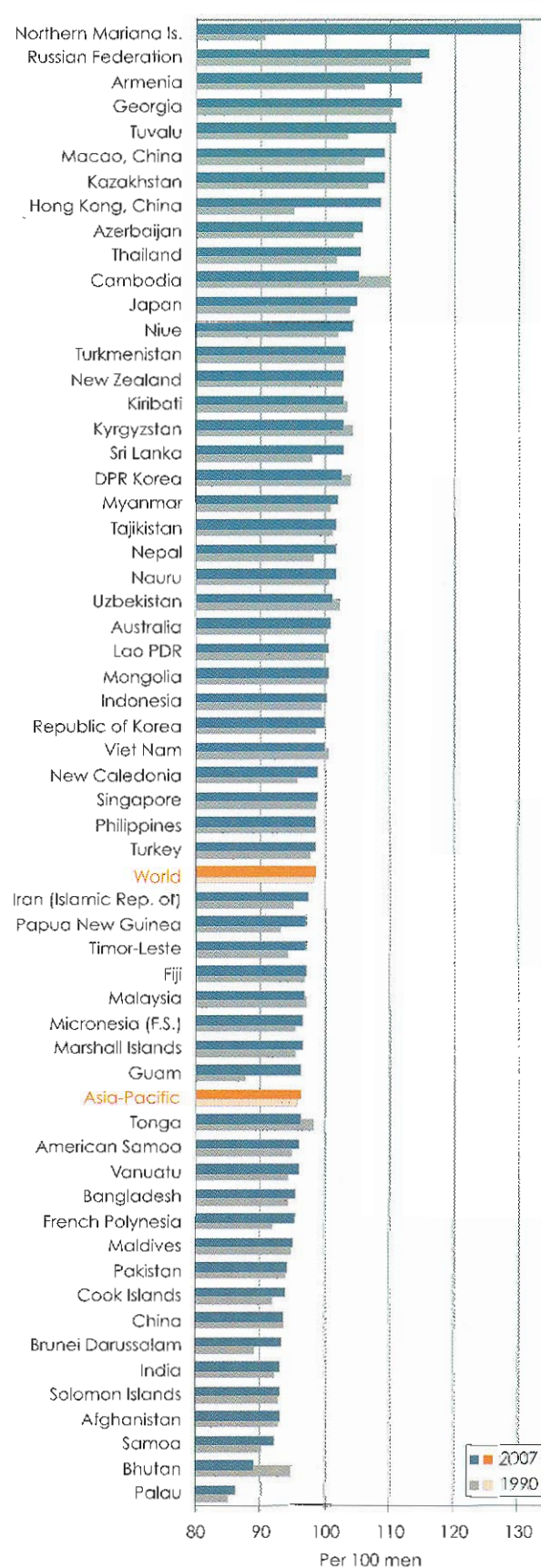
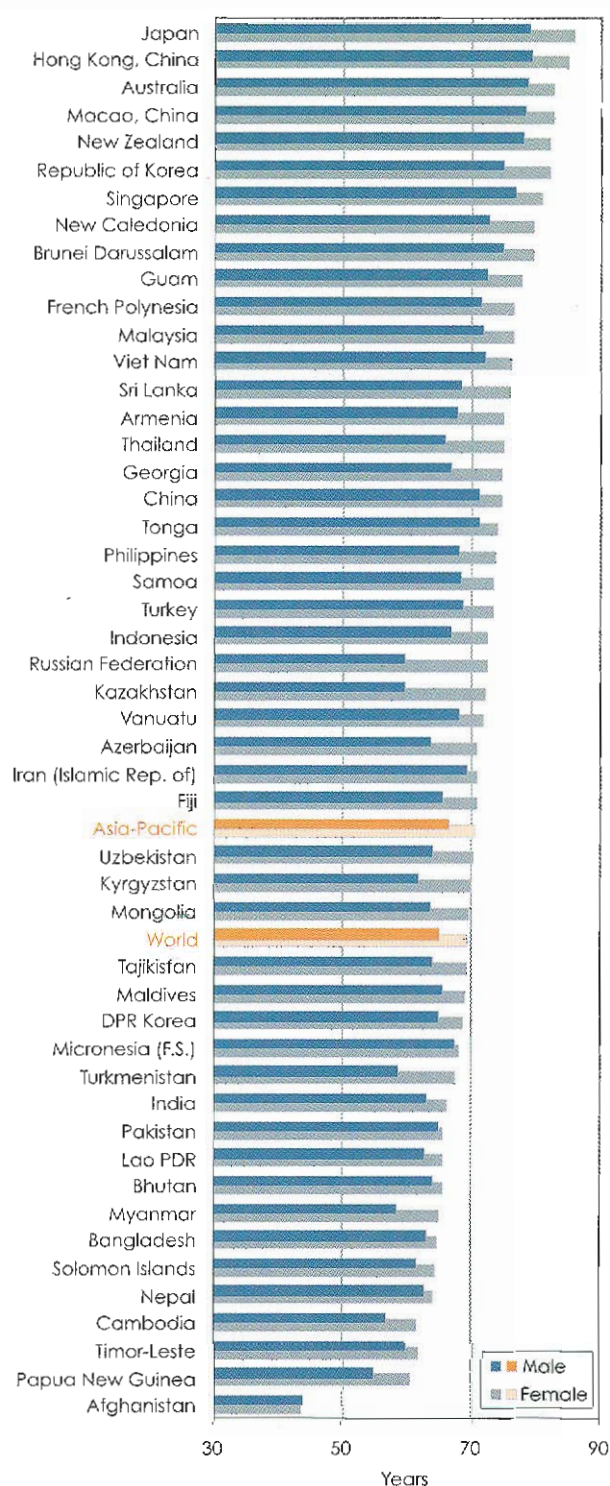




Figure 1.7

Life expectancy at birth for females and males, Asia and the Pacific, 2007



South-West Asia result from either lower sex ratios at birth or from mortality rates that do not favour females. In North and Central Asia, the high sex ratios reflect higher female life expectancies.

For children, international migration is unlikely to be highly sex-selective, so the sex ratio for the population aged 0-14 years is mostly determined by the sex ratio at birth and by infant and child mortality. In most national populations, the sex ratio at birth is close to 95 females per 100 males. However, even at young ages, boys are more likely to die than girls so while at birth the number of females per 100 males is around 95, by age 20 it is likely to be around 100. If the sex ratios for the population aged 0-14 years are significantly below 95 this implies that the ratio is unusually low at birth or that female infant or child mortality rates are relatively high. Countries with particularly low numbers of females per 100 males aged 0-14 years include Armenia, Azerbaijan, China, Georgia, India and the Republic of Korea.



**Population size (thousands)**

De facto mid-year population, covering all residents, regardless of legal status or citizenship, except for refugees not permanently settled in the country of asylum.

**Aggregates:** Sum of individual country values. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Population growth rate (% per annum)**

The average annual rate of change in the total population over a five-year period, starting and ending in the middle of the years indicated. **Aggregates:** Averages are calculated using total population as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Crude birth rate (per 1,000 population)**

The total number of births in a population during a given period divided by the total number of person-years lived by the population during that period, generally approximated by the size of the population at the mid-point of the period multiplied by the length of the period in years.

**Aggregates:** Averages are calculated using total population as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Crude death rate (per 1,000 population)**

The ratio of the number of deaths occurring during a calendar year to the number exposed to the risk of dying during the same period, equivalent to the mean population or average population for the period. **Aggregates:** Averages are calculated using total population as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Proportion of children in total population (percentage)**

The proportion of children aged 0-14 in the total population. **Aggregates:** Averages are calculated using the total population as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Proportion of elderly in total population (percentage)**

The proportion of people aged 65 or older in the total population. **Aggregates:** Averages are calculated using total population as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Population sex ratio (women per 100 men)**

The number of women divided by the number of men in the total population, expressed per 100 men. **Aggregates:** Averages are calculated as the sum of women population divided by the sum of men population. **Source:** Calculated by ESCAP using data from World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Child sex ratio (girls per 100 boys)**

The number of girls divided by the number of boys in the total population aged 0-14 years. **Aggregates:** Averages are calculated as the sum of girls aged 0-14 divided by the sum of boys aged 0-14. **Source:** Calculated by ESCAP using data from World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Fertility rate (live births per woman)**

The number of children a woman would have by the end of her reproductive period if she experienced the current prevailing age-specific fertility rates throughout her childbearing life. **Aggregates:** Averages are calculated using women aged 15-49 as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Adolescent fertility rate (live births per 1,000 girls aged 15-19)**

The number of births to women aged 15-19 divided by the number of women in the same age group. Reported as average number of births per thousand women for five-year periods starting and ending in the middle of the years indicated. **Aggregates:** Averages are calculated using women aged 15-19 as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

**Life expectancy at birth (years)**

The number of years a newborn infant would live if prevailing patterns of age-specific mortality rates at the time of birth were to stay the same throughout the child's life. Data are disaggregated by sex. **Aggregates:** Averages have been calculated by the United Nations Population Division using age-sex specific patterns of mortality. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).



## 1. Demographic trends

### 1.1 Population

	Total population					Population growth rate			
	Thousands					Per cent per annum			
	1990	1995	2000	2005	2007	90-95	95-00	00-05	2007
<b>East and North-East Asia</b>	<b>1 343 912</b>	<b>1 414 933</b>	<b>1 476 295</b>	<b>1 522 472</b>	<b>1 538 927</b>	<b>1.0</b>	<b>0.9</b>	<b>0.6</b>	<b>0.5</b>
China	1 149 069	1 213 732	1 269 962	1 312 979	1 328 630	1.1	0.9	0.7	0.6
DPR Korea	20 143	21 715	22 946	23 616	23 790	1.5	1.1	0.6	0.3
Hong Kong, China	5 704	6 206	6 662	7 057	7 206	1.7	1.4	1.2	1.0
Japan	123 537	125 472	127 034	127 897	127 967	0.3	0.2	0.1	0.0
Macao, China	372	412	441	473	481	2.0	1.4	1.4	0.8
Mongolia	2 216	2 389	2 470	2 581	2 629	1.5	0.7	0.9	0.9
Republic of Korea	42 869	45 008	46 780	47 870	48 224	1.0	0.8	0.5	0.4
<b>South-East Asia</b>	<b>440 574</b>	<b>481 288</b>	<b>519 996</b>	<b>557 669</b>	<b>572 500</b>	<b>1.8</b>	<b>1.6</b>	<b>1.4</b>	<b>1.3</b>
Brunei Darussalam	257	295	333	374	390	2.8	2.5	2.3	2.1
Cambodia	9 698	11 395	12 780	13 956	14 444	3.3	2.3	1.8	1.7
Indonesia	182 847	197 411	211 693	226 063	231 627	1.5	1.4	1.3	1.2
Lao PDR	4 076	4 692	5 224	5 664	5 859	2.9	2.2	1.6	1.7
Malaysia	18 103	20 594	23 274	25 653	26 572	2.6	2.5	2.0	1.8
Myanmar	40 147	43 134	45 884	47 967	48 798	1.4	1.2	0.9	0.9
Philippines	61 226	68 587	76 213	84 566	87 960	2.3	2.1	2.1	2.0
Singapore	3 016	3 478	4 017	4 327	4 436	2.9	2.9	1.5	1.2
Thailand	54 291	57 523	60 666	63 003	63 884	1.2	1.1	0.8	0.7
Timor-Leste	740	850	819	1 067	1 155	2.8	-0.8	5.5	3.7
Viet Nam	66 173	73 330	79 094	85 029	87 375	2.1	1.5	1.5	1.4
<b>South and South-West Asia</b>	<b>1 249 903</b>	<b>1 392 043</b>	<b>1 529 016</b>	<b>1 660 369</b>	<b>1 713 272</b>	<b>2.2</b>	<b>1.9</b>	<b>1.7</b>	<b>1.6</b>
Afghanistan	12 659	18 256	20 737	25 067	27 145	7.6	2.6	3.9	4.1
Bangladesh	113 049	126 297	139 434	153 281	158 665	2.2	2.0	1.9	1.7
Bhutan	547	507	559	637	658	-1.5	2.0	2.7	1.5
India	860 195	954 282	1 046 235	1 134 403	1 169 016	2.1	1.9	1.6	1.5
Iran (Islamic Rep. of)	56 674	62 199	66 125	69 421	71 208	1.9	1.2	1.0	1.3
Maldives	216	248	273	295	306	2.8	1.9	1.6	1.8
Nepal	19 114	21 672	24 419	27 094	28 196	2.5	2.4	2.1	2.0
Pakistan	112 991	127 766	144 360	158 081	163 902	2.5	2.5	1.8	1.8
Sri Lanka	17 114	18 080	18 714	19 121	19 299	1.1	0.7	0.4	0.5
Turkey	57 345	62 736	68 158	72 970	74 877	1.8	1.7	1.4	1.3
<b>North and Central Asia</b>	<b>215 242</b>	<b>218 569</b>	<b>218 667</b>	<b>218 187</b>	<b>218 175</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Armenia	3 545	3 227	3 082	3 018	3 002	-1.9	-0.9	-0.4	-0.2
Azerbaijan	7 212	7 791	8 143	8 352	8 467	1.6	0.9	0.5	0.7
Georgia	5 460	5 033	4 720	4 473	4 395	-1.6	-1.3	-1.1	-0.8
Kazakhstan	16 530	15 919	14 954	15 211	15 422	-0.7	-1.2	0.3	0.7
Kyrgyzstan	4 395	4 591	4 946	5 204	5 317	0.9	1.5	1.0	1.1
Russian Federation	148 615	149 124	147 423	143 953	142 499	0.1	-0.2	-0.5	-0.5
Tajikistan	5 303	5 772	6 173	6 550	6 736	1.7	1.4	1.2	1.4
Turkmenistan	3 668	4 193	4 502	4 833	4 965	2.7	1.4	1.4	1.3
Uzbekistan	20 515	22 918	24 724	26 593	27 372	2.2	1.5	1.5	1.5
<b>Pacific</b>	<b>26 718</b>	<b>28 979</b>	<b>31 089</b>	<b>33 394</b>	<b>34 250</b>	<b>1.6</b>	<b>1.4</b>	<b>1.4</b>	<b>1.2</b>
Australia	16 873	18 072	19 139	20 310	20 743	1.4	1.2	1.2	1.0
American Samoa	47	53	57	64	67	2.2	1.6	2.3	2.1
Cook Islands	18	18	16	14	13	0.3	-2.4	-2.6	-2.3
Fiji	724	768	802	828	839	1.2	0.9	0.6	0.6
French Polynesia	195	216	236	256	263	2.0	1.8	1.6	1.4
Guam	134	146	155	169	173	1.7	1.3	1.7	1.4
Kiribati	72	77	84	92	95	1.5	1.7	1.8	1.6
Marshall Islands	47	51	52	57	59	1.5	0.4	1.7	2.3
Micronesia (F.S.)	96	107	107	110	111	2.2	0.0	0.5	0.5
Nauru	9	10	10	10	10	1.7	0.1	0.1	0.2
New Caledonia	171	193	215	234	242	2.5	2.2	1.7	1.6
New Zealand	3 411	3 673	3 854	4 097	4 179	1.5	1.0	1.2	0.9
Niue	2	2	2	2	2	-0.1	-3.5	-2.8	-2.0
Northern Mariana Is.	44	58	69	80	84	5.7	3.6	3.1	2.1
Palau	15	17	19	20	20	2.7	2.5	0.9	0.4
Papua New Guinea	4 131	4 709	5 381	6 070	6 331	2.7	2.7	2.4	2.1
Samoa	161	168	177	184	187	0.8	1.1	0.7	0.9
Solomon Islands	314	362	415	472	496	2.9	2.8	2.6	2.4
Tonga	95	97	98	99	100	0.6	0.1	0.3	0.5
Tuvalu	9	10	10	10	11	0.8	0.7	0.5	0.4
Vanuatu	149	172	190	215	226	2.9	2.0	2.6	2.4
<b>Asia and the Pacific</b>	<b>3 276 348</b>	<b>3 535 812</b>	<b>3 775 064</b>	<b>3 992 091</b>	<b>4 077 125</b>	<b>1.5</b>	<b>1.3</b>	<b>1.1</b>	<b>1.1</b>
LLDC	99 781	111 929	119 933	130 803	135 769	2.3	1.4	1.8	1.9
LDC	200 952	227 839	251 005	276 003	286 241	2.5	2.0	1.9	1.8
ASEAN	439 834	480 438	519 178	556 602	571 345	1.8	1.6	1.4	1.3
ECO	297 291	332 144	362 824	392 281	405 412	2.2	1.8	1.6	1.7
SAARC	1 135 885	1 267 107	1 394 732	1 517 979	1 567 187	2.2	1.9	1.7	1.6
Central Asia	66 627	69 446	71 244	74 234	75 677	0.8	0.5	0.8	1.0
Pacific island dev. econ.	6 434	7 234	8 097	8 967	9 329	2.4	2.3	2.1	1.9
Low-income	432 707	486 609	536 519	584 643	604 427	2.4	2.0	1.7	1.7
Middle-income	2 647 018	2 845 936	3 029 570	3 194 268	3 258 275	1.5	1.3	1.1	1.0
High-income	196 585	203 227	208 937	213 144	214 387	0.7	0.6	0.4	0.3
<b>Other world regions</b>									
Africa	637 421	726 334	820 959	922 011	964 973	2.6	2.5	2.3	2.3
Europe	572 707	579 389	581 078	587 134	588 785	0.2	0.1	0.2	0.1
Latin America & Carib.	444 271	483 860	523 048	557 979	572 206	1.7	1.6	1.3	1.3
North America	283 920	299 670	315 672	332 245	338 831	1.1	1.0	1.0	1.0
Other countries/areas	80 211	93 980	108 303	123 292	129 305	3.2	2.9	2.6	2.4
<b>World</b>	<b>5 294 879</b>	<b>5 719 045</b>	<b>6 124 123</b>	<b>6 514 751</b>	<b>6 671 226</b>	<b>1.6</b>	<b>1.4</b>	<b>1.2</b>	<b>1.2</b>



## 1.2 Birth and death

	Crude birth rate				Crude death rate			
	Per 1,000 population				Per 1,000 population			
	90-95	95-00	00-05	2007	90-95	95-00	00-05	2007
<b>East and North-East Asia</b>	<b>17.8</b>	<b>15.2</b>	<b>13.3</b>	<b>12.5</b>	<b>7.0</b>	<b>6.8</b>	<b>6.8</b>	<b>7.2</b>
China	18.7	15.8	13.7	13.1	7.1	6.7	6.7	7.0
DPR Korea	20.7	18.8	15.3	13.3	6.2	7.8	9.2	9.9
Hong Kong, China	12.1	10.1	8.2	7.6	5.4	5.2	5.3	5.8
Japan	9.8	9.5	9.0	8.4	7.0	7.5	8.0	8.8
Macao, China	16.8	11.0	7.6	7.3	4.6	4.2	4.3	4.6
Mongolia	28.8	21.8	19.7	18.5	8.6	7.4	6.9	6.6
Republic of Korea	15.7	13.4	10.8	9.3	5.7	5.4	5.5	5.8
<b>South-East Asia</b>	<b>25.9</b>	<b>23.0</b>	<b>21.2</b>	<b>19.8</b>	<b>7.8</b>	<b>7.1</b>	<b>6.7</b>	<b>6.4</b>
Brunei Darussalam	27.5	25.4	23.7	21.8	3.2	2.9	2.8	2.8
Cambodia	40.3	32.4	27.6	26.4	11.6	10.5	9.9	9.1
Indonesia	24.3	22.0	20.7	18.9	8.2	7.2	6.7	6.3
Lao PDR	41.1	34.4	29.2	26.7	11.9	9.5	8.2	7.1
Malaysia	28.1	24.6	22.9	20.9	5.0	4.7	4.5	4.5
Myanmar	25.4	22.0	19.8	18.2	10.3	9.9	10.0	9.8
Philippines	31.6	29.3	27.9	26.1	6.3	5.5	5.1	4.8
Singapore	17.4	14.1	10.2	8.2	4.9	4.8	4.9	5.2
Thailand	18.4	16.9	15.5	14.6	7.5	8.1	8.4	8.6
Timor-Leste	43.6	44.7	42.8	41.8	15.7	12.4	10.4	9.0
Viet Nam	27.8	22.0	19.9	18.9	7.0	5.7	5.2	5.1
<b>South and South-West Asia</b>	<b>31.6</b>	<b>28.2</b>	<b>25.5</b>	<b>23.8</b>	<b>9.8</b>	<b>9.0</b>	<b>8.5</b>	<b>8.1</b>
Afghanistan	52.1	51.7	50.1	48.3	22.7	22.4	21.7	20.1
Bangladesh	33.4	29.7	27.7	25.2	11.0	9.3	8.3	7.6
Bhutan	35.7	29.1	22.7	18.8	12.6	10.0	8.1	7.2
India	30.6	27.7	25.4	23.2	9.8	9.1	8.7	8.3
Iran (Islamic Rep. of)	30.0	20.5	19.1	20.2	6.7	5.7	5.5	5.4
Maldives	36.2	27.0	22.7	23.0	8.7	7.3	6.5	5.8
Nepal	37.8	34.3	30.8	28.2	11.9	9.8	8.8	7.8
Pakistan	39.1	32.9	28.3	27.0	10.0	8.7	7.8	7.1
Sri Lanka	20.2	18.2	16.6	15.1	6.6	6.9	7.3	7.3
Turkey	24.7	22.3	19.8	18.4	7.2	6.2	5.8	5.9
<b>North and Central Asia</b>	<b>16.2</b>	<b>13.2</b>	<b>13.2</b>	<b>14.0</b>	<b>11.5</b>	<b>12.4</b>	<b>13.2</b>	<b>13.4</b>
Armenia	18.9	13.8	11.4	12.2	8.1	8.5	8.8	9.6
Azerbaijan	25.4	19.1	15.2	15.7	7.3	7.0	6.9	7.5
Georgia	14.8	12.0	11.1	10.8	9.6	10.3	11.0	11.8
Kazakhstan	20.5	16.5	17.1	19.3	9.7	11.3	10.9	10.1
Kyrgyzstan	29.0	24.1	21.6	21.5	7.9	8.1	8.0	8.0
Russian Federation	11.3	9.1	9.8	10.6	13.0	14.4	15.6	16.2
Tajikistan	37.2	32.7	29.8	27.5	8.5	7.8	6.8	6.4
Turkmenistan	31.9	25.3	22.7	21.9	8.3	8.1	8.2	8.3
Uzbekistan	32.1	25.9	23.5	22.7	7.2	6.8	6.7	6.7
<b>Pacific</b>	<b>19.7</b>	<b>18.8</b>	<b>17.7</b>	<b>16.7</b>	<b>7.7</b>	<b>7.5</b>	<b>7.4</b>	<b>7.4</b>
Australia	14.6	13.5	12.9	12.4	7.0	7.0	6.9	7.0
American Samoa								
Cook Islands								
Fiji	27.5	25.4	23.4	21.3	6.2	6.3	6.3	6.6
French Polynesia	25.5	21.4	19.6	18.4	5.0	4.8	4.9	5.2
Guam	25.8	23.8	20.9	18.6	4.6	4.7	5.0	5.4
Kiribati								
Marshall Islands								
Micronesia (F.S.)	32.5	31.4	29.5	26.4	6.4	6.3	6.3	6.1
Nauru								
New Caledonia	23.7	21.4	18.3	16.4	5.5	5.4	5.3	5.5
New Zealand	16.8	15.2	14.1	13.7	7.7	7.4	7.2	7.1
Niue								
Northern Mariana Is.								
Palau								
Papua New Guinea	36.9	36.5	34.3	30.1	10.7	10.2	9.9	9.6
Samoa	32.4	32.2	29.5	25.1	6.8	6.2	5.8	5.4
Solomon Islands	38.7	36.3	33.8	30.8	10.5	8.8	7.9	7.3
Tonga	29.5	26.7	24.5	25.3	5.9	5.7	5.7	5.7
Tuvalu								
Vanuatu	36.2	34.0	31.1	28.9	7.1	6.6	5.9	5.1
<b>Asia and the Pacific</b>	<b>24.1</b>	<b>21.4</b>	<b>19.4</b>	<b>18.4</b>	<b>8.5</b>	<b>8.0</b>	<b>7.8</b>	<b>7.8</b>
LLDC	33.9	30.5	28.4	28.2	11.1	11.0	10.6	10.2
LDC	34.2	30.9	28.4	26.7	11.9	10.6	9.9	9.2
ASEAN	25.9	22.9	21.2	19.8	7.8	7.0	6.7	6.4
ECO	33.2	28.0	25.0	24.7	9.1	8.4	7.9	7.8
SAARC	32.0	28.9	26.1	24.2	10.1	9.3	8.8	8.3
Central Asia	26.8	22.0	20.2	20.4	8.2	8.4	8.1	8.1
Pacific island dev. econ.	34.6	33.9	31.3	28.1	9.4	9.0	8.8	8.3
Low-income	33.8	29.4	26.3	24.9	10.1	9.0	8.4	7.9
Middle-income	23.4	20.7	18.8	17.8	8.4	7.9	7.8	7.7
High-income	11.9	11.0	9.8	9.1	6.6	6.9	7.2	7.7
<b>Other world regions</b>								
Africa	40.9	38.9	37.6	36.3	14.2	14.1	13.9	13.4
Europe	35.9	32.9	30.2	28.4	7.0	6.6	6.3	5.6
Latin America & Carib.	25.3	23.2	21.5	20.0	6.6	6.1	6.0	6.0
North America	15.4	14.2	13.8	13.6	8.6	8.3	8.2	8.2
Other countries/areas	35.9	32.9	30.2	28.4	7.0	6.6	6.3	5.6
<b>World</b>	<b>24.7</b>	<b>22.5</b>	<b>21.3</b>	<b>20.4</b>	<b>9.2</b>	<b>8.9</b>	<b>8.8</b>	<b>8.6</b>



## 1. Demographic trends

### 1.3 Children and elderly

	Proportion of children in total population					Proportion of elderly in total population				
	Percentage					Percentage				
	1990	1995	2000	2005	2007	1990	1995	2000	2005	2007
<b>East and North-East Asia</b>	<b>26.8</b>	<b>25.6</b>	<b>23.9</b>	<b>20.9</b>	<b>20.0</b>	<b>6.0</b>	<b>6.8</b>	<b>7.8</b>	<b>8.8</b>	<b>9.1</b>
China	27.7	26.6	24.9	21.6	20.6	5.4	6.0	6.8	7.7	7.9
DPR Korea	26.2	26.9	25.9	24.2	23.1	4.7	5.7	6.9	8.5	9.1
Hong Kong, China	21.5	19.4	16.9	15.1	14.4	8.5	9.6	11.0	12.0	12.1
Japan	18.4	16.0	14.6	13.9	13.7	12.0	14.6	17.2	19.7	20.8
Macao, China	25.7	26.1	22.4	16.1	14.3	6.5	7.0	7.4	7.5	7.6
Mongolia	41.7	38.9	34.5	28.9	27.1	4.0	3.7	3.9	3.9	4.0
Republic of Korea	25.8	23.4	20.8	18.6	17.6	5.0	5.8	7.4	9.4	10.2
<b>South-East Asia</b>	<b>36.3</b>	<b>34.2</b>	<b>31.6</b>	<b>29.3</b>	<b>28.5</b>	<b>4.1</b>	<b>4.4</b>	<b>4.9</b>	<b>5.4</b>	<b>5.6</b>
Brunei Darussalam	34.5	33.0	31.3	29.6	28.8	2.7	2.7	2.9	3.2	3.2
Cambodia	44.7	46.3	41.9	37.6	35.8	2.7	2.8	2.9	3.1	3.3
Indonesia	35.8	33.0	30.3	28.4	27.7	3.8	4.2	4.9	5.5	5.8
Lao PDR	44.7	44.6	43.4	39.8	38.1	3.4	3.4	3.4	3.5	3.5
Malaysia	37.4	36.1	33.5	31.4	30.5	3.7	3.7	3.9	4.4	4.5
Myanmar	35.6	33.1	30.2	27.3	26.3	4.9	5.2	5.5	5.6	5.6
Philippines	40.9	39.5	37.8	36.2	35.5	3.2	3.2	3.5	3.8	4.0
Singapore	21.5	22.3	21.8	19.5	18.0	5.6	6.2	7.2	8.5	9.0
Thailand	28.5	25.8	23.6	21.7	21.2	4.9	5.7	6.7	7.8	8.2
Timor-Leste	39.9	41.7	49.4	45.0	44.6	2.0	2.3	2.5	2.7	2.8
Viet Nam	38.9	37.0	33.5	29.6	28.1	4.9	5.0	5.5	5.6	5.6
<b>South and South-West Asia</b>	<b>38.9</b>	<b>37.8</b>	<b>35.8</b>	<b>33.4</b>	<b>32.4</b>	<b>3.8</b>	<b>4.0</b>	<b>4.4</b>	<b>4.7</b>	<b>4.8</b>
Afghanistan	46.2	46.9	47.3	47.0	46.7	2.3	2.3	2.2	2.2	2.2
Bangladesh	40.7	39.6	37.2	35.2	34.2	3.0	3.1	3.3	3.5	3.7
Bhutan	42.6	43.6	40.2	33.0	30.6	3.3	3.8	4.4	4.6	4.8
India	37.8	36.6	35.0	33.0	32.1	3.9	4.2	4.6	5.0	5.1
Iran (Islamic Rep. of)	44.7	42.4	35.1	28.8	26.9	3.5	4.1	4.5	4.5	4.5
Maldives	46.5	45.3	40.3	34.0	32.0	3.3	3.5	3.7	3.8	3.8
Nepal	41.9	41.8	40.9	39.0	37.9	3.4	3.4	3.5	3.7	3.7
Pakistan	44.0	44.3	41.8	37.2	35.7	3.3	3.5	3.7	3.9	4.0
Sri Lanka	32.0	29.5	26.8	24.2	23.4	5.4	6.0	6.5	6.5	6.7
Turkey	35.7	33.0	30.5	28.3	27.4	4.0	4.5	5.2	5.6	5.7
<b>North and Central Asia</b>	<b>27.0</b>	<b>25.9</b>	<b>23.0</b>	<b>20.0</b>	<b>19.4</b>	<b>8.4</b>	<b>9.9</b>	<b>10.2</b>	<b>11.3</b>	<b>11.0</b>
Armenia	30.4	29.5	25.9	20.8	19.3	5.6	8.4	10.0	12.1	11.9
Azerbaijan	34.3	34.0	31.0	25.3	23.3	4.2	4.9	5.9	7.2	7.2
Georgia	24.6	23.6	21.6	18.9	17.8	9.3	11.3	12.5	14.3	14.3
Kazakhstan	31.5	29.8	27.6	24.2	23.7	5.9	7.1	6.8	8.0	7.8
Kyrgyzstan	37.6	37.6	34.9	31.0	29.8	5.0	5.4	5.5	5.9	5.6
Russian Federation	23.0	21.4	18.1	15.1	14.7	10.0	11.8	12.3	13.8	13.4
Tajikistan	43.2	43.7	42.4	39.4	38.0	3.8	3.8	3.5	3.9	3.8
Turkmenistan	40.5	39.5	36.2	31.8	30.1	3.8	4.2	4.4	4.7	4.5
Uzbekistan	40.9	40.4	37.2	33.2	31.6	4.0	4.3	4.3	4.7	4.6
<b>Pacific</b>	<b>26.5</b>	<b>26.2</b>	<b>25.7</b>	<b>24.8</b>	<b>24.3</b>	<b>9.2</b>	<b>9.6</b>	<b>9.9</b>	<b>10.3</b>	<b>10.6</b>
Australia	21.9	21.5	20.7	19.5	19.0	11.2	11.9	12.4	13.1	13.5
American Samoa										
Cook Islands										
Fiji	37.9	35.7	34.0	32.9	32.2	3.1	3.1	3.5	4.2	4.5
French Polynesia	35.3	33.9	31.5	27.4	26.6	3.2	3.7	4.3	5.2	5.5
Guam	30.2	30.9	30.5	29.4	28.6	3.9	4.7	5.4	6.5	6.8
Kiribati										
Marshall Islands										
Micronesia (F.S.)	44.1	43.4	40.1	38.6	38.0	3.6	3.5	3.7	3.8	3.7
Nauru										
New Caledonia	32.3	30.9	29.7	27.1	26.2	4.6	4.8	5.6	6.6	7.1
New Zealand	23.4	23.1	22.7	21.5	20.9	11.1	11.5	11.8	12.2	12.4
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea	41.7	41.4	41.3	40.6	40.0	2.2	2.2	2.2	2.4	2.4
Samoa	40.9	39.3	40.9	40.8	40.1	3.9	4.2	4.4	4.6	4.6
Solomon Islands	45.3	43.6	42.0	40.5	39.7	3.0	3.0	2.9	2.9	3.0
Tonga	39.4	40.0	38.3	37.5	36.8	4.5	5.0	5.6	6.4	6.6
Tuvalu										
Vanuatu	43.9	43.4	42.1	39.8	38.8	3.6	3.5	3.3	3.3	3.3
<b>Asia and the Pacific</b>	<b>32.7</b>	<b>31.6</b>	<b>29.8</b>	<b>27.3</b>	<b>26.4</b>	<b>5.1</b>	<b>5.6</b>	<b>6.2</b>	<b>6.8</b>	<b>6.9</b>
LLDC	39.5	39.6	38.2	35.6	34.6	4.1	4.3	4.3	4.7	4.6
LDC	40.5	39.6	37.6	35.5	34.6	3.4	3.5	3.6	3.8	3.9
ASEAN	36.3	34.2	31.6	29.3	28.5	4.1	4.4	4.9	5.4	5.6
ECO	41.3	40.6	37.5	33.5	32.3	3.7	4.0	4.3	4.5	4.5
SAARC	38.8	37.8	36.1	33.9	32.9	3.8	4.0	4.3	4.7	4.8
Central Asia	35.9	35.5	33.2	29.4	28.1	5.1	5.7	5.8	6.6	6.4
Pacific island dev. econ.	40.8	40.1	39.7	38.8	38.2	2.6	2.6	2.7	3.0	3.1
Low-income	40.5	39.9	37.6	34.6	33.4	3.7	3.9	4.1	4.3	4.4
Middle-income	32.3	31.1	29.2	26.7	25.8	4.9	5.4	6.0	6.6	6.7
High-income	20.6	18.5	17.0	15.9	15.4	10.1	12.0	14.0	16.1	16.9
<b>Other world regions</b>										
Africa	44.7	43.8	42.5	41.4	41.0	3.1	3.2	3.3	3.4	3.4
Europe	19.8	18.7	17.4	16.1	15.7	13.4	14.5	15.4	16.4	16.7
Latin America & Carib.	36.2	34.1	31.8	29.8	29.1	4.8	5.2	5.7	6.3	6.5
North America	21.7	21.9	21.3	20.5	20.2	12.1	12.3	12.3	12.3	12.5
Other countries/areas	43.9	42.1	39.8	37.3	36.5	3.0	3.2	3.3	3.3	3.4
<b>World</b>	<b>32.6</b>	<b>31.7</b>	<b>30.2</b>	<b>28.3</b>	<b>27.7</b>	<b>6.1</b>	<b>6.5</b>	<b>6.9</b>	<b>7.3</b>	<b>7.5</b>



## 1.4 Women and girls

	Population sex ratio					Child sex ratio				
	Women per 100 men					Girls per 100 boys				
	1990	1995	2000	2005	2007	1990	1995	2000	2005	2007
<b>East and North-East Asia</b>	95	95	95	95	95	92	91	90	89	88
China	94	94	94	94	94	92	90	89	88	87
DPR Korea	104	104	104	103	103	96	96	96	96	95
Hong Kong, China	95	101	107	108	109	92	95	96	96	96
Japan	104	104	104	105	105	95	95	95	95	95
Macao, China	106	107	108	109	109	94	95	95	96	96
Mongolia	100	100	100	100	101	98	97	97	96	96
Republic of Korea	99	99	100	100	100	92	93	93	93	93
<b>South-East Asia</b>	100	100	100	101	101	97	97	96	96	96
Brunei Darussalam	89	91	92	93	93	94	93	92	93	93
Cambodia	110	108	106	106	105	98	97	97	96	96
Indonesia	100	100	100	100	100	97	97	97	96	96
Lao PDR	100	100	100	101	101	97	97	97	97	96
Malaysia	97	97	97	97	97	95	95	95	95	95
Myanmar	101	101	101	102	102	97	97	97	97	97
Philippines	99	99	99	99	99	96	96	96	96	96
Singapore	99	99	99	99	99	93	93	93	93	93
Thailand	102	102	104	105	105	96	96	95	94	94
Timor-Leste	94	95	96	97	97	92	94	95	96	96
Viet Nam	101	100	100	100	100	97	97	96	96	96
<b>South and South-West Asia</b>	93	93	94	94	94	93	93	93	93	93
Afghanistan	93	93	93	93	93	94	94	94	94	94
Bangladesh	94	95	95	95	95	94	95	95	95	95
Bhutan	95	97	97	90	89	98	98	98	98	98
India	92	92	93	93	93	92	92	92	91	91
Iran (Islamic Rep. of)	95	96	97	97	97	95	95	95	95	95
Maldives	95	95	95	95	95	97	96	95	95	95
Nepal	98	101	101	102	102	94	94	94	95	95
Pakistan	94	94	94	94	94	94	94	95	95	95
Sri Lanka	98	99	100	102	103	97	97	97	96	96
Turkey	98	98	98	98	99	96	97	97	96	96
<b>North and Central Asia</b>	111	110	111	112	112	97	96	96	95	95
Armenia	106	111	113	114	115	97	98	94	89	87
Azerbaijan	104	104	105	106	106	95	95	94	92	90
Georgia	110	110	111	112	112	96	96	94	93	92
Kazakhstan	107	107	109	109	109	97	96	96	95	95
Kyrgyzstan	104	103	103	103	103	98	97	97	96	96
Russian Federation	113	113	114	115	116	97	96	96	95	95
Tajikistan	101	100	100	101	102	98	97	97	96	96
Turkmenistan	103	103	103	103	103	98	98	97	98	98
Uzbekistan	102	102	101	101	101	97	97	97	97	97
<b>Pacific</b>	99	100	100	100	100	95	95	95	94	94
Australia	100	101	101	101	101	95	95	95	95	95
American Samoa	95	95	96	96	96					
Cook Islands	92	93	94	94	94					
Fiji	97	97	97	97	97	95	94	94	94	94
French Polynesia	92	92	94	95	95	95	95	94	94	95
Guam	88	92	96	96	96	96	96	95	93	93
Kiribati	103	102	103	103	103					
Marshall Islands	96	96	95	96	97					
Micronesia (F.S.)	96	96	98	97	97	93	93	93	94	94
Nauru	101	101	101	102	102					
New Caledonia	96	95	97	98	99	95	93	94	95	95
New Zealand	103	103	104	103	103	96	95	95	94	94
Niue	102	102	103	104	104					
Northern Mariana Is.	91	101	118	129	130					
Palau	85	84	83	86	86					
Papua New Guinea	93	95	96	97	97	95	94	94	94	94
Samoa	90	92	92	92	92	91	91	92	92	92
Solomon Islands	93	93	93	93	93	92	92	91	92	92
Tonga	98	97	97	96	96	93	92	91	93	93
Tuvalu	104	106	108	110	111					
Vanuatu	94	95	95	96	96	92	92	93	94	94
<b>Asia and the Pacific</b>	96	96	96	96	96	93	93	92	92	92
LLDC	101	101	101	101	101	96	96	95	95	95
LDC	97	97	97	97	98	95	95	95	95	95
ASEAN	100	100	100	101	101	97	97	96	96	96
ECO	97	97	97	97	97	95	95	95	95	95
SAARC	93	93	93	94	94	93	93	92	92	92
Central Asia	105	104	104	105	105	97	97	96	96	95
Pacific island dev. econ.	94	95	96	97	97	95	94	94	94	94
Low-income	97	97	97	97	97	95	95	95	95	95
Middle-income	95	95	95	96	96	93	92	92	91	91
High-income	102	102	103	103	103	94	95	94	94	94
<b>Other world regions</b>										
Africa	101	101	101	101	101	98	98	98	98	98
Europe	106	106	106	106	106	95	95	95	95	95
Latin America & Carib.	101	102	102	103	103	97	97	97	97	97
North America	104	103	103	103	103	95	95	95	95	95
Other countries/areas	91	91	91	91	91	96	96	96	96	96
<b>World</b>	98	98	98	98	99	95	94	94	94	94



## 1. Demographic trends

### 1.5 Fertility

	Total fertility rate				Adolescent fertility rate		
	Live births per woman				Live births per 1,000 girls aged 15-19		
	90-95	95-00	00-05	2007	95-00	00-05	05-10
<b>East and North-East Asia</b>	<b>2.0</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>	<b>6.0</b>	<b>2.5</b>	<b>7.7</b>
China	2.0	1.8	1.7	1.7	6.3	2.3	8.1
DPR Korea	2.3	2.1	1.9	1.9	1.6	1.5	1.4
Hong Kong, China	1.3	1.1	1.0	1.0	6.0	5.3	5.4
Japan	1.5	1.4	1.3	1.3	4.5	3.7	3.3
Macao, China	1.6	1.2	0.9	0.9	6.1	4.6	4.9
Mongolia	3.5	2.5	2.1	1.9	41.5	49.7	44.8
Republic of Korea	1.6	1.5	1.3	1.2	2.8	3.2	4.0
<b>South-East Asia</b>	<b>3.2</b>	<b>2.8</b>	<b>2.5</b>	<b>2.3</b>	<b>43.2</b>	<b>39.8</b>	<b>34.3</b>
Brunei Darussalam	3.1	2.8	2.5	2.3	34.2	30.7	27.3
Cambodia	5.5	4.6	3.7	3.2	57.7	49.3	42.0
Indonesia	2.9	2.6	2.4	2.2	52.3	47.3	39.8
Lao PDR	5.9	4.8	3.7	3.2	90.5	88.4	72.2
Malaysia	3.5	3.1	2.9	2.6	16.1	14.5	12.9
Myanmar	3.2	2.7	2.3	2.1	24.0	18.9	16.4
Philippines	4.2	3.8	3.5	3.3	46.9	51.6	46.7
Singapore	1.7	1.6	1.4	1.3	7.4	5.6	4.5
Thailand	2.0	1.9	1.8	1.8	49.0	44.6	41.5
Timor-Leste	5.7	6.8	7.0	6.6	114.3	64.3	53.8
Viet Nam	3.4	2.6	2.3	2.2	24.9	21.1	17.5
<b>South and South-West Asia</b>	<b>4.1</b>	<b>3.6</b>	<b>3.2</b>	<b>2.9</b>	<b>97.2</b>	<b>69.4</b>	<b>63.4</b>
Afghanistan	8.0	8.0	7.6	7.1	166.2	131.9	113.0
Bangladesh	4.1	3.6	3.2	2.9	151.5	149.2	124.5
Bhutan	5.5	4.3	3.0	2.2	73.2	50.9	36.8
India	3.9	3.5	3.1	2.8	99.5	68.9	61.8
Iran (Islamic Rep. of)	4.4	2.8	2.1	2.0	46.1	24.3	20.4
Maldives	5.6	4.1	2.9	2.6	45.4	26.2	23.3
Nepal	5.0	4.4	3.8	3.3	127.2	122.2	114.6
Pakistan	5.9	5.0	4.1	3.5	68.8	22.0	35.6
Sri Lanka	2.5	2.2	2.0	1.9	29.4	28.3	25.3
Turkey	2.9	2.6	2.3	2.1	58.4	46.0	37.5
<b>North and Central Asia</b>	<b>2.2</b>	<b>1.7</b>	<b>1.6</b>	<b>1.7</b>	<b>37.2</b>	<b>30.6</b>	<b>29.0</b>
Armenia	2.4	1.8	1.4	1.4	53.0	30.9	29.5
Azerbaijan	2.9	2.3	1.8	1.8	41.0	28.9	29.0
Georgia	2.0	1.6	1.5	1.4	55.6	35.0	30.2
Kazakhstan	2.6	2.1	2.0	2.3	40.0	28.4	30.7
Kyrgyzstan	3.7	3.0	2.6	2.5	37.6	31.5	31.3
Russian Federation	1.6	1.3	1.3	1.3	35.7	29.8	27.9
Tajikistan	4.9	4.4	3.8	3.4	35.9	31.6	27.7
Turkmenistan	4.0	3.2	2.7	2.5	17.8	16.9	15.9
Uzbekistan	3.9	3.1	2.7	2.5	40.9	37.2	33.8
<b>Pacific</b>	<b>2.5</b>	<b>2.4</b>	<b>2.4</b>	<b>2.3</b>	<b>40.0</b>	<b>33.3</b>	<b>26.3</b>
Australia	1.9	1.8	1.8	1.8	19.3	17.0	14.3
American Samoa							
Cook Islands							
Fiji	3.4	3.2	3.0	2.8	52.9	41.7	31.5
French Polynesia	3.1	2.6	2.4	2.3	57.8	43.7	34.0
Guam	3.1	3.0	2.8	2.6	78.2	54.5	51.5
Kiribati							
Marshall Islands							
Micronesia (F.S.)	4.8	4.6	4.2	3.8	44.8	35.8	26.0
Nauru							
New Caledonia	2.9	2.6	2.3	2.1	32.8	28.0	26.2
New Zealand	2.1	2.0	2.0	2.0	31.2	27.1	22.5
Niue							
Northern Mariana Is.							
Palau							
Papua New Guinea	4.7	4.6	4.3	3.8	89.8	70.2	50.8
Samoa	4.7	4.7	4.4	4.0	45.4	36.8	27.2
Solomon Islands	5.6	5.0	4.4	3.9	63.0	51.2	41.2
Tonga	4.5	4.0	3.8	3.8	16.6	17.7	17.8
Tuvalu							
Vanuatu	4.8	4.6	4.2	3.8	62.0	52.5	44.0
<b>Asia and the Pacific</b>	<b>2.9</b>	<b>2.6</b>	<b>2.4</b>	<b>2.3</b>	<b>54.8</b>	<b>40.3</b>	<b>39.1</b>
LLDC	4.4	3.9	3.5	3.4	80.9	70.3	68.1
LDC	4.4	3.9	3.4	3.1	120.1	114.6	98.6
ASEAN	3.2	2.7	2.5	2.3	43.1	39.8	34.3
ECO	4.6	3.8	3.2	3.0	62.1	34.0	37.1
SAARC	4.1	3.7	3.3	3.0	102.3	73.3	66.7
Central Asia	3.3	2.7	2.4	2.3	39.9	31.9	30.3
Pacific island dev. econ.	4.5	4.3	4.0	3.6			
Low-income	4.5	3.8	3.3	3.0	82.5	65.2	60.6
Middle-income	2.8	2.5	2.3	2.2	51.8	36.6	35.4
High-income	1.6	1.5	1.3	1.3	6.2	5.8	5.6
<b>Other world regions</b>							
Africa	5.7	5.3	5.0	4.7	121.6	115.8	103.8
Europe	1.6	1.5	1.4	1.5	20.0	16.9	14.9
Latin America & Carib.	3.1	2.8	2.5	2.4	85.4	80.1	76.1
North America	2.0	2.0	2.0	2.0	49.1	41.0	39.9
Other countries/areas	5.5	4.8	4.2	3.8	56.4	45.8	39.8
<b>World</b>	<b>3.1</b>	<b>2.8</b>	<b>2.7</b>	<b>2.6</b>	<b>65.4</b>	<b>55.3</b>	<b>52.6</b>



## 1.6 Life expectancy

	Female life expectancy at birth					Male life expectancy at birth				
	Years					Years				
	1990	1995	2000	2005	2007	1990	1995	2000	2005	2007
<b>East and North-East Asia</b>	<b>71.0</b>	<b>72.7</b>	<b>74.5</b>	<b>75.8</b>	<b>76.2</b>	<b>67.5</b>	<b>69.0</b>	<b>70.6</b>	<b>71.7</b>	<b>72.0</b>
China	69.6	71.1	72.9	74.3	74.7	66.7	68.2	69.8	71.0	71.3
DPR Korea	73.8	72.6	69.6	68.8	69.1	66.8	65.0	63.9	64.6	64.9
Hong Kong, China	80.4	82.0	83.8	84.9	85.1	74.9	76.3	78.0	79.1	79.3
Japan	81.9	83.1	84.6	85.7	86.0	75.9	76.6	77.7	78.7	79.0
Macao, China	79.2	80.4	81.6	82.5	82.8	74.4	75.9	77.1	78.1	78.5
Mongolia	62.6	64.7	67.5	69.2	69.8	59.0	60.3	61.5	62.8	63.6
Republic of Korea	75.3	77.5	79.6	81.5	82.0	67.1	69.7	72.2	74.3	74.9
<b>South-East Asia</b>	<b>65.0</b>	<b>67.7</b>	<b>70.1</b>	<b>72.0</b>	<b>72.7</b>	<b>61.1</b>	<b>63.3</b>	<b>65.2</b>	<b>67.0</b>	<b>67.8</b>
Brunei Darussalam	76.3	77.7	78.5	79.3	79.6	72.0	72.9	73.8	74.6	74.9
Cambodia	56.6	57.9	58.8	60.6	61.8	53.4	54.5	53.8	55.2	56.7
Indonesia	63.3	66.2	69.3	71.6	72.5	59.8	62.6	65.6	67.8	68.5
Lao PDR	55.4	59.1	61.9	64.5	65.5	53.0	56.6	59.5	61.9	62.8
Malaysia	72.3	73.8	75.0	76.1	76.6	68.2	69.1	70.2	71.4	71.9
Myanmar	60.9	62.4	63.2	64.2	65.0	56.9	57.7	57.1	57.6	58.7
Philippines	67.5	69.7	71.6	73.3	73.8	63.4	65.6	67.4	68.9	69.4
Singapore	77.3	78.9	80.0	81.4	81.8	72.6	74.6	75.9	77.5	77.9
Thailand	70.4	72.0	73.4	74.5	74.9	63.7	63.4	62.9	65.0	66.1
Timor-Leste	47.0	52.8	57.3	60.5	61.5	45.4	51.2	55.8	58.9	59.8
Viet Nam	67.3	71.2	73.8	75.7	76.1	63.7	67.8	70.2	71.9	72.3
<b>South and South-West Asia</b>	<b>59.5</b>	<b>61.7</b>	<b>63.4</b>	<b>65.2</b>	<b>66.0</b>	<b>58.7</b>	<b>60.2</b>	<b>61.3</b>	<b>62.5</b>	<b>63.2</b>
Afghanistan	41.2	41.8	41.8	42.8	43.5	41.4	41.8	41.9	42.9	43.6
Bangladesh	54.7	58.4	61.4	64.0	64.8	54.2	57.2	60.2	62.3	63.0
Bhutan	54.2	58.5	63.2	66.5	67.4	51.1	55.1	59.7	63.1	63.9
India	59.8	61.7	63.4	65.3	66.2	59.2	60.5	61.3	62.3	63.0
Iran (Islamic Rep. of)	65.8	68.3	70.2	71.8	72.4	63.5	65.9	67.5	68.7	69.2
Maldives	59.0	61.1	64.0	67.6	69.0	61.7	63.3	64.9	66.6	67.4
Nepal	53.8	57.7	60.7	62.9	63.9	54.4	57.6	60.1	62.1	63.0
Pakistan	59.9	61.9	63.0	64.8	65.6	59.6	61.0	62.3	64.3	65.0
Sri Lanka	73.5	74.2	74.6	75.6	76.1	66.8	67.3	66.8	67.9	68.5
Turkey	66.9	69.9	72.4	73.9	74.2	62.5	65.4	67.7	69.0	69.4
<b>North and Central Asia</b>	<b>71.4</b>	<b>70.4</b>	<b>70.4</b>	<b>70.9</b>	<b>71.2</b>	<b>61.7</b>	<b>59.3</b>	<b>58.7</b>	<b>58.9</b>	<b>59.2</b>
Armenia	71.0	72.9	74.2	74.9	75.1	65.4	66.0	67.5	68.2	68.4
Azerbaijan	69.7	69.7	70.2	70.8	71.1	62.2	62.4	62.9	63.5	63.7
Georgia	74.2	74.3	74.3	74.5	74.7	66.6	66.5	66.5	66.7	67.0
Kazakhstan	71.4	69.4	69.5	71.5	72.2	61.8	58.7	58.1	60.5	61.4
Kyrgyzstan	70.2	69.6	69.1	69.6	69.9	62.3	61.5	61.1	61.7	61.9
Russian Federation	73.2	72.3	71.9	72.1	72.4	62.4	59.9	58.9	58.6	58.8
Tajikistan	66.1	66.3	67.8	69.0	69.3	60.9	61.1	62.5	63.8	64.1
Turkmenistan	67.0	67.5	66.9	67.0	67.4	59.4	59.0	58.4	58.5	58.9
Uzbekistan	70.0	69.5	69.7	70.0	70.3	63.6	63.1	63.3	63.6	63.9
<b>Pacific</b>	<b>74.9</b>	<b>76.0</b>	<b>76.8</b>	<b>77.6</b>	<b>77.9</b>	<b>68.4</b>	<b>69.7</b>	<b>70.9</b>	<b>72.2</b>	<b>72.6</b>
Australia	80.0	81.1	82.2	83.3	83.5	73.8	75.3	76.9	78.5	78.8
American Samoa										
Cook Islands										
Fiji	69.0	68.9	69.5	70.6	71.0	64.8	64.6	65.2	66.1	66.5
French Polynesia	72.0	73.7	75.2	76.3	76.7	66.9	68.8	70.1	71.2	71.6
Guam	74.5	75.5	76.5	77.5	77.9	69.8	70.9	71.9	72.8	73.2
Kiribati										
Marshall Islands										
Micronesia (F.S.)	66.8	67.3	67.9	68.7	69.2	65.7	66.2	66.7	67.3	67.6
Nauru										
New Caledonia	73.9	75.2	77.5	79.3	79.7	68.3	69.5	70.8	72.5	72.8
New Zealand	78.3	79.5	80.7	81.8	82.1	72.3	74.1	76.0	77.7	78.1
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea	57.6	59.1	59.7	60.1	60.3	52.1	53.4	53.9	54.3	54.6
Samoa	68.4	70.9	72.8	74.2	74.7	61.8	64.3	66.3	67.8	68.4
Solomon Islands	57.1	60.1	62.2	63.8	64.3	56.4	59.2	61.0	62.2	62.6
Tonga	71.1	71.7	72.7	73.8	74.2	68.5	69.6	70.7	71.8	72.2
Tuvalu										
Vanuatu	64.7	67.1	69.4	71.3	72.0	61.8	64.0	65.9	67.5	68.1
<b>Asia and the Pacific</b>	<b>64.7</b>	<b>66.3</b>	<b>67.9</b>	<b>69.5</b>	<b>70.1</b>	<b>61.9</b>	<b>63.1</b>	<b>64.4</b>	<b>65.6</b>	<b>66.2</b>
LLDC	60.6	60.4	60.3	61.1	61.5	56.3	55.8	55.6	56.6	57.1
LDC	54.7	57.3	59.3	61.0	61.8	53.5	55.6	57.1	58.6	59.3
ASEAN	65.1	67.7	70.1	72.0	72.7	61.1	63.4	65.2	67.0	67.8
ECO	62.7	63.9	64.6	66.0	66.5	59.9	60.8	61.6	63.0	63.5
SAARC	58.7	60.9	62.6	64.5	65.3	58.2	59.7	60.8	62.0	62.6
Central Asia	70.0	69.2	69.5	70.4	70.8	62.5	61.3	61.3	62.4	62.9
Pacific island dev. econ.	61.2	62.4	63.2	63.7	64.0	55.8	57.0	57.6	58.1	58.4
Low-income	59.5	61.7	63.1	64.7	65.3	57.5	59.3	60.6	62.1	62.7
Middle-income	65.4	67.0	68.6	70.2	70.8	62.6	63.8	65.0	66.2	66.7
High-income	80.4	81.9	83.4	84.7	85.0	73.7	75.0	76.6	77.9	78.2
<b>Other world regions</b>										
Africa	53.7	53.5	53.0	53.1	53.6	50.3	50.1	50.1	50.9	51.5
Europe	77.6	78.3	79.3	80.3	80.6	70.5	71.1	72.3	73.5	73.9
Latin America & Carib.	71.1	73.0	74.7	76.0	76.5	64.6	66.4	68.1	69.5	70.0
North America	78.5	79.1	79.9	80.6	80.9	71.9	73.0	74.4	75.4	75.8
Other countries/areas	66.5	67.1	68.2	69.5	70.4	63.8	64.2	64.8	65.9	66.8
<b>World</b>	<b>65.8</b>	<b>66.9</b>	<b>67.9</b>	<b>68.9</b>	<b>69.4</b>	<b>61.8</b>	<b>62.5</b>	<b>63.4</b>	<b>64.4</b>	<b>64.9</b>



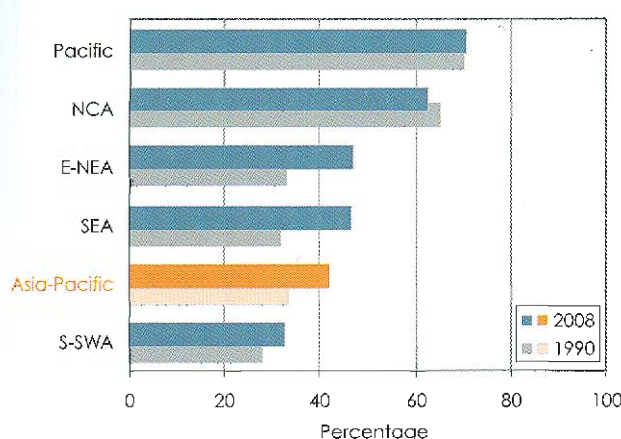
## 2 Urbanization

People in Asia and the Pacific continue to migrate from rural to urban areas. After Africa, the rate of urbanization is the second highest in the world. As a result, the proportion of the population in urban areas, while still well below the world average, is rising steadily.

The urban population in Asia and the Pacific has been growing at 2.3 per cent per annum – faster than the global average of 2.0 per cent. However the level of urbanization differs considerably between subregions. The most urbanized is the Pacific subregion, where over 70 per cent of the population lives in cities and towns. The Federated States of Micronesia, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu are exceptions, with levels below 25 per cent. The next most urbanized region is North and Central Asia. At the other end of the scale is South and South-West Asia, with only 32.7 per cent of the population living in urban areas, though the Islamic Republic of Iran and Turkey have levels of over 50 per cent.

**Figure 2.1**

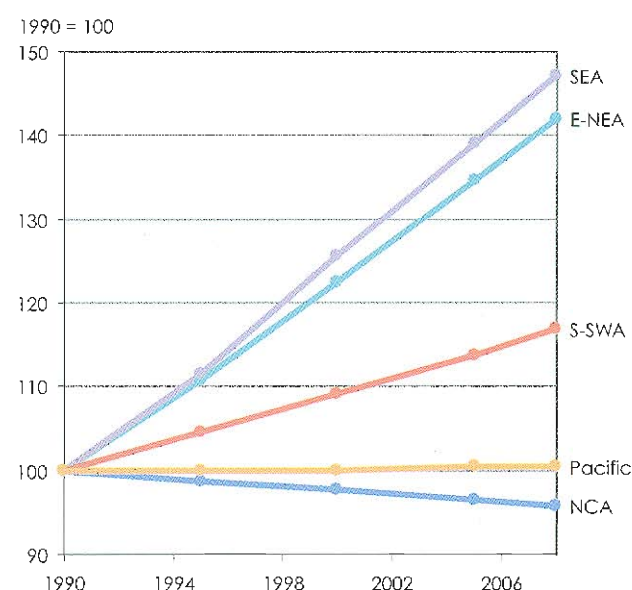
**Level of urbanization, by Asia-Pacific subregion, 1990 and 2008**



Urban population growth is fastest in South-East Asia at 3.1 per cent annually. By contrast in North and Central Asia the urban population is shrinking – with a negative growth rate of -0.2 per cent. This was partly because many people with

**Figure 2.2**

**Change in the urbanization rate, by subregion, indexed to 100, 1990-2008**



limited opportunities at home have been migrating to other countries.

Urbanization results from a number of factors. In the rural areas, productivity improvements in agriculture release workers for other, better-paying industries which are often located in or near urban areas. People will also move to cities to take advantage of better access to services. By and large, levels of urbanization are highest in the more developed countries.

In Asia and the Pacific natural population growth is around 1.1 per cent per year but urban growth is around 2.0 per cent, so the remaining 50-60 per cent of urban population growth must be due to rural-urban migration or to the reclassification of rural areas into urban areas. In parallel with the decline in overall population growth there has been a decline in urban growth. In 1990 urban growth rate was 3.4 per cent per year but by 2008 it was down to 2.3 per cent per year.

One distinctive outcome of urbanization in Asia and the Pacific is the growth of megacities – those more than 10 million people. The region



## 2. Urbanization

has 11 of the world's 19 megacities including 6 in the top 10. Megacities may be the most visible manifestation of urbanization but they only have

about 10 per cent of the urban population: over 50 per cent of the region's urban populations live in cities with fewer than five million people.

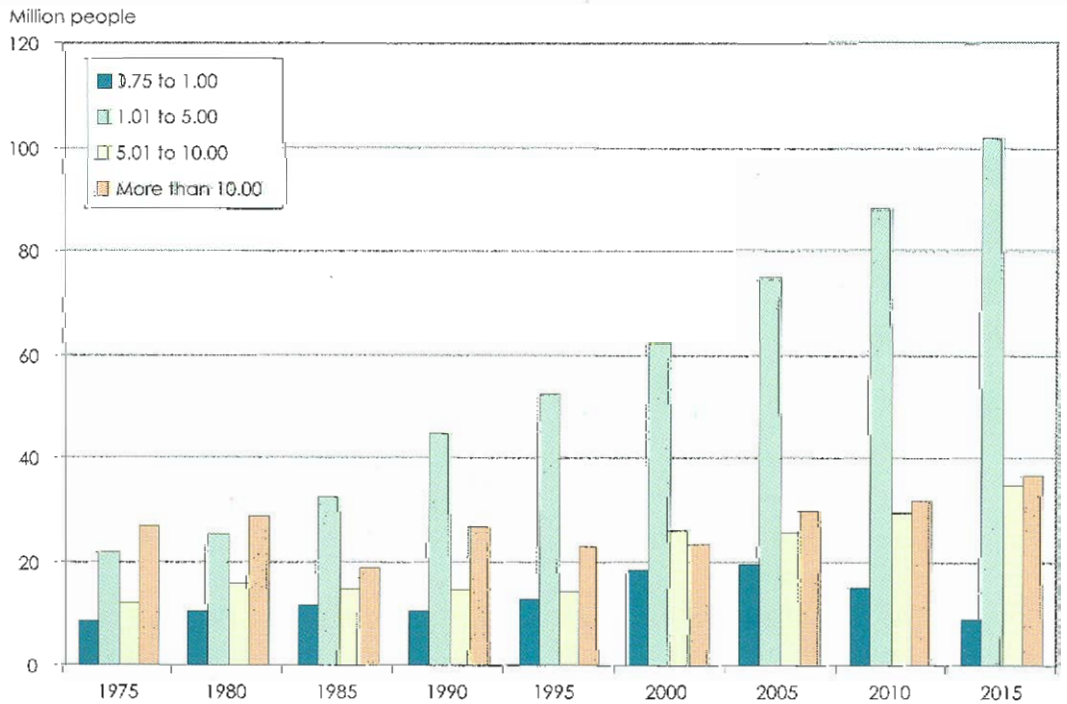
World megacities, 2007

City, country	Population (millions)			Average annual rate of change, 1975-2007
	1975	2007	2025	
1. Tokyo, Japan	26.6	35.7	36.4	0.9
2. New York-Newark, United States	15.9	19.0	20.6	0.6
3. Ciudad de México (Mexico City), Mexico	10.7	19.0	21.0	1.8
4. Mumbai, India	7.1	19.0	26.4	3.1
5. São Paulo, Brazil	9.6	18.8	21.4	2.1
6. Delhi, India	4.4	15.9	22.5	4.0
7. Shanghai, China	7.3	15.0	19.4	2.2
8. Kolkata, India	7.9	14.8	20.6	2.0
9. Dhaka, Bangladesh	2.2	13.5	22.0	5.6
10. Buenos Aires, Argentina	8.7	12.8	13.8	1.2
11. Los Angeles-Long Beach-Santa Ana, United States	8.9	12.5	13.7	1.1
12. Karachi, Pakistan	4.0	12.1	19.1	3.5
13. Al-Qahirah (Cairo), Egypt	6.4	11.9	15.6	1.9
14. Rio de Janeiro, Brazil	7.6	11.7	13.4	1.4
15. Osaka-Kobe, Japan	9.8	11.3	11.4	0.4
16. Beijing, China	6.0	11.1	14.5	1.9
17. Manila, Philippines	5.0	11.1	14.8	2.5
18. Moskva (Moscow), Russian Federation	7.6	10.5	10.5	1.0
19. Istanbul, Turkey	3.6	10.1	12.1	3.2

Source: United Nations Department of Economic and Social Affairs/Population Division, World Urbanization Prospects: The 2007 Revision.

Figure 2.3

### Urban population in Asia and the Pacific, by size of settlement, 1975-2015





Cities in the region face major and inter-connected problems. They have to expand infrastructure and services to rapidly growing populations and also address the implications of mushrooming slum and squatter settlements. They also need to tackle issues related to climate change. Developing countries in particular are struggling to provide adequate housing, physical infrastructure and economic, social and environmental services.

Across the region in 2005, on average the proportion of the urban population living in slums was around about one-third. In East and North-East Asia it was 33.2 per cent, in South-East Asia it was 34.1 per cent and in South and South-West Asia it was 37.3 per cent. However in some countries the proportion is much higher – more than 50 per cent

in Bangladesh, Cambodia, the Lao People's Democratic Republic, Mongolia and Nepal.

Urban areas account for 75 per cent of all energy use and for 80 per cent of all greenhouse gas emissions. Most Asian cities are near water bodies – on the coast or along rivers and lakes – making them vulnerable to natural disasters, particularly floods, caused by extreme weather events related to climate change.

Least equipped to deal with all these issues are the smaller cities and towns. Unlike megacities and other large cities (those with more than 5 million people), smaller cities and towns lack the necessary human, institutional, financial and political capital. Policy makers at the local, national and regional levels may thus need to pay special attention to the development needs and problems of these cities and towns.

### Defining urban

There is no common definition in the region of what is "urban". In fact, there is a bewildering variety. Of the 26 countries and territories surveyed by ESCAP, 15 defined urban areas based on administrative criteria, four on population size and/or density, two on economic functions or availability of certain infrastructure and services, while the rest used a mixture of administrative criteria and population size and density. Because most countries define urban based on administrative criteria, urbanization levels and urban population growth rates may be underreported. Most growth occurs in the urban periphery, which may be beyond municipal or city boundaries and therefore may not be reflected in official statistics.

### Urbanization rate (% of total population)

Population living in areas classified as urban according to the administrative criteria used by each country or area, as a percentage of the total population. **Aggregates:** Averages are calculated using total population as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

### Urban population growth rate (% per annum)

The average annual rate of change of the urban population. Reported for a single-year period or for five-year periods starting and ending in the middle of the indicated years. **Aggregates:** Averages are calculated using urban population as weight. **Source:** Calculated by ESCAP using data from World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).

### Slum population (% of urban population)

Number of people in households living in slum dwellings. Reported as a share of the urban population. A slum

household is a group of individuals living under the same roof who lack one or more (in some cities, two or more) of the following conditions: security of tenure, structural quality and durability of dwellings, access to safe water, access to sanitation facilities or sufficient living area.

**Aggregates:** Averages are calculated using the urban population as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed in September 2007).

### Population density (population per km<sup>2</sup>)

Number of people per square kilometre of the surface area. Total surface area comprises total land area and inland and tidal water areas. **Aggregates:** Averages are calculated as total population divided by total surface area. **Source:** Calculated by ESCAP using data from World Population Prospects: The 2006 Revision Population Database and United Nations Common database (online database, accessed in September 2007).

### Population of urban agglomerations by size of agglomerations (thousands)

Population living in urban agglomeration defined as agglomeration comprising a city or town proper and also the suburban fringe or thickly settled territory lying outside of, but adjacent to, the city boundaries. Data are presented for the following agglomerations size range: 750,000 to 1 millions inhabitants; 1 to 5 million inhabitants; 5 to 10 million inhabitants; and 10 million inhabitants or more. **Aggregates:** Sum of individual country values. **Source:** World Urbanization Prospects: The 2007 Revision (online database, accessed on 8 October 2008).



## 2. Urbanization

### 2.1 Urbanization

	Urbanization rate					Urban population growth rate				Slum population	
	% of total population					Per cent per annum				% of urban population	
	1990	1995	2000	2005	2007	90-95	95-00	00-05	2007	1990	2005
<b>East and North-East Asia</b>	<b>33.0</b>	<b>36.6</b>	<b>40.4</b>	<b>44.5</b>	<b>46.1</b>	<b>3.1</b>	<b>2.9</b>	<b>2.6</b>	<b>2.3</b>	<b>46.0</b>	<b>33.2</b>
China	27.4	31.4	35.8	40.4	42.2	3.9	3.6	3.2	2.8	43.6	32.9
DPR Korea	58.4	59.1	60.2	61.6	62.3	1.8	1.5	1.0	0.9		
Hong Kong, China	99.5	100.0	100.0	100.0	100.0	1.8	1.4	1.2	1.0		
Japan	63.1	64.6	65.2	65.8	66.2	0.8	0.4	0.3	0.3		
Macao, China	99.8	99.9	100.0	100.0	100.0	2.1	1.4	1.4	0.8		
Mongolia	57.0	56.8	56.6	56.7	56.9	1.4	0.6	0.9	1.2	68.5	57.9
Republic of Korea	73.8	78.2	79.6	80.8	81.3	2.2	1.1	0.8	0.6	68.5	
<b>South-East Asia</b>	<b>31.6</b>	<b>35.3</b>	<b>39.7</b>	<b>44.0</b>	<b>45.7</b>	<b>4.0</b>	<b>4.0</b>	<b>3.5</b>	<b>3.2</b>	<b>39.4</b>	<b>34.1</b>
Brunei Darussalam	65.8	68.6	71.1	73.5	74.4	3.7	3.2	3.0	2.7		
Cambodia	12.6	14.2	16.9	19.7	20.9	5.7	6.0	5.0	4.8	71.7	78.9
Indonesia	30.6	35.6	42.0	48.1	50.4	4.6	4.8	4.1	3.5	32.2	26.3
Lao PDR	15.4	17.2	18.9	20.6	21.4	5.1	4.1	3.5	3.6	66.1	79.3
Malaysia	49.8	55.6	61.8	67.3	69.3	4.9	4.7	3.7	3.2		
Myanmar	24.9	26.1	28.0	30.6	31.9	2.4	2.7	2.7	3.0	31.1	45.6
Philippines	48.8	54.0	58.5	62.7	64.2	4.4	3.8	3.5	3.2	54.9	43.7
Singapore	100.0	100.0	100.0	100.0	100.0	2.9	2.9	1.5	1.2		
Thailand	29.4	30.3	31.1	32.3	32.9	1.7	1.6	1.5	1.7	19.5	26.0
Timor-Leste	20.8	22.7	24.5	26.5	27.3	4.5	0.8	7.1	5.3		
Viet Nam	20.3	22.2	24.3	26.4	27.3	4.0	3.4	3.2	3.1	60.5	41.3
<b>South and South-West Asia</b>	<b>28.0</b>	<b>29.2</b>	<b>30.5</b>	<b>31.8</b>	<b>32.4</b>	<b>3.1</b>	<b>2.8</b>	<b>2.5</b>	<b>2.5</b>	<b>58.9</b>	<b>37.3</b>
Afghanistan	18.3	19.7	21.3	22.9	23.6	9.2	4.1	5.4	5.7	98.5	
Bangladesh	19.8	21.5	23.2	25.1	25.9	4.0	3.6	3.5	3.4	87.3	70.8
Bhutan	7.2	8.3	9.6	11.1	11.8	1.4	5.0	5.7	4.4	70.0	
India	25.5	26.6	27.7	28.7	29.2	2.9	2.7	2.4	2.4	60.8	34.8
Iran (Islamic Rep. of)	56.3	60.2	64.2	66.9	68.0	3.3	2.5	1.8	2.1	51.9	30.3
Maldives	25.8	25.6	27.5	29.6	30.5	2.7	3.4	3.1	3.4		
Nepal	8.9	10.9	13.4	15.8	16.7	6.9	6.8	5.4	5.0	96.9	60.7
Pakistan	30.6	31.8	33.1	34.9	35.7	3.3	3.3	2.9	3.0	78.7	47.5
Sri Lanka	17.2	16.4	15.7	15.1	15.1	0.2	-0.2	-0.3	0.3	24.8	
Turkey	59.2	62.1	64.7	67.3	68.2	2.8	2.5	2.2	2.0	23.3	15.5
<b>North and Central Asia</b>	<b>65.4</b>	<b>64.6</b>	<b>63.9</b>	<b>63.2</b>	<b>62.8</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.3</b>	<b>-0.2</b>		
Armenia	67.5	66.3	65.1	64.1	63.8	-2.2	-1.3	-0.7	-0.4		
Azerbaijan	53.7	52.2	50.9	51.5	51.6	1.0	0.4	0.7	0.8		
Georgia	55.2	54.0	52.7	52.2	52.3	-2.1	-1.7	-1.2	-0.7		
Kazakhstan	56.3	55.9	56.3	57.3	57.8	-0.9	-1.1	0.7	1.1		
Kyrgyzstan	37.8	36.3	35.4	35.8	36.1	0.1	1.0	1.2	1.5		
Russian Federation	73.4	73.4	73.4	73.0	72.8	0.1	-0.2	-0.6	-0.7		
Tajikistan	31.5	28.0	25.9	24.7	24.4	-0.7	-0.2	0.2	0.9		
Turkmenistan	45.1	44.7	45.1	46.2	46.9	2.6	1.6	1.9	2.1		
Uzbekistan	40.1	38.4	37.3	36.7	36.7	1.4	0.9	1.2	1.5		
<b>Pacific</b>	<b>70.4</b>	<b>70.4</b>	<b>70.4</b>	<b>70.6</b>	<b>70.7</b>	<b>1.6</b>	<b>1.4</b>	<b>1.5</b>	<b>1.3</b>		
Australia	85.4	86.1	87.2	88.2	88.6	1.5	1.4	1.4	1.3		
American Samoa											
Cook Islands											
Fiji	41.6	45.5	48.3	50.8	51.8	3.0	2.1	1.7	1.6		
French Polynesia	55.9	53.5	52.4	51.7	51.6	1.1	1.4	1.3	1.3		
Guam	90.8	92.1	93.2	94.0	94.3	2.0	1.5	1.9	1.5		
Kiribati											
Marshall Islands											
Micronesia (F.S.)	25.8	25.1	22.3	22.3	22.4	1.6	-2.3	0.5	0.7		
Nauru											
New Caledonia	59.6	60.3	61.9	63.7	64.4	2.7	2.7	2.3	2.2		
New Zealand	84.7	85.3	85.7	86.2	86.4	1.6	1.0	1.4	1.1		
Niue											
Northern Mariana Is.											
Palau											
Papua New Guinea	13.1	13.2	13.2	13.4	13.6	2.7	2.7	2.7	2.8		
Samoa	21.2	21.5	21.9	22.4	22.7	1.1	1.4	1.2	1.7		
Solomon Islands	13.7	14.7	15.7	17.0	17.6	4.3	4.2	4.2	4.2		
Tonga	22.7	22.9	23.2	24.0	24.4	0.7	0.4	0.9	1.6		
Tuvalu											
Vanuatu	18.7	20.2	21.7	23.5	24.3	4.4	3.5	4.2	4.2		
<b>Asia and the Pacific</b>	<b>33.3</b>	<b>35.5</b>	<b>37.9</b>	<b>40.4</b>	<b>41.4</b>	<b>2.8</b>	<b>2.7</b>	<b>2.4</b>	<b>2.3</b>	<b>50.9</b>	<b>35.0</b>
LLDC	34.8	33.3	32.8	33.0	33.2	1.4	1.1	1.9	2.3	88.0	79.1
LDC	19.2	20.7	22.5	24.5	25.4	4.1	3.7	3.7	3.7	72.9	67.5
ASEAN	31.6	35.3	39.7	44.0	45.7	4.0	4.0	3.5	3.2	39.4	34.1
ECO	43.4	44.4	45.8	47.1	47.7	2.7	2.4	2.2	2.4	52.5	34.2
SAARC	25.0	26.1	27.3	28.5	29.1	3.1	2.8	2.6	2.6	65.2	40.6
Central Asia	47.7	45.8	44.4	44.1	44.2	0.0	-0.1	0.7	1.1		
Pacific island dev. econ.	21.5	21.7	21.7	21.9	22.1	2.6	2.3	2.3	2.3		
Low-income	25.4	26.6	28.0	29.6	30.4				3.0	73.3	55.8
Middle-income	31.9	34.5	37.3	40.1	41.3				2.4		
High-income	69.4	71.7	72.7	73.6	74.1				0.6	68.5	37.0
<b>Other world regions</b>											
Africa	32.0	34.2	36.3	38.4	39.2	4.0	3.7	3.5	3.4	62.8	51.9
Europe	70.2	71.0	71.6	72.4	72.7	0.5	0.2	0.4	0.4		
Latin America & Carib.	70.9	73.2	75.4	77.4	78.1	2.4	2.2	1.8	1.7	37.0	25.4
North America	75.4	77.3	79.1	80.7	81.3	1.6	1.5	1.4	1.3		
Other countries/areas	63.1	63.8	64.2	64.6	64.8	3.4	3.0	2.7	2.5	37.0	35.7
<b>World</b>	<b>43.0</b>	<b>44.7</b>	<b>46.6</b>	<b>48.6</b>	<b>49.4</b>	<b>2.4</b>	<b>2.2</b>	<b>2.1</b>	<b>2.0</b>	<b>49.2</b>	<b>36.0</b>



## 2.2 Density

	Population of urban agglomerations									
	Population density		with 750 000 to 1 million inhabitants		with 1 to 5 million inhabitants		with 5 to 10 million inhabitants		with 10 million inhabitants or more	
	Population per km <sup>2</sup>		Thousands		Thousands		Thousands		Thousands	
	1990	2007	1990	2005	1990	2005	1990	2005	1990	2005
<b>East and North-East Asia</b>	<b>114</b>	<b>131</b>								
China	120	138	19 349	37 845	102 825	167 748	21 371	36 154		25 220
DPR Korea	167	197		762	2 526	4 375				
Hong Kong, China	5 282	6 551					5 677	7 057		
Japan	327	339			13 520	14 585			43 565	46 585
Macao, China	21 388	17 183								
Mongolia	1	2		856						
Republic of Korea	432	486		2 626	9 936	13 461		9 825	10 544	
<b>South-East Asia</b>	<b>98</b>	<b>127</b>								
Brunei Darussalam	45	68								
Cambodia	54	80				1 363				
Indonesia	96	122	816	3 282	8 593	11 332	8 175	8 843		
Lao PDR	17	25								
Malaysia	55	81		1 646	1 120	1 405				
Myanmar	59	72		915	2 907	3 928				
Philippines	204	293	854	787		1 325	7 973			10 761
Singapore	4 436	6 347			3 016	4 327				
Thailand	106	125					5 888	6 582		
Timor-Leste	50	78								
Viet Nam	200	265			8 596	6 046		5 072		
<b>South and South-West Asia</b>	<b>163</b>	<b>223</b>								
Afghanistan	19	42			1 306	2 994				
Bangladesh	785	1 102	985	766	2 023	5 653	6 621			12 576
Bhutan	12	14								
India	262	356	7 491	14 814	32 730	55 030	13 544	24 622	23 198	47 537
Iran (Islamic Rep. of)	32	41	7 056	8 613						
Maldives	719	1 019								
Nepal	130	192		815						
Pakistan	142	206	3 520		6 577	9 743	7 147	6 259		11 553
Sri Lanka	261	294								
Turkey	73	96	1 726	1 863	4 302	8 717	6 552	9 709		
<b>North and Central Asia</b>	<b>10</b>	<b>10</b>								
Armenia	118	101			1 175	1 103				
Azerbaijan	83	98			1 733	1 867				
Georgia	78	63			1 224	1 093				
Kazakhstan	6	6			1 080	1 190				
Kyrgyzstan	22	27		817						
Russian Federation	9	8	3 690	4 606	16 974	15 165	8 987			10 416
Tajikistan	37	47								
Turkmenistan	7	10								
Uzbekistan	46	61			2 100	2 158				
<b>Pacific</b>	<b>3</b>	<b>4</b>								
Australia	2	3			10 284	12 298				
American Samoa	236	334								
Cook Islands	74	56								
Fiji	40	46								
French Polynesia	49	66								
Guam	248	321								
Kiribati	89	117								
Marshall Islands	263	329								
Micronesia (F.S.)	209	159								
Nauru	458	508								
New Caledonia	9	13								
New Zealand	13	16	870			1 189				
Niue	9	6								
Northern Mariana Is.	63	182								
Palau	32	44								
Papua New Guinea	9	14								
Samoa	57	66								
Solomon Islands	11	17								
Tonga	126	134								
Tuvalu	314	351								
Vanuatu	12	19								
<b>Asia and the Pacific</b>	<b>61</b>	<b>76</b>	<b>10 106</b>	<b>19 607</b>	<b>44 482</b>	<b>74 621</b>	<b>14 400</b>	<b>25 620</b>	<b>26 800</b>	<b>29 841</b>
LLDC	15	20								
LDC	94	133								
ASEAN	98	128								
ECO	37	50								
SAARC	221	305								
Central Asia	16	18								
Pacific island dev. econ.	12	17								
Low-income	95	132								
Middle-income	65	80								
High-income	23	25								
<b>Other world regions</b>										
Africa	21	32								
Europe	97	100								
Latin America & Carib.	22	28								
North America	14	17								
Other countries/areas	21	33								
<b>World</b>	<b>39</b>	<b>50</b>								



### 3 International migration

**The United Nations estimates that in 2005 globally there were 190 million people living outside of their country of birth – 2.9 per cent of the world's population.**

In 2005, the countries in the Asia-Pacific region were home to almost 50 million migrants – around 1.2 per cent of their total population. Generally these migrants come from other countries in the region. However there is also migration into and out of the region; as a whole, Asia and the Pacific is experiencing net out-migration, primarily to high-income economies.

There is no single standard definition of who is an international migrant. The United Nations Population Division bases its estimates on the number of people living in a country other than that of their birth. This has the advantage that the data on these “foreign-born” people are available in most population censuses. However, censuses using this definition will include as migrants people who may have arrived decades previously and subsequently become citizens of the host country. On the other hand, people who return to their country of birth after a long period abroad would not be counted as migrants since they are not foreign born.

Generally, migrant numbers in censuses are likely to be underestimates. By focussing on permanent or long-term residents, they miss many short-term arrivals. These and other official sources of information are also likely to miss most irregular migrants.

Those who are counted as migrants will also change when there are alterations in international borders. This was evident following the break-up of the Soviet Union. Thus, many of the international migrants in the Russian Federation, for example, are ethnic Russians who were born in other republics within the Union of Soviet Socialist Republics and would previously have been classified as “internal” migrants. As a result, one-quarter of the region's migrants are now found in the Russian Federation. Similarly, many of the international migrants in

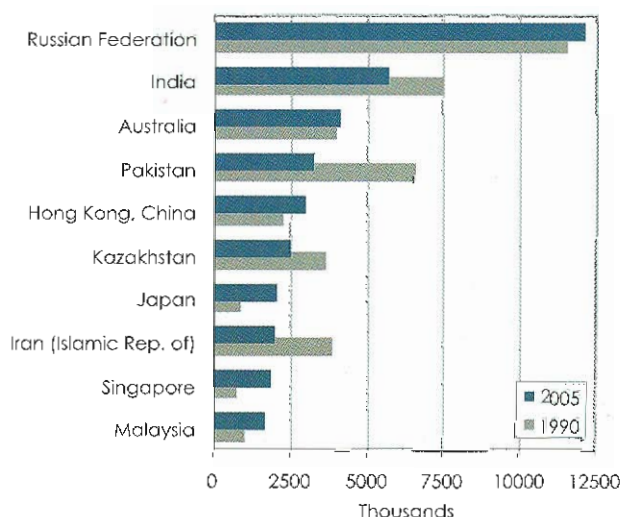
Kazakhstan are ethnic Kazakhs who moved to the country, primarily from Mongolia, when it became independent.

A corresponding situation arose in Bangladesh, India and Pakistan. The large numbers of international migrants are a consequence partly of the population exchanges when India and Pakistan were partitioned in 1947 and when Bangladesh became independent in 1972. However, as these migrants are now at least 60 years of age and many are now dying, the number of migrants in India and Pakistan has been declining. In Pakistan, the number of international migrants declined by one million persons between 2000 and 2005, though this also reflected the return of former refugees to Afghanistan.

Other countries or areas with more than one million foreign-born people in 2005 were Australia; Hong Kong, China; the Islamic Republic of Iran; Japan; Malaysia; Singapore, Thailand, Turkey and Uzbekistan.

**Figure 3.1**

**Stock of international migrants, selected Asia-Pacific countries or areas, 1990 and 2005**



The highest proportions of migrants tend to be in the richer countries. While the proportion of the foreign-born population in low-income

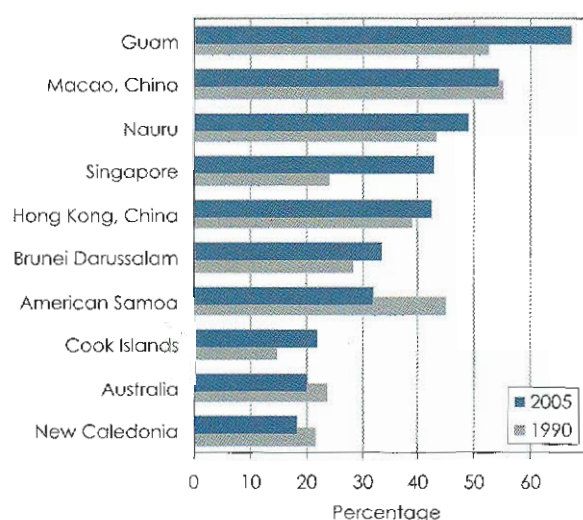


economies in 2005 was only 0.8 per cent (and these countries include Bangladesh, India and Pakistan), it was 1.1 per cent in middle-income economies, and 6.0 per cent in high-income economies.

International migrants can have a greater proportional impact on areas with small populations. Countries or areas of less than a half million people but which also have high proportions of foreign born include: Guam; Macao, China; Nauru; Brunei Darussalam; American Samoa; New Caledonia and Cook Islands. Larger countries or areas that in 2005 had at least 15 per cent of their populations foreign born included Australia, Kazakhstan, Hong Kong, China; New Zealand and Singapore.

**Figure 3.2**

**Foreign population as a share of the total population, Asia-Pacific countries or areas, 1990 and 2005**



Among the subregions the highest proportion of people foreign born was in the Pacific at 15 per cent, while the proportion in Central Asia was only 8 per cent. Of the countries or areas in the region, the highest proportion foreign born – two thirds – was in Guam. The only other area with more than half of its population born elsewhere was Macao,

China, at 56 per cent. Both Singapore and Hong Kong, China, however, also had high proportions, at 43 per cent.

Globally, most migrants travel from less developed to more developed regions. Thus, in each of the three five-year periods since 1990, Asia and the Pacific, Africa and Latin America and the Caribbean have all experienced net out-migration, while Northern America, Europe and countries in the Middle East have experienced net in-migration. Unlike the stock figures, which are based on place of birth, flows of migrants count all people moving in and out, regardless of place of birth or nationality.

Within the Asia-Pacific region, net migration rates were negative – i.e. more people were leaving than arriving – though for the high-income economies the rates were positive. During the period 2000-2005, net out-migration from Asia and the Pacific, mostly from the low-income and middle-income economies, was 0.3 per 1,000 population per annum, or an average of 1.3 million people a year.

Nevertheless, some parts of the region, in addition to the traditional countries of immigration such as Australia, have experience significant immigration. The highest rate, 21 per 1,000, was recorded for Timor-Leste, because many Timorese who were exiles or refugees prior to independence returned home. Afghanistan also experienced a high rate of net in-migration (9.7 per 1,000) owing to the return of former refugees. High rates of net in-migration were also achieved by Macao, China (10.9 per 1,000), Singapore (9.6) and Hong Kong, China (8.7).

During the period 2000-2005 there was also significant out-migration from the Pacific. Countries with high negative migration rates include Fiji (-10.3 per 1,000), the Federated States of Micronesia (-17.9), Samoa (-16.6) and Tonga (-16.1). For Central Asia as a whole, the net migration rate was -3.8; in both Georgia and Tajikistan the rate was -10.8.



**Stock of foreign population (thousand people)**

Estimated number of international immigrants, male and female, in the middle of the indicated year. Generally represents the number of persons born in a country other than where they live. Where data on the place of birth were unavailable, the number of non-citizens was used as a proxy for the number of international immigrants. In either case, the migrant stock includes refugees, some of whom may not be foreign born. **Aggregates:** Sum of individual country values. **Source:** World Migrant Stock: The 2005 Revision Population Database (online database, accessed in August 2008).

**Stock of foreign population as share of total population (percentage)**

The number of international immigrants (see definition for *Stock of foreign population*) divided by the total

population. **Aggregates:** Averages are calculated using the total population as weight. **Source:** World migrant stock: The 2005 Revision Population Database (online database, accessed in August 2008).

**Net migration rate (per 1,000 population)**

The number of international immigrants minus the number of emigrants over a period, divided by the average population of the receiving country over that period. **Aggregates:** Averages are calculated using total population as weight. **Source:** World Population Prospects: The 2006 Revision Population Database (online database, accessed in September 2007).



### 3. International migration

#### 3.1 International migration

	Stock of foreign population				Stock of foreign population as share of total population				Net migration rate			
	Thousands				Percentage				Per 1,000 population			
	1990	1995	2000	2005	1990	1995	2000	2005	90-95	95-00	00-05	05-10
<b>East and North-East Asia</b>	<b>4 293</b>	<b>4 986</b>	<b>5 686</b>	<b>6 497</b>	<b>0.32</b>	<b>0.35</b>	<b>0.39</b>	<b>0.43</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.2</b>	<b>-0.2</b>
China	380	441	513	596	0.03	0.04	0.04	0.05	-0.2	-0.2	-0.3	-0.3
DPR Korea	34	35	36	37	0.17	0.16	0.16	0.16				
Hong Kong, China	2 218	2 432	2 701	2 999	38.89	39.19	40.54	42.49	10.1	9.3	8.7	8.3
Japan	877	1 261	1 620	2 048	0.71	1.00	1.28	1.60	0.4	0.4	0.4	0.4
Macao, China	204	224	240	257	54.86	54.53	54.48	54.39	7.8	7.1	10.9	4.2
Mongolia	7	7	8	9	0.30	0.31	0.33	0.35	-5.2	-7.4	-4.0	-2.3
Republic of Korea	572	584	568	551	1.33	1.30	1.21	1.15	-0.5	-0.3	-0.3	-0.1
<b>South-East Asia</b>	<b>3 031</b>	<b>3 500</b>	<b>4 752</b>	<b>5 664</b>	<b>0.69</b>	<b>0.73</b>	<b>0.91</b>	<b>1.02</b>	<b>-0.5</b>	<b>-0.3</b>	<b>-0.6</b>	<b>-0.6</b>
Brunei Darussalam	73	87	104	124	28.48	29.60	31.23	33.22	2.6	2.2	2.0	1.8
Cambodia	38	116	237	304	0.40	1.02	1.85	2.18	2.8	1.3	0.2	-0.1
Indonesia	466	219	330	160	0.25	0.11	0.16	0.07	-0.8	-0.9	-0.9	-0.8
Lao PDR	23	23	24	25	0.56	0.50	0.46	0.44	-1.4	-3.5	-4.2	-2.5
Malaysia	1 014	1 135	1 392	1 639	5.60	5.51	5.98	6.39	3.0	4.5	1.2	0.7
Myanmar	101	112	115	117	0.25	0.26	0.25	0.24	-0.6	0.0	-0.4	0.0
Philippines	164	214	322	374	0.27	0.31	0.42	0.44	-2.8	-2.5	-2.2	-2.0
Singapore	727	992	1 352	1 843	24.11	28.51	33.65	42.59	15.4	19.6	9.6	9.0
Thailand	391	568	844	1 050	0.72	0.99	1.39	1.67	0.6	1.7	0.7	0.5
Timor-Leste	5	6	5	6	0.72	0.68	0.64	0.57	-40.8	21.2	1.7	
Viet Nam	28	27	28	21	0.04	0.04	0.04	0.02	-0.7	-0.5	-0.5	-0.5
<b>South and South-West Asia</b>	<b>20 804</b>	<b>16 821</b>	<b>16 247</b>	<b>14 516</b>	<b>1.66</b>	<b>1.21</b>	<b>1.06</b>	<b>0.87</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.3</b>
Afghanistan	29	35	38	43	0.23	0.19	0.18	0.17	42.9	-4.1	9.7	10.1
Bangladesh	882	1 006	988	1 032	0.78	0.80	0.71	0.67	-0.4	-0.5	-0.7	-0.6
Bhutan	8	9	9	10	1.53	1.70	1.64	1.53	-38.3	0.1	11.7	3.0
India	7 493	6 951	6 271	5 700	0.87	0.73	0.60	0.50	-0.2	-0.3	-0.2	-0.2
Iran (Islamic Rep. of)	3 809	2 478	2 321	1 959	6.72	3.98	3.51	2.82	-5.3	-1.7	-3.7	-1.4
Maldives	3	3	3	3	1.23	1.17	1.15	1.14				
Nepal	413	625	718	819	2.16	2.88	2.94	3.02	-1.0	-0.9	-0.8	-0.7
Pakistan	6 556	4 077	4 243	3 254	5.80	3.19	2.94	2.06	-4.3	-0.1	-1.6	-1.7
Sri Lanka	461	428	397	368	2.69	2.37	2.12	1.93	-2.9	-4.3	-4.7	-3.1
Turkey	1 150	1 210	1 259	1 328	2.01	1.93	1.85	1.82	0.4	0.3	-0.1	0.1
<b>North and Central Asia</b>	<b>19 510</b>	<b>18 519</b>	<b>17 767</b>	<b>17 275</b>	<b>9.06</b>	<b>8.47</b>	<b>8.12</b>	<b>7.92</b>	<b>-1.2</b>	<b>-0.6</b>	<b>-0.4</b>	<b>-0.6</b>
Armenia	659	455	314	235	18.58	14.09	10.19	7.80	-29.5	-14.3	-6.6	-5.0
Azerbaijan	361	292	160	182	5.00	3.75	1.97	2.18	-3.1	-3.2	-2.4	-1.2
Georgia	338	250	219	191	6.20	4.97	4.63	4.27	-21.3	-14.4	-10.8	-6.8
Kazakhstan	3 619	3 295	2 871	2 502	21.89	20.70	19.20	16.45	-18.6	-17.1	-2.7	-2.6
Kyrgyzstan	623	482	372	288	14.18	10.49	7.53	5.53	-12.2	-1.1	-3.0	-2.8
Russian Federation	11 525	11 707	11 892	12 080	7.75	7.85	8.07	8.39	3.0	3.0	1.3	0.4
Tajikistan	426	305	330	306	8.03	5.28	5.35	4.68	-11.3	-11.6	-10.8	-5.9
Turkmenistan	307	260	241	224	8.36	6.19	5.35	4.63	2.5	-2.3	-0.4	-0.4
Uzbekistan	1 653	1 474	1 367	1 268	8.06	6.43	5.53	4.77	-3.1	-3.4	-2.3	-1.5
<b>Pacific</b>	<b>4 750</b>	<b>5 052</b>	<b>5 049</b>	<b>5 032</b>	<b>17.78</b>	<b>17.43</b>	<b>16.24</b>	<b>15.07</b>	<b>4.9</b>	<b>3.5</b>	<b>4.9</b>	<b>3.7</b>
Australia	3 984	4 068	4 072	4 097	23.61	22.51	21.28	20.17	5.9	5.0	6.0	4.8
American Samoa	21	21	21	20	44.97	39.74	36.19	31.82				
Cook Islands	3	3	3	3	14.56	15.13	18.08	21.82				
Fiji	14	15	16	17	1.89	1.92	1.99	2.07	-9.3	-10.7	-10.3	-8.3
French Polynesia	26	28	31	34	13.22	13.06	13.03	13.13	-0.5	1.4	1.5	
Guam	70	82	97	113	52.43	56.59	62.30	67.28	-4.6	-6.4	1.0	
Kiribati	2	2	2	3	3.03	2.98	2.90	2.80				
Marshall Islands	2	2	2	2	3.27	3.11	3.12	2.94				
Micronesia (F.S.)	3	3	3	4	3.18	3.16	3.24	3.24	-4.4	-25.4	-17.9	-15.3
Nauru	4	4	5	5	42.93	42.48	45.45	48.67				
New Caledonia	37	39	41	43	21.40	20.03	19.00	18.43	5.8	5.5	4.3	4.5
New Zealand	529	732	708	642	15.52	19.91	18.37	15.67	5.3	2.1	5.1	2.4
Niue	0	0	0	0	10.05	7.93	7.46	6.74				
Northern Mariana Is.	5	5	5	5	11.10	8.63	7.40	6.53				
Palau	2	2	3	3	12.93	13.17	13.54	15.08				
Papua New Guinea	33	32	26	25	0.80	0.67	0.49	0.42				
Samoa	6	7	8	9	3.64	4.05	4.46	5.00	-15.8	-16.2	-16.6	-10.6
Solomon Islands	4	4	4	3	1.29	1.04	0.85	0.69				
Tonga	3	2	2	1	3.19	2.25	1.63	1.17	-18.0	-19.5	-16.1	-14.9
Tuvalu	0	0	0	0	3.23	3.17	3.12	3.12				
Vanuatu	2	2	1	1	1.44	0.98	0.70	0.48	-1.1	-7.9		
<b>Asia and the Pacific</b>	<b>52 388</b>	<b>48 877</b>	<b>49 500</b>	<b>48 985</b>	<b>1.60</b>	<b>1.38</b>	<b>1.31</b>	<b>1.23</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>
LLDC	8 127	7 261	6 453	5 910	8.14	6.49	5.38	4.52	-0.2	-5.5	-0.4	0.5
LDC	1 517	1 950	2 152	2 375	0.75	0.86	0.86	0.86	2.6	-0.8	0.3	0.5
ASEAN	3 026	3 494	4 747	5 658	0.69	0.73	0.91	1.02	-0.5	-0.2	-0.6	-0.6
ECO	18 532	13 906	13 204	11 354	6.23	4.19	3.64	2.89	-2.2	-1.8	-1.3	-0.6
SAARC	15 845	13 133	12 666	11 229	1.39	1.04	0.91	0.74	-0.2	-0.4	-0.3	-0.3
Central Asia	7 985	6 812	5 875	5 196	11.98	9.81	8.25	7.00	-10.5	-8.1	-3.8	-2.5
Pacific island dev. econ.	236	253	269	292	3.67	3.50	3.32	3.25	-6.5	-8.8	-7.3	-7.5
Low-income	10 843	8 353	8 525	7 542	2.51	1.72	1.59	1.29	-0.4	-0.8	-0.7	-0.5
Middle-income	32 215	29 983	29 430	28 676	1.22	1.05	0.97	0.90	-0.4	-0.3	-0.4	-0.3
High-income	9 323	10 534	11 538	12 758	4.74	5.18	5.52	5.99	1.3	1.4	1.3	1.2
<b>Other world regions</b>												
Africa									-0.5	-0.4	-0.5	-0.4
Europe									-1.3	0.8	2.4	1.6
Latin America & Carib.									-1.7	-1.5	-2.5	-1.5
North America									4.0	4.5	4.7	4.1
Other countries/areas									2.9	2.1	2.0	0.6
<b>World</b>	<b>154 945</b>	<b>165 080</b>	<b>176 736</b>	<b>190 634</b>								



## 4 Child health

A key indicator of children's health status is the infant mortality rate. The rate in Asia and the Pacific is only half that in Africa but almost twice that in Latin America and the Caribbean. Deaths can be reduced substantially through immunization against common diseases.

The infant mortality rate (IMR) is the number of children, per thousand live births, who die before reaching their first birthday. Countries with higher levels of economic development generally have low IMRs: within Asia and the Pacific, the IMR in high-income economies is only 4 deaths per 1,000 live births, compared with 38 in middle-income economies and 66 in low-income economies. However, some countries have demonstrated that specific interventions can yield good results even at lower levels of development. Geographically, the IMR is the lowest in East and North-East Asia (19) and highest in South and South-West Asia (60).

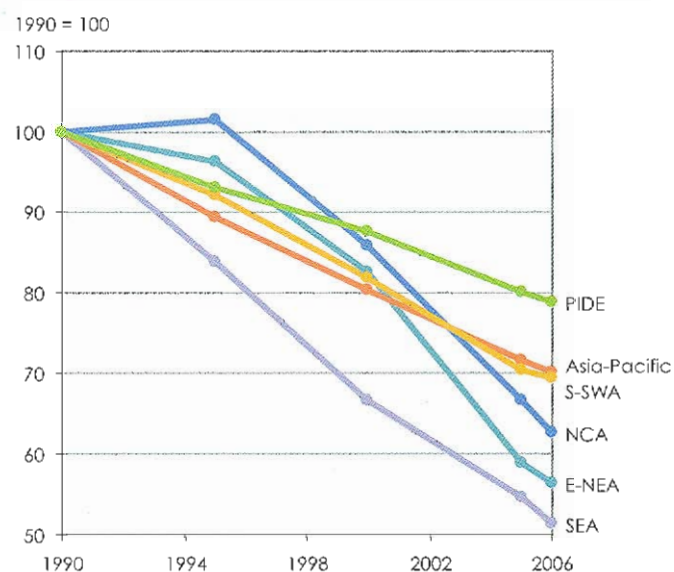
Between 1990 and 2006, the IMR in Asia and the Pacific fell from 62 to 43, a decline of 32 per cent. Perhaps unexpectedly, the smallest percentage reductions were in those subregions that had the highest infant mortalities in 1990. The reduction in South and South-West Asia, for example, was 30 per cent, and in the Pacific developing economies only 21 per cent – compared with 44 per cent in East and North-East Asia and 48 per cent in South-East Asia.

Subregional averages, however, obscure important differences between countries. Some have achieved good results. In Mongolia, for example, infant mortality increased in 1990 following the transition to a market economy but subsequently declined by 57 per cent. Other countries were also been able to achieve reductions of more than 50 per cent over the 16-year period: Armenia (55 per cent), Indonesia (57 per cent), Thailand (73 per cent) and Viet Nam (60 per cent).

The results in South and South-West Asia are mixed. Bangladesh reduced the IMR by 48 per cent, from a high level. Turkey reduced the IMR by

**Figure 4.1**

**Index of change in infant mortality rates, selected groups of Asia-Pacific countries or areas, 1990-2006**



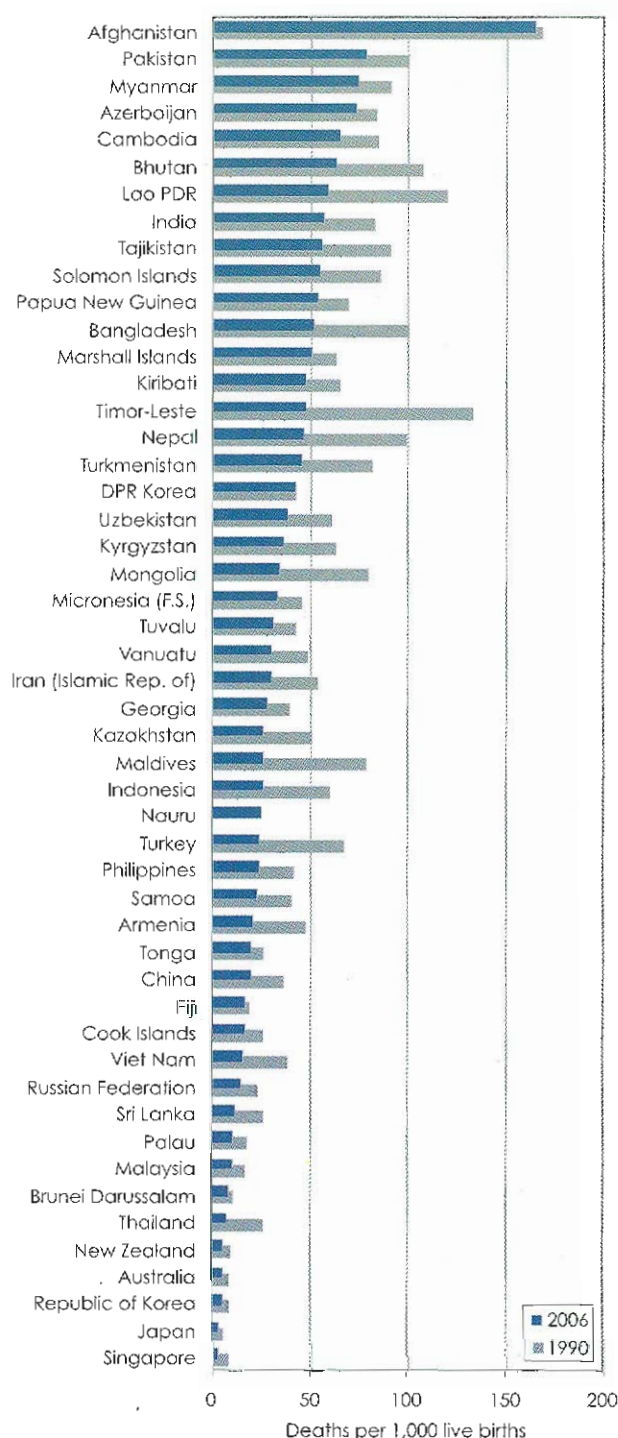
64 per cent from a relatively high level and Sri Lanka achieved a 58 per cent reduction from a low level. On the other hand, the IMR in India declined by only 30 per cent, from a relatively high level, and that in Pakistan declined by only 22 per cent from a high level.

The under-five mortality rate is the number of children who die before reaching their fifth birthday – also expressed as deaths per 1,000 live births in a particular year. It thus includes infant mortality. In 2006, the average under-five mortality rate in Asia and the Pacific was 56, compared with a global average of 72. As with infant mortality, the under-five mortality rate is lower in the more developed countries. In the Asia-Pacific region in 2006, the under-five mortality rate was only 5 in the high-income economies, but 49 in the middle-income economies and 88 in the low-income economies. Again, however, some countries have made good progress even at lower levels of development. By geographical subregion, the under-five mortality rate was the highest in South and South-West Asia, and



Figure 4.2

**Infant mortality, Asia and the Pacific, 1990 and 2006**



lower than the regional average in each of the other subregions. As with infant mortality, the highest relative reductions were not among the countries that had the highest rates in 1990.

The United Nations Millennium Declaration aimed to reduce the under-five mortality rate by two-thirds between 1990 and 2015. If the decline in the under-five mortality rate from 1990 had been linear, then countries should by 2006 have reduced the rate by 43 per cent. Globally, however, there has

only been a 23 per cent decline. Asia and the Pacific has done better than average, with a 35 per cent decline, but will still need to increase the pace of reduction if it is to meet the target. Within South and South-West Asia, however, several countries are on track to achieve the MDG target. Between 1990 and 2006, Bangladesh reduced the under-five mortality rate by 54 per cent, the Islamic Republic of Iran by 53 per cent, Sri Lanka by 59 per cent and Turkey by 68 per cent.

Some countries in South-East Asia have had similar declines – 63 per cent in Indonesia, 54 per cent in the Lao People's Democratic Republic, 48 per cent in the Philippines, 74 per cent in Thailand, and 68 per cent in Viet Nam. However in two countries with high levels of under-five mortality, the declines were modest – only 29 per cent in Cambodia and 20 per cent in Myanmar.

A major contributor to child mortality is malnutrition. A number of countries with high rates of malnutrition also have high rates of under-five mortality – including Afghanistan, Bangladesh, Cambodia, India, the Lao People's Democratic Republic, Myanmar, Nepal, Pakistan, Tajikistan and Timor-Leste. Although the available data do not permit a thorough analysis of trends, it seems malnutrition is coming down more slowly than infant or under-five mortality. This may be because mortality can be reduced through relatively inexpensive public health measures, such as immunizing children, providing clean water and sanitation, and offering oral rehydration therapy, whereas eliminating child malnutrition may require raising the incomes of poor people through broadly based economic development.

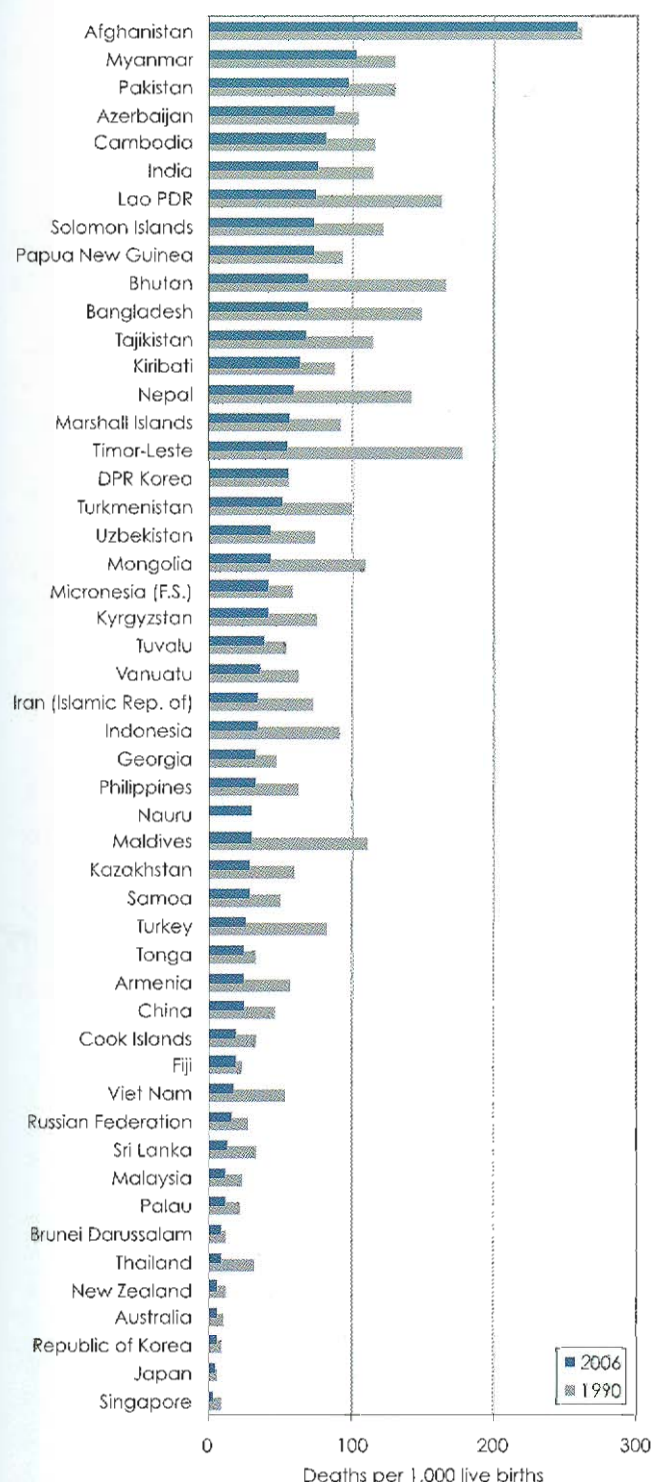
For immunization against common diseases, Asia and the Pacific has performed slightly below the world average. In 2006, in the world as a whole 80 per cent of one-year-old children had received at least one dose of measles vaccine, but in Asia and the Pacific the proportion was 78 per cent. However, there is substantial variation among subregions. The lowest levels are in South and South-West Asia. And those in the Pacific developing economies are also below average. On the other hand, the measles immunization level is above average in South-East Asia and well over 90 per cent in East and North-East Asia and in North and Central Asia.

In South and South-West Asia, India's low measles immunization rate (59 per cent) reduces the average for the subregion and has a significant impact on the average for Asia and the Pacific as a whole. Indeed, the rate in India is only slightly



Figure 4.3

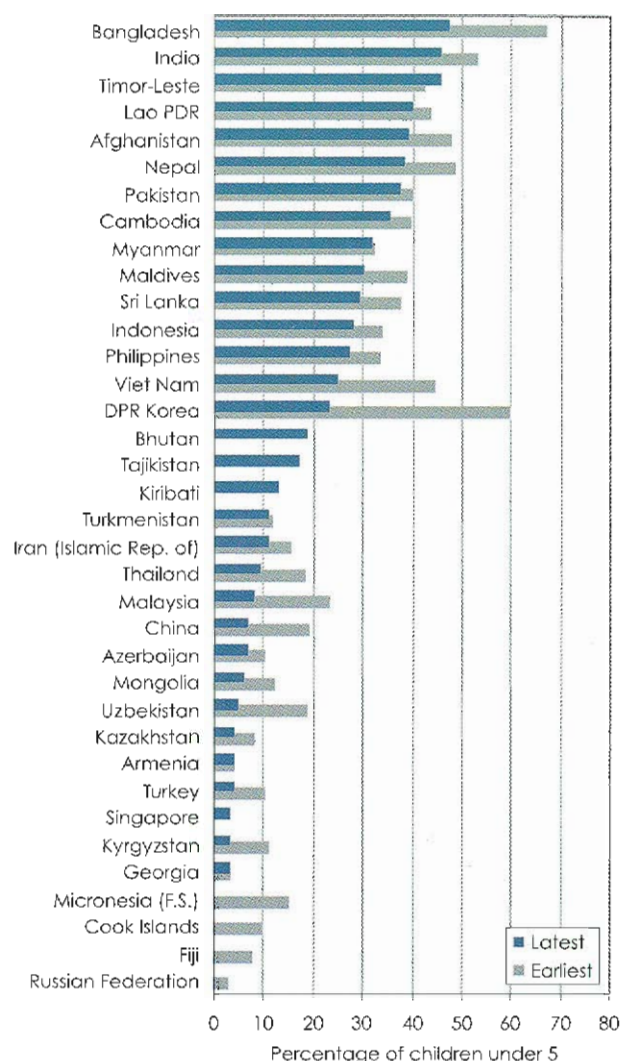
Under-five mortality, Asia and the Pacific, 1990 and 2006



above the 1990 level, far below the peak of 72 per cent reached in 1995. Other countries in the subregion have done better: Bangladesh has achieved 81 per cent and the rates in Sri Lanka and Turkey are close to 100 per cent.

Figure 4.4

Prevalence of moderately or severely underweight children, Asia and the Pacific, 1990 and 2006



Immunization with the combination, DPT3 vaccine against diphtheria, pertussis and typhoid follows a similar pattern. India's low level again pulls down the averages both for the subregion and Asia and the Pacific as a whole. What is alarming is that the latest recorded rate in India is substantially lower than in 1990. Among the smaller countries, immunization rates are lowest in the Lao People's Democratic Republic – 48 per cent for measles and 57 per cent for DPT3.

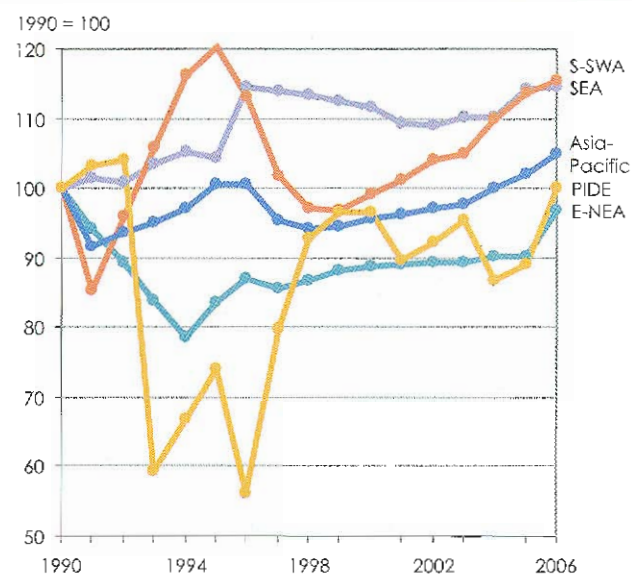
Low levels of child immunization are not necessarily the result of low national income. Two low-income economies have performed strongly: Mongolia (99 per cent) and Viet Nam (94 per cent) also have high levels of immunization against measles.



#### 4. Child health

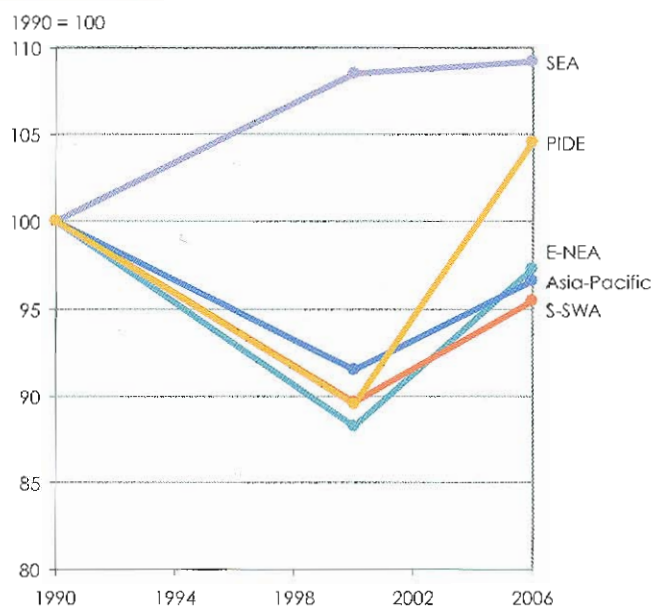
**Figure 4.5**

Index of change in measles immunization of one-year-olds in selected groups of Asian and Pacific countries, 1990-2006



**Figure 4.6**

Index of change in DPT3 immunization of one-year-olds in selected groups of Asia-Pacific countries, 1990-2006



#### Infant mortality rate (MDG) (deaths per 1,000 live births)

The infant mortality rate is the probability (expressed as a rate per 1,000 live births) of a child born in a specified year dying before reaching the age of one if subject to current age-specific mortality rates. **Aggregates:** Averages were calculated using the number of live births as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 17 July 2008).

#### Under-five mortality rate (MDG) (deaths per 1,000 live births)

The under-five mortality rate is the probability (expressed as a rate per 1,000 live births) of a child born in a specified year dying before reaching the age of five if subject to current age-specific mortality rates. **Aggregates:** Averages are calculated using total number of live births as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 17 July 2008).

#### Prevalence of underweight children (% of children under 5)

Percentage of children aged 0-59 months who fall below minus 2 standard deviations from the median weight for age of the international reference population as adopted by the World Health Organization (WHO). **Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 1 August 2008).

#### Children immunized against measles (MDG) (percentage)

Proportion of 1 year old children immunized against measles. Measles vaccine is recommended to be given at 9 months, except in specified countries where it is recommended to be given between 12 and 15 months for which the indicator is calculated as the proportion of children aged 24 months having received one dose of measles-containing vaccine. **Aggregates:** Averages are calculated using the population of children aged one as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 17 July 2008).

#### Children immunized against measles: Poorest and richest quintiles (percentage)

See definition of *children immunized against measles*. Disaggregation for the lowest and richest wealth quintile of the population. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 19 June 2008).

#### Immunized against DPT3 (percentage)

DPT3 immunization coverage is the percentage of one-year-olds who have received three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine in a given year. **Aggregates:** Averages are calculated using the population of children aged one as weight. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 4 June 2008).



## 4.1 Child health

	Infant mortality rate					Under-five mortality rate					Prevalence of underweight children	
	Deaths per 1,000 live births					Deaths per 1,000 live births					% of children under 5	
	1990	1995	2000	2005	2006	1990	1995	2000	2005	2006	Earliest	Latest
<b>East and North-East Asia</b>	<b>34</b>	<b>33</b>	<b>28</b>	<b>20</b>	<b>19</b>	<b>43</b>	<b>41</b>	<b>35</b>	<b>24</b>	<b>23</b>		
China	36	35	30	21	20	45	44	37	25	24	19.1 (90)	6.9 (05)
DPR Korea	42	42	42	42	42	55	55	55	55	55	60.0 (98)	23.4 (04)
Hong Kong, China												
Japan	5	4	3	3	3	6	6	5	4	4		
Macao, China												
Mongolia	79	62	48	36	34	109	83	62	45	43	12.3 (92)	6.3 (05)
Republic of Korea	8	6	5	5	5	9	6	5	5	5		
<b>South-East Asia</b>	<b>53</b>	<b>44</b>	<b>35</b>	<b>29</b>	<b>27</b>	<b>77</b>	<b>61</b>	<b>47</b>	<b>37</b>	<b>36</b>		
Brunei Darussalam	10	8	8	8	8	11	9	9	9	9		
Cambodia	85	89	78	67	65	116	123	104	85	82	39.8 (93)	35.6 (05)
Indonesia	60	48	36	28	26	91	66	48	36	34	34.0 (95)	28.2 (03)
Lao PDR	120	99	77	62	59	163	131	101	79	75	44.0 (93)	40.0 (00)
Malaysia	16	13	11	10	10	22	17	14	12	12	23.3 (93)	8.1 (05)
Myanmar	91	83	78	75	74	130	117	110	105	104	32.4 (90)	31.8 (03)
Philippines	41	35	30	25	24	62	49	40	33	32	33.5 (90)	27.6 (03)
Singapore	7	4	3	2	2	9	5	4	3	3		3.4 (00)
Thailand	26	17	11	8	7	31	20	13	8	8	18.6 (93)	9.3 (05)
Timor-Leste	133	118	85	52	47	177	154	107	61	55	42.6 (02)	45.8 (03)
Viet Nam	38	32	23	16	15	53	44	30	19	17	44.9 (94)	25.2 (05)
<b>South and South-West Asia</b>	<b>85</b>	<b>76</b>	<b>68</b>	<b>61</b>	<b>60</b>	<b>119</b>	<b>105</b>	<b>92</b>	<b>81</b>	<b>79</b>		
Afghanistan	168	165	165	165	165	260	257	257	257	257	48.0 (97)	39.3 (04)
Bangladesh	100	83	66	54	52	149	120	92	73	69	67.4 (92)	47.5 (04)
Bhutan	107	93	77	65	63	166	133	100	75	70		18.7 (99)
India	82	73	66	59	57	115	102	89	78	76	53.4 (93)	45.9 (05)
Iran (Islamic Rep. of)	54	43	36	31	30	72	55	44	36	34	15.7 (95)	10.9 (98)
Maldives	78	62	43	28	26	111	85	54	33	30	38.9 (94)	30.4 (01)
Nepal	99	84	64	49	46	142	118	86	63	59	48.7 (95)	38.6 (06)
Pakistan	100	93	85	79	78	130	118	108	99	97	40.4 (91)	37.8 (02)
Sri Lanka	26	21	16	12	11	32	25	19	14	13	37.7 (93)	29.4 (00)
Turkey	67	52	38	26	24	82	63	44	29	26	10.4 (93)	3.9 (03)
<b>North and Central Asia</b>	<b>43</b>	<b>44</b>	<b>37</b>	<b>29</b>	<b>27</b>	<b>52</b>	<b>53</b>	<b>45</b>	<b>33</b>	<b>32</b>		
Armenia	47	41	32	23	21	56	48	36	26	24	3.9 (98)	4.0 (05)
Azerbaijan	84	80	77	74	73	105	98	93	89	88	10.1 (96)	6.8 (01)
Georgia	39	36	32	29	28	46	41	37	33	32	3.1 (99)	3.1 (99)
Kazakhstan	51	50	37	27	26	60	60	43	31	29	8.3 (95)	4.0 (06)
Kyrgyzstan	63	53	44	37	36	75	62	51	43	41	11.0 (97)	3.4 (06)
Russian Federation	23	23	20	15	14	27	27	24	17	16	3.0 (95)	
Tajikistan	91	90	75	59	56	115	114	93	71	68		17.4 (05)
Turkmenistan	81	71	59	47	45	99	88	71	54	51	12.0 (00)	11.0 (05)
Uzbekistan	61	57	52	40	38	74	68	62	46	43	18.8 (96)	5.1 (06)
<b>Pacific</b>	<b>30</b>	<b>28</b>	<b>27</b>	<b>25</b>	<b>24</b>	<b>40</b>	<b>37</b>	<b>36</b>	<b>33</b>	<b>32</b>		
Australia	8	6	5	5	5	10	7	6	6	6		
American Samoa												
Cook Islands	26	24	20	17	16	32	29	24	20	19	10.0 (97)	
Fiji	19	17	16	16	16	22	19	18	18	18	7.9 (93)	
French Polynesia												
Guam												
Kiribati	65	57	52	48	47	88	77	70	65	64		13.0 (99)
Marshall Islands	63	59	55	51	50	92	81	68	58	56		
Micronesia (F.S.)	45	41	37	34	33	58	52	47	42	41	15.0 (97)	
Nauru		25	25	25	25		30	30	30	30		
New Caledonia												
New Zealand	9	7	6	5	5	11	9	8	6	6		
Niue												
Northern Mariana Is.												
Palau	18	15	13	10	10	21	17	14	11	11		
Papua New Guinea	69	64	60	55	54	94	87	80	74	73		
Samoa	40	33	28	24	23	50	41	34	29	28		
Solomon Islands	86	75	65	56	55	121	103	88	75	73		
Tonga	26	24	22	20	20	32	29	26	24	24		
Tuvalu	42	38	35	31	31	54	48	43	38	38		
Vanuatu	48	40	38	31	30	62	50	48	38	36		
<b>Asia and the Pacific</b>	<b>62</b>	<b>57</b>	<b>51</b>	<b>44</b>	<b>43</b>	<b>86</b>	<b>78</b>	<b>68</b>	<b>58</b>	<b>56</b>		
LLDC	96	95	92	86	85	134	135	131	123	122		
LDC	105	94	83	75	74	155	137	118	106	104		
ASEAN	52	44	35	28	27	76	60	47	37	35		
ECO	86	81	76	70	69	113	107	101	93	92		
SAARC	88	78	70	64	62	123	109	96	85	83		
Central Asia	65	62	53	42	41	79	75	64	49	47		
Pacific island dev. econ.	63	58	55	50	49	85	79	73	67	66		
Low-income	90	83	74	67	66	126	114	101	90	88		
Middle-income	58	53	47	40	38	79	72	62	51	49		
High-income	6	5	4	4	4	8	6	5	5	5		
<b>Other world regions</b>												
Africa	103	100	93	89	88	170	166	155	147	145		
Europe	12	9	7	6	6	14	11	9	8	7		
Latin America & Carib.	43	36	29	23	23	55	44	35	28	26		
North America	10	8	7	7	6	12	9	9	8	8		
Other countries/areas	47	41	38	35	35	62	54	49	46	45		
<b>World</b>	<b>64</b>	<b>60</b>	<b>55</b>	<b>50</b>	<b>49</b>	<b>93</b>	<b>88</b>	<b>80</b>	<b>73</b>	<b>72</b>		



## 4. Child health

### 4.2 Child immunization, one-year-olds

	Immunized against measles								Immunized against DPT3		
	Total				Poorest quintile		Richest quintile				
	Percentage				Percentage		Percentage		Percentage		
	1990	1995	2000	2006	Earliest	Latest	Earliest	Latest	1990	2000	2006
<b>East and North-East Asia</b>	97	81	86	94					96	85	93
China	98	80	85	93					97	85	93
DPR Korea	98	67	78	96					98	56	89
Hong Kong, China											
Japan	73	93	96	99					90	85	99
Macao, China											
Mongolia	92	85	94	99					84	95	99
Republic of Korea	93	93	95	99					74	97	98
<b>South-East Asia</b>	72	75	80	82					75	81	82
Brunei Darussalam	99	99	99	97					93	99	99
Cambodia	34	62	65	78		70 (05)		82 (05)	38	50	80
Indonesia	58	63	72	72		60 (03)		85 (03)	60	75	70
Lao PDR	32	68	42	48					18	53	57
Malaysia	70	86	88	90					90	95	96
Myanmar	90	82	84	78					88	82	82
Philippines	85	72	81	92		70 (03)		89 (03)	88	80	88
Singapore	84	97	96	93					85	98	95
Thailand	80	91	94	96					92	97	98
Timor-Leste				64							67
Viet Nam	88	95	97	93		64 (02)		98 (02)	88	96	94
<b>South and South-West Asia</b>	58	70	58	67					69	62	66
Afghanistan	20	41	35	68					25	31	77
Bangladesh	65	79	76	81		60 (04)		91 (04)	69	83	88
Bhutan	93	85	76	90					96	92	95
India	56	72	52	59		40 (06)		85 (06)	70	56	55
Iran (Islamic Rep. of)	85	95	99	99					91	99	99
Maldives	96	96	99	97					94	97	98
Nepal	57	56	71	85		73 (06)		95 (06)	43	72	89
Pakistan	50	47	56	80	28 (91)		75 (91)		54	61	83
Sri Lanka	80	87	99	99					86	99	99
Turkey	78	65	86	98					84	85	90
<b>North and Central Asia</b>		87	97	97						96	97
Armenia		96	92	92		72 (05)		61 (05)		93	87
Azerbaijan		97	99	96						99	95
Georgia		61	73	95						80	87
Kazakhstan		95	99	99		74 (99)		76 (99)		97	99
Kyrgyzstan		97	98	97	82 (97)		81 (97)			99	92
Russian Federation		85	97	99						97	99
Tajikistan		70	87	87						83	86
Turkmenistan		92	97	99		91 (00)		80 (00)		97	98
Uzbekistan		91	99	95						96	95
<b>Pacific</b>	81	73	80	83					86	79	85
Australia	86	87	91	94					95	90	92
American Samoa											
Cook Islands	67	96	76	99					93	97	99
Fiji	84	94	85	99					97	89	81
French Polynesia											
Guam											
Kiribati	75	47	80	81					97	90	86
Marshall Islands	52	57	94	96					92	39	74
Micronesia (F.S.)	81	90	85	83					85	85	67
Nauru			8	99					74	44	72
New Caledonia											
New Zealand	90	84	85	82					90	90	89
Niue	99	34	99	99					99	99	99
Northern Mariana Is.											
Palau	98	99	83	98					99	96	98
Papua New Guinea	67	42	62	65					68	59	75
Samoa	89	96	93	54					90	99	56
Solomon Islands	70	68	87	84					77	82	91
Tonga	86	94	95	99					94	95	99
Tuvalu	95	94	81	84					99	82	97
Vanuatu	66	60	94	99					76	90	85
<b>Asia and the Pacific</b>	74	75	71	78					79	73	77
LLDC	43	70	71	83					37	70	86
LDC	62	71	70	78					63	73	85
ASEAN	72	75	80	82					75	81	82
ECO	61	65	70	87					66	72	88
SAARC	56	69	55	65					67	59	63
Central Asia		89	96	95						94	84
Pacific island dev. econ.	70	52	68	70					73	65	76
Low-income	63	68	70	82					65	72	86
Middle-income	76	76	70	76					82	72	74
High-income	81	92	95	98					86	89	97
<b>Other world regions</b>											
Africa	61	59	60	74					61	58	75
Europe	81	87	90	92					88	94	95
Latin America & Carib.	76	87	92	93					68	88	92
North America	90	88	91	93					90	94	96
Other countries/areas	80	79	87	84					87	86	84
<b>World</b>	73	74	72	80					76	73	79



## 5 Maternal and reproductive health

In 2005, 237,000 mothers in Asia and the Pacific died from causes related to pregnancy. This represents 44 per cent of the world's maternal deaths, lower than the region's share of total population. Nevertheless maternal mortality is a serious problem in many developing countries in the region, especially in South and South-West Asia.

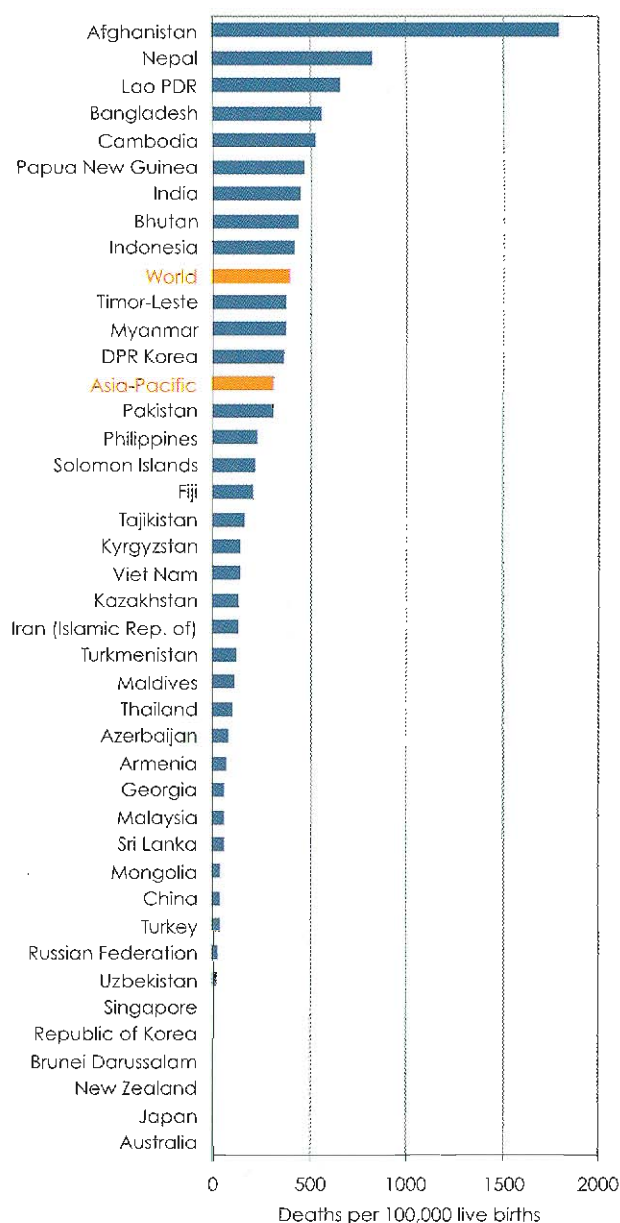
Maternal mortality is difficult to measure. Many countries, particularly those which have high maternal mortality rates, have weak systems for registering births and deaths so their coverage of these "vital events" is incomplete. In fact, as countries improve their systems they may report increasing numbers of maternal deaths even when the actual number is declining. The alternative is to estimate deaths using sample surveys, but for such estimates to be reliable the sample sizes need to be very large. Much research has been undertaken to estimate maternal mortality in a comparable manner across countries and over time – so as to better track progress towards the corresponding Millennium Development Goal, which is to reduce maternal mortality by three-quarters between 1990 and 2015.

The maternal mortality ratio (MMR) is the number of maternal deaths per 100,000 live births in a specified year. MMRs are highly correlated with per capita income. In 2005, globally the average ratio was 404, and across Asia and the Pacific it was 317. But in the region's high-income economies the ratio was only 5, compared with 273 in the middle-income economies, and 519 in the low-income economies.

By geographical region, MMRs ranged from a relatively low 48 in East and North-East Asia and 58 in North and Central Asia, to 302 in South-East Asia, 432 in the Pacific developing economies and 469 in South and South-West Asia. Some countries had very high ratios – above 500 in Afghanistan, Bangladesh, Cambodia, the Lao People's Democratic Republic and Nepal. Typically the rates were highest in the poorest countries, but even these

Figure 5.1

Maternal mortality ratios, Asia and the Pacific, 2005

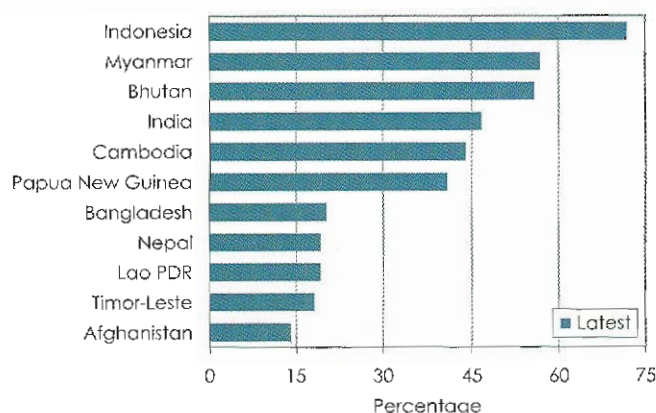


countries can reduce deaths by using specific reproductive health interventions. Thus although Viet Nam has a lower per capita income than Indonesia its MMR was only 150, compared with 420 in Indonesia.



Figure 5.2

Proportions of births attended by skilled health personnel, in countries with high MMRs, 2000-2006



The most effective way to reduce maternal mortality is to have births attended by skilled health personnel. Countries with high MMRs tend to have a low proportion of births assisted in this way – 14 per cent in Afghanistan, 20 per cent in Bangladesh, 44 per cent in Cambodia and 19 per cent in the Lao People's Democratic Republic. On the other hand, two low-income economies with relatively low MMRs both have high proportions of births attended by skilled personnel: Sri Lanka, 96 per cent; and Viet Nam, 88 per cent.

Another important step is to provide contraception to women who wish to delay or stop bearing children. Except for Bangladesh, the countries in which the MMR exceeds 500 all have contraceptive prevalence rates below 50 per cent. Even the poorest countries, however, can achieve higher prevalence rates – as in Sri Lanka (70 per cent) and Viet Nam (76 per cent) – countries that have achieved low levels of maternal mortality through effective health interventions.

A further way of reducing maternal mortality is to ensure that pregnant women have access to antenatal care. In most of the countries in the region for which data are available, more than 90 per cent of pregnant women make at least one visit to a medical centre for antenatal care. In South and South-West Asia, however, that proportion is often quite low – less than 50 per cent in Afghanistan, Bangladesh, Nepal and Pakistan.

The women at lower risk are those in richer households and in urban areas which have better access to reproductive health care. For example, in the Philippines in 2003, for women in the richest quintile the proportion of births attended by skilled personnel was 92 per cent but for women in the poorest quintile the proportion was only 25 per

Figure 5.3

Contraceptive prevalence rates in low-income economies, 2000-2006

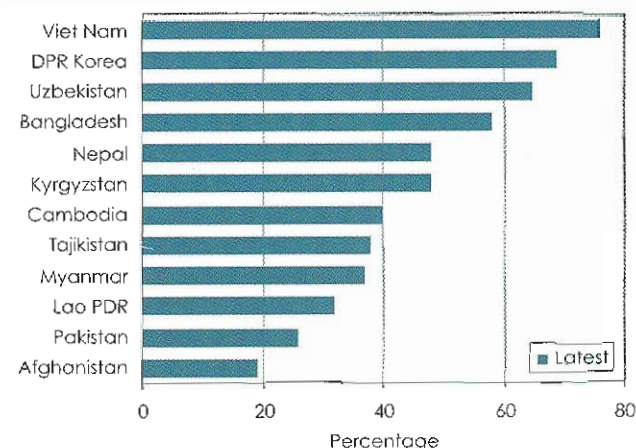
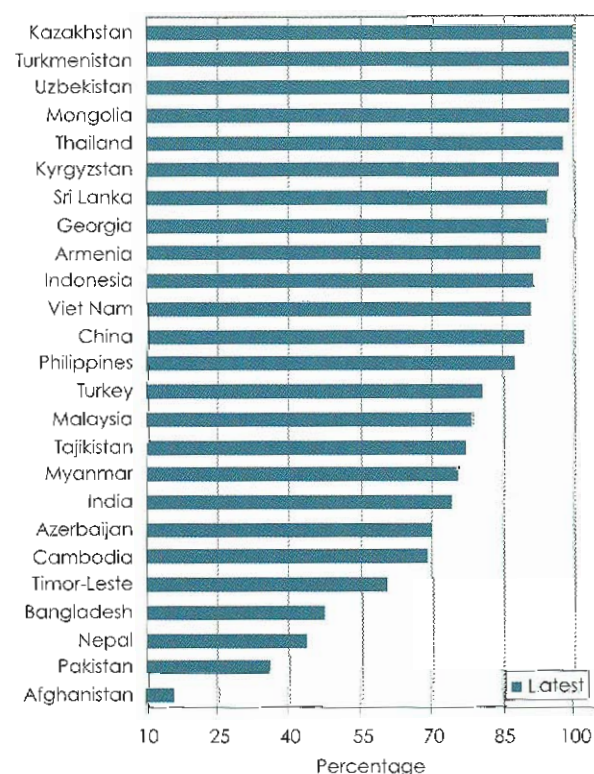


Figure 5.4

Proportion of pregnant women receiving antenatal care at one visit to a medical centre, 2000-2006



cent. Similarly, in urban areas the proportion was 79 per cent but in the rural areas only 41 per cent.

The risk of both maternal mortality and infant mortality is much greater for births occurring to women below age 20. For this reason, another effective policy measure is to reduce adolescent fertility. Adolescent fertility remains high in several countries in South and South-West Asia, as well as in the Lao People's Democratic Republic and Papua New Guinea.



**Maternal mortality ratio (number; deaths per 100,000 live births.)**

Number of maternal deaths per 100,000 live births during a specified time period, usually 1 year. Related terms: Maternal death is the death of a woman while pregnant or within 42 days after termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

**Aggregates:** Number: Sum of individual country values; Ratio: Averages are calculated using the total number of births as weight. **Source:** Number: Calculated by ESCAP using data from United Nations Millennium Development Goals Indicators; Ratio: United Nations Millennium Development Goals Indicators (online database, accessed on 4 August 2008).

**Proportions of births attended by skilled health personnel (percentage)**

Percentage of births attended by skilled health personnel (doctors, nurses or midwives). Skilled health personnel include those who are trained in: providing life-saving obstetric care, including giving the necessary supervision, care and advice to women during pregnancy, labour and the post-partum period; conducting deliveries on their own; and caring for newborns. Traditional birth attendants, even if they receive a short training course, are not included. **Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 5 August 2008).

**Proportion of births attended by skilled health personnel: poorest and richest quintiles (percentage)**

See definition of *proportions of births attended by skilled health personnel*. Disaggregation is provided for the lowest and richest wealth quintile of the population. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 4 June 2008).

**Proportions of births attended by skilled health personnel. Urban/Rural (percentage)**

See definition of *proportions of births attended by skilled health personnel*. Disaggregation is provided for urban and rural areas. **Aggregates:** None. **Source:** United Nations

Millennium Development Goals Indicators (online database, accessed on 5 August 2008).

**Contraceptive prevalence rate (percentage)**

Contraceptive prevalence is the percentage of women married or in union aged 15 to 49 who are currently using, or whose sexual partner is using, at least one method of contraception, regardless of the method used. For analytical convenience, contraceptive methods are often classified as either modern or traditional. Modern methods of contraception include female and male sterilization, oral hormonal pills, the intra-uterine device (IUD), the male condom, injectables, the implant (including Norplant), vaginal barrier methods, the female condom and emergency contraception. Traditional methods of contraception include the rhythm (periodic abstinence), withdrawal, lactational amenorrhea method (LAM) and folk methods.

**Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 5 August 2008).

**Pregnant women receiving antenatal care coverage: one visit and four visits (percentage)**

Antenatal care coverage (at least one visit) is the percentage of women aged 15-49 with a live birth in a given time period that received antenatal care provided by skilled health personnel (doctors, nurses, or midwives) at least once during pregnancy, as a percentage of women age 15-49 years with a live birth in a given time period. Antenatal care coverage (at least four visits) is the percentage of women aged 15-49 with a live birth in a given time period that received antenatal care four or more times with any provider (whether skilled or unskilled), as a percentage of women age 15-49 years with a live birth in a given time period. A skilled health worker/attendant is an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborn children.

**Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 4 August 2008).



## 5. Maternal and reproductive health

### 5.1 Maternal mortality and antenatal care

	Maternal mortality		Proportions of births attended by skilled health personnel					
	Number	Deaths per 100,000 live births	Total		Poorest quintile	Richest quintile	Rural	Urban
			Earliest	Latest	Percentage			
	2005	2005			Latest	Latest	Latest	Latest
<b>East and North-East Asia</b>	<b>9 149</b>	<b>48</b>						
China	7 786	45	94 (90)	98 (05)				
DPR Korea	1 209	370	98 (90)	97 (04)				
Hong Kong, China								
Japan	66	6	100 (90)	100 (96)				
Macao, China								
Mongolia	22	46	94 (98)	99 (06)				
Republic of Korea	65	14						
<b>South-East Asia</b>	<b>34 503</b>	<b>302</b>						
Brunei Darussalam	1	13	98 (94)	99 (99)				
Cambodia	2 014	540	34 (98)	44 (05)	21 (05)	90 (05)	39 (05)	70 (05)
Indonesia	18 738	420	41 (90)	72 (04)	40 (03)	94 (03)	55 (03)	79 (03)
Lao PDR	1 024	660		19 (01)				
Malaysia	345	62	93 (90)	98 (05)				
Myanmar	3 428	380	46 (91)	57 (01)				
Philippines	5 266	230	53 (93)	60 (03)	25 (03)	92 (03)	41 (03)	79 (03)
Singapore	5	14		100 (98)				
Thailand	1 034	110	99 (00)	97 (06)				
Timor-Leste	167	380	26 (97)	18 (03)				
Viet Nam	2 480	150	77 (97)	88 (06)	58 (02)	100 (02)	82 (02)	99 (02)
<b>South and South-West Asia</b>	<b>190 816</b>	<b>469</b>						
Afghanistan	22 180	1 800	12 (00)	14 (03)				
Bangladesh	22 966	570	10 (94)	20 (06)	3 (04)	40 (04)	9 (04)	30 (04)
Bhutan	55	440	15 (94)	56 (03)				
India	122 686	450	34 (93)	47 (06)	19 (06)	89 (06)	38 (06)	74 (06)
Iran (Islamic Rep. of)	1 917	140	86 (97)	90 (00)				
Maldives	8	120	90 (94)	84 (04)				
Nepal	6 527	830	7 (91)	19 (06)	5 (06)	58 (06)	19 (06)	52 (06)
Pakistan	13 699	320	19 (91)	31 (05)	5 (91)	55 (91)	8 (91)	42 (91)
Sri Lanka	173	58	94 (93)	96 (00)				
Turkey	605	44	76 (93)	83 (03)			69 (03)	90 (03)
<b>North and Central Asia</b>	<b>1 739</b>	<b>58</b>						
Armenia	27	76	96 (97)	98 (05)	93 (05)	100 (05)	98 (05)	99 (05)
Azerbaijan	103	82	100 (98)	100 (04)				
Georgia	32	66	97 (90)	99 (03)				
Kazakhstan	390	140	100 (95)	100 (06)	99 (99)	99 (99)	100 (99)	98 (99)
Kyrgyzstan	166	150	98 (97)	98 (06)	96 (97)	100 (97)	98 (97)	99 (97)
Russian Federation	418	28	99 (90)	99 (03)				
Tajikistan	315	170	79 (96)	83 (05)				
Turkmenistan	140	130	96 (96)	100 (06)	97 (00)	98 (00)	97 (00)	98 (00)
Uzbekistan	148	24	98 (96)	100 (06)				
<b>Pacific</b>	<b>992</b>	<b>185</b>						
Australia	10	4	100 (91)	100 (99)				
American Samoa								
Cook Islands			99 (91)	98 (01)				
Fiji	38	210	100 (98)	99 (00)				
French Polynesia								
Guam								
Kiribati			72 (94)	85 (98)				
Marshall Islands				95 (98)				
Micronesia (F.S.)			93 (99)	88 (01)				
Nauru								
New Caledonia								
New Zealand	5	9	95 (94)	100 (95)				
Niue			99 (90)	100 (02)				
Northern Mariana Is.								
Palau			99 (90)	100 (02)				
Papua New Guinea	905	470	53 (96)	41 (00)				
Samoa			76 (90)	100 (98)				
Solomon Islands	33	220	85 (94)	85 (99)				
Tonga			92 (91)	95 (00)				
Tuvalu			100 (90)	100 (02)				
Vanuatu			87 (94)	88 (99)				
<b>Asia and the Pacific</b>	<b>237 199</b>	<b>317</b>						
LLDC	31 097	842						
LDC	58 403	773						
ASEAN	34 337	302						
ECO	39 663	410						
SAARC	188 294	497						
Central Asia	1 321	88						
Pacific island dev. econ.	977	432						
Low-income	77 095	519						
Middle-income	159 951	273						
High-income	153	8						
<b>Other world regions</b>								
Africa	282 428	828						
Europe	520	9						
Latin America & Carib.	15 301	133						
North America	487	11						
Other countries/areas	7 408	214						
<b>World</b>	<b>543 342</b>	<b>404</b>						



## 5.2 Reproductive health

	Contraceptive prevalence rate		Pregnant women receiving antenatal care coverage			
	Percentage		Four visits		One visit	
	Earliest	Latest	Earliest	Latest	Earliest	Latest
<b>East and North-East Asia</b>						
China	85 (92)	87 (01)			90 (01)	90 (05)
DPR Korea	62 (92)	69 (02)				
Hong Kong, China	86 (92)	84 (02)				
Japan	58 (90)	54 (05)				
Macao, China						
Mongolia	65 (94)	66 (06)			90 (98)	99 (06)
Republic of Korea	79 (91)	81 (97)				
<b>South-East Asia</b>						
Brunei Darussalam						
Cambodia	13 (95)	40 (05)		27 (05)	34 (98)	69 (05)
Indonesia	50 (91)	58 (05)		81 (02)	76 (91)	92 (02)
Lao PDR	19 (93)	32 (00)				
Malaysia	55 (94)				74 (03)	79 (05)
Myanmar	17 (91)	37 (01)			76 (97)	76 (01)
Philippines	40 (93)	51 (06)		70 (03)	83 (93)	88 (03)
Singapore	65 (92)	62 (97)				
Thailand	74 (93)	72 (06)			86 (96)	98 (06)
Timor-Leste	25 (91)	10 (03)		30 (03)	71 (97)	61 (03)
Viet Nam	65 (94)	76 (06)		29 (02)	71 (97)	91 (06)
<b>South and South-West Asia</b>						
Afghanistan	5 (00)	19 (06)			37 (00)	16 (03)
Bangladesh	40 (91)	58 (04)		16 (04)	26 (94)	48 (06)
Bhutan	19 (94)	31 (00)				
India	41 (93)	56 (06)		51 (06)	49 (93)	74 (06)
Iran (Islamic Rep. of)	65 (92)	74 (00)				
Maldives	23 (91)	39 (04)				
Nepal	23 (91)	48 (06)		29 (06)	15 (91)	44 (06)
Pakistan	12 (91)	26 (06)	14 (91)		26 (91)	36 (05)
Sri Lanka	66 (93)	70 (00)			80 (93)	95 (00)
Turkey	63 (93)	71 (03)		54 (03)	62 (93)	81 (03)
<b>North and Central Asia</b>						
Armenia	61 (00)	53 (05)		71 (05)	82 (97)	93 (05)
Azerbaijan	55 (00)	55 (01)		30 (99)	98 (97)	70 (01)
Georgia	41 (00)	47 (05)		75 (05)	74 (97)	94 (05)
Kazakhstan	59 (95)	51 (06)		70 (99)	93 (95)	100 (06)
Kyrgyzstan	60 (97)	48 (06)		81 (97)	97 (97)	97 (06)
Russian Federation	63 (93)	73 (99)				
Tajikistan	34 (00)	38 (05)			71 (00)	77 (05)
Turkmenistan		62 (00)		83 (00)	98 (00)	99 (06)
Uzbekistan	56 (96)	65 (06)	79 (96)		95 (96)	99 (06)
<b>Pacific</b>						
Australia	67 (95)	71 (02)				
American Samoa						
Cook Islands	63 (96)	43 (99)				
Fiji						
French Polynesia						
Guam		67 (02)				
Kiribati		36 (00)				
Marshall Islands						
Micronesia (F.S.)						
Nauru						
New Caledonia						
New Zealand	74 (95)					
Niue						
Northern Mariana Is.						
Palau		33 (03)				
Papua New Guinea	26 (96)					
Samoa						
Solomon Islands						
Tonga						
Tuvalu						
Vanuatu	39 (95)					
<b>Asia and the Pacific</b>						
ULDC						
LDC						
ASEAN						
ECO						
SAARC						
Central Asia						
Pacific island dev. econ.						
Low-income						
Middle-income						
High-income						
<b>Other world regions</b>						
Africa						
Europe						
Latin America & Carib.						
North America						
Other countries/areas						
<b>World</b>						



## 6 Gender equality

**Gender equality is both a means to development and a development goal in itself. This chapter reviews overall gender equality in Asia and the Pacific – comparing this with internationally agreed standards, including those established in the Millennium Development Goals, the Beijing Platform for Action and the Convention on the Elimination of All Forms of Discrimination against Women.**

It is difficult to analyse the status of women and men in the region systematically. Problems include data gaps in many key areas – and the lack of methodologies for measuring progress in reducing gender gaps. This chapter uses the best available data – the sex-disaggregated indicators that are presented throughout this *Yearbook*, along with some additional indicators.

### Demographics and health

While the current sex ratio in Asia and the Pacific – 96 females to every 100 males – approaches natural gender parity, there are concerns in some subregions. In North and Central Asia, for example, women exceed men by 12 percentage points and there are more men than women in 8 of the 10 countries in South and South-West Asia. In East and North-East Asia nearly all countries and areas have more women than men, though in China men outnumber women.

Significant shifts in fertility and mortality patterns in Asia and the Pacific have affected female and male populations in different ways. As populations age, for example, they tend to have more women in the senior age cohorts, raising important social policy concerns for the coming decades.

### Women's representation in politics

In almost every country, national and local politics are dominated by men. The Economic and Social Council and the Beijing Platform for Action have established a target of 30 per cent female

representation in key decision-making positions but according to the Interparliamentary Union, women are still under represented. Nevertheless, there has been some progress. Three countries in the region have achieved the 30 per cent target in the lower or upper house of the national parliament – Australia, Nepal and New Zealand. And to ensure representation a number of countries have reserved seats for women in legislative bodies.

Still, many countries in the region are far from the target. In the 47 lower or single chamber parliaments for which data were available for 2008, women held on average just 13.1 per cent of the seats. Of the 45 countries in Asia and the Pacific for which data were available, women representatives comprised less than 10 per cent in 18 countries: Armenia, Georgia, Kiribati, India, the Islamic Republic of Iran, Marshall Islands, Micronesia (Federated States of), Mongolia, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Sri Lanka, Tonga, Turkey, Tuvalu and Vanuatu. Five of the 13 Pacific countries for which data were available had no women members of parliament at all.

### Women's human rights

The Convention on the Elimination of All Forms of Discrimination against Women adopted by the General Assembly in its resolution 34/180 of 18 December 1979, is often described as an international bill of rights for women. Of the 44 countries in Asia and the Pacific that have ratified the Convention, 37 have submitted one or more reports to the Economic and Social Council, and 15 have submitted at least three reports.

### Health

An important signal of women's social, economic and political status is the attention paid to their sexual and reproductive health. This is highlighted in the sixth MDG – which focuses on maternal mortality. In Asia and the Pacific, the risks of dying from childbirth vary enormously from one



## CEDAW ratification and reporting status of countries in Asia and the Pacific

	Date of signature	Date of receipt of the instrument of ratification, accession or succession	States Latest Report	Examined at	No. of reports submitted
<b>ESCAP</b>					
<b>East and North-East Asia</b>					
China	17 July 1980	4 November 1980	Combined fifth and sixth periodic reports	36 <sup>th</sup> Session (2006)	5
DPR Korea			Initial report	33 <sup>rd</sup> Session (2005)	1
Hong Kong, China					
Japan	17 July 1980	25 June 1985	Fifth periodic report	29 <sup>th</sup> Session (2003)	5
Mongolia	17 July 1980	20 July 1981	Combined third and fourth periodic reports	24 <sup>th</sup> Session (2001)	3
Macao, China					
Republic of Korea	25 May 1983	27 December 1984	Combined fifth and sixth periodic reports		5
<b>South-East Asia</b>					
Brunei Darussalam			No report submitted		
Cambodia	17 October 1980	15 October 1992	Combined initial, second and third reports	34 <sup>th</sup> Session (2006)	1
Indonesia	29 July 1980	13 September 1984	Combined fourth and fifth periodic reports		4
Lao PDR	17 July 1980	14 August 1981	Combined initial, first, second, third, fourth and fifth periodic reports	32 <sup>nd</sup> Session (2005)	1
Malaysia		5 July 1995	Combined initial and second periodic reports	35 <sup>th</sup> Session (2006)	1
Myanmar		22 July 1997	Initial report	22 <sup>nd</sup> Session (2000)	1
Philippines	15 July 1980	5 August 1981	Combined fifth and sixth periodic reports	36 <sup>th</sup> Session (2006)	5
Singapore		5 October 1995	Third periodic report		3
Thailand		9 August 1985	Combined fourth and fifth periodic reports	34 <sup>th</sup> Session (2006)	4
Timor-Leste		16 April 2003	No report submitted		
Viet Nam	29 July 1980	17 February 1982	Combined fifth and sixth periodic reports	37 <sup>th</sup> Session (2007)	5
<b>South and South-West Asia</b>					
Afghanistan	14 August 1980	5 March 2003	No report submitted		
Bangladesh		6 November 1984	Fifth periodic report	31 <sup>st</sup> Session (2004)	5
Bhutan	17 July 1980	31 August 1981	Combined initial, second, third, fourth, fifth and sixth periodic reports and Corrigendum	30 <sup>th</sup> Session (2004)	1
India	30 July 1980	9 July 1993	Combined second and third reports	37 <sup>th</sup> Session (2007)	2
Iran (Islamic Rep. of)			Not a party to CEDAW Convention		
Maldives		1 July 1993	Combined second and third periodic reports	37 <sup>th</sup> Session (2007)	2
Nepal	5 February 1991	22 April 1991	Combined second and third periodic reports	30 <sup>th</sup> Session (2004)	2
Pakistan		12 March 1996	Combined initial, second and third periodic reports	38 <sup>th</sup> Session (2007)	1
Sri Lanka	17 July 1980	5 October 1981	Combined third and fourth periodic reports	26 <sup>th</sup> Session (2002)	3
Turkey		20 December 1985	Combined fourth and fifth periodic reports	32 <sup>nd</sup> Session (2005)	4
<b>North and Central Asia</b>					
Armenia		13 September 1993	Second periodic report	Exceptional session (2002)	2
Azerbaijan		10 July 1995	Combined second and third periodic reports	37 <sup>th</sup> Session (2007)	2
Georgia		26 October 1994	Combined second and third periodic reports	36 <sup>th</sup> Session (2006)	2
Kazakhstan		26 August 1998	Second periodic report	37 <sup>th</sup> Session (2007)	2
Kyrgyzstan		10 February 1997	Second periodic report	30 <sup>th</sup> Session (2004)	2
Russian Federation	17 July 1980	23 January 1981	Fifth periodic report	26 <sup>th</sup> Session (2002)	5
Tajikistan		26 October 1993	Combined initial, second and third periodic reports	37 <sup>th</sup> Session (2007)	1
Turkmenistan		1 May 1997	Combined initial and second periodic reports	35 <sup>th</sup> Session (2006)	1
Uzbekistan		19 July 1995	Combined second and third periodic reports	36 <sup>th</sup> Session (2006)	2
<b>Pacific</b>					
American Samoa					
Australia	17 July 1980	28 July 1983	Combined fourth and fifth periodic reports	34 <sup>th</sup> Session (2006)	4
Cook Islands		11 August 2006	Initial report		1
Fiji		28 August 1995	Initial report	26 <sup>th</sup> Session (2002)	1
French Polynesia					
Guam					
Kiribati		17 March 2004	No report submitted		
Marshall Islands		2 March 2006	Report not yet submitted		
Micronesia (F.S.)		1 September 2004	Report not yet submitted		
Nauru			Not a party to CEDAW Convention		
New Caledonia					
New Zealand	17 July 1980	10 January 1985	Sixth periodic report		6
Niue					
Northern Mariana Is.					
Palau			Not a party to CEDAW Convention		
Papua New Guinea		12 January 1995	No report submitted		
Samoa		25 September 1992	Combined initial, second and third periodic reports	32 <sup>nd</sup> Session (2005)	1
Solomon Islands		6 May 2002	No report submitted		
Tonga			Not a party to CEDAW Convention		
Tuvalu		6 October 1999	No report submitted		
Vanuatu		8 September 1995	Combined initial, second and third reports	38 <sup>th</sup> Session (2007)	1



country to another. Maternal mortality ratios per 100,000 live births range from 4 in Australia to 1,800 in Afghanistan. Of the subregions, the worst situation is in South and South-West Asia which accounts for 80 per cent of the region's maternal deaths. In contrast, maternal mortality is low in East and North-East Asia.

Women are much more likely to survive pregnancy and childbirth if they have assistance from trained birth attendants during delivery, and if they give birth in recognized health facilities staffed by physicians and other trained personnel. The women least likely to have births attended by skilled personnel are generally the poorest. In Nepal in 2006, for example, among the poorest quintile of the population only 5 per cent of births were attended by skilled personnel, while for the richest quintile the proportion was 58 per cent. Similarly, in Bangladesh in 2004, the proportion of births attended by skilled personnel was 3 per cent in the poorest quintile compared with 40 per cent in the richest quintile. In addition, women in rural areas are less likely to have skilled birth attendants than women in the cities.

Another serious concern for women is malnutrition, especially iron-deficiency anaemia. In a number of countries, more than half of the female non-pregnant population aged 15-49 years old suffer from anaemia: in Nepal in 1998, 66.7 per cent; in Uzbekistan in 1996, 64.8 per cent; in Cambodia in 2000, 57.3 per cent; in Bhutan in 2002, 54.8 per cent; and in India in 2000, 52.0 per cent. Factors contributing to anaemia among rural and poor women include scarcity of food and inadequate nutrition. In some Asian countries, women are conditioned to subordinate their general health and nutritional needs to those of men and children. At mealtimes, for example, they may eat last and least.

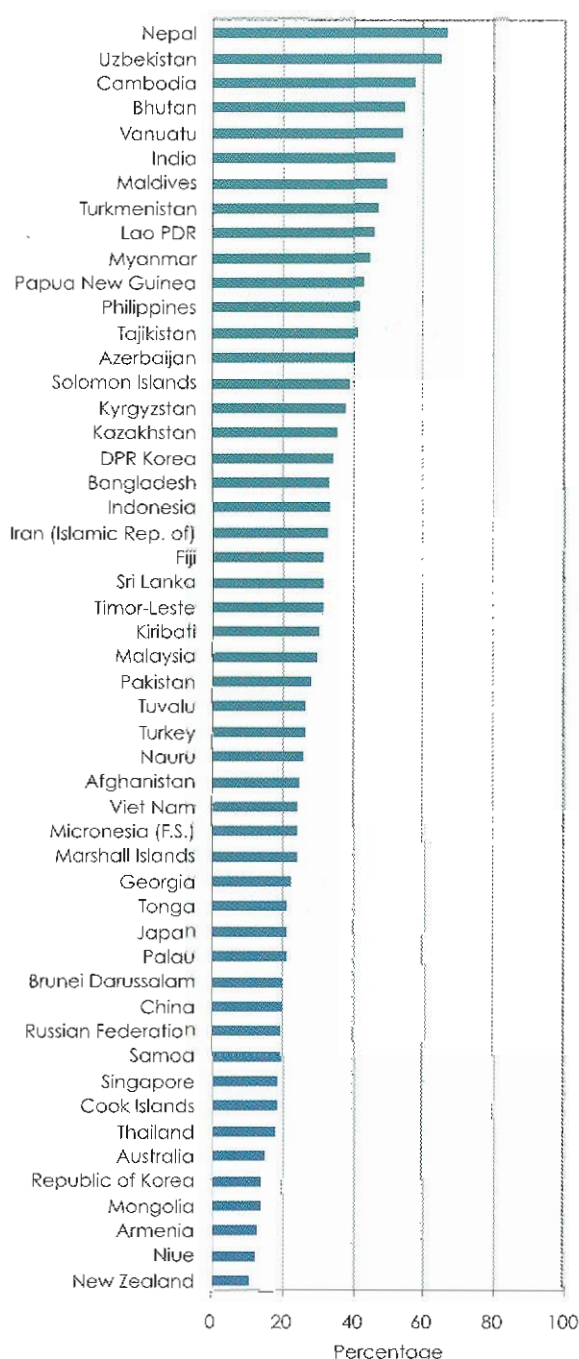
## Education

One of the main gender achievements in Asia and the Pacific has been gender equality in primary schools. By 2006, all the subregions had achieved full parity between girls and boys, or were approaching it. Of the individual countries for which reliable data were available, the weakest performer was Pakistan where the ratio of girls to boys was only 0.78.

There have also been major achievements in secondary schools. Indeed in some countries girls outnumber boys. In Mongolia, the Philippines and Fiji the girl/boy ratios ranged from 1.10 to 1.21. On

Figure 6-1

Proportion of non-pregnant women aged 15-49 with anaemia, Asia and the Pacific, latest available data



the other hand, there have been setbacks for girls in some transition countries. Between 1999 and 2006, Azerbaijan, for example, experienced a drop in the girl to boy sex ratio in secondary school from 1.01 to 0.96. Pakistan also had a low ratio in secondary schools – 0.76.

Women are, however, still some way from equality at the tertiary level. In 2006 the overall regional aggregate was 0.87. The disparity was most pronounced in Tajikistan where the ratio was 0.38. Other countries with low ratios included Nepal (0.40), Cambodia (0.56), Bhutan (0.59), Vanuatu (0.59), Republic of Korea (0.65), the Lao People's



Democratic Republic (0.68), Uzbekistan (0.71), India (0.72), and Turkey (0.75).

On the other hand, in a number of countries women substantially outnumber men in tertiary education. In Brunei Darussalam, for example, the ratio was 1.88 and in Maldives it was 2.37. Women also substantially outnumbered men in Kyrgyzstan (1.30), Australia (1.28), the Russian Federation (1.36), Kazakhstan (1.44), New Zealand (1.51), Mongolia (1.56) and Tonga (1.68).

One of the outcomes of better education for women has been higher levels of literacy. In 2006 in East and North-East Asia, South-East Asia and North and Central Asia, literacy rates were at parity or approaching parity – though women were less literate than men in South and South-West Asia. The Pacific does not have sufficient gender-disaggregated data to indicate the differences.

### Employment

Advances in education for girls and women have not, however, necessarily been translated into better employment or economic advancement. In the formal sector women have fewer opportunities than men, and have lower economic status and power.

Even in developed countries, women generally earn less than men. The United Nations Economic Commission for Europe collects subregional data on the wage gaps in Central Asia. In Kazakhstan and Kyrgyzstan in 2004, it found that women's wages were just over one-third those of men.

However, variations in the methodologies used by countries to compute wages hamper cross-country comparisons. ESCAP has been making efforts to measure wage gaps more effectively while also addressing issues of time use and unpaid work. ESCAP is also trying to improve statistics on the informal sector which employs many women – in order to shed more light on the full scope of women's work in developing countries.

### Women's reproductive work

Most of the sex-disaggregated data on the economic activities of men and women concerns paid work and those productive activities which contribute to a country's GDP. However, this misses out a large part of women's work which is devoted to "reproductive" tasks – such as ensuring food supplies, securing and cooking food, collecting fuel and water and caring for children, the old, the sick and the disabled.

Conventional economic and statistical analysis has typically excluded reproductive work because it is unpaid. This undervalues women's work, indeed renders much of it invisible. To address this problem a number of countries have been developing methods of measuring women's reproductive work more effectively. Some regions, such as Europe, are introducing harmonized time use surveys into official data collections to recognize women's unremunerated work and assess its economic value.

### Violence against women

In many countries women suffer from domestic and other forms of violence. This is even more difficult to measure and there are few reliable, internationally comparable statistics. The United Nations Statistical Commission has been mandated to propose, in consultation with the Commission on the Status of Women, a possible set of indicators. This core set of indicators will be discussed by representatives at the fortieth session of the United Nations Statistical Commission, which will be held in February 2009. If adopted by national statistical offices, these indicators should, in the next few years, provide more reliable and harmonized country data.

Some existing data come from the World Health Organization, which has carried out a multi-country study on women's health and domestic violence. Four of the participating countries were in Asia and the Pacific. The study showed, for example, that during their lifetime 62 per cent of rural women in Bangladesh and nearly half of those in Samoa and Thailand had experienced physical or sexual domestic violence, or both. In Japan, 15 per cent of the urban women surveyed reported having experienced domestic violence. In Bangladesh and Thailand the urban rates were only a few percentage points lower than in the rural areas.

### Data limitations on gender inequality and discrimination

The scarcity of sex-disaggregated makes it difficult to assess gender equality in the region. There are, for example, major gaps in gender statistics on trafficking, migration and remittances. In most countries in Asia and the Pacific, the most important and comprehensive source of data are population censuses. While they typically have sex as a standard background variable in data collection, not all census results are reported by sex.



Other major sources of gender data are administrative records – on health, births, deaths, mortality and other areas. Unfortunately in many developing countries these records are frequently incomplete, unreliable and underutilized, leading to gaps and estimation biases.

**Seats held by women in national parliament (percentage)**

The percentage of seats held by women in the national parliament. The indicator covers the single chamber in unicameral parliaments and the lower chamber in bicameral parliaments. Seats are usually won by members in general parliamentary elections. Seats may also be filled by nomination, appointment, indirect election, rotation of members or by-election. **Aggregates:** Arithmetic mean of the country values. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 1 October 2008).

**Women in parliament: Number of seats in the lower or single house (number)**

The total number of seats in the single or the lower house of the national parliament. **Aggregates:** Arithmetic mean of the country values. **Source:** Inter-Parliamentary Union, Women in National Parliaments (online database, accessed on 21 October 2008).

**Women in parliament: Number of seats in the upper house or senate (number)**

The total number of seats in the senate or the upper chamber/house of bicameral parliaments. **Aggregates:** Arithmetic mean of the country values. **Source:** Inter-Parliamentary Union, Women in National Parliaments (online database, accessed on 21 October 2008).

**Women in parliament: Number of women in the upper house or senate (number)**

Number of seats held by women in the senate or the upper chamber/house of bicameral parliaments. **Aggregates:** Arithmetic mean of the country values. **Source:** Inter-Parliamentary Union, Women in National Parliaments (online database, accessed on 21 October 2008).

**Women-to-men ratio in employment (percentage)**

The number of employed women divided by the number of employed men, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Women-to-men ratio in non-agricultural employment (percentage)**

The number of employed women divided by the number of employed men in sectors other than agriculture, expressed as a percentage. **Aggregates:** Aggregate values

In addition, it is often difficult to make cross-country comparisons in key gender areas such as violence against women, employment and reproductive work – due to differences between countries in the concepts and definitions,

have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market Fifth Edition (online database, accessed on 21 May 2008).

**Women-to-men employers ratio (percentage)**

The number of female employers divided by the number of male employers, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market Fifth Edition (online database, accessed on 21 May 2008).

**Employment by sector: Agriculture; women and men (percentage)**

The proportion of employment in agriculture, hunting, forestry and fishing of total employment, expressed as a percentage. Data are presented disaggregated by sex. **Aggregates:** None. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market Fifth Edition (online database, accessed on 21 May 2008).

**Employment by sector: Industry; women and men (percentage)**

The proportion of employment in mining and quarrying, manufacturing, construction and public utilities (electricity, gas and water) of total employment, expressed as a percentage. Data are disaggregated by sex. **Aggregates:** None. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market Fifth Edition (online database, accessed on 21 May 2008).

**Employment by sector: Services; women and men (percentage)**

The proportion of total employment in wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate and business services, and community, social and personal services, expressed as a percentage. Data are disaggregated by sex. **Aggregates:** None. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Employment by status: Employees; women and men (percentage)**

The number of employees divided by the total employment by status, expressed as a percentage. Data are presented



disaggregated by sex. **Aggregates:** None. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market Fifth Edition (online database, accessed on 21 May 2008).

**Employment by status: Employers; women and men (percentage)**

The number of employers divided by the total employment by status, expressed as a percentage. Data are presented disaggregated by sex. **Aggregates:** None. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market Fifth Edition. (online database, accessed on 21 May 2008).

**Employment by status: Own account workers; women and men (percentage)**

An own-account worker is working on her/his own account or with one or more partners, holds a type of job where the remuneration is directly dependent upon the profits

derived from the goods and services produced, and has not engaged on a continuous basis any employees to work for her/him. Data are presented disaggregated by sex. **Aggregates:** None. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 10 June 2008).

**Employment by status: Contributing family workers; women and men (percentage)**

Contributing family worker is holding a (self-employment) job in a market-oriented establishment operated by a related person living in the same household. Data are presented disaggregated by sex. **Aggregates:** None. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 10 June 2008).



## 6.1 Women in national parliaments

	Single or lower house					Senate or upper house	
	Percentage of women				Number of seats Latest	Number of seats	Percentage of women
	1990	2000	2005	2008		Latest	Latest
<b>East and North-East Asia</b>	<b>14.1</b>	<b>11.6</b>	<b>13.4</b>	<b>14.0</b>			
China	21.3	21.8	20.2	20.6	2 987 (08)		
DPR Korea	21.1	20.1	20.1	20.1	687 (03)		
Hong Kong, China							
Japan	1.4	4.6	7.1	9.4	480 (05)	242 (07)	18.2 (07)
Macao, China							
Mongolia	24.9	7.9	6.8	6.6	72 (08)		
Republic of Korea	2.0	3.7	13.0	14.4	299 (08)		
<b>South-East Asia</b>	<b>10.0</b>		<b>16.2</b>	<b>17.4</b>			
Brunei Darussalam							
Cambodia		8.2	9.8	19.5	123 (08)	61 (06)	14.8 (06)
Indonesia	12.4		11.3	11.6	550 (04)		
Lao PDR	6.3	21.2	22.9	25.2	115 (06)		
Malaysia	5.1		9.1	10.0	222 (08)	59 (08)	28.8 (08)
Myanmar							
Philippines	9.1	12.4	15.3	20.5	239 (07)	23 (07)	17.4 (07)
Singapore	4.9	4.3	16.0	24.5	94 (06)		
Thailand	2.8	5.6	8.8	11.7	480 (07)	150 (08)	16.0 (08)
Timor-Leste			25.3	29.2	65 (07)		
Viet Nam	17.7	26.0	27.3	25.8	493 (07)		
<b>South and South-West Asia</b>	<b>5.1</b>	<b>7.2</b>	<b>9.9</b>	<b>11.7</b>			
Afghanistan	3.7			27.7	242 (05)	102 (05)	21.6 (05)
Bangladesh	10.3	9.1	2.0	14.8 (06)			
Bhutan	2.0	2.0	9.2	2.7	47 (08)	25 (07)	24.0 (07)
India	5.0	9.0	8.3	9.1	541 (04)	243 (08)	9.5 (08)
Iran (Islamic Rep. of)	1.5	4.9	4.1	4.1	286 (08)		
Maldives	6.3		6.0	12.0	50 (05)		
Nepal	6.1	5.9		17.3	594 (08)		
Pakistan	10.1		21.3	21.1	338 (08)	100 (06)	17.0 (06)
Sri Lanka	4.9	4.9	4.9	5.8	225 (04)		
Turkey	1.3	4.2	4.4	9.1	549 (07)		
<b>North and Central Asia</b>		<b>8.6</b>	<b>11.8</b>	<b>10.8</b>			
Armenia	35.6	3.1	5.3	9.2	131 (07)		
Azerbaijan		12.0	10.5	11.4	123 (05)		
Georgia		7.2	9.4	9.4	150 (08)		
Kazakhstan		10.4	10.4	15.9	107 (07)	47 (05)	4.3 (05)
Kyrgyzstan		1.4	10.0	25.6	90 (07)		
Russian Federation		7.7	9.8	14.0	450 (07)	169 (07)	4.7 (07)
Tajikistan		2.8	12.7	17.5	63 (05)	34 (05)	23.5 (05)
Turkmenistan	26.0	26.0		16.0	50 (04)		
Uzbekistan		6.8	17.5	17.5	120 (04)	100 (05)	15.0 (05)
<b>Pacific</b>	<b>3.2</b>	<b>5.9</b>	<b>5.7</b>	<b>6.4</b>			
Australia	6.1	22.4	24.7	26.7	150 (07)	76 (07)	35.5 (07)
American Samoa							
Cook Islands							
Fiji		11.3	8.5	8.5 (06)			
French Polynesia							
Guam							
Kiribati	0.0	4.9	4.8	4.3	46 (07)		
Marshall Islands			3.0	3.0	33 (07)		
Micronesia (F.S.)		0.0	0.0	0.0	14 (05)		
Nauru	5.6	0.0	0.0	0.0	18 (08)		
New Caledonia							
New Zealand	14.4	29.2	28.3	33.1	121 (05)		
Niue							
Northern Mariana Is.							
Palau		0.0	0.0	0.0	16 (04)	9 (04)	0.0 (04)
Papua New Guinea	0.0	1.8	0.9	0.9	109 (07)		
Samoa	0.0	8.2	6.1	8.2	49 (06)		
Solomon Islands	0.0	2.0	0.0	0.0	50 (06)		
Tonga	0.0		0.0	3.3	32 (08)		
Tuvalu	7.7	0.0	0.0	0.0	15 (06)		
Vanuatu	4.3	0.0	3.8	3.8	52 (08)		
<b>Asia and the Pacific</b>	<b>7.9</b>	<b>8.8</b>	<b>10.6</b>	<b>12.8</b>			
LLDC		9.8		13.1			
LDC	6.0	8.6		11.6 (06)			
ASEAN	8.0		15.1	18.6			
ECO	7.8		13.8	13.0			
SAARC	6.1	7.8	11.3	13.8			
Central Asia		8.7	12.1	10.9			
Pacific island dev. econ.	2.1	2.6	2.3	2.7			
Low-income	7.0		14.1	15.0 (06)			
Middle-income	8.8	8.1	8.4	8.4			
High-income	5.8	12.8	17.8	20.8			
<b>Other world regions</b>							
Africa		8.9	13.2	15.1			
Europe		17.4	21.1	22.4			
Latin America & Carib.	9.2	12.7	16.4	17.6			
North America	10.0	17.0	18.0	18.6			
Other countries/areas	2.7	3.0	5.6	8.1			
<b>World</b>	<b>9.4</b>	<b>11.1</b>	<b>14.5</b>	<b>15.8</b>			



## 6. Gender equality

### 6.2 Gender equality in the labour market

	Women to men ratio in employment				Women to men employers				Women to men ratio in non-agricultural employment			
	Percentage				Percentage				Percentage			
	1991	1995	2000	2006	1990	1995	2000	Latest	1990	1995	2000	Latest
<b>East and North-East Asia<sup>1</sup></b>	<b>80.4</b>	<b>81.5</b>	<b>82.6</b>	<b>84.1 (07)</b>								
China	82.6	82.2	81.7	80.6								
DPR Korea	68.1	66.2	67.4	65.9								
Hong Kong, China	59.2	64.2	74.8	86.1	57.4	63.6	73.0	83.3 (05)	12.1 (93)	14.8	16.8	21.9 (05)
Japan	68.8	67.8	68.6	70.2	66.8	67.1	68.4	70.7 (05)	20.6	22.9	22.1	21.6 (05)
Macao, China	70.2	76.0	86.5	92.0	69.3	76.9	89.3	91.0 (05)	15.5 (96)		13.8	22.1 (05)
Mongolia	69.2	67.5	68.7	67.3	101.3	92.1	101.8	113.1 (05)			38.9	54.8 (03)
Republic of Korea	64.8	65.7	68.5	70.1	65.6	65.0	68.7	70.2 (05)	37.5	39.7	22.0	25.3 (05)
<b>South-East Asia<sup>1</sup></b>	<b>71.5</b>	<b>70.5</b>	<b>71.0</b>	<b>70.0 (07)</b>	<b>67.0 (91)</b>	<b>67.1</b>	<b>69.0</b>	<b>72.0 (07)</b>				
Brunei Darussalam	49.3	50.6	52.2	50.9	47.9 (91)		71.7 (01)					
Cambodia	109.1	106.2	105.3	103.1	77.8 (93)		98.4	111.5 (01)			11.7	51.4 (01)
Indonesia	60.7	60.1	59.7	58.1	62.3	55.2	59.3	54.5 (05)				
Lao PDR	69.1	70.1	69.1	70.1		61.1				35.0		
Malaysia	53.0	52.3	54.2	56.3	55.9	54.3	57.6	59.5 (03)		11.0	11.1	14.4 (03)
Myanmar	80.9	80.9	81.3	82.3								
Philippines	55.3	58.0	59.7	67.3	83.6	83.8	84.1	85.2 (05)			27.1 (01)	25.5 (05)
Singapore	63.8	63.2	66.6	66.0	66.3 (91)	63.6	65.2	71.5 (05)	18.4 (91)	19.2	24.5	25.3 (04)
Thailand	86.3	81.6	84.8	88.7	83.0	78.7	85.4	91.9 (05)	28.3	24.9	30.3	28.7 (04)
Timor-Leste	59.2	58.3	62.3	65.7								
Viet Nam	93.5	94.1	94.3	93.3	100.4 (96)		93.2	86.6 (04)		37.6 (96)	55.4	41.0 (04)
<b>South and South-West Asia<sup>1</sup></b>	<b>40.2</b>	<b>40.7</b>	<b>41.7</b>	<b>45.5 (07)</b>	<b>23.7 (91)</b>	<b>23.6</b>	<b>23.8</b>	<b>33.3 (07)</b>				
Afghanistan	34.7	34.7	35.0	38.6								
Bangladesh	66.1	60.7	59.9	57.8	17.1		30.6	23.5 (03)		25.4 (96)	12.8	9.7 (03)
Bhutan	33.9	33.9	40.0	49.4								
India	39.6	39.1	38.5	38.9								
Iran (Islamic Rep. of)	23.8	30.1	38.6	48.9				20.3 (05)		3.1 (96)		
Maldives	25.5	34.6	48.3	65.8		46.3	44.0	63.9 (03)		14.9	12.5	
Nepal	59.5	60.8	63.4	64.1	25.8 (91)		42.8 (01)					
Pakistan	27.5	29.4	29.7	36.1	7.1	8.1	7.9	10.8 (05)		3.4	2.1	1.6 (05)
Sri Lanka	46.6	42.8	46.4	45.5	41.8 (93)	44.4	46.7 (02)				8.2 (02)	11.6 (03)
Turkey	42.6	39.3	35.7	36.3	16.7	16.9	19.9	21.5 (05)		3.7 (98)	4.0	4.7 (05)
<b>North and Central Asia</b>												
Armenia	91.4	89.0	92.0	97.3								
Azerbaijan	87.7	84.2	88.1	92.7		76.5 (99)	77.3	96.6 (05)				
Georgia	110.1	103.7	86.6	77.2		84.9 (98)	75.2	80.8 (05)		13.4 (98)	13.6	23.2 (05)
Kazakhstan	84.0	85.8	91.5	97.3			96.8 (01)	97.3 (04)			37.4 (01)	36.9 (04)
Kyrgyzstan	82.8	81.5	78.6	78.0		83.3 (96)	74.7	75.0 (04)			38.5 (02)	50.0 (04)
Russian Federation	94.6	91.1	93.9	96.7		99.0 (97)	99.9	102.1 (05)	17.7 (92)	24.0	40.3	66.2 (05)
Tajikistan	73.1	72.8	73.8	78.4								
Turkmenistan	87.0	84.7	85.5	88.0								
Uzbekistan	80.4	79.2	80.3	81.6								
<b>Pacific</b>												
Australia	71.4	75.3	78.8	82.8	73.1	77.6	81.0	83.4 (05)	46.5	48.7	50.0	50.6 (05)
American Samoa												
Cook Islands												
Fiji	60.1	60.1	61.5	63.3								
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia						65.7 (96)				33.9 (96)		
New Zealand	77.9	78.7	82.7	87.3	81.9 (90)	83.9	87.7	89.1 (05)	37.0 (91)	41.8	40.8	44.0 (05)
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea	88.5	92.2	94.0	94.8								
Samoa												
Solomon Islands	64.8	62.7	63.5	61.9								
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific<sup>1</sup></b>	<b>65.4</b>	<b>65.5</b>	<b>66.1</b>	<b>67.7 (07)</b>	<b>53.5 (91)</b>	<b>54.7</b>	<b>53.9</b>	<b>64.1 (07)</b>				
LLDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific Island dev. econ.												
Low-income												
Middle-income												
High-income												
<b>Other world regions</b>												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
<b>World</b>												

<sup>1</sup> Aggregate values calculation based on ILO methodology



## 6.3 Employment by sector and gender

	Agriculture				Industry				Services			
	Female		Male		Female		Male		Female		Male	
	Percentage				Percentage				Percentage			
	Earliest	Latest	Earliest	Latest	Earliest	Latest	Earliest	Latest	Earliest	Latest	Earliest	Latest
East and North-East Asia												
China												
DPR Korea												
Hong Kong, China	29.9 (90)	31.6 (05)	70.1 (90)	68.4 (05)	32.7 (90)	19.7 (05)	67.3 (90)	80.3 (05)	38.6 (90)	50.1 (05)	61.4 (90)	49.9 (05)
Japan	47.8 (90)	42.2 (05)	52.2 (90)	57.8 (05)	32.7 (90)	26.1 (05)	67.3 (90)	73.9 (05)	44.4 (90)	47.9 (05)	55.6 (90)	52.1 (05)
Macao, China	33.3 (90)	50.0 (05)	66.7 (90)	50.0 (05)	48.8 (90)	43.7 (05)	51.2 (90)	56.3 (05)	35.2 (90)	49.0 (05)	64.8 (90)	51.0 (05)
Mongolia	45.1 (93)	46.6 (05)	54.9 (93)	53.4 (05)	45.8 (93)	44.5 (05)	54.2 (93)	55.5 (05)	52.6 (93)	56.4 (05)	47.4 (93)	43.6 (05)
Republic of Korea	46.2 (90)	46.8 (05)	53.8 (90)	53.2 (05)	34.7 (90)	25.8 (05)	65.3 (90)	74.2 (05)	43.3 (90)	47.6 (05)	56.7 (90)	52.4 (05)
South-East Asia												
Brunei Darussalam	26.0 (91)	10.5 (01)	74.0 (91)	89.5 (01)	11.8 (91)	21.7 (01)	88.2 (91)	78.3 (01)	39.1 (91)	47.3 (01)	60.9 (91)	52.7 (01)
Cambodia	54.6 (93)	51.3 (01)	45.4 (93)	48.7 (01)	37.9 (93)	59.9 (01)	62.1 (93)	40.1 (01)	45.0 (93)	48.8 (01)	55.0 (93)	51.2 (01)
Indonesia	39.1 (90)	37.0 (05)	60.9 (90)	63.0 (05)	34.9 (90)	29.5 (05)	65.1 (90)	70.5 (05)	40.0 (90)	38.0 (05)	60.0 (90)	62.0 (05)
Lao PDR	54.1 (95)	54.1 (95)	45.9 (95)	45.9 (95)	40.1 (95)	40.1 (95)	59.9 (95)	59.9 (95)	37.3 (95)	37.3 (95)	62.7 (95)	62.7 (95)
Malaysia	34.5 (90)	27.7 (03)	65.5 (90)	72.3 (03)	36.1 (90)	30.2 (03)	63.9 (90)	69.8 (03)	35.7 (90)	41.6 (03)	64.3 (90)	58.4 (03)
Myanmar												
Philippines	25.2 (90)	25.9 (05)	74.8 (90)	74.1 (05)	30.9 (90)	30.2 (05)	69.1 (90)	69.8 (05)	51.1 (90)	50.9 (05)	48.9 (90)	49.1 (05)
Singapore	16.3 (91)	24.1 (04)	83.7 (91)	75.9 (04)	37.2 (91)	28.8 (05)	62.8 (91)	71.2 (05)	41.4 (91)	47.2 (05)	58.6 (91)	52.8 (05)
Thailand	47.4 (90)	44.3 (05)	52.6 (90)	55.7 (05)	40.8 (90)	42.8 (05)	59.2 (90)	57.2 (05)	48.2 (90)	50.7 (05)	51.8 (90)	49.3 (05)
Timor-Leste												
Viet Nam	51.2 (96)	50.6 (04)	48.8 (96)	49.4 (04)	42.1 (96)	38.7 (04)	57.9 (96)	61.3 (04)	54.5 (96)	51.8 (04)	45.5 (96)	48.2 (04)
South and South-West Asia												
Afghanistan												
Bangladesh	50.3 (90)	25.2 (03)	49.7 (90)	74.8 (03)	26.5 (90)	29.9 (03)	73.5 (90)	70.1 (03)	5.0 (90)	14.7 (03)	95.0 (90)	85.3 (03)
Bhutan												
India												
Iran (Islamic Rep. of)	26.3 (05)	26.3 (05)	73.7 (05)	73.7 (05)	18.0 (05)	18.0 (05)	82.0 (05)	82.0 (05)	16.1 (05)	16.1 (05)	83.9 (05)	83.9 (05)
Maldives	10.9 (95)	18.1 (03)	89.1 (95)	81.9 (03)	48.4 (95)	50.4 (03)	51.6 (95)	49.6 (03)	23.7 (95)	34.3 (03)	76.3 (95)	65.7 (03)
Nepal	45.0 (91)	47.5 (01)	55.0 (91)	52.5 (01)	19.8 (91)	40.1 (01)	80.2 (91)	59.9 (01)	20.7 (91)	23.0 (01)	79.3 (91)	77.0 (01)
Pakistan	16.5 (90)	26.5 (05)	83.5 (90)	73.5 (05)	8.3 (90)	12.5 (05)	91.7 (90)	87.5 (05)	5.5 (90)	8.2 (05)	94.5 (90)	91.8 (05)
Sri Lanka	33.9 (93)	37.8 (02)	66.1 (93)	62.2 (02)	34.3 (93)	37.5 (02)	65.7 (93)	62.5 (02)	26.8 (93)	28.7 (02)	73.2 (93)	71.3 (02)
Turkey	50.9 (90)	45.3 (05)	49.1 (90)	54.7 (05)	14.8 (90)	15.7 (05)	85.2 (90)	84.3 (05)	14.0 (90)	18.8 (05)	86.0 (90)	81.2 (05)
North and Central Asia												
Armenia												
Azerbaijan	53.7 (99)	45.2 (05)	46.3 (99)	54.8 (05)	33.4 (99)	34.2 (05)	66.6 (99)	65.8 (05)	45.7 (99)	52.9 (05)	54.3 (99)	47.1 (05)
Georgia	50.6 (98)	50.0 (05)	49.4 (98)	50.0 (05)	26.7 (98)	22.4 (05)	73.3 (98)	77.6 (05)	50.7 (98)	50.4 (05)	49.3 (98)	49.6 (05)
Kazakhstan	46.4 (01)	46.0 (04)	53.6 (01)	54.0 (04)	28.7 (01)	28.8 (04)	71.3 (01)	71.2 (04)	56.1 (01)	56.6 (04)	43.9 (01)	43.4 (04)
Kyrgyzstan	45.9 (96)	42.5 (04)	54.1 (96)	57.5 (04)	33.9 (96)	26.5 (04)	66.1 (96)	73.5 (04)	49.8 (96)	49.4 (04)	50.2 (96)	50.6 (04)
Russian Federation	30.7 (97)	38.8 (05)	69.3 (97)	61.2 (05)	36.7 (97)	35.2 (05)	63.3 (97)	64.8 (05)	56.5 (97)	58.1 (05)	43.5 (97)	41.9 (05)
Tajikistan												
Turkmenistan												
Uzbekistan												
Pacific												
Australia	29.5 (90)	30.7 (05)	70.5 (90)	69.3 (05)	21.1 (90)	20.0 (05)	78.9 (90)	80.0 (05)	49.9 (90)	52.6 (05)	50.1 (90)	47.4 (05)
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia	22.0 (96)	22.0 (96)	78.0 (96)	78.0 (96)	13.9 (96)	13.9 (96)	86.1 (96)	86.1 (96)	48.5 (96)	48.5 (96)	51.5 (96)	51.5 (96)
New Zealand	32.1 (90)	32.4 (05)	67.9 (90)	67.6 (05)	25.2 (90)	21.9 (05)	74.8 (90)	78.1 (05)	52.6 (90)	55.0 (05)	47.4 (90)	45.0 (05)
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
Asia and the Pacific												
LLDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific island dev. econ.												
Low-income												
Middle-income												
High-income												
Other world regions												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
World												



## 6. Gender equality

### 6.4 Employment by status and gender

	Earliest year	Latest year	Employees		Employers		Own account workers		Contributing family workers									
			Female	Male	Female	Male	Female	Male	Female	Male								
			Percentage		Percentage		Percentage		Percentage									
			Earliest	Latest	Earliest	Latest	Earliest	Latest	Earliest	Latest								
East and North-East Asia																		
China																		
DPR Korea																		
Hong Kong, China	1993	2005	39.7	48.3	60.3	51.7	10.8	18.0	89.2	82.0	12.7	22.9	87.3	77.1	86.8	85.3	13.2	14.7
Japan	1990	2005	37.9	41.3	62.1	58.7	17.1	17.8	82.9	82.2	34.7	28.1	65.3	71.9	82.0	80.1	18.0	19.9
Macao, China	1996	2005	46.7	49.7	53.3	50.3	13.4	18.1	86.6	81.9	26.9	24.6	73.1	75.4	87.0	93.1	13.0	6.9
Mongolia	2000	2003	48.6	50.9	51.4	49.1	28.0	35.4	72.0	64.6	24.1	35.3	75.9	64.7	70.1	61.3	29.9	38.7
Republic of Korea	1990	2005	38.3	42.1	61.7	57.9	27.3	20.2	72.7	79.8	32.2	32.6	67.8	67.4	87.4	87.4	12.7	11.3
South-East Asia																		
Brunei Darussalam																		
Cambodia	2000	2001	41.1	43.3	58.9	56.7	10.5	33.9	89.5	66.1	36.5	41.7	63.5	58.3	70.5	64.4	29.5	35.6
Indonesia																		
Lao PDR	1995	1995	28.6	28.6	71.4	71.4	25.9	25.9	74.1	74.1	52.0	52.0	48.0	48.0	58.0	58.0	42.0	42.0
Malaysia	1995	2003	34.0	36.5	66.0	63.5	9.9	12.6	90.1	87.4	24.4	27.1	75.6	72.9	67.2	71.3	32.8	28.7
Myanmar																		
Philippines	2001	2005	38.2	38.0	61.8	62.0	21.4	20.3	78.6	79.7	37.3	34.7	62.7	65.3	54.0	56.8	46.0	43.2
Singapore	1991	2004	42.5	48.1	57.5	51.9	15.5	20.2	84.5	79.8	19.4	25.1	80.6	74.9	76.8	74.1	23.2	25.9
Thailand	1990	2004	41.9	44.0	58.1	56.0	22.0	22.3	78.0	77.7	27.8	34.9	72.2	65.1	64.5	63.5	35.5	36.5
Timor-Leste																		
Viet Nam	1996	2004	41.0	40.4	59.0	59.6	27.3	29.1	72.7	70.9	33.9	37.1	66.1	62.9	68.3	70.5	31.7	29.5
South and South-West Asia																		
Afghanistan																		
Bangladesh	1996	2003	26.7	21.6	73.3	78.4	20.3	8.9	79.7	91.1	10.0	12.2	90.0	87.8	73.6	58.1	26.4	41.9
Bhutan																		
India																		
Iran (Islamic Rep. of)	1996	1996	12.6		87.4		3.0		97.0		6.7		93.3		46.0		54.0	
Maldives	1995	2000	32.4	40.6	67.6	59.4	12.9	11.1	87.1	88.9	20.6	24.4	79.4	75.6	52.2	56.7	47.8	43.3
Nepal																		
Pakistan	1995	2005	8.8	13.9	91.2	86.1	3.3	1.6	96.7	98.4	3.8	7.3	96.2	92.7	33.1	37.0	66.9	63.0
Sri Lanka	2002	2003	33.7	32.0	66.3	68.0	7.6	10.4	92.4	89.6	19.3	19.8	80.7	80.2	70.8	69.7	29.2	30.3
Turkey	1990	2005	16.9	20.9	83.1	79.1	3.6	4.5	96.4	95.5	9.7	14.2	90.3	85.8	69.9	67.4	30.1	32.6
North and Central Asia																		
Armenia	2001	2001	48.5	48.5	51.5	51.5					34.6	34.6	65.4	65.4	37.5	37.5	62.5	62.5
Azerbaijan																		
Georgia	1998	2005	48.5	47.7	51.5	52.3	11.8	18.8	88.2	81.2	31.9	34.3	68.1	65.7	61.7	65.0	38.3	35.0
Kazakhstan	2001	2004	45.2	46.7	54.8	53.3	27.2	27.0	72.8	73.0	53.4	51.8	46.6	48.2	57.0	54.3	43.0	45.7
Kyrgyzstan	2002	2004	44.5	42.9	55.5	57.1	27.8	33.3	72.2	66.7	36.7	34.4	63.3	65.6	64.8	62.8	35.2	37.2
Russian Federation	1992	2005	49.0	49.6	51.0	50.4	15.1	39.8	84.9	60.2	32.1	48.0	67.9	52.0	35.2	41.1	64.8	58.9
Tajikistan																		
Turkmenistan																		
Uzbekistan																		
Pacific																		
Australia	1990	2005	43.0	46.5	57.0	53.5	31.7	33.6	68.3	66.4	31.8	33.2	68.2	66.8	61.5	60.4	38.5	39.6
American Samoa																		
Cook Islands																		
Fiji																		
French Polynesia																		
Guam																		
Kiribati																		
Marshall Islands																		
Micronesia (F.S.)																		
Nauru																		
New Caledonia	1996		40.9		59.1		25.3		74.7						53.0		47.0	
New Zealand	1990	2005	47.1	49.0	52.9	51.0	27.0	30.6	73.0	69.4	29.9	33.0	70.1	67.0	67.0	65.6	33.0	34.4
Niue																		
Northern Mariana Is.																		
Palau																		
Papua New Guinea																		
Samoa																		
Solomon Islands																		
Tonga																		
Tuvalu																		
Vanuatu																		
Asia and the Pacific																		
LLDC																		
LDC																		
ASEAN																		
ECO																		



## 7 HIV and AIDS

The Asia-Pacific region appears to be less affected by HIV and AIDS than other regions of the world. It has more than half the world's population but less than one-fifth of the people living with HIV. However, the trends in some parts of the region are alarming.

The United Nations Millennium Declaration aims to have halted and then begun to reverse the spread of HIV by 2015. Although in Asia and the Pacific the average adult prevalence rate – the percentage of people aged 15-49 infected with HIV – decreased slightly between 2001 and 2007, from 0.28 to 0.25 per cent, the number of people living with HIV may be increasing as a result of overall population rise. By 2007, the total number of people living with HIV across Asia and the Pacific was 5.9 million. In the Pacific, the number nearly tripled. In North and Central Asia it increased one and a half times and in East and North-East Asia it increased by 47 per cent. The increase in South-East Asia was only 15 per cent.

Of those living with HIV, 1.96 million, or one third, are women. This proportion is lower than the global average (49 per cent). Furthermore, it does not vary greatly among subregions: East and North-East Asia (29 per cent), South-East Asia (34 per cent), South and South-West Asia (37 per cent), North and Central Asia (26 per cent) and the Pacific (31 per cent). However, these averages can mask important differences between countries; in Papua New Guinea for example, the majority of people living with HIV are women.

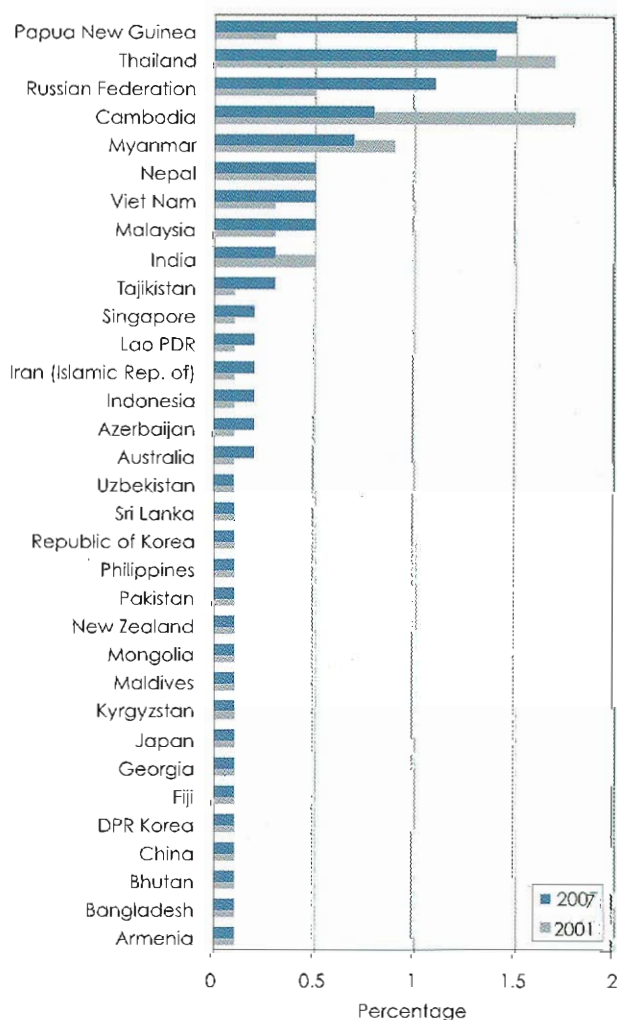
The countries in which HIV prevalence exceeds 1.0 per cent are Papua New Guinea (1.5 per cent), the Russian Federation (1.1 per cent) and Thailand (1.4 per cent). The next highest levels are found in Cambodia (0.8 per cent) and Myanmar (0.7 per cent).

To check for progress towards the MDG target it is important to look at changes in prevalence rates. The worst performance has been in North and Central Asia where between 2001 and

2007 the prevalence doubled and in the Pacific where it nearly tripled – though these two subregions accounted for only 18 per cent of the region's people living with HIV in 2007. In East and North-East Asia and in South-East Asia, over the same period the overall picture remained static, as in both subregions the prevalence remained unchanged – though it should be noted that the prevalence has been increasing in Viet Nam and Indonesia, while coming down in Thailand, Cambodia and Myanmar. In South and South-West

Figure 7.1

HIV prevalence among people aged 15-49 in Asia and the Pacific, 2001 and 2007



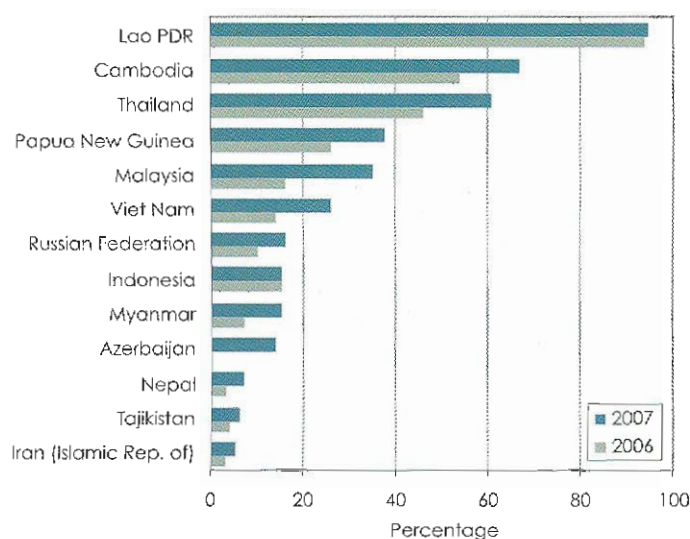


Asia, the prevalence declined markedly, from 0.40 per cent in 2001 to 0.26 per cent in 2007, and this was over and above the downwards revision in India thanks to the collection of more accurate data.

Some countries in the region are also ensuring better access to antiretroviral therapy (ART). It is encouraging to observe that two countries with high prevalence rates in 2001, Cambodia (1.8 per cent) and Thailand (1.7 per cent) had by 2007 achieved high coverage with ART. Coverage was higher only in the Lao People's Democratic Republic, which has a much lower HIV prevalence. Although the percentage with access to ART is under 40 per cent in all other countries for which there is information, in most of these the percentage increased substantially between 2006 and 2007, implying that the provision of ART is expanding rapidly.

**Figure 7.2**

**Access to antiretroviral drugs by people with advanced HIV in Asia and the Pacific, 2006 and 2007**



If transmission of HIV is to be halted it is essential to ensure correct knowledge about prevention. For this purpose the most important group is people aged 15-24 years. It is significant that the percentage of young people who know how to prevent the disease is highest in Cambodia and Thailand, countries which between 2001 and 2007 substantially reduced their HIV prevalence. Elsewhere, however, the dissemination of such

information has been inadequate. Across the region no more than half of young people have comprehensive, correct knowledge on how to avoid the disease.

Although the average HIV prevalence in the ESCAP region may be levelling off, between 2001 and 2007 there was a steady increase in the recorded number of annual AIDS deaths – reaching 188,800. The actual number will be even higher since the 2007 estimate was unavailable for India. Most subregions saw increases. The exception was South-East Asia, where there was a 15 per cent decline – largely as a result of success in Cambodia and Thailand, countries that have not only reduced the prevalence but also achieved some of the region's most effective ART programmes.

An important development in 2008 was the publication of the report of the high-level Commission on AIDS in Asia. The report reviewed and analysed all key information on the epidemic and the response in South, South-East and East-Asia, confirming that the epidemic in those subregions is predominantly driven by transmission among most at risk populations such as sex workers and their clients, injecting drug users and men having sex with men. It concluded by stating that in order for the HIV – related MDG target to be achieved, countries must invest sufficient resources in programmes which offer the right mix of prevention, care and treatment and which help mitigate the impact on the people most at risk along with their partners and families.

The only way to get an accurate measure of HIV prevalence would be to test everyone. In practice estimates are based on surveys among selected population groups – including those which are known to be at risk – and applying these results to the population as a whole. As with any estimate, the results need to be interpreted carefully. As more information becomes available, such estimates are refined. It also must be noted that prevalence rates do not fully reflect recent trends in transmission as they include all people who live with the virus at a given moment. As treatment coverage expands, more people living with HIV survive longer, which can mask possible decreases in the number of new cases – the incidence.



**Adults aged 15 and above living with HIV/AIDS, men and women (number)**

Adults are defined as men and women aged 15+ years. These estimates include all people with HIV infection at a given time, whether or not they have developed symptoms of AIDS. Data are disaggregated by sex.

**Aggregates:** Sum of the individual country values. **Source:** UNAIDS 2008 Report on the global AIDS epidemic (online database, accessed on 7 August 2008).

**HIV prevalence rate, aged 15-49 (percentage)**

The prevalence of HIV among the population 15-49 years old is the percentage of individuals aged 15-49 living with HIV at a given time. **Aggregates:** Averages are calculated using the population aged 15-49 as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 7 August 2008).

**Population with advanced HIV with access to ART (percentage)**

The percentage of adults and children with advanced HIV infection currently receiving antiretroviral therapy according to nationally approved treatment protocols (or WHO/Joint UN Programme on HIV and AIDS standards) among the estimated number of people with advanced HIV infection. The numerator (the number of people receiving antiretroviral therapy) is derived from national programme reporting systems, aggregated from health facilities or other service delivery sites. The

denominator (the total number of people who need antiretroviral therapy) is generated using a standardized statistical modelling approach. **Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 18 July 2008).

**Population aged 15-24 with comprehensive correct knowledge of HIV/AIDS, women and men (percentage)**

Percentage of young men and women aged 15-24 years with comprehensive correct knowledge of HIV/AIDS is the share of women and men aged 15-24 years who correctly identify the two major ways of preventing the sexual transmission of HIV (using condoms and limiting sex to one faithful, uninfected partner), who reject the two most common local misconceptions about HIV transmission and who know that a healthy-looking person can transmit HIV. The data are disaggregated by sex. **Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 7 August 2008).

**AIDS deaths (number; per 100,000 population)**

The estimated number of adults and children who died due to AIDS. **Aggregates:** Number: Sum of individual country values. Per 100,000 population: Averages are calculated using total population as weight. **Source:** Number: United Nations Millennium Development Goals Indicators; Per 100,000 population: calculated by ESCAP using data from United Nations Millennium Development Goals Indicators (online database, accessed on 7 August 2008).



## 7. HIV and AIDS

### 7.1 HIV/AIDS prevalence, prevention and treatment

	Adults aged 15 and above living with HIV/AIDS				HIV prevalence rate, aged 15-49		Population with advanced HIV with access to ART		Population aged 15-24 with comprehensive correct knowledge of HIV/AIDS	
	Women		Total				Percentage		Percentage	
	Number		Number		Percentage					
		2001	2007	2001	2007	2001	2007	2006	2007	
East and North-East Asia	123 600	206 100	484 900	713 600	0.10	0.10				
China	120 000	200 000	470 000	690 000	0.10	0.10	19	19		
DPR Korea					0.10	0.10		0		
Hong Kong, China										
Japan	1 800	2 300	8 100	9 600	0.10	0.10				
Macao, China										
Mongolia		200		1 000	0.10	0.10			35(05)	
Republic of Korea	1 800	3 600	6 800	13 000	0.10	0.10				
South-East Asia	427 000	525 700	1 351 000	1 556 700	0.44	0.44				
Brunei Darussalam										
Cambodia	31 000	20 000	120 000	70 000	1.80	0.80	54	67	50(05)	45(05)
Indonesia	10 000	54 000	93 000	270 000	0.10	0.20	15	15	1(03)	0(03)
Lao PDR	500	1 300	1 100	5 400	0.10	0.20	94	95		
Malaysia	10 000	21 000	43 000	79 000	0.30	0.50	16	35		
Myanmar	97 000	100 000	290 000	240 000	0.90	0.70	7	15		
Philippines	500	2 200	1 000	8 200	0.10	0.10	24	31	12(03)	18(03)
Singapore	1 000	1 200	2 900	4 100	0.10	0.20				
Thailand	240 000	250 000	650 000	600 000	1.70	1.40	46	61	46(06)	
Timor-Leste										
Viet Nam	37 000	76 000	150 000	280 000	0.30	0.50	14	26	44(06)	50(05)
South and South-West Asia	1 038 100	951 500	2 760 500	2 563 200	0.40	0.26				
Afghanistan										
Bangladesh	100	2 000	7 500	12 000	0.10	0.10	3	7	16(06)	
Bhutan		100		500	0.10	0.10				
India	1 000 000	880 000	2 600 000	2 300 000	0.50	0.30			20(06)	36(06)
Iran (Islamic Rep. of)	12 000	24 000	45 000	85 000	0.10	0.20	3	5		
Maldives					0.10	0.10				
Nepal	12 000	17 000	55 000	68 000	0.50	0.50	3	7	28(06)	44(06)
Pakistan	13 000	27 000	50 000	94 000	0.10	0.10	1	3		
Sri Lanka	1 000	1 400	3 000	3 700	0.10	0.10	10	14		
Turkey										
North and Central Asia	89 100	254 400	401 000	995 600	0.40	0.83				
Armenia	500	1 000	1 800	2 400	0.10	0.10	8	12	23(05)	15(05)
Azerbaijan		1 300	500	7 800	0.10	0.20		14	2(00)	
Georgia	100	1 000	500	2 700	0.10	0.10				
Kazakhstan	1 000	3 300	3 400	12 000			23	23	22(06)	
Kyrgyzstan	500	1 100	1 000	4 200	0.10	0.10		14	20(06)	
Russian Federation	86 000	240 000	390 000	940 000	0.50	1.10	10	16		
Tajikistan	500	2 100	2 400	10 000	0.10	0.30	4	6	3(05)	
Turkmenistan				500					5(06)	
Uzbekistan	500	4 600	1 400	16 000	0.10	0.10	30	24	31(06)	7(02)
Pacific	4 600	22 700	25 000	72 400	0.14	0.44				
Australia	1 000	1 200	14 000	18 000	0.10	0.20				
American Samoa										
Cook Islands										
Fiji					0.10	0.10				
French Polynesia										
Guam										
Kiribati										
Marshall Islands										
Micronesia (F.S.)										
Nauru										
New Caledonia										
New Zealand	200	500	1 200	1 400	0.10	0.10				
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea	3 400	21 000	9 800	53 000	0.30	1.50	26	38		
Samoa										
Solomon Islands										
Tonga										
Tuvalu										
Vanuatu										
Asia and the Pacific	1 682 400	1 960 400	5 022 400	5 901 500	0.28	0.25				
LLDC	15 500	32 000	66 600	127 800	0.22	0.25				
LDC	140 600	140 400	473 600	395 900	0.40	0.30				
ASEAN	427 000	525 700	1 351 000	1 556 700	0.44	0.44				
ECO	27 500	63 400	103 700	229 500	0.10	0.14				
SAARC	1 026 100	927 500	2 715 500	2 478 200	0.41	0.26				
Central Asia	3 100	14 400	11 000	55 600	0.10	0.14				
Pacific island dev. econ.	3 400	21 000	9 800	53 000	0.27	1.33				
Low-income	195 500	272 100	688 200	852 600	0.27	0.27				
Middle-income	1 481 100	1 679 500	4 301 200	5 002 800	0.29	0.26				
High-income	5 800	8 800	33 000	46 100	0.10	0.11				
Other world regions										
Africa	10 370 300	11 279 200	17 650 000	19 286 100	4.50	3.96				
Europe	242 100	403 800	853 900	1 214 000	0.29	0.37				
Latin America & Carib.	529 700	621 700	1 514 000	1 751 600	0.53	0.56				
North America	193 000	250 000	1 049 000	1 173 000	0.30	0.40				
Other countries/areas	3 100	3 900	5 700	7 900	0.10	0.10				
World	13 020 600	14 519 000	26 095 000	29 334 100	0.87	0.83				



## 7.2 AIDS deaths

	AIDS deaths			
	Number		Per 100,000 population	
	2001	2007	2001	2007
<b>East and North-East Asia</b>	<b>15 800</b>	<b>40 200</b>	<b>1</b>	<b>3</b>
China	15 000	39 000	1	3
DPR Korea	100	500	0	2
Hong Kong, China				
Japan	100	100	0	0
Macao, China				
Mongolia	100	100	4	4
Republic of Korea	500	500	1	1
<b>South-East Asia</b>	<b>111 100</b>	<b>94 100</b>	<b>21</b>	<b>16</b>
Brunei Darussalam	100	100	29	26
Cambodia	14 000	6 000	107	42
Indonesia	100	8 700	0	4
Lao PDR	100	100	2	2
Malaysia	1 000	3 100	4	12
Myanmar	24 000	24 000	52	49
Philippines	100	500	0	1
Singapore	100	500	2	11
Thailand	66 000	31 000	108	49
Timor-Leste	100	100	12	9
Viet Nam	5 500	20 000	7	23
<b>South and South-West Asia</b>	<b>6 400</b>	<b>16 000</b>	<b>2</b>	<b>3</b>
Afghanistan	100	100	0	0
Bangladesh	100	1 000	0	1
Bhutan	100	100	17	15
India				
Iran (Islamic Rep. of)	1 000	4 300	1	6
Maldives	100	100	36	33
Nepal	2 600	4 900	10	17
Pakistan	1 900	5 000	1	3
Sri Lanka	500	500	3	3
Turkey				
<b>North and Central Asia</b>	<b>2 500</b>	<b>37 200</b>	<b>1</b>	<b>19</b>
Armenia	100	500	3	17
Azerbaijan	100	100	1	1
Georgia	100	100	2	2
Kazakhstan				
Kyrgyzstan	100	500	2	9
Russian Federation	1 900	35 000	1	25
Tajikistan	100	500	2	7
Turkmenistan				
Uzbekistan	100	500	0	2
<b>Pacific</b>	<b>800</b>	<b>1 300</b>	<b>3</b>	<b>4</b>
Australia	100	100	1	0
American Samoa				
Cook Islands				
Fiji	100	100	12	12
French Polynesia				
Guam				
Kiribati				
Marshall Islands				
Micronesia (F.S.)				
Nauru				
New Caledonia				
New Zealand	100	100	3	2
Niue				
Northern Mariana Is.				
Palau				
Papua New Guinea	500	1 000	9	16
Samoa				
Solomon Islands				
Tonga				
Tuvalu				
Vanuatu				
<b>Asia and the Pacific</b>	<b>136 600</b>	<b>188 800</b>	<b>5</b>	<b>7</b>
LLDC	3 500	7 400	3	6
LDC	41 200	36 400	16	13
ASEAN	111 000	94 000	21	16
ECO	3 400	11 000	1	4
SAARC	5 400	11 700	2	3
Central Asia	600	2 200	1	4
Pacific island dev. econ.	600	1 100	9	15
Low-income	49 200	64 100	9	11
Middle-income	86 400	123 300	5	6
High-income	1 000	1 400	0	1
<b>Other world regions</b>				
Africa	1 358 800	1 495 400	163	156
Europe	17 500	33 000	3	6
Latin America & Carib.	65 400	79 100	12	14
North America	500	500	2	2
Other countries/areas	600	1 000	6	9
<b>World</b>	<b>1 579 400</b>	<b>1 797 800</b>	<b>34</b>	<b>36</b>



## 8 Other major infectious diseases

The United Nations Millennium Declaration calls upon countries to have halted and begun to reverse the scourge of malaria and other major diseases by 2015. The Asia-Pacific region as a whole, and nearly every country in it, has achieved that goal.

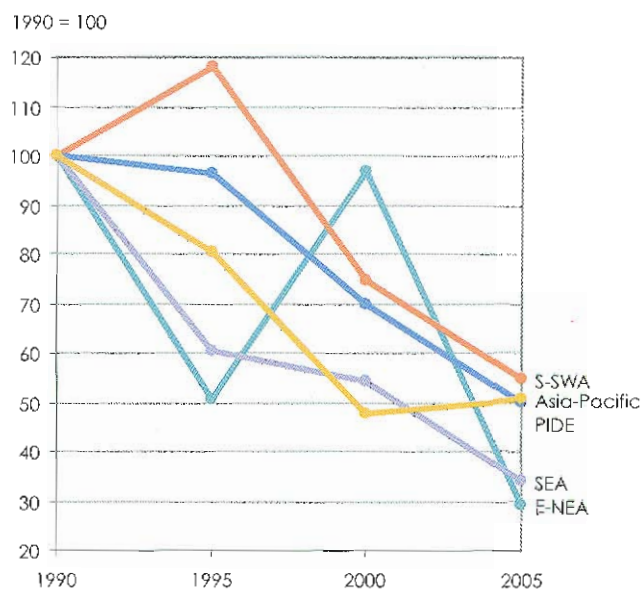
Asia and the Pacific has seen a significant decline in the incidence of malaria – the number of new cases in a year per 100,000 population. Between 1995 and 2000, the incidence fell from 155 to 112 and by 2005 was down to 80. The 3.1 million cases reported in 2005 constituted less than five per cent of the world's cases. The incidence is generally higher in the poorest tropical countries: while in 2005 was relatively low at 142 in South-East Asia and 126 in South and South-West Asia, it was 2,729 in the Pacific developing economies.

In 2005, the only countries in the region with recorded rates above 1,000 were Solomon Islands (16,249), Timor-Leste (4,109), Papua New Guinea (1,627), and Vanuatu (4,566). Because annual incidence rates fluctuate it is not clear whether these countries have reversed the spread of the disease on a sustained basis but between 2003 and 2006 Solomon Islands and Vanuatu did record declines. The situation in Indonesia bears watching; the incidence of 192 in 2005 was the highest ever recorded, though the incidence might previously have been under-reported.

Most of the reported cases and deaths from malaria in Asia and the Pacific occur in South-East Asia and in South and South-West Asia for, although those subregions have modest incidences, they have the region's largest populations. Of the reported cases in Asia and the Pacific, 67 per cent occurred in South and South-West Asia, 26 per cent in South-East Asia and 6 per cent in the Pacific. Of the 3.1 million reported cases in 2005, 1.8 million were in India and 433,000 were in Indonesia. The figure for India represented a decline from 2000, but that for Indonesia was a 76 per cent increase.

**Figure 8.1**

Index of change of malaria incidence, selected groups of Asia-Pacific countries, 1990-2005



In 2005, Myanmar and Pakistan reported more than 100,000 cases, and Papua New Guinea 99,000.

For the region as a whole, the annual number of malaria deaths declined steadily between 1996 and 2005, from 10,833 to 4,816. In 2005, more than half the deaths were in South-East Asia, with one third in Myanmar alone. South and South-West Asia accounted for 31 per cent of the deaths, including 963 in India. In the Pacific, there were 725 malaria deaths in Papua New Guinea.

For Asia and the Pacific a more widespread infectious disease is tuberculosis – although since 1990 the prevalence has been declining steadily. Between 2000 and 2006 the prevalence per 100,000 population fell from 323 to 230. The problem has been greatest in South-East Asia, in South and South-West Asia, and in the Pacific developing economies – though in these three subregions too it has also declined steadily. In 2006, the region's highest prevalences were in Timor-Leste (789) and Cambodia (665), followed by Papua New Guinea (513) and Tuvalu (504). Nevertheless between 2000



Figure 8.2

Tuberculosis incidence, Asia and the Pacific, 1990 and 2006

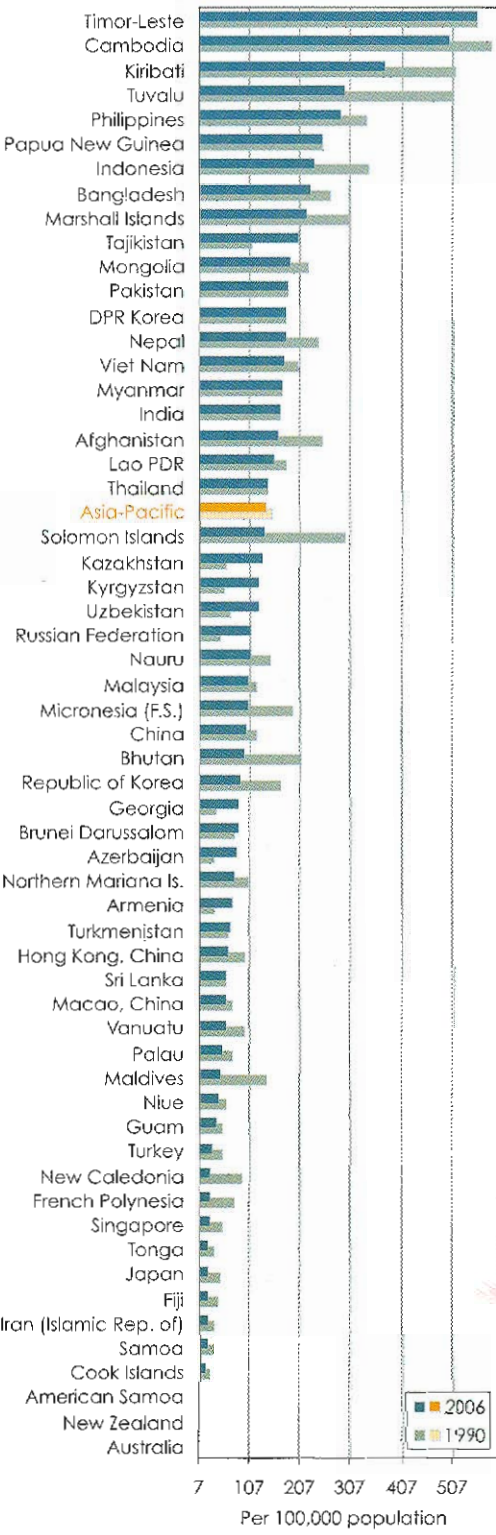
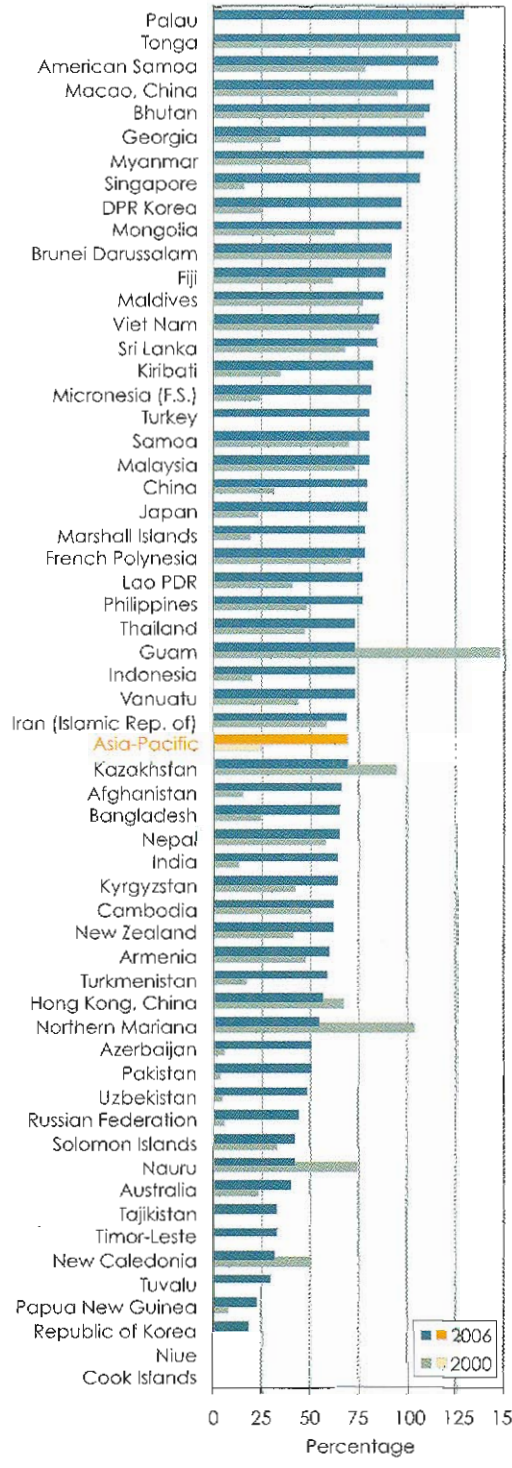


Figure 8.3

DOTS detection rates, Asia and the Pacific, 2000 and 2006





and 2006 in all four countries the prevalences fell significantly.

The other main way of tracking progress is via the incidence – the number of new cases reported in a year per 100,000 population. Across the region, since 1990 tuberculosis incidences have changed less than prevalences but have also declined steadily. In 2006, the incidence was higher than the regional average in South-East Asia, in South and South-West Asia and in the Pacific developing economies. Although the incidence was lower in North and Central Asia it increased marginally between 2000

and 2006. Among individual countries in 2006, the highest incidences were in Timor-Leste (556), Cambodia (500), Kiribati (373) and Tuvalu (295).

For some countries, the reported numbers of new cases are estimates; Myanmar, Papua New Guinea and Timor-Leste, for example reported the same number each year from 1990 to 2006.

Treatment for tuberculosis is the “directly observable treatment – short course” (DOTS). One encouraging trend is that between 2000 and 2006 the proportion of cases being detected rose in all subregions of Asia and the Pacific – implying stronger systems of national surveillance.

#### **Malaria incidence (per 100,000 population)**

The number of reported new cases of malaria in a given time period expressed per 100,000 population. **Aggregates:** Averages are calculated using the total population as weights. Missing data for some countries have been imputed. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 17 June 2008).

#### **Malaria reported cases (number)**

The number of notified cases of malaria in a given time period. **Aggregates:** Sum of the individual country values. Missing data for some countries and years have been imputed. **Source:** World Health Organization, WHO Global Health Atlas (online database, accessed on 17 June 2008).

#### **Malaria reported deaths (number)**

The number of deaths caused by malaria in a given time period. **Aggregates:** Sum of the individual country values. Missing data of some countries and years have been imputed. **Source:** World Health Organization, WHO Global Health Atlas (online database, accessed on 17 June 2008).

#### **Tuberculosis prevalence (per 100,000 population)**

The number of cases of tuberculosis (TB) (all forms) in a population at a given point in time (sometimes referred

to as point prevalence). It is expressed in this database as the number of cases per 100,000 population. Estimates include cases of TB in people with HIV. **Aggregates:** Averages are calculated using total population as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 19 August 2008).

#### **Tuberculosis incidence (per 100,000 population)**

The estimated number of new tuberculosis cases arising in one year per 100,000 population. All forms of TB are included, as are cases in people with HIV. **Aggregates:** Averages are calculated using the total population as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 19 August 2008).

#### **DOTS detection rate (percentage)**

The ratio of the annual new smear-positive notifications (under DOTS) to estimated annual new smear-positive incidence, expressed as a percentage. DOTS, Directly Observable Treatment - Short course, is an internationally-recommended TB control strategy. Case detection means that TB is diagnosed in a patient and is reported within the national surveillance system, and then to WHO. **Aggregates:** Averages are calculated using the number of TB cases per year as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 21 August 2008).



## 8. Other major infectious diseases

### 8.1 Malaria

	Incidence					Reported cases					Reported deaths		
	Per 100,000 population					Number					Number		
	1990	1995	2000	2005	2006	1990	1995	2000	2005	2006	2000	2005	2006
<b>East and North-East Asia</b>	7	4	7	2	3	90 117	48 342	96 536	30 018	44 178	41	49	38
China	8	4	1	2	3	89 000	47 118	18 620	21 935	35 397	39	48	37
DPR Korea			321	28				73 742	6 728			0	
Hong Kong, China				0					32				
Japan													
Macao, China				0					0			0	
Mongolia				0					0			0	
Republic of Korea	0	0	9	3	4	0	107	4 142	1 323	2 021	1	0	0
<b>South-East Asia</b>	420	253	228	142		1 851 677	1 218 147	1 183 878	793 241			2 515	
Brunei Darussalam													
Cambodia	1 277	675	489	354	554	123 796	76 923	62 439	49 436	78 696	608	296	396
Indonesia	94	62	116	192		171 908	123 226	245 612	433 326			97	
Lao PDR	541	1 109	766	240	319	22 044	52 021	40 023	13 602	18 382	350	77	21
Malaysia	279	288	55	22	20	50 500	59 208	12 705	5 569	5 294	35	33	22
Myanmar	2 464	1 522	1 291	316		989 042	656 547	592 354	151 508		2 746	1 707	
Philippines	141	83	48	55	41	86 200	56 852	36 596	46 485	35 405	536	145	124
Singapore				4					166				
Thailand	504	144	135	47		273 880	82 743	81 692	29 782		625	71	
Timor-Leste			6 089	4 109				49 836	43 857			71	
Viet Nam	187	137	79	23	26	123 796	100 116	62 442	19 497	22 637	148	18	41
<b>South and South-West Asia</b>	230	271	172	126		2 875 729	3 773 770	2 628 584	2 089 292		1 530	1 483	
Afghanistan	2 508		983	266	317	317 479		203 911	66 798	82 692			
Bangladesh	48	121	40	31		53 875	152 729	55 599	48 096		469	481	
Bhutan	1 735	4 573	1 063	286		9 497	23 188	5 935	1 825			5	
India	235	313	194	160		2 018 783	2 988 231	2 031 790	1 817 093		946	963	
Iran (Islamic Rep. of)	137	109	30	27	23	77 470	67 532	19 716	18 966	15 909	4		
Maldives	7	7	7			16	17	20			0		
Nepal	120	45	31	18		22 856	9 718	7 616	4 962		0	10	
Pakistan	71	88	57	81	77	79 689	111 836	82 526	127 825	124 000			
Sri Lanka	1 679	787	1 122	9		287 384	142 294	210 039	1 640			0	
Turkey	15	131	17	3	1	8 680	82 096	11 432	2 084	796		0	0
<b>North and Central Asia</b>	0	5	10	1	1	449	9 952	21 970	3 246	2 087	2	3	4
Armenia	0	16	5	0	0	0	502	141	0	0		0	0
Azerbaijan	0	36	19	3	2	24	2 840	1 526	242	143		0	0
Georgia	0	0	5	3	1	1	1	245	155	60		0	0
Kazakhstan	0	0	0	0	0	3	41	37	6	2		0	0
Kyrgyzstan	0	0	0	4	6	1	3	12	226	318		0	0
Russian Federation	0	0	1	0	0	216	425	795	205	143	2	3	4
Tajikistan	3	106	309	35	20	175	6 103	19 064	2 309	1 344		0	0
Turkmenistan	0	0	1	0		1	10	24	1			0	
Uzbekistan	0	0	1	0	0	28	27	126	102	76		0	0
<b>Pacific</b>													
Australia													
American Samoa													
Cook Islands													
Fiji													
French Polynesia													
Guam													
Kiribati													
Marshall Islands													
Micronesia (F.S.)													
Nauru													
New Caledonia													
New Zealand													
Niue				0					0			0	
Northern Mariana Is.													
Palau													
Papua New Guinea	2 539	2 103	1 509	1 627	1 311	104 900	99 000	81 192	98 762	81 303	617	725	668
Samoa													
Solomon Islands	37 149	32 758	16 341	16 249	15 565	116 500	118 521	67 884	76 762	75 337	38	38	12
Tonga													
Tuvalu													
Vanuatu	19 274	6 941	3 385	4 586	3 649	28 805	11 954	6 422	9 834	8 055		0	6
<b>Asia and the Pacific</b>	161	155	112	80		5 068 812	5 280 321	4 087 101	3 101 790		7 348	4 816	
LLDC	373	280	232	69	82	372 108	290 582	278 415	90 073	109 745		114	
LDC	844	575	436	169		1 694 242	1 308 079	1 092 039	466 683		4 257	2 707	
ASEAN	419	251	218	135		1 841 345	1 207 815	1 134 042	749 384			2 444	
ECO	163	140	93	56	57	483 550	466 617	338 374	218 559	225 281			
SAARC	246	286	186	136		2 789 579	3 624 142	2 597 436	2 068 242		1 526	1 481	
Central Asia	0	14	30	4	3	233	9 527	21 175	3 041	1 944		0	0
Pacific island dev. econ.	5 405	4 346	2 582	2 729	2 372	250 206	229 476	155 499	185 359	184 696	656	763	686
Low-income	452	325	251	114		1 955 266	1 580 758	1 348 930	666 613			3 374	
Middle-income	118	130	90	76		3 112 700	3 698 610	2 733 183	2 433 008		2 345	1 438	
High-income													
<b>Other world regions</b>													
Africa	6 937	5 077	5 517	6 889		44 364 437	36 736 619	45 127 166	63 288 194		284 776		
Europe	2	2	2	2	2	9 794	9 681	14 473	10 095	10 014	71	35	29
Latin America & Carib.	259	292	236	203	154	1 055 897	1 300 673	1 139 240	1 046 955	808 368		149	
North America													
Other countries/areas	88	683	1 338	171	181	68 821	624 179	1 406 253	204 514	221 412			
<b>World</b>	1 044	838	919	1 127		50 567 761	43 951 452	51 774 232	67 651 548				



## 8.2 Tuberculosis

	Prevalence				Incidence				DOTS detection rate		
	Per 100,000 population				Per 100,000 population				Percentage		
	1990	1995	2000	2006	1990	1995	2000	2006	1995	2000	2006
<b>East and North-East Asia</b>	<b>296</b>	<b>276</b>	<b>247</b>	<b>183</b>	<b>113</b>	<b>105</b>	<b>99</b>	<b>94</b>	<b>15</b>	<b>31</b>	<b>78</b>
China	322	304	271	201	117	111	105	99	15	31	79
DPR Korea	431	400	368	180	178	178	178	178		25	97
Hong Kong, China	96	86	78	64	94	84	76	62		67	56
Japan	62	51	45	29	47	39	34	22		23	79
Macao, China	73	92	87	59	69	87	85	59	88	95	113
Mongolia	569	486	283	191	220	210	199	188	7	63	97
Republic of Korea	221	131	113	123	166	98	72	88	30		18
<b>South-East Asia</b>	<b>476</b>	<b>422</b>	<b>335</b>	<b>267</b>	<b>273</b>	<b>253</b>	<b>235</b>	<b>216</b>	<b>9</b>	<b>39</b>	<b>77</b>
Brunei Darussalam	117	115	62	99	75	75	62	83		91	91
Cambodia	915	797	745	665	586	557	530	500	40	50	62
Indonesia	438	380	327	253	343	304	270	234	1	20	73
Lao PDR	476	407	344	293	179	170	162	152		40	77
Malaysia	192	152	136	125	120	114	109	103	64	73	80
Myanmar	411	389	289	169	171	171	171	171		49	109
Philippines	819	774	554	432	337	320	305	287	0	48	77
Singapore	52	49	39	25	50	47	38	26	62	16	107
Thailand	340	305	237	198	142	142	142	142		47	73
Timor-Leste	1 208	1 111	1 111	789	556	556	556	556			33
Viet Nam	444	346	249	225	203	193	183	173	30	82	85
<b>South and South-West Asia</b>	<b>509</b>	<b>483</b>	<b>419</b>	<b>277</b>	<b>167</b>	<b>166</b>	<b>163</b>	<b>161</b>	<b>2</b>	<b>14</b>	<b>63</b>
Afghanistan	614	583	440	231	248	247	208	161		15	66
Bangladesh	621	576	499	391	264	251	239	225	6	24	65
Bhutan	244	164	128	96	207	163	128	96	99	108	112
India	568	539	464	299	168	168	168	168	0	12	64
Iran (Islamic Rep. of)	50	55	40	28	36	40	31	22	42	58	69
Maldives	147	86	86	54	139	98	69	45	105	77	87
Nepal	625	527	311	244	243	220	199	176		57	64
Pakistan	428	424	416	263	181	181	181	181	1	3	50
Sri Lanka	108	97	107	80	61	61	61	61	62	67	85
Turkey	83	62	49	32	49	40	31	29			80
<b>North and Central Asia</b>	<b>80</b>	<b>111</b>	<b>158</b>	<b>130</b>	<b>50</b>	<b>70</b>	<b>110</b>	<b>111</b>	<b>11</b>	<b>15</b>	<b>48</b>
Armenia	53	70	96	81	33	47	71	72	12	47	59
Azerbaijan	58	76	113	87	35	50	75	77	5	6	50
Georgia	53	69	98	84	39	54	82	84	18	34	109
Kazakhstan	95	94	145	142	58	62	141	130		94	69
Kyrgyzstan	90	118	157	137	55	77	135	123		42	63
Russian Federation	72	116	168	125	45	73	113	107		5	44
Tajikistan	195	106	192	298	112	65	117	204			33
Turkmenistan	106	80	130	78	64	52	92	65		17	58
Uzbekistan	114	119	140	145	68	76	93	122		4	48
<b>Pacific</b>	<b>148</b>	<b>138</b>	<b>128</b>	<b>106</b>	<b>54</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>47</b>	<b>14</b>	<b>28</b>
Australia	7	7	6	7	7	7	6	7		23	40
American Samoa	28	22	15	12	12	11	10	9		78	115
Cook Islands	39	30	26	24	22	20	18	16	126	0	0
Fiji	63	42	38	31	42	34	28	22	57	61	88
French Polynesia	149	107	51	29	74	54	39	26		70	78
Guam	103	93	58	49	51	46	42	37		147	73
Kiribati	1 162	928	545	402	513	464	420	373		34	82
Marshall Islands	685	547	430	241	302	274	248	220		19	79
Micronesia (F.S.)	313	217	171	109	189	155	128	101	12	24	82
Nauru	330	263	199	134	146	132	119	106		74	42
New Caledonia	114	71	50	35	91	57	41	27	43	50	32
New Zealand	10	11	11	9	10	11	11	9		40	61
Niue	133	106	96	85	59	53	48	43			0
Northern Mariana Is.	233	186	84	90	103	93	84	75		103	54
Palau	89	64	115	51	70	64	58	51	184		129
Papua New Guinea	790	723	651	513	250	250	250	250		7	22
Samoa	44	31	27	25	32	27	23	19	73	70	80
Solomon Islands	661	459	288	194	292	230	181	135		32	42
Tonga	54	41	34	34	34	31	28	25	67	123	127
Tuvalu	1 160	857	723	504	508	429	362	295			29
Vanuatu	213	162	87	65	94	81	70	58		44	73
<b>Asia and the Pacific</b>	<b>386</b>	<b>366</b>	<b>323</b>	<b>230</b>	<b>150</b>	<b>146</b>	<b>144</b>	<b>139</b>	<b>8</b>	<b>24</b>	<b>69</b>
LLDC	295	284	239	189	130	133	147	142	0	1	16
LDC	590	544	57	49	257	247	233	218	12	33	70
ASEAN	475	421	334	265	273	253	234	215	9	39	77
ECO	235	236	232	157	108	110	114	114	5	13	54
SAARC	553	525	455	300	179	178	176	174	2	14	63
Central Asia	100	99	139	140	60	65	104	118	11	40	55
Pacific island dev. econ.	590	531	471	374	201	196	193	190	47	12	26
Low-income	487	449	388	284	212	206	201	194	12	31	66
Middle-income	391	374	330	233	146	143	141	136	7	23	70
High-income	92	65	57	49	70	50	41	37	31	28	45
<b>Other world regions</b>											
Africa	303	368	446	475	150	204	277	316	35	40	48
Europe	39	39	39	29	32	32	32	29	73	24	68
Latin America & Carib.	153	121	95	69	100	83	69	56	80	46	71
North America	7	6	4	3	9	8	6	4	81	82	84
Other countries/areas	99	94	73	64	59	55	52	44	683	1 338	181
<b>World</b>	<b>294</b>	<b>289</b>	<b>272</b>	<b>219</b>	<b>124</b>	<b>128</b>	<b>136</b>	<b>139</b>	<b>14</b>	<b>30</b>	<b>62</b>



## 9 Health risks and causes of death

**As countries develop economically and socially, they undergo epidemiological transitions – as the chief causes of death change from communicable to non-communicable diseases.**

Measuring the relative importance of a disease involves estimating the number of years of life lost to each cause of death. Years of life lost take into account the expectation of life and the age at which a death occurs, using standard life tables so as to produce results that are comparable between countries. For example, if the life expectancy of a person at age 60 is an additional 20 years, the death of that person from a particular disease when they are 60 years old results in the loss of 20 years of life. However, the standard WHO methodology also makes additional adjustments, notably giving greater weight to deaths occurring at younger ages and lower weight to deaths occurring at older ages.

The complexity of the calculations and the need for complete and accurate reporting of cause of death mean that preparing estimates for aggregate populations, such as for the Asia-Pacific region, is not feasible. However, the results for individual countries give a strong indication of the general issues. In 2002, in numerous countries in South-East Asia and in South and South-West Asia, as well as in Papua New Guinea, more than half the years lost were to communicable diseases. Conversely, in such highly developed countries as Australia, Japan, New Zealand, the Republic of Korea, the Russian Federation and Singapore less than 10 per cent of lives lost were to communicable diseases.

On the other hand, in highly developed countries most of the years of life were lost to non-communicable diseases, including include cancer, and cardiovascular and pulmonary diseases. These are clearly the main causes of death in more developed countries where they can account for more than 70 per cent years of life lost.

Several countries are in the midst of an epidemiological transition, with roughly comparable numbers of years of life lost to communicable and

non-communicable diseases. These include the Democratic People's Republic of Korea, Mongolia, Indonesia, the Philippines, Thailand and Viet Nam.

A third main category of causes of death is injuries. These include workplace accidents, road accidents, homicides and civil violence. Years of life lost to injuries are typically higher in countries that are undergoing rapid industrialization but have yet to develop adequate labour standards and road safety measures. Countries in which in 2002 the proportion years of years of life lost to injuries exceeded 20 per cent included Brunei Darussalam, China, the Islamic Republic of Iran, Kazakhstan, the Republic of Korea, the Russian Federation and Sri Lanka. A second tier of countries, in which the proportion was between 15 and 20 per cent, included both such highly industrialized countries as Australia and Japan, and such rapidly industrializing countries as Thailand and Viet Nam.

The third category includes suicide. Both the reporting of suicide and suicide itself are often culture specific. In the Asia-Pacific region, the countries reporting the highest levels of suicide are the Russian Federation, Sri Lanka, Kazakhstan, Japan and the Republic of Korea. In every country the suicide rate for males is at least double that for females. In both Kazakhstan and the Russian Federation, the suicide rate for males is more than five times that for females.

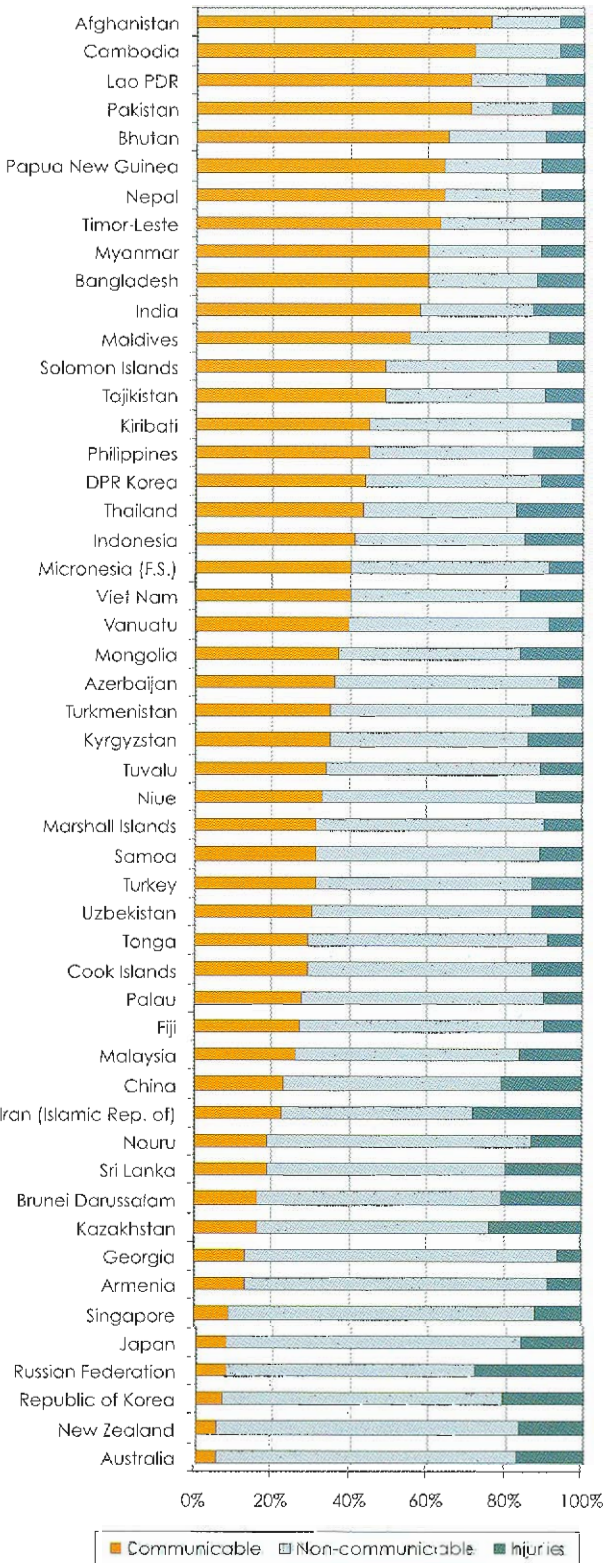
One of the most significant preventable causes of poor health in the region is smoking. The prevalence of smoking reflects both income and culture factors but also shows striking sex differences – far more men smoke than women. Among males in the region 47.7 per cent are smokers, compared with a global average of only 41.3 per cent. The proportions are especially high for East and North-East Asia (58.1 per cent) and North and Central Asia (60.3 per cent). The highest percentage of smokers among males in any country in the region is found in the Russian Federation, 70.1 per cent.

The proportion of women in the region who smoke, at 6.1 per cent, is lower than the global



Figure 9.1

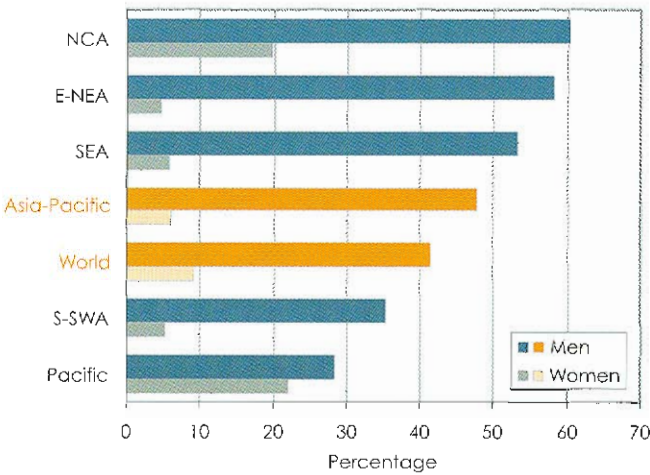
Proportions of years of life lost to communicable and non-communicable diseases and injuries, Asia and the Pacific, 2002



average of 9 per cent. But it is much higher in North and Central Asia, at 19.8 per cent and in the Pacific at 22.1 per cent – reflecting high rates in the Russian Federation (26.5 per cent), Australia (21.8 per cent) and New Zealand (27.5 per cent). The rates are also high in Nepal (26.4 per cent) and Turkey (19.2 per cent).

Figure 9.2

Prevalence of smoking, women and men, Asia-Pacific subregions, 2005



A particular concern is smoking among adolescents. The proportion of 13-15 year-olds who are smokers is especially high in the Pacific. In Tuvalu, it is 36 per cent, and it exceeds 45 per cent in the Cook Islands, the Federated States of Micronesia and Papua New Guinea.

For alcohol, per capita consumption in the Asia-Pacific region as a whole is modest – 3.2 litres per adult. But the level varies significantly by subregion and country – affected by a combination of income and culture factors. It is low in all countries in South and South-West Asia and in most of the countries in South-East Asia. Higher levels are found in the Russian Federation and in the Pacific, but the latter average is high largely because of high consumption in Australia and New Zealand.



**Years of potential life lost to communicable diseases, non-communicable diseases, and injuries (percentage of total)**

The number of premature deaths multiplied by a standard life expectancy at the age at which death occurs due to communicable diseases, non-communicable diseases, and injuries. The standard life expectancy used for years of life lost at each age is the same for deaths in all regions of the world. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 5 September 2008).

**Suicide rates, women and men (per 100,000 population)**

The total number of suicides in a given year divided by the respective mid-year population, expressed per 100,000 population. Suicide is the act of deliberately killing oneself. Risk factors for suicide include mental disorder (such as depression, personality disorder, alcohol dependence, or schizophrenia), and some physical illnesses, such as neurological disorders, cancer, and HIV infection. Data are disaggregated by sex. Suicides are often underreported and the reported rates are not necessarily internationally comparable. **Aggregates:** None. **Source:** World Health Organization, Mental Health programme (online database, accessed on 3 September 2008).

**Prevalence of smoking: female and male (% of women)**

The prevalence of current tobacco smoking (including cigarettes, cigars, pipes or any other smoked tobacco

products) among women. Current smoking includes both daily and non-daily or occasional smoking.

**Aggregates:** Averages are calculated using the population of women aged 15 and above as weight. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 8 September 2008).

**Prevalence of smoking in adolescents (% of population aged 13-15)**

The prevalence among boys and girls aged 13-15 of tobacco use, including smoking, oral tobacco and snuff, on more than one occasion in the 30 days preceding the survey. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed in July 2008).

**Alcohol consumption (litres per adult aged 15 and above)**

Litres of pure alcohol per capita, computed as the sum of alcohol production and imports, less alcohol exports, divided by the adult population (aged 15 years and older).

**Aggregates:** Averages are calculated using population aged 15 and above as weight. **Source:** World Health Organization Global Information System on Alcohol and Health (online database, accessed on 5 September 2008).



## 9. Health risks and causes of death

### 9.1 Causes of deaths

	Years of potential life lost to			Suicide rates	
	Communicable diseases	Non-communicable diseases	Injuries	Per 100,000 population	
	2002	Percentage of total	2002	Female	Male
<b>East and North-East Asia</b>					
China	23	56	21	14.8 (99)	13.0 (99)
DPR Korea	44	46	11		
Hong Kong, China				12.4 (04)	25.2 (04)
Japan	8	76	16	12.8 (04)	35.6 (04)
Macao, China					
Mongolia	37	47	16		
Republic of Korea	7	72	21	15.0 (04)	32.5 (04)
<b>South-East Asia</b>					
Brunei Darussalam	16	63	21		
Cambodia	72	22	6		
Indonesia	41	44	15		
Lao PDR	71	19	10		
Malaysia	26	58	16		
Myanmar	60	29	11		
Philippines	45	42	13	1.7 (93)	2.5 (93)
Singapore	9	79	12	7.6 (03)	12.5 (03)
Thailand	43	40	17	3.8 (02)	12.0 (02)
Timor-Leste	63	26	11		
Viet Nam	40	44	16		
<b>South and South-West Asia</b>					
Afghanistan	76	18	6		
Bangladesh	60	28	12		
Bhutan	85	25	10		
India	58	29	13	9.1 (98)	12.2 (98)
Iran (Islamic Rep. of)	22	49	28	0.1 (91)	0.3 (91)
Maldives	55	36	9		
Nepal	64	25	11		
Pakistan	70	21	8		
Sri Lanka	19	61	20	16.8 (91)	44.6 (91)
Turkey	31	56	13		
<b>North and Central Asia</b>					
Armenia	13	78	9	0.5 (03)	3.2 (03)
Azerbaijan	36	58	6	0.5 (02)	1.8 (02)
Georgia	13	81	6	1.1 (01)	3.4 (01)
Kazakhstan	16	60	24	8.9 (03)	51.0 (03)
Kyrgyzstan	35	51	14	3.0 (04)	15.0 (04)
Russian Federation	8	64	28	10.7 (04)	61.6 (04)
Tajikistan	49	41	10	2.3 (01)	2.9 (01)
Turkmenistan	35	52	13	3.5 (98)	13.8 (98)
Uzbekistan	30	57	13	3.0 (03)	8.1 (03)
<b>Pacific</b>					
Australia	5	77	17	4.7 (03)	17.1 (03)
American Samoa					
Cook Islands	29	57	13		
Fiji	27	63	10		
French Polynesia					
Guam					
Kiribati	45	52	3		
Marshall Islands	31	59	10		
Micronesia (F.S.)	40	51	9		
Nauru	19	68	13		
New Caledonia					
New Zealand	5	79	17	4.2 (00)	19.8 (00)
Niue	33	55	12		
Northern Mariana Is.					
Palau	28	63	10		
Papua New Guinea	64	25	11		
Samoa	31	58	11		
Solomon Islands	49	44	7		
Tonga	29	62	9		
Tuvalu	34	55	11		
Vanuatu	39	51	9		
<b>Asia and the Pacific</b>					
LLDC					
LDC					
ASEAN					
ECO					
SAARC					
Central Asia					
Pacific island dev. econ.					
Low-income					
Middle-income					
High-income					
<b>Other world regions</b>					
Africa					
Europe					
Latin America & Carib.					
North America					
Other countries/areas					
<b>World</b>					



## 9.2 Tobacco and alcohol consumption

	Prevalence of smoking			Alcohol consumption per capita					
	Women	Men	Adolescents	Litres per adult aged 15 and above					
	% of women	% of men	% of population aged 13-15	1990	1995	2000	2001	2002	2003
	2005	2005	Latest						
<b>East and North-East Asia</b>	<b>4.7</b>	<b>58.1</b>		<b>4.4</b>	<b>5.5</b>	<b>5.5</b>	<b>5.4</b>	<b>5.5</b>	<b>5.5</b>
China	3.7	59.5	5.5 (05)	3.4	5.0	5.2	5.2	5.1	5.2
DPR Korea		58.6		3.7	3.9	3.7	2.5	3.2	3.3
Hong Kong, China									
Japan	14.3	44.3		8.0	7.9	7.6	7.6	7.6	7.6
Macao, China									
Mongolia	6.5	45.8	14.9 (03)	2.9	1.5	2.8	2.6	2.9	2.8
Republic of Korea	5.7	53.3	10.2 (05)	9.3	7.8	7.3	7.8	7.8	7.9
<b>South-East Asia</b>	<b>5.8</b>	<b>53.3</b>		<b>1.3</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.5</b>	<b>1.5</b>
Brunei Darussalam				2.7	0.7	0.4	0.5	0.1	0.1
Cambodia	6.5	40.5	5.1 (03)	0.4	0.3	1.5	1.9	1.4	1.5
Indonesia	4.5	65.9	13.5 (06)	0.1	0.1	0.1	0.1	0.1	0.1
Lao PDR	15.6	65.0	8.9 (03)	6.9	9.2	6.8	6.9	6.9	6.9
Malaysia	2.8	54.4	25.8 (03)	0.8	0.9	1.1	1.1	1.1	1.1
Myanmar	13.6	46.5	15.3 (07)	0.1	0.2	0.3	0.4	0.3	0.3
Philippines	9.8	42.0	22.6 (07)	3.7	3.8	3.8	3.8	3.6	3.5
Singapore			9.1 (00)	0.6	2.0	2.1	2.1	2.2	2.2
Thailand	3.4	39.8	15.7 (05)	5.0	5.0	5.2	5.8	5.8	5.6
Timor-Leste			41.0 (06)						
Viet Nam	2.5	45.7	2.2 (03)	0.2	0.3	0.7	0.7	0.9	0.9
<b>South and South-West Asia</b>	<b>5.2</b>	<b>35.3</b>		<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>
Afghanistan			9.8 (04)			0.0	0.0	0.0	0.0
Bangladesh	3.8	47.0	5.8 (04)	0.0	0.0	0.0	0.0	0.0	0.0
Bhutan			20.2 (06)	0.5	0.5	0.6	0.6	0.2	0.2
India	3.8	33.1	13.7 (06)	0.3	0.3	0.3	0.3	0.3	0.3
Iran (Islamic Rep. of)	5.5	29.6	26.6 (07)	0.0	0.0	0.0	0.0	0.0	0.0
Maldives	11.6	44.5	5.9 (07)						
Nepal	26.4	34.8	9.4 (07)	0.0	0.1	0.1	0.1	0.2	0.2
Pakistan	6.6	35.4	10.1 (03)	0.0	0.0	0.0	0.0	0.0	0.0
Sri Lanka	2.6	30.2	9.1 (07)	0.2	0.2	0.2	0.2	0.3	0.3
Turkey	19.2	51.6	8.4 (03)	0.8	1.5	1.4	1.4	1.4	1.4
<b>North and Central Asia</b>	<b>19.8</b>	<b>60.3</b>		<b>6.8</b>	<b>7.3</b>	<b>8.1</b>	<b>8.0</b>	<b>8.0</b>	<b>8.0</b>
Armenia	3.7	55.1	7.3 (04)		2.5	1.6	1.4	1.4	1.5
Azerbaijan	0.9				1.2	6.7	5.8	5.0	4.5
Georgia	6.3	57.1	24.6 (03)		6.8	1.8	1.7	1.6	1.5
Kazakhstan	9.7	43.2	11.4 (04)		4.7	3.4	2.8	3.7	3.0
Kyrgyzstan	2.2	46.9	7.2 (04)	4.5	3.2	2.2	2.2	3.0	3.6
Russian Federation	26.5	70.1	27.3 (04)	7.1	11.2	10.5	10.4	10.3	10.3
Tajikistan			5.1 (04)		1.8	0.3	0.8	0.5	0.4
Turkmenistan					2.1	1.5	1.1	1.1	1.2
Uzbekistan	1.2	24.2			1.5	1.6	1.6	1.5	1.5
<b>Pacific</b>	<b>22.1</b>	<b>28.4</b>		<b>8.7</b>	<b>8.1</b>	<b>7.8</b>	<b>7.8</b>	<b>7.6</b>	<b>7.6</b>
Australia	21.8	27.7		10.5	9.7	9.5	9.3	9.2	9.0
American Samoa						0.2	0.1	0.1	0.2
Cook Islands	20.0	36.1	45.1 (03)			2.3	0.7	0.4	3.7
Fiji	5.1	23.6	11.5 (05)	2.2	1.7	2.1	2.0	2.0	1.7
French Polynesia				9.8	9.6	7.1	7.5	6.9	6.6
Guam				5.8	4.7	5.0	4.9	4.5	1.3
Kiribati						1.0	1.2	0.7	0.5
Marshall Islands									
Micronesia (F.S.)			46.2 (07)	0.0	0.7	0.2	0.2	1.8	1.2
Nauru	52.4	46.1				4.9	3.7	1.0	0.9
New Caledonia				8.7	9.8	7.6	9.2	10.2	10.0
New Zealand	27.5	29.7	20.1 (07)	11.5	10.4	8.8	8.5	9.8	9.7
Niue						9.0	10.9	6.0	9.5
Northern Mariana Is.									
Palau	9.7	38.1							
Papua New Guinea			47.7 (07)	1.1	1.0	2.1	2.3	1.8	1.6
Samoa	23.4	58.3	23.5 (07)	2.2	2.3	2.3	2.5	2.1	1.7
Solomon Islands				0.6	0.3	0.3	0.6	0.6	1.0
Tonga	15.8	61.8				0.7	0.8	0.8	0.8
Tuvalu			36.4 (06)			1.1	1.9	0.5	1.4
Vanuatu	8.1	49.1	25.6 (07)	1.3	1.8	0.9	0.8	0.8	0.8
<b>Asia and the Pacific</b>	<b>6.1</b>	<b>47.7</b>		<b>2.8</b>	<b>3.2</b>	<b>3.2</b>	<b>3.2</b>	<b>3.2</b>	<b>3.2</b>
LLDC	11.0	36.7			1.5	1.7	1.8	1.7	1.7
LDC	8.7	45.7		0.2	0.2	0.3	0.3	0.3	0.3
ASEAN	5.8	53.3		1.3	1.6	1.6	1.6	1.5	1.5
ECO	8.5	37.3		1.3	0.7	0.7	0.8	0.7	0.7
SAARC	4.5	34.8		0.3	0.2	0.2	0.2	0.2	0.2
Central Asia	3.8	35.8			2.4	2.3	2.4	2.2	2.2
Pacific island dev. econ.	9.3	35.6		1.9	1.4	2.5	2.3	2.0	2.0
Low-income	6.6	42.2		0.5	0.6	0.5	0.6	0.6	0.6
Middle-income	5.5	48.9		2.6	3.3	3.3	3.2	3.2	3.2
High-income	13.3	44.5		8.3	8.0	7.7	7.7	7.7	7.7
<b>Other world regions</b>									
Africa	2.6	19.7		2.8	3.5	3.4	3.4	3.3	3.3
Europe	27.4	38.5		10.7	10.1	10.0	10.1	10.0	10.0
Latin America & Carb.	17.5	34.2		5.7	5.7	5.3	5.4	5.4	5.4
North America	21.2	26.1		9.3	8.2	8.5	8.4	8.5	8.4
Other countries/areas	5.1	31.9		1.1	0.8	0.6	0.6	0.6	0.6
<b>World</b>	<b>9.0</b>	<b>41.3</b>		<b>4.4</b>	<b>4.6</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>



## 10 Financial and human resources for health

**Many governments in Asia and the Pacific have been devoting more resources to health – both as a proportion of GDP and of total government expenditure.**

In 2005, for the region as a whole, government health expenditures were 6.4 per cent of GDP. Expenditures tend to be highest in small island developing States because of the expense of reaching sparse populations separated by large distances. In the Pacific subregion, for example, health expenditures were 8.8 per cent of GDP and they were also high in Timor-Leste and Maldives. In 2005, the lowest government expenditures relative to GDP were in Brunei Darussalam, Indonesia, Myanmar and Pakistan; in each case between 2.0 and 2.2 per cent. It should be noted that per capita government expenditure is also quite high in Brunei Darussalam, though the country has a large GDP and a small population.

In most parts of the region, expenditure has been rising – between 2000 and 2005 as a percentage of GDP government health expenditure rose in every subregion. It has also risen in most countries or areas – exceeding 10 per cent. A cause for concern, however, is that in several countries where the proportion was already low it declined further between 2000 and 2005 – to below 6.0 per cent in Azerbaijan, Georgia, the Lao People's Democratic Republic, Myanmar, Pakistan, the Philippines, Singapore and Viet Nam.

As might be expected, total expenditure on health, public and private, is greater in richer countries – even after adjusting for the cost of living by using purchasing power parity dollars (\$PPP). In five high-income economies, per capita expenditure in 2005 was more than \$PPP 1,000, while in several low-income economies it was less than \$PPP 100. The pattern is similar for government health expenditure, though the disparities between countries are greater. In countries that spend more per capita on health a higher proportion of this is

spent by governments – 83 per cent in Japan, for example, 77 per cent in New Zealand and 67 per cent in Australia, compared with only 11 per cent in Myanmar, 18 per cent in Pakistan, 19 per cent in India and 26 per cent in Viet Nam.

Of the private expenditure on health, some comes from insurance plans, or is provided by employers or by non-profit institutions. But 82 per cent comes from out-of-pocket (OOP) expenditure as households pay directly for medical care and services. In countries where private expenditure is dominant, OOP expenditure can represent a high proportion of a country's total health expenditure. For example, in Singapore 68 per cent of total expenditure is private, of which 94 per is out of pocket, which thus accounts for 64 per cent of all the country's health expenditure. On the other hand in the Islamic Republic of Iran, private expenditure is only 44 per cent of total expenditure on health, so although 95 per cent is OOP this accounts for only 42 per cent of all health expenditure. In Turkey, the proportion is even lower: OOP accounts for only 20 per cent of total health expenditure. Other countries with low proportions are Australia (18 per cent), Japan (14 per cent) and New Zealand (17 per cent).

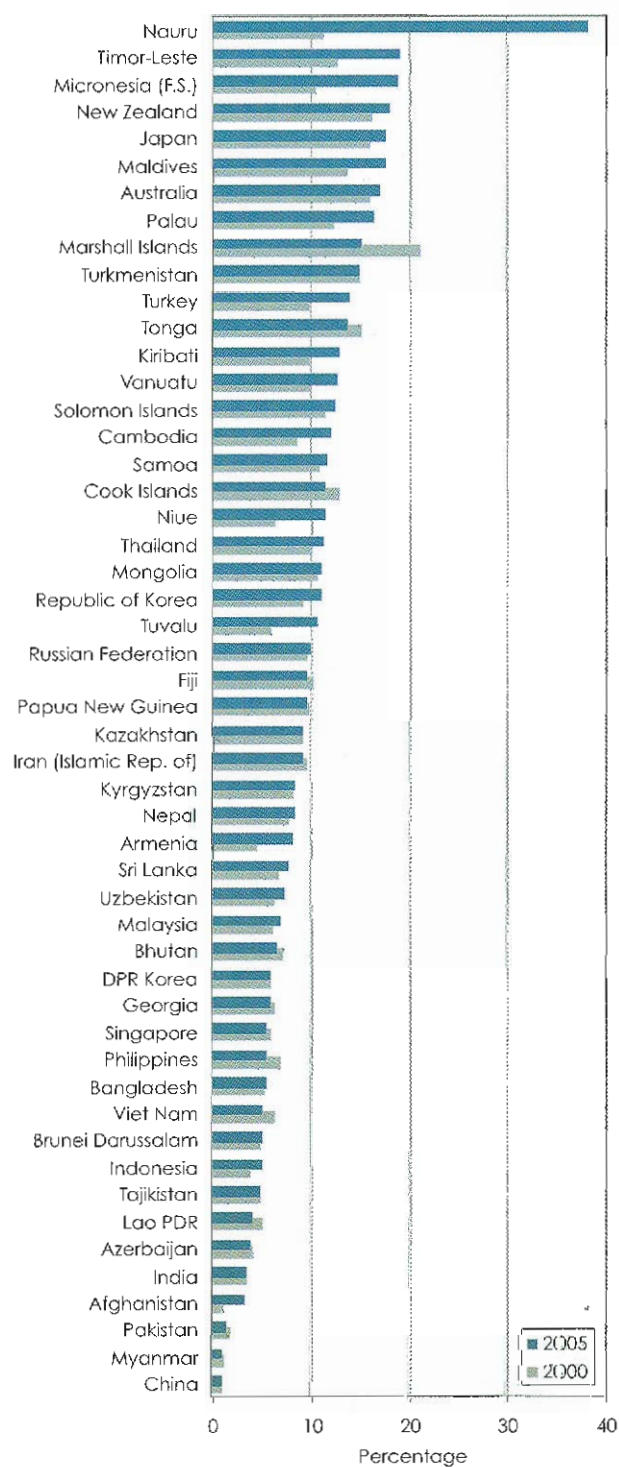
Differences in per capita income across the region are also reflected in the availability of health personnel. In general, high-income economies in Asia and the Pacific have between 1.5 and 3.0 physicians per 1,000 population whereas most low- and middle-income economies have less than one. All the countries in the North and Central Asia subregion on the other hand are better supplied with doctors, with ratios ranging from 2 in Turkmenistan to 4.6 in Georgia.

There are also wide disparities between countries in the number of nursing and midwifery personnel. The number per 1,000 population is 85 or more in Australia, Japan, New Zealand and the Russian Federation but 10 or less in several low-income economies.



**Figure 10.1**

Proportion of government expenditure devoted to health, Asia and the Pacific, 2000 and 2005


**Figure 10.2**

Per capita total expenditure on health in low-income economies of Asia and the Pacific, 2000 and 2005

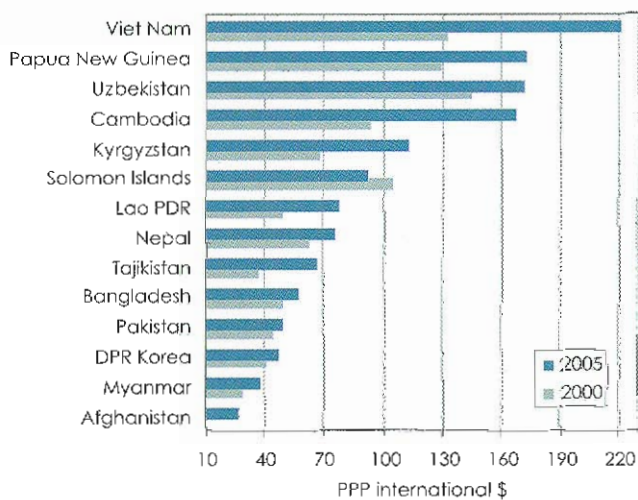




Figure 10.3

Out-of-pocket expenditure as a proportion of total private health expenditure, Asia and the Pacific, 2000 and 2005

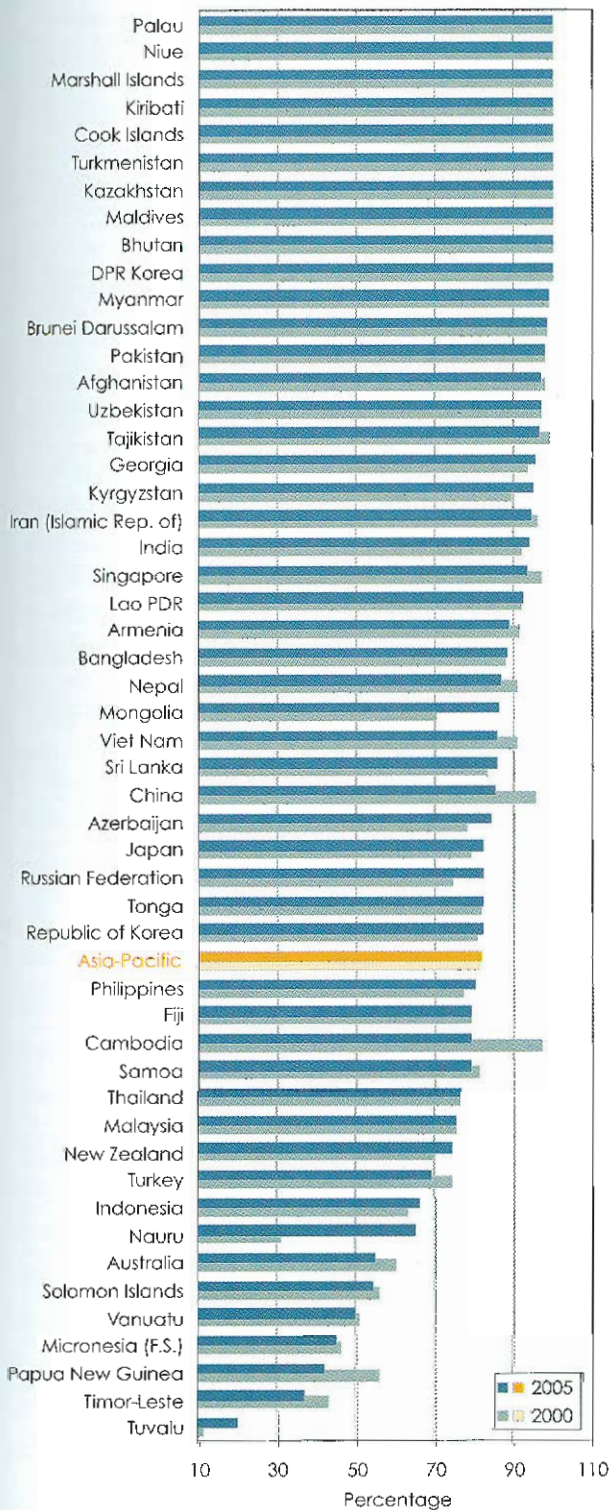
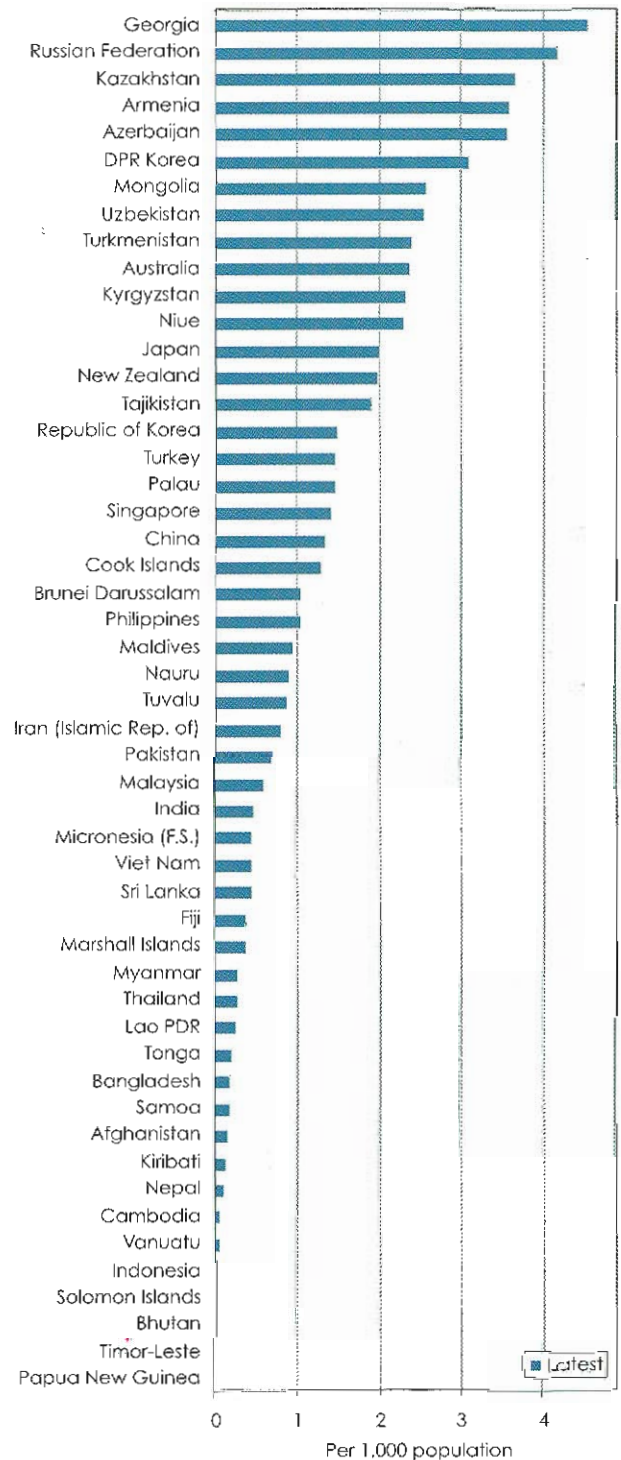


Figure 10.4

Number of physicians, Asia and the Pacific, 2000-2006





### Total health expenditure (% of GDP)

Level of total expenditure on health as a percentage of gross domestic product (GDP). Total expenditure on health comprises the funds mobilized by the system, being the sum of General Government and Private Expenditure on Health. **Aggregates:** Averages are calculated using current GDP in US dollars as weight. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 16 June 2008).

### General government health expenditure (% of total government expenditure)

The sum of outlays for health maintenance, restoration or enhancement paid for in cash or supplied in kind by government entities, such as the Ministry of Health, other ministries, parastatal organizations or social security agencies (without double counting government transfers to social security and extrabudgetary funds). It includes transfer payments to households to offset medical care costs and extrabudgetary funds to finance health services and goods. The revenue base of these entities may comprise multiple sources, including external funds. General government expenditure corresponds to the consolidated outlays of all levels of government: territorial authorities (Central/Federal Government, Provincial/Regional/State/District authorities, Municipal/Local governments), social security institutions and extrabudgetary funds, including capital outlays. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 16 June 2008).

### Per capita total expenditure on health (purchasing power parity (PPP) international dollar)

The sum of general government and private expenditure expressed in international (PPP) dollars divided by mid-year population. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 11 August 2008).

### Per capita government expenditure on health (purchasing power parity (PPP) international dollar)

Government expenditure on health in PPP international dollars divided by mid-year population. See also definition of *general government health expenditure*. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 11 August 2008).

### Private expenditure on health (% of total expenditure on health)

The sum of outlays for health by private entities, such as commercial or mutual health insurance providers, non-profit institutions serving households, resident corporations

and quasi-corporations not controlled by government with a health services delivery or financing, and direct household out-of-pocket payments, expressed as a proportion of total health expenditure. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 16 June 2008).

### Out-of-pocket expenditure on health (% of private expenditure on health)

The direct outlay of households, including gratuities and payments in kind, made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances and other goods and services, whose primary intent is to contribute to the restoration or to the enhancement of the health status of individuals or population groups, expressed as a proportion of total health expenditure. It includes household payments to public services, non-profit institutions and non-governmental organizations. It includes non-reimbursable cost sharing, deductibles, co-payments and fee-for-service, but excludes payments made by companies that deliver medical and paramedical benefits, whether required by law or not, to their employees. It excludes payments for overseas treatment. **Aggregates:** Averages are calculated using current GDP in US dollars as weight. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 16 June 2008).

### Number of physicians (per 1,000 population)

The number of all physicians (general and specialist), expressed per 1,000 population. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 11 August 2008).

### Number of nursing and midwifery personnel (per 10,000 population)

The total number of professional nurses, professional midwives, auxiliary nurses, auxiliary midwives, enrolled nurses, enrolled midwives and other personnel, such as dental nurses and primary care nurses, expressed per 10,000 population. Traditional birth attendants are included. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 11 August 2008).

### Number of hospital beds (per 10,000 population)

The number of in-patient beds, expressed per 10,000 population. Maternity beds are included while cots and delivery beds are excluded. **Aggregates:** None. **Source:** WHO Statistical Information System (WHOSIS) (online database, accessed on 11 August 2008).



## 10.1 Financial resources for health

	Total health expenditure			General government health expenditure			Per capita total expenditure on health			Per capita government expenditure on health		
	% of GDP			% of total government expenditure			International dollars (PPP)					
	2000	2004	2005	2000	2004	2005	2000	2004	2005	2000	2004	2005
East and North-East Asia	6.8	6.9	6.9									
China	4.6	4.7	4.7	1.1	1.0	1.0	183	279	315	70	106	122
DPR Korea	3.6	3.5	3.5	6.0	6.0	6.0	41	46	47	35	39	41
Hong Kong, China												
Japan	7.6	8.0	8.2	16.0	17.8	17.7	1 967	2 337	2 474	1 598	1 910	2 047
Macao, China												
Mongolia	5.6	5.0	4.3	10.7	10.3	11.0	104	120	113	83	96	87
Republic of Korea	4.4	5.5	6.0	9.3	10.3	11.0	718	1 129	1 280	364	590	679
South-East Asia	3.0	3.3	3.3									
Brunei Darussalam	2.5	2.2	2.0	5.0	4.8	5.1	457	458	421	381	358	335
Cambodia	5.8	6.6	6.4	8.7	14.0	12.0	93	150	167	21	44	41
Indonesia	1.7	2.1	2.1	3.8	4.5	5.1	48	74	78	19	30	36
Lao PDR	3.2	3.9	3.6	5.2	5.2	4.1	49	76	78	16	15	16
Malaysia	3.3	4.5	4.2	6.2	7.9	7.0	280	459	454	147	230	203
Myanmar	2.1	2.2	2.2	1.2	1.4	1.1	29	36	38	4	5	4
Philippines	3.5	3.3	3.2	7.0	5.7	5.5	170	194	199	81	74	73
Singapore	3.4	3.7	3.5	6.0	5.3	5.6	874	1 094	1 140	322	328	363
Thailand	3.4	3.5	3.5	10.0	11.5	11.3	226	300	323	127	194	207
Timor-Leste	8.8	10.3	13.7	12.7	12.2	19.1	93	110	145	66	90	126
Viet Nam	5.4	5.7	6.0	6.4	4.7	5.1	132	188	221	40	51	57
South and South-West Asia	4.4	5.0	5.2									
Afghanistan	3.3	4.4	5.2	1.1	2.1	3.3	11	20	26	1	3	5
Bangladesh	3.1	3.1	2.8	5.3	6.2	5.5	49	60	57	13	17	17
Bhutan	5.4	4.2	4.0	7.2	6.1	6.5	84	84	85	63	59	60
India	4.3	4.9	5.0	3.4	3.1	3.5	60	88	100	13	16	19
Iran (Islamic Rep. of)	5.9	6.2	7.8	9.6	7.5	9.2	364	503	677	135	221	378
Maldives	6.8	7.8	12.4	13.7	16.0	17.7	357	563	878	271	439	751
Nepal	5.4	5.7	5.8	7.7	8.7	8.4	62	72	76	15	20	21
Pakistan	2.5	2.2	2.1	1.8	1.6	1.5	44	47	49	9	9	9
Sri Lanka	3.7	4.2	4.1	6.8	8.2	7.8	127	177	189	61	81	88
Turkey	4.9	5.9	5.7	9.8	14.2	13.9	432	572	592	272	412	422
North and Central Asia	5.3	5.1	5.1									
Armenia	6.4	5.7	5.4	4.6	8.3	8.2	154	242	270	27	73	89
Azerbaijan	4.8	4.0	3.9	4.2	3.4	3.8	115	152	193	21	33	48
Georgia	7.4	8.5	8.6	6.4	5.3	5.9	161	276	318	27	43	62
Kazakhstan	4.1	3.8	3.9	9.2	10.2	9.3	177	263	306	91	159	197
Kyrgyzstan	4.7	5.7	6.0	8.3	8.2	8.4	68	106	113	30	42	45
Russian Federation	5.4	5.2	5.2	9.6	9.7	10.1	375	505	561	224	301	348
Tajikistan	4.6	4.4	5.0	4.9	4.6	5.0	37	54	67	7	12	15
Turkmenistan	4.8	4.5	4.8	14.9	14.9	14.9	211	230	308	156	153	205
Uzbekistan	5.8	4.9	5.0	6.3	7.5	7.4	145	156	171	65	72	82
Pacific	8.2	8.7	8.8									
Australia	8.3	8.8	8.8	16.0	16.8	17.0	2 265	2 885	3 001	1 518	1 930	2 012
American Samoa												
Cook Islands	6.1	4.8	4.6	13.0	13.2	11.5	543	594	587	493	546	537
Fiji	4.7	4.4	4.1	10.3	10.1	9.6	245	280	271	169	200	192
French Polynesia												
Guam												
Kiribati	11.6	13.7	12.7	9.8	9.3	13.0	228	292	283	209	272	261
Marshall Islands	22.0	13.2	15.4	21.1	13.0	15.2	764	485	582	748	468	565
Micronesia (F.S.)	9.0	11.7	13.5	10.5	16.1	18.9	333	449	539	292	406	494
Nauru	11.0	10.4	10.3	11.2	32.9	38.1	622	692	716	467	433	382
New Caledonia												
New Zealand	8.1	8.5	8.9	16.2	17.2	18.0	1 686	2 067	2 223	1 333	1 596	1 720
Niue	8.0	15.5	14.5	6.3	12.3	11.5	118	302	300	116	299	296
Northern Mariana Is.												
Palau	9.7	9.7	9.6	12.3	14.7	16.4	716	845	901	639	771	819
Papua New Guinea	3.6	4.5	4.2	9.9	10.0	9.6	129	173	172	105	147	148
Samoa	5.5	4.9	4.9	10.8	8.2	11.6	186	204	218	132	168	175
Solomon Islands	5.2	6.0	4.3	11.4	18.8	12.6	105	120	92	99	113	85
Tonga	5.8	5.3	5.0	15.2	14.0	13.7	250	268	254	183	205	192
Tuvalu	13.4	9.2	8.8	5.9	9.6	10.6	157	149	150	145	136	135
Vanuatu	4.4	4.3	4.3	9.8	12.2	12.8	136	131	133	92	85	87
Asia and the Pacific	6.3	6.4	6.4									
LLDC	4.8	4.3	4.4									
LDC	3.5	3.6	3.6									
ASEAN	3.0	3.3	3.3									
ECO	4.7	5.1	5.4									
SAARC	4.0	4.4	4.5									
Central Asia	5.0	4.5	4.5									
Pacific island dev. econ.	4.8	5.1	4.8									
Low-income	3.5	3.5	3.4									
Middle-income	4.4	4.7	4.8									
High-income	7.3	7.7	7.9									
Other world regions												
Africa	5.4	5.7	5.6									
Europe	8.6	9.3	9.4									
Latin America & Carib.	6.8	6.9	7.0									
North America	12.9	14.8	14.7									
Other countries/areas	4.9	4.6	4.2									
World	9.2	9.9	9.9									



## 10.2 Financial, human and other resources on health

	Private expenditure on health			Out-of-pocket expenditure on health			Physicians	Number of Nursing and mid-wifery personnel	Hospital beds
	% of total expenditure on health			% of private expenditure on health			Per 1,000 population	Per 10,000 population	
	2000	2004	2005	2000	2004	2005	Latest	Latest	Latest
<b>East and North-East Asia</b>				<b>82</b>	<b>84</b>	<b>83</b>			
China	62	62	61	96	87	85	1.4 (03)	10 (03)	22 (06)
DPR Korea	14	14	14	100	100	100	3.2 (03)	41 (03)	
Hong Kong, China									
Japan	19	18	17	79	84	82	2.1 (04)	95 (04)	141 (05)
Macao, China									
Mongolia	20	20	23	71	85	87	2.7 (02)	35 (02)	64 (06)
Republic of Korea	49	48	47	81	82	82	1.6 (03)	19 (03)	86 (06)
<b>South-East Asia</b>				<b>77</b>	<b>77</b>	<b>77</b>			
Brunei Darussalam	17	22	20	99	99	99	1.1 (02)	61 (02)	30 (05)
Cambodia	78	70	76	97	84	79	0.2 (00)	9 (00)	1 (04)
Indonesia	62	60	53	63	69	66	0.1 (03)	8 (03)	
Lao PDR	67	80	79	92	90	93	0.4 (04)	10 (04)	12 (05)
Malaysia	48	50	55	75	75	76	0.7 (02)	18 (02)	19 (06)
Myanmar	87	87	89	99	99	99	0.4 (04)	10 (04)	7 (00)
Philippines	52	62	63	77	79	80	1.1 (02)	61 (02)	13 (06)
Singapore	63	70	68	97	94	94	1.5 (03)	45 (03)	32 (06)
Thailand	44	35	36	77	75	77	0.4 (00)	28 (00)	
Timor-Leste	29	19	13	43	37	37	0.1 (04)	22 (04)	
Viet Nam	70	73	74	91	86	86	0.6 (02)	8 (02)	26 (05)
<b>South and South-West Asia</b>				<b>89</b>	<b>88</b>	<b>88</b>			
Afghanistan	99	84	80	98	97	97	0.2 (05)	5 (05)	4 (03)
Bangladesh	74	71	71	88	88	88	0.3 (05)	3 (05)	3 (01)
Bhutan	26	30	29	100	100	100	0.1 (07)	3 (07)	16 (01)
India	78	82	81	92	94	94	0.6 (04)	13 (04)	
Iran (Islamic Rep. of)	63	56	44	96	95	95	0.9 (05)	16 (05)	17 (05)
Maldives	24	22	14	100	100	100	1.0 (04)	27 (04)	23 (03)
Nepal	75	73	72	91	88	87	0.2 (04)	5 (04)	2 (01)
Pakistan	80	82	83	98	98	98	0.8 (05)	5 (05)	12 (05)
Sri Lanka	52	54	54	83	86	86	0.6 (04)	17 (04)	29 (00)
Turkey	37	28	29	75	69	70	1.6 (06)	29 (06)	27 (06)
<b>North and Central Asia</b>				<b>78</b>	<b>84</b>	<b>84</b>			
Armenia	82	70	67	92	98	89	3.7 (06)	49 (06)	44 (06)
Azerbaijan	82	78	75	78	81	85	3.7 (06)	84 (06)	81 (06)
Georgia	83	85	81	93	92	96	4.6 (06)	40 (06)	37 (06)
Kazakhstan	49	40	36	100	100	100	3.8 (06)	76 (06)	78 (06)
Kyrgyzstan	56	60	61	89	95	95	2.4 (06)	58 (06)	51 (06)
Russian Federation	40	40	38	75	82	82	4.3 (06)	85 (06)	97 (06)
Tajikistan	80	79	77	99	97	97	2.0 (06)	50 (06)	61 (06)
Turkmenistan	26	33	33	100	100	100	2.5 (06)	47 (06)	43 (06)
Uzbekistan	55	54	52	97	97	97	2.7 (05)	109 (05)	52 (05)
<b>Pacific</b>				<b>61</b>	<b>57</b>	<b>58</b>			
Australia	33	33	33	60	55	55	2.5 (01)	97 (01)	40 (05)
American Samoa									
Cook Islands	9	8	9	100	100	100	1.4 (04)	47 (04)	63 (05)
Fiji	31	28	29	79	79	79	0.5 (03)	20 (03)	21 (05)
French Polynesia									
Guam									
Kiribati	8	7	8	100	100	100	0.2 (04)	30 (04)	15 (05)
Marshall Islands	2	3	3	100	100	100	0.5 (00)	30 (00)	
Micronesia (F.S.)	12	10	9	46	45	45	0.6 (03)	23 (03)	33 (06)
Nauru	25	38	47	31	58	66	1.0 (04)	49 (04)	59 (04)
New Caledonia									
New Zealand	21	23	23	70	75	74	2.1 (02)	89 (03)	60 (02)
Niue	2	1	1	100	100	100	2.4 (04)	110 (04)	49 (06)
Northern Mariana Is.									
Palau	11	9	9	100	100	100	1.6 (00)	61 (04)	59 (06)
Papua New Guinea	18	15	14	56	42	43	0.1 (00)	5 (00)	
Samoa	29	18	19	81	57	79	0.3 (03)	17 (03)	10 (05)
Solomon Islands	6	6	8	56	55	55	0.1 (03)	14 (03)	15 (05)
Tonga	27	24	24	82	86	82	0.3 (02)	34 (02)	29 (04)
Tuvalu	8	9	10	12	17	20	1.0 (03)	46 (03)	56 (01)
Vanuatu	32	35	35	51	50	50	0.1 (04)	17 (04)	41 (05)
<b>Asia and the Pacific</b>				<b>82</b>	<b>82</b>	<b>82</b>			
LLDC				95	96	96			
LDC				90	90	89			
ASEAN				77	77	77			
ECO				86	84	84			
SAARC				92	94	94			
Central Asia				96	97	97			
Pacific island dev. econ.				65	60	60			
Low-income				94	93	93			
Middle-income				87	84	84			
High-income				78	80	79			
<b>Other world regions</b>									
Africa				72	69	70			
Europe				66	69	68			
Latin America & Carib.				75	72	71			
North America				28	26	26			
Other countries/areas				63	60	58			
<b>World</b>				<b>58</b>	<b>59</b>	<b>59</b>			



# 11 Access to water and sanitation

The Millennium Development Goals have important targets for water and sanitation. While the Asia-Pacific region has made some progress, hundreds of millions of people still lack sufficient water, either for personal use or for production.

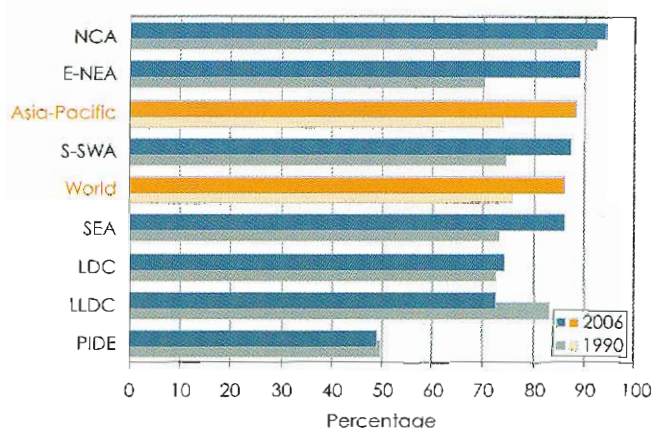
In Asia and the Pacific many more people now benefit from better water supplies. Between 1990 and 2006, the proportion of the region's population with access to improved drinking water sources increased from 74 to 88 per cent, an increase of 1.2 billion people. This places the region ahead of Africa, where the ratio was only 64 per cent, but behind Latin America and Caribbean at 91 per cent and North America and Europe where the proportion was 99 per cent.

The proportion increased in all Asia-Pacific subregions except for the Pacific developing economies. East and North-East Asia made the most impressive gains: between 1970 and 2006 access to improved water sources increased from 70 to almost 90 per cent of the population. China led this surge, particularly in the rural areas where access increased from 55 to 81 per cent. In North and Central Asia access at 94 per cent is almost universal – higher than the averages for both Asia and the Pacific and Latin America and the Caribbean, and for the world. The only exception in that subregion is Tajikistan, which by 2006 had only reached 67 per cent.

Other countries are also lagging. The least developed countries and landlocked developing countries still have access rates of just above 70 per cent, while the Pacific developing economies are even further behind, at 49 per cent. The lowest coverage is in some Pacific islands, like Papua New Guinea with 40 per cent and Fiji with 47 per cent. Many people in South-East Asia also lack access to proper water, particularly those in the Lao People's Democratic Republic where coverage is only 40 per cent, Timor-Leste (38 per cent) and Cambodia (35 per cent).

Figure 11.1

Proportion of total population with access to improved water sources, selected Asia-Pacific groupings, 1990 and 2006



In most parts of the world, access to water is better in urban than rural areas. In Asia and the Pacific in 2006 average access for urban areas was 96 per cent, higher than in Africa where the proportion was 84 per cent, and almost at par with the 97 per cent in Latin America and the Caribbean. However from 1990 the region's urban areas made only modest progress, only 1 percentage point compared with a 19 percentage point gain in the rural areas. In fact, in the least developed countries urban coverage fell: between 1990 and 2006 coverage dropped from 88 to 80 per cent, with a serious impact on the urban poor. This is largely because of rapid urbanization which has spread limited services over a larger population. The urban drop was driven by deteriorating access in many Pacific islands, as well as in Bangladesh, Myanmar and Nepal.

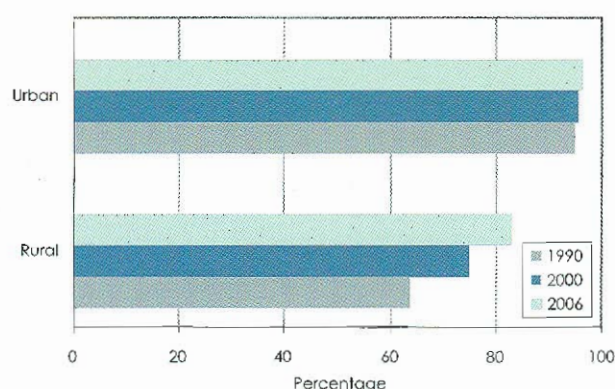
Globally the greatest gains in water availability were in rural areas of Asia and the Pacific: between 1990 and 2006 average access increased from 64 to 84 per cent. All subregions contributed to the increase, except some island States.

Among individual countries, Viet Nam and Georgia stood out – having already achieved their MDG targets. In Viet Nam between 1990 and

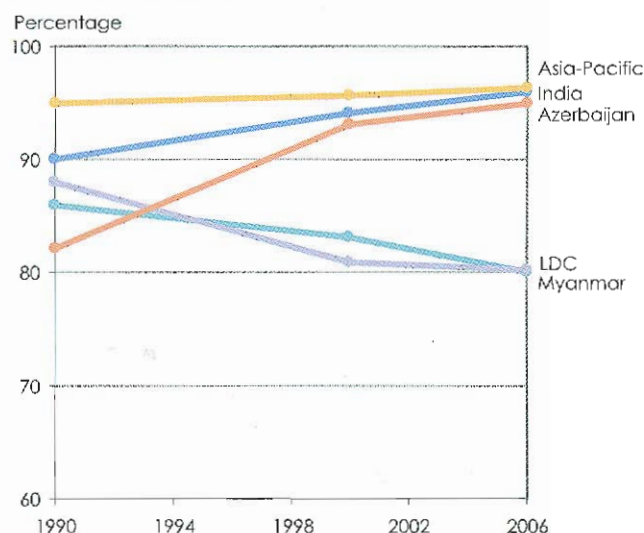


**Figure 11.2**

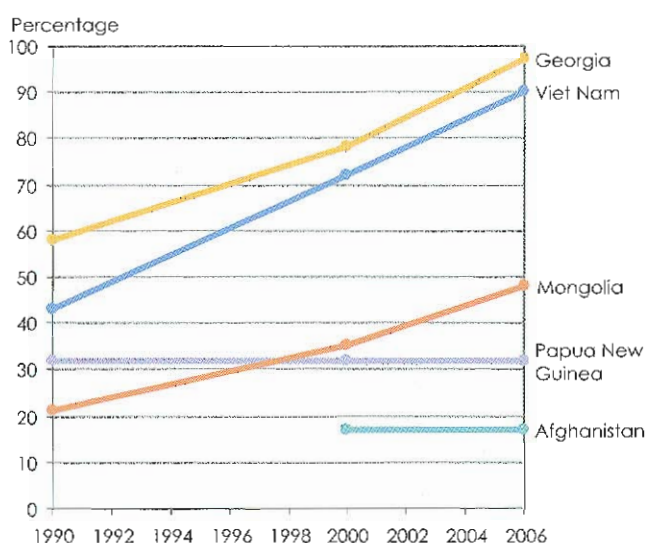
Proportion of rural and urban populations with access to improved water sources, Asia and the Pacific, 1990, 2000 and 2006

**Figure 11.3**

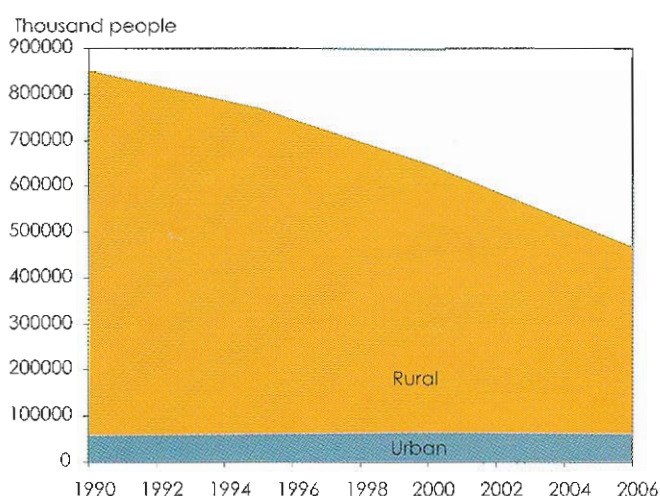
Proportion of the urban population with access to improved water sources, selected Asia-Pacific countries, 1990-2006

**Figure 11.4**

Proportion of the rural population with access to improved water sources, selected Asia-Pacific countries, 1990-2006

**Figure 11.5**

Number of people without access to improved water sources, Asia and the Pacific, 1990-2006



2006, coverage in rural areas increased from 43 to 90 per cent. Georgia, also saw a noteworthy increase, from 58 to 97 per cent.

In contrast, the lowest rural access, only 17 per cent, was in conflict-stricken and landlocked Afghanistan. The second lowest rank was in Papua New Guinea where rural access in 2006 was only 32 per cent and showed little sign of improvement. Other Pacific islands are also lagging and some have seen urban access deteriorate. Landlocked Mongolia also has poor access in rural areas: despite more than doubling coverage between 1990 and 2006 it still reached only 48 per cent.

Overall, between 1990 and 2006 rural progress has been better in the middle-income economies – twice as fast as in the low-income economies where the rise was only 11 percentage points. Clearly without greater efforts to extend rural coverage, access could remain low for a long time to come.

Access to clean water is vital for living a long and healthy life. It is no surprise therefore that four out of the five Asia-Pacific countries with low access to improved water sources – Afghanistan, the Lao People's Democratic Republic, Papua New Guinea, Timor-Leste – also have some of the region's lowest life expectancies. On the other hand, countries where life expectancy was greater than 74 years all had 100 per cent access – except for Viet Nam where in 2006 access was 92 per cent.

## Sanitation

To help improve sanitation coverage worldwide, the General Assembly, in its resolution 61/192, decided to declare 2008 the International Year of Sanitation. Improved sanitation facilities



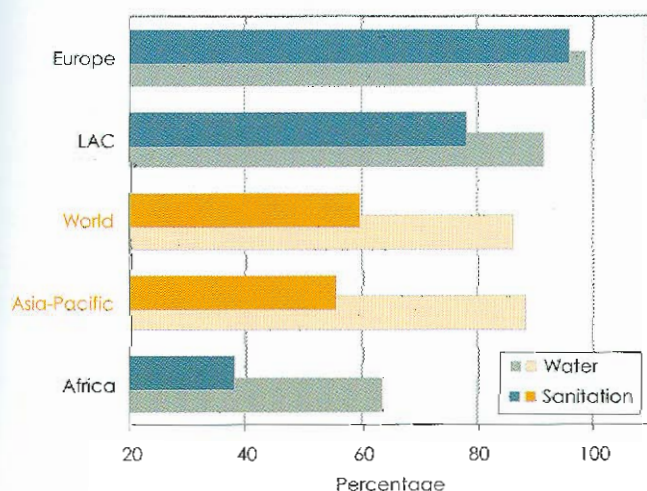
include household toilets or latrines connected to piped sewerage systems and also septic tanks and ventilated improved pit latrines. People without these facilities usually defecate in fields or dispose of faeces in plastic bags, bucket latrines or rivers.

In Asia and the Pacific, 45 per cent of the region's population currently lack access to improved sanitation facilities. The problem is even greater in rural areas, where the proportion without access rises to 56 per cent. Compared with access to improved water sources, the discrepancy between rural and urban areas in access to sanitation is much greater.

Access to sanitation has improved significantly in almost all Asia-Pacific subregions. The region's average access, at 55 per cent higher than in Africa (38 per cent) but is still lower than the global average of 60 per cent and the Latin American and Caribbean average of 78 per cent. Sanitation is much better in the richer countries. In the region's high-income economies just about everyone has access to sanitation. But the situation is much worse in the middle- and low-income economies: in both cases access is only 54 per cent. It may seem surprising that access is the same in both groups, but this is because India, which has low access, has just "graduated" to the group of middle-income economies – thus improving the average for low-income economies but dragging down the average of middle-income economies.

**Figure 11.6**

**Proportion of people with access to improved water sources and sanitation, world regions, 2006**



As with other services, access to sanitation varies considerably between subregions. Some of the most rapid progress has been in North-East Asia which between 1990 and 2006 increased access by

18 percentage points, and in South-East Asia where the increase was 15 percentage points.

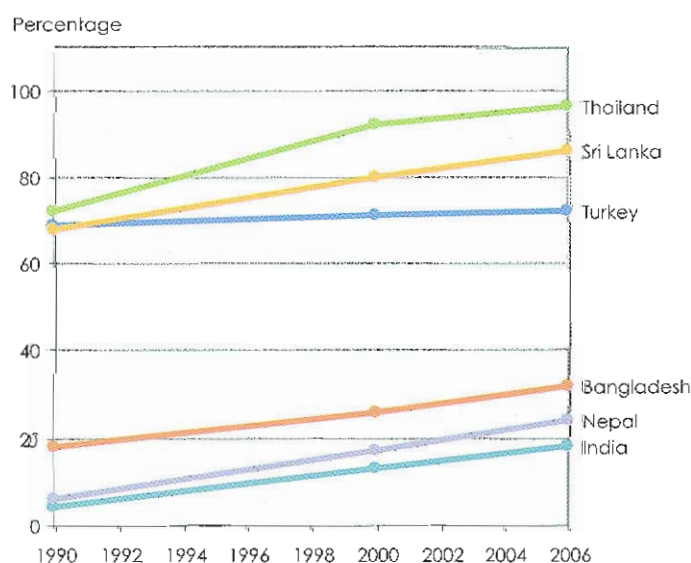
The situation in South and South-West Asia is more difficult. Although since 1990 the number of people with access increased by 50 per cent this still means that by 2006 average coverage was only 35 per cent. Some countries in the subregion have done better – including Sri Lanka, Turkey, the Maldives and Pakistan. On the other hand access is very low in Nepal, India, Afghanistan and Bangladesh. Nevertheless, even these countries have seen improvements. For example, India improved rural coverage from a mere 4 per cent in 1990 to 18 per cent in 2006. Nepal also achieved noteworthy improvements, while in 1990 only 6 per cent had access to improved sanitation, by 2006 the proportion had risen to one-quarter.

Progress in rural South-East Asia was led by Myanmar, where access to improved sanitation increased 5.4 times and Viet Nam where it increased 2.7 times. Thailand and Malaysia also stood out, achieving access for their rural population, of 96 and 93 per cent respectively. North and Central Asia, already had high levels of rural coverage in 1990, and in 2006 remained comfortably ahead of the regional average.

As with access to water, the Pacific subregion as a whole has since 1990 seen little improvement in sanitation. However, overall access to sanitation is higher than access to water. The Pacific average is driven by Australia and New Zealand, so does not reflect poor coverage the smaller Pacific islands. In fact rural access to improved sanitation in

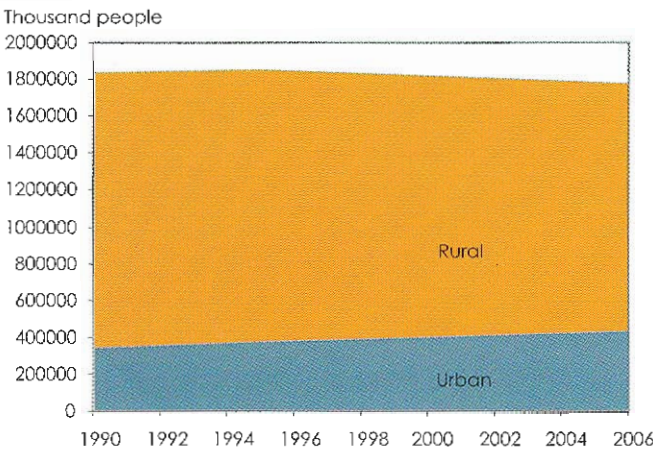
**Figure 11.7**

**Proportion of the rural population with access to improved sanitation, selected Asian countries, 1990-2006**





**Figure 11.8**  
**People without access to improved sanitation in Asia and the Pacific, 1990-2006**



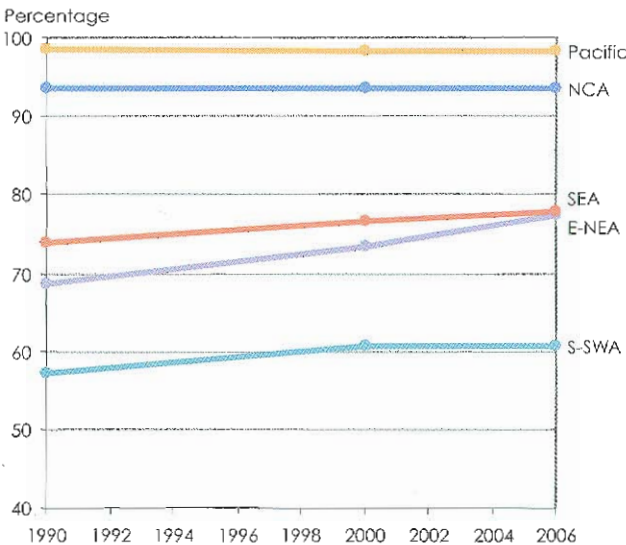
a number of these countries is extremely low – 20 per cent in Kiribati, 18 per cent in the Solomon Islands and only 14 per cent in the Federated States of Micronesia,

Although providing improved sanitation is easier in urban environments, the region's urban coverage increased only moderately between 1990 and 2006, from 69 to 74 per cent. This unimpressive performance is largely because of rapid urbanization and an increase in the number of people living in slums. The greatest problems are in landlocked developing countries and Pacific developing economies where since 2000 the percentage of urban population with access to improved sanitation has actually fallen. Some highly populated countries, like Indonesia and Bangladesh, have also recorded worrying urban declines.

Elsewhere there has been significant progress. East and North-East Asian, for example, registered improvements in urban access of nearly ten percentage points. South and South-West Asia

Urban dwellers also experienced a three percentage point increase. North and Central Asia already had very high coverage, over 90 per cent, so the small declines for urban dwellers can be attributed to rapid urbanization.

**Figure 11.9**  
**Average urban access to improved sanitation, Asia-Pacific subregions, 1990-2006**



Better access to water and sanitation brings enormous development benefits. Many of these are for individuals – by permitting higher school participation, boosting living standards, and saving health care costs. But there are also benefits for society as a whole through a more productive workforce, greater foreign direct investment and improved aesthetics and tourist potential. A recent study of four South-East Asian countries estimated the total economic benefits of achieving universal access to sanitation at between \$5.4 billion and \$27 billion.



**Population with access to improved water sources, urban/rural (percentage)**

Percentage of the population using improved drinking water sources (including household water connection, public standpipe, borehole, protected dug well, protected spring, rainwater collection and bottled water – if a secondary available source is also improved). Data are disaggregated by urban and rural areas. **Aggregates:** (Total) Averages are calculated using the total population as weight. (Urban) Averages are calculated using the urban population as weight. (Rural) Averages are calculated using the rural population as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 8 August 2008).

**Population with access to improved water sources (percentage)**

Percentage of the population using improved drinking water sources (including household water connection, public standpipe, borehole, protected dug well, protected spring, rainwater collection and bottled water – if

a secondary available source is also improved). **Aggregates:** (Total) Averages are calculated using the total population as weight. (Urban) Averages are calculated using the urban population as weight. (Rural) Averages are calculated using the rural population as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 8 August 2008).

**Population with access to improved sanitation, urban/rural (percentage)**

Proportion of people using an improved sanitation facility (including flush/pour flush toilet or latrine to: piped sewerage, septic tank or pit; a Ventilated Improved Pit (VIP) latrine; a pit latrine with slab or a composting toilet/latrine). Data are disaggregated by between urban and rural areas. **Aggregates:** (Total) Averages are calculated using the total population as weight. (Urban) Averages are calculated using the urban population as weight. (Rural) Averages are calculated using the rural population as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 8 August 2008).



## 11. Access to water and sanitation

### 11.1 Access to water

	Population with access to improved water sources											
	Rural				Urban				Total			
	Percentage				Percentage				Percentage			
	1990	1995	2000	2006	1990	1995	2000	2006	1990	1995	2000	2006
<b>East and North-East Asia</b>	57	65	73	82	98	98	97	98	70	77	82	89
China	55	63	71	81	97	97	97	98	67	74	80	88
DPR Korea		100	100	100	100	100	100	100		100	100	100
Hong Kong, China												
Japan	100	100	100	100	100	100	100	100	100	100	100	100
Macao, China												
Mongolia	21	24	35	48	97	96	93	90	64	65	68	72
Republic of Korea		71	71		97	97	97	97		91	92	
<b>South-East Asia</b>	64	67	73	81	92	92	92	92	73	75	80	86
Brunei Darussalam												
Cambodia		14	33	61		47	60	80		19	38	65
Indonesia	63	65	68	71	92	91	90	89	72	74	77	80
Lao PDR		34	39	53		73	76	86		41	46	60
Malaysia	96	96	96	96	100	100	100	100	98	98	98	99
Myanmar	47	53	66	80	86	85	83	80	57	61	71	80
Philippines	75	79	84	88	92	93	94	96	83	87	90	93
Singapore					100	100	100	100				
Thailand	94	95	96	97	98	98	98	99	95	96	97	98
Timor-Leste			56	56			77	77			61	62
Viet Nam	43	57	72	90	87	90	94	98	52	64	77	92
<b>South and South-West Asia</b>	68	72	77	84	92	92	94	95	75	78	82	87
Afghanistan		17	17	17		37	37	37		21	21	22
Bangladesh	76	76	77	78	88	87	86	85	78	78	79	80
Bhutan			79	79			98	98			81	81
India	65	71	77	86	90	92	94	96	71	77	82	89
Iran (Islamic Rep. of)	84	84	84		99	99	99	99	92	93	94	
Maldives	95	93	82	76	100	100	99	98	96	95	87	83
Nepal	70	76	81	88	97	96	95	94	72	78	83	89
Pakistan	81	83	85	87	96	96	95	95	86	87	88	90
Sri Lanka	62	67	73	79	91	93	96	98	67	71	77	82
Turkey	74	80	87	95	92	94	96	98	85	89	93	97
<b>North and Central Asia</b>	84	81	82	84	97	97	99	100	92	92	93	94
Armenia		75	83	96	99	99	99	99		91	93	98
Azerbaijan	51	53	58	59	82	85	93	95	68	70	76	78
Georgia	58	61	78	97	91	92	95	100	76	78	87	99
Kazakhstan	91	91	91	91	99	99	99	99	96	95	96	96
Kyrgyzstan		65	73	83	97	97	98	98		77	82	89
Russian Federation	86	87	88	88	97	98	99	100	94	95	96	97
Tajikistan		42	47	58		91	92	93		56	59	67
Turkmenistan												
Uzbekistan	85	85	83	82	97	97	98	98	90	90	89	88
<b>Pacific</b>	62	61	57	55	99	99	99	98	88	87	85	85
Australia	100	100	100	100	100	100	100	100	100	100	100	100
American Samoa												
Cook Islands	87	87	87	88	99	99	99	98	94	94	95	95
Fiji	51	51	51	51	43	43	43	43	48	47	47	47
French Polynesia	100	100	100	100	100	100	100	100	100	100	100	100
Guam	100	100	100	100	100	100	100	100	100	100	100	100
Kiribati	33	41	50	53	76	77	77	77	48	54	62	65
Marshall Islands	97	97	96		95	89	83		96	92	88	
Micronesia (F.S.)	86	89	92	94	93	94	94	95	88	90	92	94
Nauru												
New Caledonia												
New Zealand	82	82			100	100	100	100	97	97		
Niue	100	100	100	100	100	100	100	100	100	100	100	100
Northern Mariana Is.	100	99	97	97	98	98	98	98	98	98	98	98
Palau	98	97	95	94	73	74	78	79	90	90	90	89
Papua New Guinea	32	32	32	32	88	88	88	88	39	39	39	40
Samoa	89	88	88	87	99	96	92	90	91	90	89	88
Solomon Islands	65	65	65	65	94	94	94	94	69	69	70	70
Tonga	100	100	100	100	100	100	100	100	100	100	100	100
Tuvalu	89	90	91	92	92	93	94	94	90	92	93	93
Vanuatu	53	53	52		93	90	86		61	61	59	
<b>Asia and the Pacific</b>	64	69	75	83	95	95	96	96	74	78	83	88
LLDC	75	61	62	65	96	89	89	88	83	70	71	73
LDC	69	63	67	72	88	82	81	80	72	66	70	74
ASEAN	64	67	73	81	92	92	92	92	73	75	80	86
ECO	81	76	78	79	96	95	95	95	87	84	86	85
SAARC	68	72	77	84	91	92	93	94	73	77	81	87
Central Asia	80	74	76	79	95	95	97	98	87	84	86	88
Pacific island dev. econ.	41	41	40	39	80	80	79	80	50	49	49	49
Low-income	68	68	73	79	93	90	90	90	74	74	78	82
Middle-income	62	68	75	83	94	95	96	97	72	78	83	89
High-income	100	95	95	100	99	99	99	99	100	98	98	100
<b>Other world regions</b>												
Africa	42	44	47	51	86	85	85	84	57	58	61	64
Europe	93	95	96	97	100	100	100	100	98	98	99	99
Latin America & Carib.	61	65	69	73	94	95	96	97	84	87	89	91
North America	94	94	94	95	100	100	100	100	99	99	99	99
Other countries/areas	65	67	69	71	98	97	95	93	88	86	84	83
<b>World</b>	62	67	71	77	95	95	95	96	76	79	82	86



## 11.2 Access to sanitation

	Population with access to improved sanitation											
	Rural				Urban				Total			
	Percentage				Percentage				Percentage			
	1990	1995	2000	2006	1990	1995	2000	2006	1990	1995	2000	2006
<b>East and North-East Asia</b>	<b>46</b>	<b>51</b>	<b>55</b>	<b>61</b>	<b>69</b>	<b>71</b>	<b>73</b>	<b>77</b>	<b>53</b>	<b>57</b>	<b>63</b>	<b>68</b>
China	43	48	53	59	61	65	69	74	48	53	59	65
DPR Korea		60	60			58	58			59	59	
Hong Kong, China												
Japan	100	100	100	100	100	100	100	100	100	100	100	100
Macao, China												
Mongolia		23	26	31		66	65	64		47	48	50
Republic of Korea												
<b>South-East Asia</b>	<b>40</b>	<b>42</b>	<b>51</b>	<b>58</b>	<b>74</b>	<b>75</b>	<b>77</b>	<b>78</b>	<b>49</b>	<b>53</b>	<b>61</b>	<b>67</b>
Brunei Darussalam												
Cambodia		2	9	19		43	51	62		8	16	28
Indonesia	42	40	39	37	73	71	69	67	51	51	52	52
Lao PDR		6	14	38		48	57	87		13	22	48
Malaysia			93	93	95	95	95	95			94	94
Myanmar	15	26	53	81	47	55	74	85	23	34	59	82
Philippines	46	55	64	72	71	75	78	81	58	66	72	78
Singapore					100	100	100	100				
Thailand	72	82	92	96	92	93	94	95	78	85	93	96
Timor-Leste			32	32			64	64			40	41
Viet Nam	21	32	43	56	62	70	78	88	29	40	51	65
<b>South and South-West Asia</b>	<b>11</b>	<b>15</b>	<b>20</b>	<b>24</b>	<b>57</b>	<b>59</b>	<b>61</b>	<b>61</b>	<b>24</b>	<b>28</b>	<b>32</b>	<b>35</b>
Afghanistan		29	27	25		42	43	45		32	30	30
Bangladesh	18	21	26	32	56	54	51	48	26	28	32	36
Bhutan			50	50			71	71			52	52
India	4	8	13	18	44	46	49	52	14	18	23	28
Iran (Islamic Rep. of)	78	78	78	86	86	86	83	83	83			
Maldives		42	42	42	100	100	100	100		57	58	59
Nepal	6	12	17	24	36	39	42	45	9	15	20	27
Pakistan	14	22	30	40	76	80	85	90	33	40	48	58
Sri Lanka	68	74	80	86	85	86	88	89	71	76	81	86
Turkey	69	70	71	72	96	96	96	96	85	86	87	88
<b>North and Central Asia</b>	<b>78</b>	<b>79</b>	<b>80</b>	<b>81</b>	<b>94</b>	<b>93</b>	<b>93</b>	<b>94</b>	<b>89</b>	<b>88</b>	<b>89</b>	<b>89</b>
Armenia		78	79	81	94	94	95	96		89	89	91
Azerbaijan		70	70	70		90	90	90		80	80	80
Georgia	91	91	91	92	96	96	95	94	94	94	93	93
Kazakhstan	96	96	97	98	97	97	97	97	97	97	97	97
Kyrgyzstan		92	93	93		93	93	94		92	93	93
Russian Federation	70	70	70	70	93	93	93	93	87	87	87	87
Tajikistan		81	84	91		88	91	95		83	86	92
Turkmenistan												
Uzbekistan	91	92	93	95	97	97	97	97	93	94	94	96
<b>Pacific</b>	<b>65</b>	<b>63</b>	<b>60</b>	<b>58</b>	<b>99</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>87</b>	<b>87</b>	<b>86</b>	<b>86</b>
Australia	100	100	100	100	100	100	100	100	100	100	100	100
American Samoa												
Cook Islands	91	92	99	100	100	100	100	100	96	97	100	100
Fiji	55	55	55	55	87	87	87	87	68	70	70	71
French Polynesia	97	97	97	97	99	99	99	99	98	98	98	98
Guam	98	98	98	98	99	99	99	99	99	99	99	99
Kiribati	20	20	20	20	26	34	43	46	22	25	30	33
Marshall Islands	51	54	57		88	90	93		75	77	81	
Micronesia (F.S.)	20	18	16	14	54	56	59	61	29	28	26	25
Nauru												
New Caledonia												
New Zealand	88	88										
Niue	100	100	100	100	100	100	100	100	100	100	100	100
Northern Mariana Is.	78	86	93	96	85	89	92	94	84	89	92	94
Palau	54	53	52	52	76	81	92	96	61	61	65	67
Papua New Guinea	41	41	41	41	67	67	67	67	44	44	44	45
Samoa	98	99	100	100	100	100	100	100	98	99	100	100
Solomon Islands	18	18	18	18	98	98	98	98	29	30	31	32
Tonga	96	96	96	96	98	98	98	98	96	96	96	96
Tuvalu	74	78	81	84	83	87	90	93	78	83	86	89
Vanuatu		42	42			78	78			49	50	
<b>Asia and the Pacific</b>	<b>32</b>	<b>35</b>	<b>39</b>	<b>44</b>	<b>69</b>	<b>70</b>	<b>72</b>	<b>74</b>	<b>44</b>	<b>47</b>	<b>52</b>	<b>55</b>
LLDC ESCAP	52	50	52	54	92	84	82	81	66	61	61	63
LDC ESCAP	16	20	29	38	53	52	55	57	23	27	35	42
ASEAN	40	42	51	58	74	75	77	78	49	53	61	67
ECO	44	48	51	53	88	87	89	91	64	65	68	69
SAARC	8	12	17	23	49	51	54	57	18	22	27	33
Central Asia	93	89	90	92	97	95	95	95	95	92	92	93
Pacific island dev. econ.	44	44	44	43	81	80	80	80	52	52	51	52
Low-income	20	28	36	45	67	68	71	76	31	38	46	54
Middle-income	32	35	39	42	66	68	69	71	42	46	50	54
High-income	100	100	100	100	100	100	100	100	100	100	100	100
<b>Other world regions</b>												
Africa	24	24	26	29	53	53	53	53	33	34	36	38
Europe	92	92	92	91	99	99	98	98	97	96	96	96
Latin America & Carib.	35	41	47	52	81	83	85	86	68	72	75	78
North America	99	99	99	99	100	100	100	100	100	100	100	100
Other countries/areas	39	49	53	59	91	91	91	92	61	70	72	74
<b>World</b>	<b>34</b>	<b>37</b>	<b>41</b>	<b>44</b>	<b>76</b>	<b>77</b>	<b>77</b>	<b>78</b>	<b>51</b>	<b>54</b>	<b>57</b>	<b>60</b>



## 12 Participation in education

Asia and the Pacific has made considerable progress in bringing children into the educational system. Nevertheless, more than 29 million of the region's children are still not in school.

The Millennium Development Goals and the Education for All (EFA) initiative state that by 2015, all children should have access to, and complete, good quality primary education. To achieve this, most countries in the region have passed laws making primary education compulsory, and in some cases free. Additionally, some countries are aiming to achieve full participation in basic education – covering both primary and lower secondary levels.

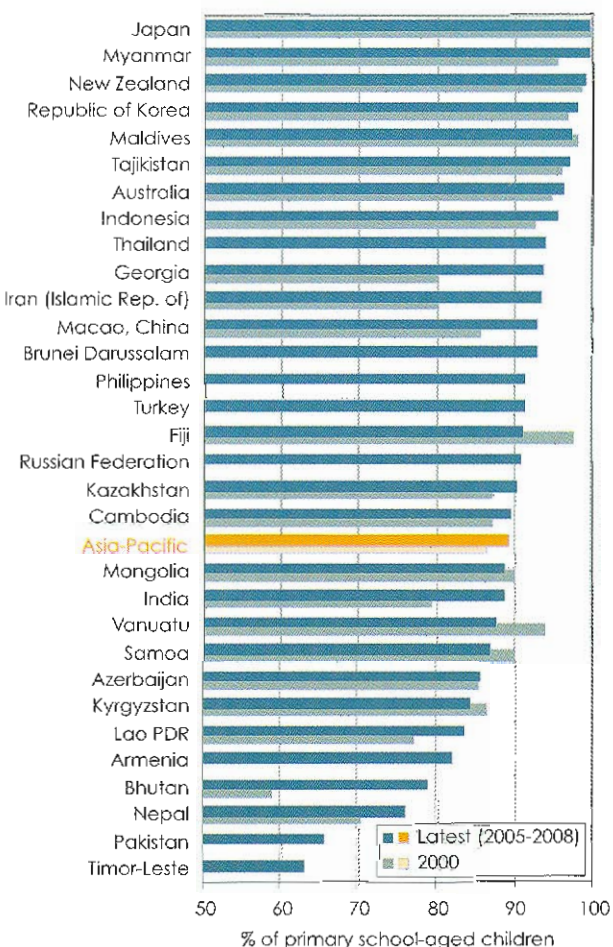
Partly due to the EFA initiative, which started in 1990, most countries in Asia and the Pacific have made steady progress in bringing education to children and keeping them in school. Between 2000 and 2006, the region's average net enrolment ratio (NER) in primary education increased from 86 to 89 per cent – significantly higher than in Africa, which in 2006 reached 73 per cent, but somewhat lower than in Latin America and the Caribbean, which reached 94 per cent.

Among the various country groups in 2006, the highest primary NERs – above 90 per cent – were in South-East Asia, East and North-East Asia, and ASEAN, as well as in high- and middle-income economies. The lowest – below 80 per cent – were in landlocked developing countries, Pacific developing economies, ECO member States and low-income economies. Some of the most rapid progress was in the SAARC countries: between 2000 and 2006, the rate increased from 75 to 85 per cent.

The situation is even more diverse at the country level. For the 30 countries in the Asia-Pacific region for which data were available, 17 had primary NERs of more than 90 per cent – including Japan, and the Republic of Korea with rates above 98 per cent. At the other end of the scale, some countries have NERs below 80 per cent

Figure 12.1

Net primary enrolment, Asia and the Pacific, 2000-2008



– Timor-Leste (63 per cent), Pakistan (66 per cent), Nepal (76 per cent) and Bhutan (79 per cent).

In their efforts to achieve universal primary education many developing countries are channelling the bulk of their resources to primary education. However, as the number of primary school leavers increases governments are now paying greater to secondary schooling. In the ASEAN countries, for example, between 2000 and 2006 the NER increased by only one percentage point, but the secondary NER increased by 8 percentage points, from 53 to 61 per cent. Nevertheless, many



## 12. Participation in education

primary completers are still unable to move to secondary education. In the Asia-Pacific region, while 9 out of 10 children of primary-school age are enrolled in school, for secondary school the proportion is only 6 out of 10.

The chances of receiving a secondary education are far greater in the richer countries. In 2006 in the Economic Cooperation Organization countries, for example, the secondary NER was 50.8 per cent, but in the high-income economies, the ratio was at least 95 per cent.

Compared with primary education, differences between countries are greater at the secondary level. In 2006, secondary NERs ranged from a low of 29.7 per cent in Pakistan to a high of 98.7 per cent in Japan. Of the countries where data were available, Bhutan, Cambodia, the Lao People's Democratic Republic, Myanmar and Pakistan enrolled less than half their secondary school-age children. In Cambodia and Pakistan, the proportion was only one child in three.

Some countries and areas have made noticeable improvements. Between 1999-2000 and 2006-2007 a number of countries/areas recorded more than 10 percentage point increases in secondary NERs: Bhutan; Cambodia; Indonesia; Macao, China; Myanmar; Mongolia and Tajikistan. On the other hand, some countries have slipped into reverse: in Tonga after 2000 the secondary NER decreased by more than 10 percentage points.

Compared with the primary level, there are fewer data available for secondary and tertiary levels of subregional averages are available only for a limited range of indicators.

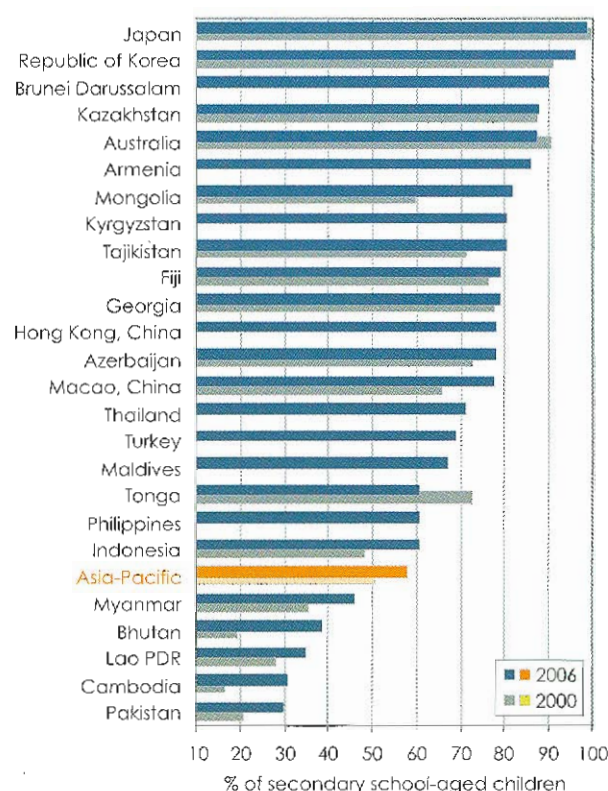
Many more young people in Asia and the Pacific are now benefitting from tertiary education. In this report, participation in tertiary education is measured by the gross enrolment ratio (GER) – the number of students enrolled in tertiary education, regardless of age, as a percentage of the five-year age group population following on the secondary school leaving age.

Between 1999 and 2006, the average tertiary GER increased from 12 to 20 per cent. Among the subregions, the highest GERs were in North and Central Asia, at 54 per cent followed by 52 per cent in the Pacific, and 26 per cent in East and North-East Asia.

Compared with secondary education, the chances of receiving tertiary education are even more dependent on income. Among the high-income economies, the GER was 67 per cent, compared with 8 per cent for the low-income group.

**Figure 12.2**

**Net secondary enrolment, Asia and the Pacific, 2000-2006**



Among the 28 countries with available data between 2006 and 2007, only seven countries and areas had tertiary GERs above 50 per cent: Australia; Japan; Kazakhstan; Macao, China; New Zealand; Republic of Korea; and the Russian Federation. Of these, the Republic of Korea and New Zealand had the highest GERs: 93 and 80 per cent, respectively. On the other hand, some countries had GERs below 10 per cent – Bangladesh, Bhutan, Cambodia, the Lao People's Democratic Republic, Pakistan and Uzbekistan – almost all low-income economies.

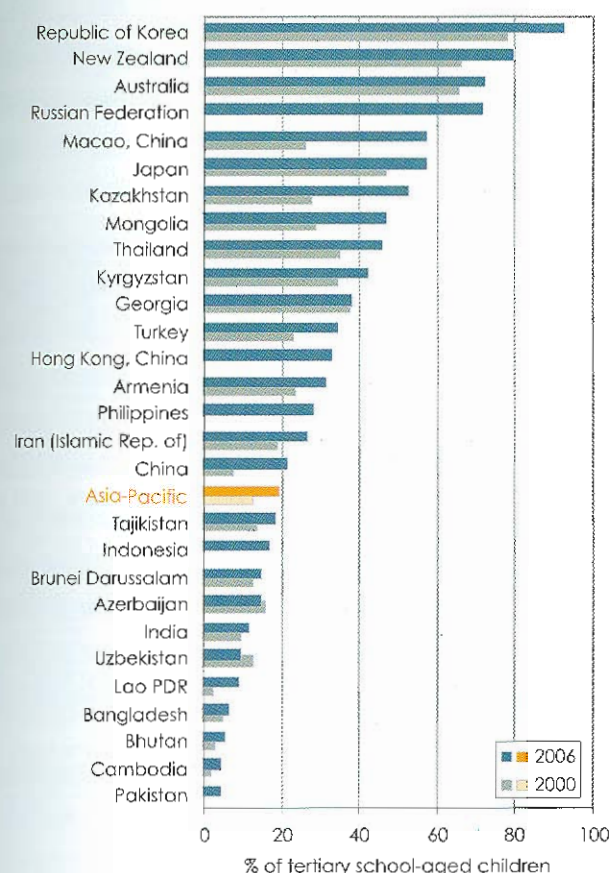
The second main measure of educational attainment is school life expectancy (SLE). This is the number of years a child of school entrance age is expected to spend in school or university, including years spent on repetition – and is a useful measure of the quality of education, reflecting the resources that countries are investing. In 2006, the Asia-Pacific region had an average SLE of 10.5 years – male 10.8, female 10.2 – indicating that most young people never reach the tertiary level. The SLE for Asia and the Pacific was greater than in Africa at 8.4 years, but lower than that in Latin America and the Caribbean at 13.3 years and Europe at 15.3 years.

SLEs in Asia and the Pacific also show considerable subregional variation. In 2006 the values ranged from 8.5 years in the low-income



Figure 12.3

## Gross tertiary enrolment, Asia and the Pacific, 2000-2006



economies to 16 years in the high-income economies. Variations were even more marked at the country level. Based on the 2006-2007 data, SLEs were less than 10 years in Pakistan, Nauru (both sexes) and Cambodia, the Lao People's Democratic Republic, India (female only). On the other hand, Australia, Japan, Kazakhstan, New Zealand, the Republic of Korea and Macao, China had SLEs greater than 14 years for both sexes. Brunei Darussalam, the Russian Federation and Thailand had SLEs greater than 14 years for females only. Australia (both sexes) and New Zealand (females only) had SLEs of more than 20 years.

In many countries women stay longer in education than men. Of the 46 countries where data was available between 1999 and 2007, 22 had women's SLEs longer than men's. Among these, the most favourable to women previously was Kiribati: in 2000 its SLE for women was 2.8 years higher than that of men, but by 2005 the gap had been reduced to 0.8 years. However, over the period 2005-2007, the biggest gaps favouring women were in New Zealand and Mongolia, both at 1.8 years. In contrast, Afghanistan was the most disadvantageous for women, in 2004 with a 6.5 year gap.

#### Net enrolment ratio in primary education (% of primary school-aged children)

The number of pupils of the theoretical school-age group for primary education, expressed as a percentage of the total population in that age-group. **Aggregates:** Aggregate values have been calculated by UNESCO Institute for Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 19 November 2008).

#### School life expectancy from primary to tertiary, boys and girls (years)

The number of years a four-year old girl or boy is expected to spend in education from primary to tertiary level, including years spent on repetition. Data are disaggregated by sex. **Aggregates:** Aggregate values are calculated by UNESCO Institute for Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 1 December 2008).

#### Net enrolment ratio in secondary education (% of secondary school-aged children)

The number of pupils of the theoretical school-age group for secondary education, expressed as a percentage of the total population in that age group. **Aggregates:** Aggregate values have been calculated by UNESCO Institute for

Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 19 November 2008).

#### Gross enrolment ratio in tertiary education (% of tertiary school-aged children)

The number of pupils enrolled in the tertiary level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. For the tertiary level, the population used is the five-year age group following on from the secondary school leaving age. **Aggregates:** Aggregate values have been calculated by UNESCO Institute for Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 19 November 2008).

#### Gender parity index for net enrolment – Primary and secondary education and gross enrolment for tertiary education (ratio)

Ratio of female to male enrolment ratios for each level of education. A GPI of 1 indicates parity between sexes. **Aggregates:** Aggregate values have been calculated by UNESCO Institute for Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 21 November 2008).



## 12. Participation in education

### 12.1 Primary education

	Net enrolment ratio in primary education				School life expectancy from primary to tertiary							
	% of primary school-aged children				Girls				Boys			
	1991 <sup>1</sup>	2000	2005	2006	2000	2003	2005	2006	2000	2003	2005	2006
<b>East and North-East Asia</b>		<b>98.3</b>	<b>93.7</b>	<b>93.9</b>		<b>11.0</b>		<b>11.5</b>		<b>11.3</b>		<b>11.6</b>
China	99.1					10.6		11.2		10.9		11.2
DPR Korea												
Hong Kong, China			90.7			13.6	13.5			14.2	13.9	
Japan	99.7	100.0	99.8	99.8	14.4	14.6	14.7	14.8	14.7	14.9	15.0	15.1
Macao, China	81.3	85.5	90.4	92.9 (07)	12.3	13.9	14.1	14.6 (07)	12.6	16.6	15.9	15.6 (07)
Mongolia	95.7	89.9	86.9	88.8 (07)	10.1	11.9	13.5	13.9 (07)	8.3	10.1	11.7	12.2 (07)
Republic of Korea	99.7	96.9	97.6	98.2	14.4	14.8	15.2	15.4	16.7	17.3	17.6	17.8
<b>South-East Asia</b>		<b>92.7</b>	<b>93.6</b>	<b>93.1</b>	<b>10.5</b>	<b>11.1</b>	<b>11.3</b>	<b>11.4</b>	<b>10.8</b>	<b>11.2</b>	<b>11.4</b>	<b>11.5</b>
Brunei Darussalam	92.7		93.4	92.8 (07)	13.7	14.1	14.3	14.2 (07)	13.1	13.3	13.5	13.6 (07)
Cambodia	75.1	87.2	96.5	89.4 (07)	6.6	8.6		9.3 (07)	8.3	10.3		10.5 (07)
Indonesia	96.7	92.6	94.5	95.4		11.1	11.2			11.5	11.7	
Lao PDR	61.9	77.2	82.7	83.7	7.2	7.8	8.3	8.4	9.1	9.7	10.0	10.1
Malaysia		96.8	99.9		12.1	13.2	13.1		11.6	12.2	12.4	
Myanmar		95.5	99.0	99.6	8.3 (01)				8.1 (01)			
Philippines	96.3		92.9	91.4		12.2	12.2	12.1		11.7	11.6	11.5
Singapore												
Thailand				93.9 (07)		12.8	13.7	14.4 (07)		12.5	13.2	13.4 (07)
Timor-Leste			68.1	63.0 (07)								
Viet Nam	90.5	94.5			9.9				10.7			
<b>South and South-West Asia</b>		<b>76.5</b>	<b>85.7</b>	<b>85.8</b>	<b>7.3</b>	<b>8.3</b>	<b>8.9</b>	<b>9.0</b>	<b>9.1</b>	<b>9.4</b>	<b>10.0</b>	<b>10.1 (06)</b>
Afghanistan						4.7	4.4 (04)			8.7	10.9 (04)	
Bangladesh		83.4	88.9 (04)		8.5	8.7	8.5 (04)		8.6	8.5	8.4 (04)	
Bhutan		58.8	73.9	79.0	7.1			10.0	8.5			10.6
India		79.2	88.5	88.7	7.3	8.5	9.3	9.4	9.4	9.7	10.5	10.6
Iran (Islamic Rep. of)	92.4	80.2	95.3	93.6	10.9	11.1	12.9	13.4 (07)	12.0	12.2	12.8	11.7 (07)
Maldives		98.2	97.6	97.4	12.6	12.8		12.3	12.4	12.6		12.2
Nepal		70.5		76.1 (07)	7.5	8.0			9.9	9.8		
Pakistan			67.2	65.6		4.9	5.7	6.3 (07)		6.6	7.4	7.9 (07)
Sri Lanka			96.7 (04)									
Turkey	90.4		90.2	91.4		10.3	10.2	10.6		12.3	11.7	12.1
<b>North and Central Asia</b>		<b>88.5</b>	<b>88.7</b>	<b>89.8</b>	<b>11.5</b>	<b>12.4</b>	<b>12.8</b>	<b>12.9</b>	<b>11.4</b>	<b>12.1</b>	<b>12.5</b>	<b>12.6</b>
Armenia			78.8	82.2		11.0	11.5	11.9		10.2	10.5	11.0
Azerbaijan	88.8	85.7	83.7	85.9 (07)	10.1	10.6	10.6	10.6	10.2	10.9	10.9	10.9
Georgia	97.1	80.2	88.6	93.7 (07)	11.9	12.1	12.7	12.8 (07)	11.9	12.1	12.4	12.6 (07)
Kazakhstan	86.7	87.2	91.0	90.3 (08)	12.6	14.3	15.4	15.6 (08)	12.0	13.4	14.4	14.6 (08)
Kyrgyzstan	92.3	86.7	85.9	84.5 (07)	11.9	12.7	12.7	12.9 (07)	11.7	12.2	12.1	12.1 (07)
Russian Federation	97.3			90.9		13.6	14.0	14.1		12.6	13.0	13.0
Tajikistan	76.7	95.9	97.5	97.2 (07)	8.9	9.5	9.9	10.0 (07)	10.7	11.6	12.0	12.0 (07)
Turkmenistan												
Uzbekistan	78.2				10.5	11.3	11.4	11.3 (07)	10.9	11.7	11.8	11.7 (07)
<b>Pacific</b>		<b>88.0</b>	<b>84.8</b>	<b>84.0</b>	<b>14.8</b>	<b>14.6</b>	<b>14.3</b>	<b>14.3</b>	<b>14.7</b>	<b>14.5</b>	<b>14.3</b>	<b>14.3</b>
Australia	99.8	94.7	96.5	96.4	20.6	20.9	20.5	20.7	20.2	20.6	20.2	20.3
American Samoa												
Cook Islands		77.4	74.2		10.1	10.0	9.9		9.7	10.0	9.6	
Fiji	99.5	97.5	93.5	91.2 (06)		13.2	13.2			12.7	12.8	
French Polynesia												
Guam												
Kiribati		97.4 (02)			14.2	13.0	12.7		11.4	12.1	11.9	
Marshall Islands			89.6 (03)			12.9				13.0		
Micronesia (F.S.)												
Nauru					8.1	8.0	9.5	8.8	6.7	7.8	8.9	8.2
New Caledonia												
New Zealand	98.8	98.7	99.2	99.3	18.3	19.8	20.5	20.4	16.8	17.7	18.5	18.6
Niue		98.5 (99)			11.6		12.3		11.3		12.3	
Northern Mariana Is.												
Palau		96.4			15.4				13.7			
Papua New Guinea												
Samoa		90.0		87.0 (07)	12.4				11.8			
Solomon Islands			61.8		6.3	7.7	8.2		7.1	8.4	8.8	
Tonga			95.9		13.3		13.2 (04)		12.9		12.9 (04)	
Tuvalu					11.4 (01)				11.1 (01)			
Vanuatu		93.9	97.1	87.8		10.1	10.0 (04)			10.7	10.7 (04)	
<b>Asia and the Pacific</b>		<b>86.4</b>	<b>89.3</b>	<b>89.3</b>	<b>8.8</b>	<b>9.6</b>	<b>10.1</b>	<b>10.2</b>	<b>9.9</b>	<b>10.3</b>	<b>10.7</b>	<b>10.8</b>
LLDC		66.7	76.4	78.1	7.3	8.7	8.9	9.1	8.4	10.3	10.7	10.7
LDC		77.0	85.0	85.5	7.3	8.1	8.0 (04)		7.9	8.8	9.1 (04)	
ASEAN		92.7	93.7	93.2	10.5	11.1	11.3	11.4	10.8	11.2	11.5	11.5
ECO		68.3	77.3	76.2	6.9	7.6	8.1	8.4	8.5	9.3	9.6	9.6
SAARC		75.4	85.0	85.1	7.0	8.0	8.7	8.8	8.8	9.2	9.8	9.9
Central Asia		88.0	89.4	88.8	10.7	11.4	11.7	11.7	11.0	11.7	12.0	12.1
Pacific island dev. econ.		73.1	63.4	61.8								
Low-income		74.4	80.1	79.5	7.2	7.7	7.9	8.0	8.2	8.6	8.9	8.9
Middle-income		88.9	91.3	91.4	9.0	9.9	10.5	10.6	10.1	10.6	11.0	11.1
High-income		97.6	97.8	97.9	15.0	15.3	15.5	15.6	15.8	16.1	16.2	16.3
<b>Other world regions</b>												
Africa		61.7	70.9	72.6	6.6	7.2	7.8		7.9	8.6	9.1	
Europe		95.5	95.3	95.3	14.9	15.5	15.6	15.6	14.4	14.8	14.9	14.9
Latin America & Carib.		92.8	93.9	93.9	12.9	13.2	13.5	13.5	12.7	12.8	13.1	13.1
North America		95.0	92.2	92.3	15.9	16.4	16.5	16.5	15.0	15.2	15.2	15.1
Other countries/areas		80.8	85.6	85.2	9.2		10.3		11.0		11.9	
<b>World</b>		<b>83.0</b>	<b>86.2</b>	<b>86.4</b>	<b>9.4</b>	<b>10.0</b>	<b>10.5</b>	<b>10.6</b>	<b>10.2</b>	<b>10.7</b>	<b>11.0</b>	<b>11.1</b>

<sup>1</sup> Data for 1991 have been extracted from the United Nations Millennium Development Goals Indicators database.



## 12.2 Secondary and tertiary education

	Net enrolment ratio in secondary education							Gross enrolment ratio in tertiary education						
	% of secondary school-aged children							% of tertiary school-aged children						
	1999	2000	2002	2003	2004	2005	2006	1999	2000	2002	2003	2004	2005	2006
<b>East and North-East Asia</b>	<b>64.4</b>	<b>61.8</b>	<b>65.0</b>	<b>67.3</b>	<b>73.2</b>	<b>74.8</b>	<b>72.8</b>	<b>12.0</b>	<b>13.4</b>	<b>18.1</b>	<b>20.5</b>	<b>23.7</b>	<b>24.6</b>	<b>25.7</b>
China								6.4	7.7	12.7	15.5			21.6
DPR Korea														
Hong Kong, China			74.3	75.0	76.0	77.1	77.9				30.6	31.0	32.1	33.0
Japan	99.4	99.5	99.7	99.8	99.9	100.0	98.7	45.1	47.4	50.5	52.1	54.0	55.3	57.3
Macao, China	62.1	65.5	71.7	74.2	76.1	77.2	77.5	27.7	26.6	64.6	77.3	68.0	60.4	57.4
Mongolia	55.5	59.8	71.7	77.2	81.4	83.1	81.5	25.7	28.8	34.0	36.1	39.0	43.3	47.2
Republic of Korea	94.5	91.0	87.3	88.3	90.4	93.9	96.0	72.6	78.4	86.8	88.5	89.9	91.0	92.6
<b>South-East Asia</b>	<b>52.4</b>	<b>52.5</b>	<b>54.0</b>	<b>56.3</b>	<b>58.1</b>	<b>59.3</b>	<b>61.3</b>	<b>16.8</b>	<b>17.3</b>	<b>19.1</b>	<b>19.7</b>	<b>20.7</b>	<b>20.9</b>	<b>21.0</b>
Brunei Darussalam						87.3	90.1	12.3	12.9	13.7	13.9	14.9	15.0	15.0
Cambodia	15.4	16.2	22.1	25.5	25.8	23.9	30.7		2.1	2.5	3.1	3.0	3.6	4.5
Indonesia		48.2		54.3	56.1	57.4	60.4			15.0	16.2	16.6	17.0	17.0
Lao PDR	26.3	28.1	30.5	33.7	35.3	35.6	34.9	2.4	2.8	4.3	5.0	5.8	7.9	9.1
Malaysia	65.1	64.8	65.4	70.9	72.0	68.7		23.0	25.9	28.0	31.2	30.6	28.6	
Myanmar	32.1	35.3	37.2	37.7	42.3	43.0	45.7	7.4	12.0	11.9				
Philippines	50.7		56.3	59.0	60.8	60.2	60.4	28.7		30.4	29.4	28.8	28.0	28.5
Singapore														
Thailand							71.0	33.0	35.2	41.0	42.3	43.6	46.0	45.9
Timor-Leste										9.6				
Viet Nam	59.1	61.0						10.6	9.5					
<b>South and South-West Asia</b>	<b>39.1</b>	<b>39.8</b>	<b>41.4</b>	<b>43.6</b>	<b>44.4</b>	<b>45.9</b>	<b>46.1</b>	<b>7.9</b>	<b>9.4</b>	<b>10.0</b>	<b>10.6</b>	<b>9.8</b>	<b>11.1</b>	<b>12.0</b>
Afghanistan											1.2	1.3		
Bangladesh	42.1	43.1	44.7	44.2	41.0			5.4	5.4	6.0	6.0	5.5	6.0	6.8
Bhutan	16.9	19.2	24.5			35.5	38.5	2.7	3.1					5.5
India									9.6	10.4	10.9	9.5	11.0	11.8
Iran (Islamic Rep. of)					78.5	77.3		18.9	19.1	19.4	20.4	22.6	24.1	26.8
Maldives			51.1			64.1	67.1							
Nepal									4.1	5.0	4.9	5.6		
Pakistan	22.0	20.6		26.2	28.3	28.3	29.7			2.5	2.5	3.1	4.5	4.5
Sri Lanka														
Turkey						66.0	68.7	21.5	23.2	24.4	28.0	28.9	31.0	34.6
<b>North and Central Asia</b>	<b>81.7</b>	<b>82.2</b>	<b>83.1</b>	<b>84.3</b>	<b>83.2</b>	<b>81.7</b>	<b>81.5</b>	<b>36.3</b>	<b>39.2</b>	<b>47.4</b>	<b>49.9</b>	<b>52.3</b>	<b>53.4</b>	<b>53.8</b>
Armenia			83.0	83.5	82.4	84.3	85.8	23.7	23.6	26.5	25.0	26.2	28.0	31.7
Azerbaijan	73.2	72.4	75.3	76.7	77.1	77.6	77.8	15.4	16.3	15.8	15.2	14.8	14.9	14.8
Georgia	76.4	77.6				77.5	78.7	35.9	37.9	40.9	42.1	41.5	46.1	38.2
Kazakhstan		87.0	87.9	89.9	90.6	88.8	87.7	24.5	28.2	38.8	44.0	47.1	52.0	52.7
Kyrgyzstan					82.1	80.5	80.5	29.0	34.7	42.9	40.0	39.6	41.4	42.7
Russian Federation											65.1	69.0	71.1	72.3
Tajikistan	62.8	71.1	76.2	78.8	79.6	79.8	80.4	13.6	14.0	14.0	15.4	16.4	17.3	18.6
Turkmenistan														
Uzbekistan								12.9	13.0	13.8	13.9	14.1	9.6	9.8
<b>Pacific</b>	<b>70.1</b>	<b>71.4</b>	<b>70.9</b>	<b>69.9</b>	<b>70.2</b>	<b>70.6</b>	<b>70.5</b>	<b>46.5</b>	<b>46.6</b>	<b>53.0</b>	<b>52.0</b>	<b>52.6</b>	<b>52.3</b>	<b>51.9</b>
Australia		90.2	87.8	86.0	85.9	86.4	87.2	65.4	65.6	76.5	74.3	72.4	72.6	72.7
American Samoa														
Cook Islands	59.0	64.4												
Fiji	78.6	76.1	77.0	75.9	81.1	80.9	79.1				15.5	15.5	15.4	
French Polynesia														
Guam														
Kiribati				70.4	70.4	68.3								
Marshall Islands			74.4	74.4						16.9	17.0			
Micronesia (F.S.)								14.1	14.1					
Nauru														
New Caledonia														
New Zealand			91.9					64.3	66.4	69.2	70.9	85.7	82.2	79.7
Niue	93.4													
Northern Mariana Is.														
Palau									40.6	40.2				
Papua New Guinea								2.0						
Samoa	71.5	64.0	65.6	66.1	66.0			11.5	7.4					
Solomon Islands	23.0	18.4	27.6	27.3										
Tonga	72.2	72.4			66.4		60.4	3.4	4.8	5.4	6.1	6.0		
Tuvalu														
Vanuatu	29.6	32.7	36.2	36.2	38.1			4.0	4.0	5.0	4.8	4.8		
<b>Asia and the Pacific</b>	<b>50.5</b>	<b>50.2</b>	<b>52.2</b>	<b>54.3</b>	<b>56.7</b>	<b>57.9</b>	<b>57.5</b>	<b>11.6</b>	<b>13.0</b>	<b>15.7</b>	<b>17.0</b>	<b>17.9</b>	<b>19.0</b>	<b>19.8</b>
LLDC	56.4	55.8	59.9	61.5	61.4	61.4	60.1	10.9	11.9	13.9	14.3	15.0	14.8	15.2
LDC	35.9	36.2	39.1	39.0	37.8	37.6	38.2	5.0	6.0	6.4	6.4	6.1	6.4	6.9
ASEAN	52.4	52.5	54.0	56.3	58.1	59.3	61.4	16.8	17.3	19.2	19.7	20.8	20.9	21.0
ECO	45.6	44.5	45.3	50.2	52.5	51.5	50.8	11.9	12.4	12.9	13.7	14.5	15.5	16.6
SAARC	36.3	37.0	38.5	40.7	41.2	43.1	43.6	6.6	8.2	8.8	9.2	8.1	9.4	10.1
Central Asia	78.5	80.1	82.1	85.7	85.5	84.1	83.8	17.9	19.2	22.2	23.1	23.7	23.5	23.5
Pacific island dev. econ.	33.5	33.6	35.9	35.8	35.9	35.8	35.5	3.9	3.8	3.8	4.0	4.0	3.9	3.9
Low-income	39.5	39.6	41.1	43.9	44.2	44.1	45.1	6.3	6.6	6.9	6.9	7.8	8.1	8.3
Middle-income	52.2	51.8	54.2	56.2	59.0	60.6	59.9	11.4	12.9	16.1	17.7	18.8	20.0	21.0
High-income	95.1	94.6	93.6	93.7	94.2	95.2	95.1	53.2	56.2	61.6	62.9	64.4	65.4	66.8
<b>Other world regions</b>														
Africa	26.4	27.6	29.2	29.9	30.8	31.5	32.0	7.9	8.2	8.4	8.4	8.9	9.2	9.2
Europe	85.6	87.2	88.0	88.4	87.9	88.1	87.6	47.2	49.2	55.3	58.0	60.3	61.9	63.2
Latin America & Carib.	58.7	61.3	65.4	66.6	68.1	69.6	70.2	21.5	22.5	25.7	27.2	28.8	30.1	31.3
North America	89.3	87.9	86.7	89.3	89.8	89.4	89.2	71.8	68.1	78.5	80.1	80.2	80.4	79.9
Other countries/areas	48.8	49.9	50.8	54.8	57.1	58.0	58.1	15.9	17.1	18.3	19.3	20.5	20.9	21.4
<b>World</b>	<b>52.2</b>	<b>52.4</b>	<b>54.1</b>	<b>55.7</b>	<b>57.4</b>	<b>58.3</b>	<b>58.1</b>	<b>17.8</b>	<b>18.7</b>	<b>21.3</b>	<b>22.4</b>	<b>23.3</b>	<b>24.1</b>	<b>24.7</b>



## 12. Participation in education

### 12.3 Gender parity in education

Gender parity index

	for net enrolment – Primary				for net enrolment – Secondary				for gross enrolment – Tertiary			
	1999	2000	2005	2006	1999	2000	2005	2006	1999	2000	2005	2006
<b>East and North-East Asia</b>	1.01	1.01	1.01	1.01	0.96	0.97	1.00	1.01	0.63	0.63	0.91	0.93
China												0.98
DPR Korea												
Hong Kong, China			0.95				1.01	1.00 (07)			1.04	1.03 (07)
Japan	1.00	1.00	1.00	1.00		1.01		1.00	0.85	0.85	0.89	0.88
Macao, China	1.01	1.00	0.97	0.97 (07)	1.10	1.08	1.05	1.04 (07)	0.76	0.95	0.70	0.92 (07)
Mongolia	1.04	1.04	1.02	1.01 (07)	1.27	1.23	1.14	1.11 (07)	1.88	1.79	1.62	1.56 (07)
Republic of Korea	0.95	0.94			1.01	1.01	0.96	0.94	0.57	0.59	0.64	0.65
<b>South-East Asia</b>	0.97	0.97	0.98	0.98	0.96	0.98	1.02	1.03	0.92	0.95	0.99	0.98
Brunei Darussalam			1.01	1.00 (07)			1.05	1.05 (07)	1.98	1.87	2.02	1.88 (07)
Cambodia	0.91	0.92	0.99	0.96 (07)	0.54	0.56	0.84	0.86		0.33	0.47	0.56 (07)
Indonesia		0.97	0.97	0.96		0.95	0.99	1.00			0.79	
Lao PDR	0.92	0.92	0.94	0.94	0.79	0.78	0.85	0.86	0.49	0.53	0.71	0.68
Malaysia	0.98	1.00	1.00		1.08	1.09	1.10		1.02	1.06	1.29	
Myanmar		1.00	1.02	1.01	1.00	1.07	0.99	1.00	1.61	1.77 (01)		
Philippines	1.00		1.02	1.02	1.09		1.20	1.21	1.26		1.23	1.24
Singapore												
Thailand				1.00 (07)				1.12 (07)	1.16	1.20	1.13	1.23 (07)
Timor-Leste			0.96	0.96 (07)						1.26 (02)		
Viet Nam		0.94 (01)							0.76	0.72		
<b>South and South-West Asia</b>	0.85	0.85	0.95	0.95	0.75	0.77	0.86	0.86 (06)	0.65	0.68	0.75	0.76
Afghanistan											0.28 (04)	
Bangladesh	1.00	1.01	1.04 (04)		1.01	1.04	1.04 (04)		0.51	0.51	0.53	0.57
Bhutan	0.89	0.90	1.00	1.00	0.99	1.00	1.00	1.01	0.58	0.52		0.59
India		0.85	0.96	0.96						0.66	0.71	0.72
Iran (Islamic Rep. of)	0.97	0.98	1.10				0.94		0.80	0.87	1.09	1.15 (07)
Maldives	1.01	1.01	1.00	1.00	1.13	1.16	1.10	1.09			2.37 (04)	2.37
Nepal	0.79	0.82		0.95 (07)						0.40	0.40 (04)	
Pakistan			0.76	0.78	0.67	0.70	0.77	0.76 (07)			0.88	0.85 (07)
Sri Lanka			1.01 (03)									
Turkey			0.95	0.96			0.85	0.86	0.68	0.68	0.74	0.75
<b>North and Central Asia</b>	0.99	0.99	0.99	0.99	1.02	1.02	0.97	0.97	1.22	1.22	1.31	1.30
Armenia			1.05	1.05			1.03	1.04	1.11	1.09	1.22	1.21 (07)
Azerbaijan	1.01	1.02	0.98	0.98 (07)	1.01	1.02	0.97	0.96	0.64	0.67	0.90	0.88 (07)
Georgia	1.00	1.00	1.02	0.97 (07)	1.00	1.00	1.00	1.01 (07)	1.07	0.95	1.04	1.12 (07)
Kazakhstan		1.01	1.00	1.00 (08)		1.02	0.99	0.99 (08)	1.15	1.18	1.43	1.44 (06)
Kyrgyzstan	0.99	0.99	0.99	0.99 (07)			1.01	1.02 (07)	1.04	1.01	1.25	1.30 (07)
Russian Federation				1.00							1.36	1.36
Tajikistan		0.93	0.96	0.96 (07)	0.91	0.87	0.85	0.86 (07)	0.35	0.34	0.35	0.38 (07)
Turkmenistan												
Uzbekistan									0.82	0.83	0.70	0.71 (07)
<b>Pacific</b>	0.98	0.97	0.97	0.97	0.99	1.00	0.99	0.99	1.24	1.25	1.29	1.31
Australia	1.01	1.01	1.01	1.01		1.02	1.02	1.02	1.22	1.23	1.25	1.28
American Samoa												
Cook Islands	0.96	0.99	1.03		1.07	1.10						
Fiji	1.01	1.00	0.99	0.99 (07)	1.11	1.10	1.07	1.10			1.20	
French Polynesia												
Guam												
Kiribati	1.01						1.11					
Marshall Islands			0.99 (03)				1.06 (03)				1.30 (03)	
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	1.00	1.00	1.00	1.00		1.03 (02)			1.46	1.45	1.49	1.51
Niue	1.00				1.05							
Northern Mariana Is.												
Palau	0.94	0.96								2.35		
Papua New Guinea									0.55			
Samoa	0.99	1.01		1.02 (07)	1.10	1.14	1.14 (04)		1.04	0.93		
Solomon Islands			0.99		0.79	0.82	0.87 (03)					
Tonga	0.96		0.97		1.12	1.10		1.25	1.29	1.64	1.68 (04)	
Tuvalu												
Vanuatu	0.99	0.99	0.98	0.99	0.87	1.14	0.87 (04)				0.59 (04)	
<b>Asia and the Pacific</b>	0.93	0.93	0.97	0.97	0.88	0.89	0.94	0.95	0.78	0.79	0.94	0.95
LLDC	0.81	0.82	0.87	0.87	0.88	0.94	0.91	0.92	0.86	0.88	1.01	1.01
LDC	0.91	0.93	0.97	0.97	0.90	0.98	0.98	0.98	0.70	0.82	0.78	0.78
ASEAN	0.97	0.97	0.98	0.98	0.96	0.98	1.02	1.03	0.92	0.95	0.99	0.98
ECO	0.82	0.82	0.87	0.89	0.84	0.87	0.88	0.88	0.78	0.80	0.94	0.95
SAARC	0.83	0.84	0.94	0.94	0.72	0.75	0.84	0.85	0.61	0.65	0.70	0.71
Central Asia	0.99	0.99	0.98	0.98	0.99	0.98	0.96	0.96	0.90	0.90	1.06	1.07
Pacific island dev. econ.	0.91	0.90	0.89	0.89	0.88	0.90	0.88	0.88	0.69	0.69	0.85	0.86
Low-income	0.87	0.88	0.91	0.92	0.88	0.92	0.93	0.94	0.73	0.77	0.76	0.76
Middle-income	0.94	0.94	0.99	0.99	0.88	0.89	0.94	0.95	0.79	0.80	0.97	0.98
High-income	0.99	0.98	0.99	0.99	1.01	1.01	0.99	0.99	0.78	0.78	0.83	0.84
<b>Other world regions</b>												
Africa	0.89	0.90	0.92	0.93	0.88	0.88	0.87	0.88	0.67	0.65	0.83	0.83
Europe	0.99	1.00	1.00	1.00	1.03	1.02	1.00	1.01	1.20	1.22	1.29	1.30
Latin America & Carib.	0.98	0.98	1.00	1.00	1.06	1.05	1.07	1.07	1.12	1.13	1.16	1.16
North America	1.00	1.00	1.01	1.02	0.96	1.02	1.02	1.02	1.32	1.32	1.40	1.41
Other countries/areas	0.88	0.89	0.91	0.91	0.88	0.88	0.89	0.89	0.97	0.96	1.03	1.03
<b>World</b>	0.93	0.94	0.97	0.97	0.92	0.93	0.96	0.96	0.96	0.96	1.06	1.06



## 13 Educational outcomes

**More than 513 million adults in the region still lack basic skills in reading, writing and numeracy. Moreover, in South and South-West Asia, one in four children never make it to grade 5 of primary school.**

Although school systems have been enrolling many more children they have not always been able to retain those students. In 2005, countries in which a high proportion – more than 90 per cent – of primary students reached grade 5 included Brunei Darussalam; Hong Kong, China; the Republic of Korea; Malaysia; Viet Nam; Tonga; and Turkey. In most other countries in the region, the percentage of students reaching grade 5 was generally between 70 and 90 per cent, except in Bangladesh (65 per cent, 2003); Cambodia (62 per cent, 2005) and the Lao People's Democratic Republic (62 per cent, 2005). Among the subregions, Central Asia had the highest rate with 98.7 per cent.

Some country groups have achieved notable improvements. The percentage of children reaching grade 5 has increased significantly in landlocked developing countries between 2000 and 2005 from 79 to 90 per cent, and in SAARC countries between 1999 and 2004 from 63 to 72 per cent. However the situation in the SAARC countries has fluctuated: the rate rose from 63 per cent in 1999 to 76 per cent in 2002 but then slid back to 72 per cent in 2004. For the ASEAN countries, the rate fell between 2001 and 2005 from 81 to 79 per cent.

According to the 2009 EFA Global Monitoring Report, in the Asia-Pacific region 513 million

people are illiterate – 66 per cent of the world's total. Of the subregions, highest literacy rates – more than 90 per cent – are in Central Asia followed by South-East Asia. However, it is difficult to educate the remaining adults because they are the most vulnerable and most difficult to reach.

In many countries in the region, literacy is a major development issue. Of the 35 countries that had data between 1991 and 2007, nine had literacy rates below 80 per cent. The situation is particularly difficult in South Asia where one in three adults is illiterate – in Afghanistan, Bangladesh, Bhutan, India, Nepal and Pakistan. The rate is similar in Papua New Guinea. Nevertheless some countries in South Asia have seen significant improvements. Bangladesh, for example, between 1991 and 2007, increased the adult literacy rate from 35.3 to 53.5 per cent. But the greatest improvement was in Nepal which over the same period raised the level from 33 to 56.5 per cent.

It is important, however, to interpret literacy data carefully. Literacy statistics are usually drawn from censuses or household surveys that rely on self-assessments, or third-party reporting, or use educational attainment as a proxy. Generally these overestimate actual literacy levels, including functional literacy. A number of literacy assessment surveys have attempted to measure skills and literacy profiles in a more comprehensive manner, such as the Literacy Assessment Surveys in Cambodia (1999) and in the Lao People's Democratic Republic (2001).



Figure 13.1

Proportion of primary students reaching grade 5, Asia and the Pacific, 1991-2006

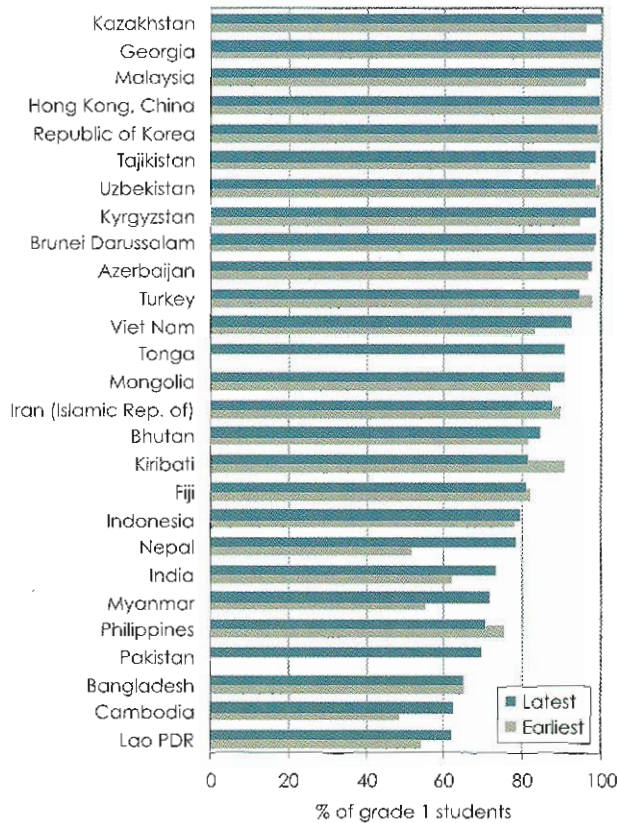
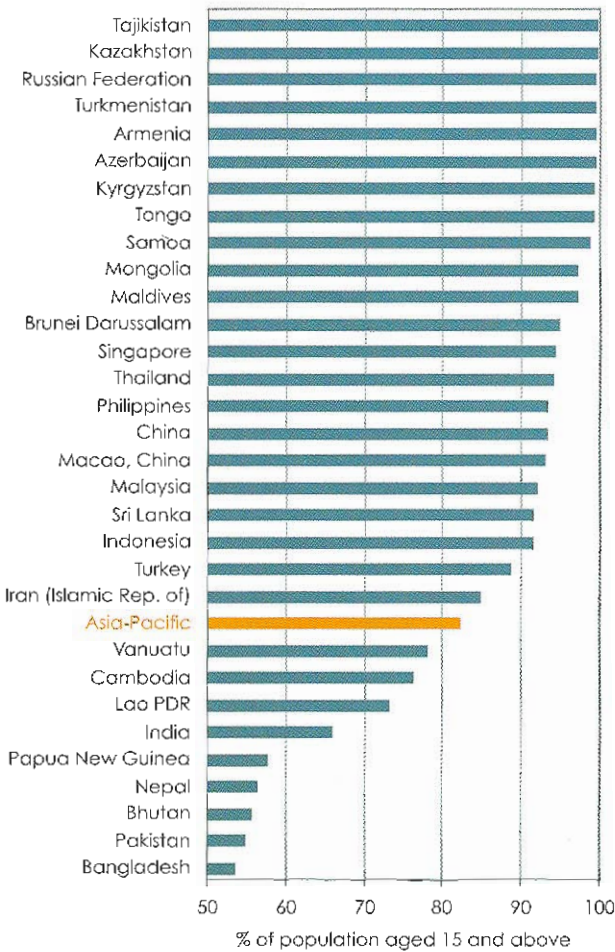


Figure 13.2

Adult literacy rates, Asia and the Pacific, 2007



**Children reaching grade 5 (% of grade 1 students)**

The percentage of a cohort of pupils enrolled in the first grade of primary-level education in a given school year who are expected to reach grade 5, regardless of repetition.

**Aggregates:** Averages are calculated using the population aged 5-14 as weight. Missing data have been imputed.

**Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 13 August 2008).

**Adult literacy rate (% of population aged 15 and above)**

The proportion of literate persons among adult population, expressed as a percentage of population aged 15 years and above. Literacy is defined as the ability to read and write with understanding a simple statement related to one's daily

life. It involves a continuum of reading and writing skills, and often includes also basic arithmetic skills. **Aggregates:** Aggregate values are calculated by UNESCO Institute for Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 1 December 2008).

**Gender parity index for adult literacy (ratio)**

The number of literate women divided by the number of literate men in the population aged 15 years and above.

**Aggregates:** Aggregate values are calculated by UNESCO Institute for Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 4 September 2008).



## 13.1 Children reaching grade 5 and literacy

	Children reaching grade 5			Adult literacy rate			Gender parity index for adult literacy		
	% of grade 1 students			% of population aged 15 and above			Ratio		
	Earliest	2001	Latest	Earliest	2005	2007	Earliest	2005	2007
<b>East and North-East Asia</b>	<b>87.5 (91)</b>					<b>94.1</b>			<b>0.94</b>
China	86.0 (91)			77.8 (90)	92.6	93.3	0.78 (90)	0.93	0.93
DPR Korea									
Hong Kong, China	99.8 (91)		99.3 (04)						
Japan	100.0 (91)								
Macao, China				91.3 (01)	92.5	93.0	0.92 (01)	0.93	0.94
Mongolia	87.2 (99)	88.5	90.9 (03)	97.8 (00)	97.5	97.3	1.00 (00)	1.00	1.01
Republic of Korea	99.3 (91)	99.2	98.8 (06)						
<b>South-East Asia</b>		<b>81.4</b>	<b>79.1 (05)</b>			<b>91.4</b>			<b>0.94</b>
Brunei Darussalam	98.0 (03)		98.3 (05)	87.8 (91)	94.2	94.9	0.89 (91)	0.96	0.97
Cambodia	48.6 (99)	63.6	62.2 (06)	67.3 (98)	75.0	76.3	0.72 (98)	0.77	0.79
Indonesia	77.9 (91)	85.9	79.5 (05)	81.5 (90)	90.6	91.4	0.86 (90)	0.92	0.93
Lao PDR	54.3 (99)	62.3	62.0 (05)	60.3 (95)	71.8	73.2	0.65 (95)	0.82	0.83
Malaysia	95.7 (91)		99.4 (04)	82.9 (91)	91.2	91.9	0.87 (91)	0.95	0.95
Myanmar	55.2 (00)	59.2	71.5 (05)	89.9 (00)			0.92 (00)		
Philippines	75.3 (01)	75.3	70.4 (05)	93.6 (90)	93.2	93.4	0.99 (90)	1.00	1.01
Singapore				89.1 (90)	93.9	94.4	0.87 (90)	0.94	0.94
Thailand				92.6 (00)	93.7	94.1	0.95 (00)	0.96	0.97
Timor-Leste									
Viet Nam	82.8 (99)	89.0	92.1 (05)	90.3 (99)			0.93 (99)		
<b>South and South-West Asia</b>		<b>64.6</b>	<b>73.1 (04)</b>			<b>65.2</b>			<b>0.73</b>
Afghanistan				28.0 (00)			0.29 (00)		
Bangladesh	64.9 (99)		65.1 (03)	35.3 (91)	51.5	53.5	0.58 (91)	0.79	0.82
Bhutan	81.3 (99)		84.4 (05)		52.8	55.6	0.59 (05)	0.59	0.63
India	62.0 (99)	61.4	73.0 (04)	48.2 (91)	64.5	66.0	0.55 (91)	0.69	0.71
Iran (Islamic Rep. of)	89.9 (91)	93.7	87.8 (02)	65.5 (91)	82.4	84.7	0.76 (91)	0.87	0.88
Maldives				96.0 (90)	96.9	97.0	1.00 (90)	1.00	1.00
Nepal	51.3 (91)	77.8	78.5 (05)	33.0 (91)	53.9	56.5	0.35 (91)	0.59	0.62
Pakistan			69.7 (04)	42.7 (98)	49.9	54.9	0.53 (98)	0.55	0.59
Sri Lanka	92.2 (91)			90.7 (01)		91.5	0.97 (01)		0.97
Turkey	97.6 (91)		94.1 (04)	79.2 (90)	88.2	88.7	0.84 (04)	0.84	0.84
<b>North and Central Asia</b>	<b>95.7 (99)</b>	<b>97.5 (00)</b>				<b>99.3</b>			<b>0.99</b>
Armenia				99.4 (01)	99.4	99.5	0.99 (01)	1.00	1.00
Azerbaijan	96.6 (99)	97.4	97.3 (05)	98.8 (99)	99.3	99.4	0.99 (99)	0.99	0.99
Georgia	99.4 (99)	94.1	100.0 (05)						
Kazakhstan	95.9 (00)	94.8	100.0 (06)	99.5 (99)	99.6	99.6	1.00 (99)	1.00	1.00
Kyrgyzstan	94.5 (99)	92.1	98.6 (05)	98.7 (99)	99.2	99.3	0.99 (99)	0.99	1.00
Russian Federation	94.8 (99)	98.7 (00)		99.4 (02)	99.5	99.5	1.00 (02)	1.00	1.00
Tajikistan	96.7 (99)	96.5	98.7 (05)	99.5 (00)	99.6	99.6	1.00 (00)	1.00	1.00
Turkmenistan				98.8 (95)	99.4	99.5	0.99 (95)	1.00	1.00
Uzbekistan	99.5 (99)	97.9	98.6 (05)	96.9 (00)			0.98 (00)		
<b>Pacific</b>	<b>87.1 (91)</b>					<b>92.8</b>			<b>0.99</b>
Australia	98.8 (91)								
American Samoa									
Cook Islands									
Fiji	82.1 (91)		81.0 (05)						
French Polynesia									
Guam									
Kiribati	90.7 (91)	69.7	81.4 (03)						
Marshall Islands									
Micronesia (F.S.)									
Nauru		25.4							
New Caledonia									
New Zealand									
Niue									
Northern Mariana Is.									
Palau									
Papua New Guinea	62.1 (91)			57.3 (00)	56.9	57.8			0.86
Samoa	92.4 (99)	95.9 (00)		97.9 (91)	98.6	98.7			0.99
Solomon Islands	78.0 (91)								
Tonga		94.6 (00)	90.9 (05)	98.9 (96)	99.2	99.2			1.00
Tuvalu		62.6							
Vanuatu	68.9 (99)			65.5 (94)	76.4	78.1			0.95
<b>Asia and the Pacific</b>						<b>82.3</b>			<b>0.87</b>
LLDC	79.3 (00)	88.4	89.6 (05)			77.5			0.88
LDC	61.2 (99)	58.6	65.2 (03)			60.4			0.81
ASEAN		81.4	79.1 (05)			91.5			0.94
ECO			81.7 (04)			72.4			0.80
SAARC	63.2 (99)	62.0	71.5 (04)			62.7			0.70
Central Asia	97.0 (99)	95.8	98.7 (05)			98.6			0.99
Pacific island dev. econ.	65.8 (91)					67.2			0.90
Low-income						67.1			0.82
Middle-income						84.3			0.88
High-income	99.7 (91)					99.0			0.99
<b>Other world regions</b>									
Africa	61.9 (91)		66.8 (03)						
Europe	97.9 (99)		97.9 (99)						
Latin America & Carib.	73.9 (91)	82.6	82.7 (03)						
North America	92.3 (99)	91.2	95.8 (05)						
Other countries/areas	79.3 (99)		81.5 (04)			80.7			0.82
<b>World</b>									



## 14 Financial and human resources for education

**In 2005, on average the Asia-Pacific region was spending 3.4 per cent of GDP on public education – below the world average of 4.7 per cent.**

Through the 2000 Dakar Framework for Action, the international community agreed to increase expenditure on education. Since then, however the Asia-Pacific region has seen no significant improvement. In 2004-2005, across the subregions, public education expenditure as a proportion of GDP ranged from 2.1 to 5.1 per cent. The proportion was lower in the low-income economies and least-developed countries – below 2.5 per cent – compared with 3.9 per cent in high-income economies.

Disturbingly, in some country groups the trend is downwards. In South and South-West Asia, between 1999 and 2005, from 4.1 to 3.5 per cent; in the SAARC countries, over the same period, from 4.1 to 3.1 per cent; and in Central Asia, between 2002 and 2005, from 3.0 to 2.4 per cent.

Among the 38 countries where data was available for at least two years between 1999 and 2006, education expenditure as a percentage of GDP increased in 22 countries but fell in 16. Changes vary from a sharp decline of 4.6 percentage points in Marshall Islands to an increase of 3.8 percentage points in Kiribati. The small Pacific island States, with the exception of the Cook Islands and Solomon Islands, spent more than 4 per cent of their GDP on education. Since 2005, 12 countries in the region have consistently spent more than 4 per cent – Australia, Bhutan, Fiji, Kiribati, Malaysia, Maldives, Marshall Islands, Mongolia, New Zealand, Palau, Tonga and Vanuatu. The region's lowest expenditure was in Cook Islands (0.2 per cent, 2001), Myanmar (1.3 per cent, 2001), Cambodia (1.7 per cent, 2004) and Pakistan (2.6 per cent, 2006).

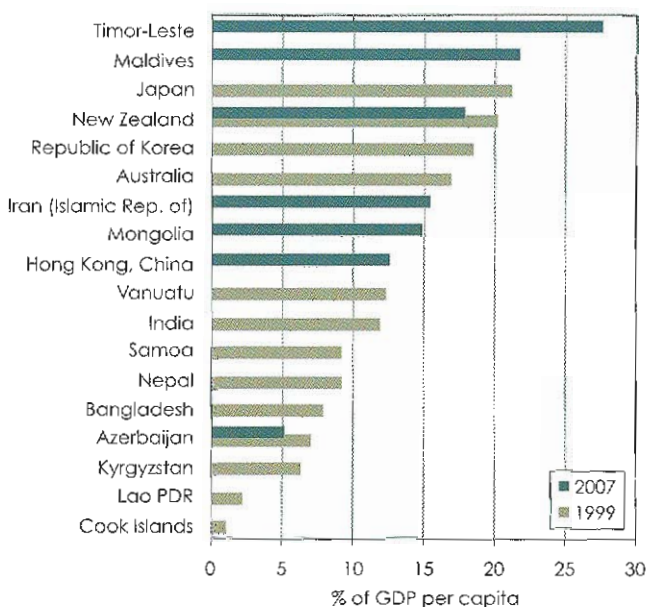
Another indicator of national commitment is the proportion of government expenditure devoted to education. Between 2005 and 2006, among the economies where data were available, only three –

Hong Kong, China; the Islamic Republic of Iran and Thailand – allocated more than 20 per cent. Among the countries where data was available for two time-periods (1999-2001) and (2005 onwards), the highest increases – more than 5 percentage points – were in Indonesia, the Lao People's Democratic Republic and Tajikistan.

Public investment at various education levels can also be assessed on the basis of spending per pupil as a percentage of per capita GDP. Over the period 2005-2006, from the 16 countries for which data were available, in the region, these proportions ranged from 5.2 per cent (Azerbaijan, 2006) to 27.6 per cent (Timor-Leste, 2007). The figure was also below 10 per cent in Bangladesh, India, Kazakhstan, the Lao People's Democratic Republic, the Philippines and Tajikistan. At the secondary level, the share was generally more than

**Figure 14.1**

**Public expenditure per pupil in the primary level as a proportion of GDP per capita, Asia and the Pacific, 1999-2007<sup>1</sup>**



<sup>1</sup> For Azerbaijan, Maldives, and New Zealand: data is for the year 2006.



## 14. Financial and human resources for education

10 per cent, except in Azerbaijan, Kazakhstan, the Lao People's Democratic Republic and the Philippines. At the tertiary level, there were even wider variations from 59.7 per cent (Hong Kong, China) to less than 6 per cent (Kazakhstan) of GDP per capita. However, this indicator is highly dependent on the country's GDP per capita, as well as on the extent to which people pay for private education.

The largest share of education expenditure goes on teachers' salaries. But the quality of education also depends on teachers' numbers, distribution, skills and competencies. One of the commonest indicators of the quality of education is the pupil-teacher ratio. In 2006, at the primary level there were on average 29 students per teacher. By subregion this ranged from a low of 18 in North and Central Asia to a high of 58 to 1 in SAARC. Generally this ratio has been coming down. Over the period 2000 to 2006, the biggest reductions – by three pupils fewer per teacher – were in ASEAN countries, to 23, and in high-income economies, to 20. The only subregion where the ratio went up was South and South-West Asia – from 39 to 58.

At the country level, the disparities are even more pronounced – ranging in 2006 from 13 in Azerbaijan and Brunei Darussalam to 50 in Cambodia. Within subregions some of the greatest contrasts were North and Central Asia, from 13 in Azerbaijan to 24 in Kyrgyzstan, and in South and South-West Asia, from 16 in Maldives to 39 in Pakistan. The biggest change was witnessed in Viet Nam with the pupil-teacher ratio decreasing from 30 in 2000 to 21 in 2006.

Pupil-teacher ratios are consistently higher at the secondary level. Across the region the average ratio is 20, ranging in 2006 from 10 in North and Central Asia to 29 in South and South-West Asia. The lowest secondary ratios were 8 in Azerbaijan and Armenia while the highest were in the Philippines (37), Nauru (34) and Myanmar (34).

Generally a smaller pupil-teacher ratio should improve both the quantity and quality of education. However, the capacity of teachers will also depend on their skills and competencies, their number of years of experience, and their opportunities for in-service training, and, at the secondary level especially, on the extent of specialization.

### **Pupils-to-teacher ratio in primary and in secondary education**

Average number of pupils (students) per teacher in primary/secondary education in a given school year, based on headcounts for both pupils and teachers. **Aggregates:** Aggregate values have been calculated by UNESCO Institute for Statistics. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 27 November 2008).

### **Public expenditure on education (% of GDP; % of total government expenditure)**

Current and capital expenditures on education by local, regional and national governments, including municipalities (household contributions are excluded), expressed as a percentage of the GDP and as a percentage of total government expenditure on all sectors (including health, education, social services, etc.). **Aggregates:** For

public expenditure on education (% of GDP): Averages are calculated using GDP in current United States dollars as weight. Any missing data values in a series have been imputed. For averages shares of total government expenditure (% of total government expenditure): None. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 2 December 2008 for % of GDP and on 27 November 2008 for % of total government expenditure).

### **Public expenditure per pupil in primary, secondary and tertiary education (% of GDP per capita)**

Total public expenditure per pupil at each level of education, expressed as a percentage of GDP per capita. **Aggregates:** None. **Source:** UNESCO Institute for Statistics, Data Centre (online database, accessed on 27 November 2008).



## 14.1 Pupil-teacher ratio

	Pupil-teacher ratio in primary education							Pupil-teacher ratio in secondary education						
	2000	2001	2002	2003	2004	2005	2006	2000	2001	2002	2003	2004	2005	2006
<b>East and North-East Asia</b>	<b>20.1</b>	<b>19.8</b>	<b>19.9</b>	<b>21.2</b>	<b>21.1</b>	<b>18.9</b>	<b>18.5</b>	<b>17.0</b>	<b>18.4</b>	<b>18.3</b>	<b>18.1</b>	<b>18.0</b>	<b>17.8</b>	<b>17.1</b>
China		19.4	19.6	21.1			18.3	17.1	18.9	18.9	18.6			17.5
DPR Korea														
Hong Kong, China	21.3	21.1	20.2	19.8	18.8	18.3	17.8							17.5
Japan	20.7	20.4	20.0	19.6	19.2	18.9	18.7	14.0	13.8	13.5	13.2	12.9	12.6	12.4
Macao, China	30.0	28.3	27.5	26.0	24.4	23.2	21.5	23.9	24.0	24.0	24.8	23.2	22.4	21.5
Mongolia	32.6	32.3	31.8	30.8	32.9	34.2	33.0	19.9	21.7	21.9	21.5	22.7	22.4	20.3
Republic of Korea	32.1	32.0	31.3	30.1	29.0	27.9	26.6	21.0	19.9	18.2	17.7	17.8	18.0	18.0
<b>South-East Asia</b>	<b>25.9</b>	<b>25.4</b>	<b>24.5</b>	<b>23.8</b>	<b>23.4</b>	<b>23.3</b>	<b>22.9</b>	<b>21.0</b>	<b>19.9</b>	<b>19.5</b>	<b>19.9</b>	<b>19.8</b>	<b>18.0</b>	<b>17.5</b>
Brunei Darussalam	13.7	13.6	12.7	12.2	10.9	10.1	12.5	10.9	11.0	11.2	10.6	10.2	10.1	10.8
Cambodia	50.1	52.9	56.3	56.2	55.1	53.2	50.4	18.5	19.6	21.6	23.6	25.1		28.2
Indonesia	22.4	22.2	20.9	20.3	20.1	20.4	20.3	15.8	14.3	13.6	14.2	14.2	11.8	11.8
Lao PDR	30.1	29.9	29.9	30.6	31.4	31.5	31.0	21.3	22.7	24.1	25.7	26.6	24.8	24.7
Malaysia	19.6	19.7	18.9	17.5	17.5	16.9		18.4	17.9	17.7	17.7	17.4	17.0	
Myanmar	32.8	32.3	32.6	32.8	32.0	30.9	29.9	31.9	30.8	31.2	32.6	33.0	33.1	33.8
Philippines		35.2	35.4	34.9	34.5	35.1	34.6		36.4	38.3	37.1	37.5	37.9	37.3
Singapore	25.6	25.1	24.4	24.9	24.3	23.5	22.6					19.0	18.5	18.4
Thailand	20.8	19.1	19.1	19.1			18.3		24.0	24.0	24.0			21.7
Timor-Leste		50.8	50.8	46.8	50.7	34.2			28.4	28.4		27.6	23.7	
Viet Nam	29.5	28.0	26.3	24.7	23.0	21.6	20.7	28.0	26.9	26.3	25.6	24.5	23.9	22.7
<b>South and South-West Asia</b>	<b>38.8</b>	<b>38.8</b>	<b>39.1</b>	<b>39.4</b>	<b>38.4</b>	<b>47.6</b>	<b>51.4</b>	<b>32.3</b>	<b>32.3</b>	<b>31.3</b>	<b>31.1</b>	<b>29.9</b>	<b>29.1</b>	<b>29.4</b>
Afghanistan														
Bangladesh	57.1	55.1	55.7	53.5	50.9			38.4	37.5	34.4	31.1	27.4		
Bhutan	41.1	39.5	37.9			31.1	29.2	32.5	32.4				28.1	22.8
India	40.0	40.1	40.7	41.3	40.2			33.6	33.4	32.3	32.3	32.7		
Iran (Islamic Rep.)	26.1	25.3	24.4	23.6	20.0	19.2	19.4	29.6	29.4	28.9	28.4			
Maldives	22.7	22.5	20.0	18.2	22.7	20.1	16.4	15.3	13.1	15.0	13.7			
Nepal	42.6	37.0	39.9	35.7	35.8	39.7	39.7	30.2	33.1	29.0	34.7			
Pakistan	33.0	34.7	35.0	34.8	37.5	38.3	39.0					41.9		
Sri Lanka		26.3	24.8	23.4	22.5	21.9	23.5			19.6	19.7	19.5		
Turkey														
<b>North and Central Asia</b>	<b>19.0</b>	<b>18.6</b>	<b>18.5</b>	<b>18.2</b>	<b>17.9</b>	<b>17.7</b>	<b>17.7</b>	<b>11.2</b>	<b>11.3</b>	<b>11.3</b>	<b>11.1</b>	<b>10.8</b>	<b>10.4</b>	<b>10.1</b>
Armenia		20.3	20.3	18.8	21.8	21.2	21.2			6.9	6.9	7.8	8.7	8.3
Azerbaijan	18.7	17.1	16.2	15.3	14.3	13.4	12.5	7.8	8.3	8.4	8.7	8.5	8.4	8.1
Georgia	16.8	15.6	13.9	14.5	14.5			7.5	7.6	9.4	9.2	9.1		
Kazakhstan	18.7	18.7	18.9	18.5	17.9	17.3	16.8	11.3	11.5	11.9	11.7	11.3	11.0	10.9
Kyrgyzstan	24.1	24.4	24.0	24.5	24.2	24.5	23.8	13.3	13.7	13.4	14.0	13.7	13.4	13.5
Russian Federation	17.6	17.0	17.0	16.6		16.7	17.1				10.8	10.3	9.5	9.0
Tajikistan	21.8	21.8	21.8	22.4	21.5	21.3	22.2	16.4	16.9	17.9	17.3	15.7	16.4	16.5
Turkmenistan														
Uzbekistan	21.4	21.7	21.3	21.1	20.1	19.9	19.4	11.5	12.0	12.2	12.9	13.0	13.3	13.0
<b>Pacific</b>	<b>20.3</b>	<b>20.2</b>	<b>19.3</b>	<b>18.9</b>	<b>18.5</b>	<b>18.6</b>	<b>18.7</b>	<b>14.4</b>	<b>13.9</b>	<b>14.2</b>	<b>14.0</b>	<b>13.7</b>	<b>14.0</b>	<b>14.0</b>
Australia														
American Samoa														
Cook Islands	17.8	17.8	17.7	15.7		16.1		13.9	14.7	15.3	15.0		15.6	
Fiji	28.1	28.0	27.8	28.2	28.2	28.2		20.2	19.1	18.6	24.6	22.4		
French Polynesia														
Guam														
Kiribati	31.7	23.6	22.4	26.5	24.7	24.7		17.6	23.6	18.4	19.9	18.6	17.0	
Marshall Islands			16.9	16.9						16.7	16.7			
Micronesia (F.S.)														
Nauru	21.5	25.3	18.6	21.8	26.4	27.9	26.8	17.4	18.7	22.9	19.0	13.4	15.4	34.0
New Caledonia														
New Zealand	18.4	17.5	17.8	17.8	16.4	16.3	15.9	15.5	15.0		14.2	13.2	14.7	14.7
Niue	14.7	18.0	14.8		11.5	11.9		11.8	11.5			8.4	8.2	
Northern Mariana Is.														
Palau	15.7					12.5		15.1						
Papua New Guinea	35.4	36.2	37.7	36.2	35.5	34.6	35.8							
Samoa	24.0	25.0	26.9	25.0	25.0			21.2	20.9		20.8	20.8		
Solomon Islands								10.1						
Tonga	22.1	20.7	22.1	21.7	20.3	21.3	22.3	14.6	13.8	14.4				
Tuvalu	19.7	18.3	16.7	17.9	19.2									
Vanuatu	22.5	23.7	23.2	21.7	20.0			24.7	15.1	13.9				
<b>Asia and the Pacific</b>	<b>26.6</b>	<b>26.3</b>	<b>26.4</b>	<b>27.5</b>	<b>27.4</b>	<b>28.2</b>	<b>28.7</b>	<b>20.6</b>	<b>21.2</b>	<b>21.1</b>	<b>21.0</b>	<b>20.7</b>	<b>20.2</b>	<b>19.8</b>
LLDC	27.2	26.3	28.9	29.9	29.9	31.3	31.5	12.1	12.6	12.8	13.2	13.2	13.6	13.4
LDC	47.4	45.7	47.4	46.6	45.3	46.9	46.3	34.3	32.8	30.3	29.0	26.7	25.1	25.8
ASEAN	25.9	25.4	24.4	23.8	23.4	23.3	22.9	20.9	19.9	19.5	19.9	19.8	17.9	17.5
ECO	28.4	28.6	28.8	28.9	28.5	28.6	28.8	19.8	20.2	20.6	20.5	18.9	18.0	18.2
SAARC	40.8	40.8	41.5	41.8	41.1	53.2	58.4	34.2	33.8	32.7	32.4	32.2	31.4	31.6
Central Asia	20.6	20.4	20.0	19.8	19.1	18.7	18.3	10.6	11.0	11.4	11.7	11.6	11.8	11.6
Pacific island dev. econ.	30.0	29.9	30.5	29.6	28.3	30.1	30.7	19.6	20.1	20.1	20.9	20.3	20.2	20.3
Low-income	36.3	36.0	36.5	36.0	35.9	36.4	36.3	25.9	25.5	25.4	24.9	24.1	23.1	23.1
Middle-income	25.3	25.1	25.1	26.4	26.3	27.2	27.7	20.0	20.8	20.7	20.6	20.4	19.9	19.5
High-income	22.5	22.3	21.7	21.2	20.6	20.2	19.9	15.3	15.0	14.6	14.3	14.1	14.0	13.9
<b>Other world regions</b>														
Africa	35.7	37.0	37.0	37.9	37.8	38.4	38.5	19.9	20.0	20.4	20.6	21.3	21.7	21.9
Europe	15.6	15.1	14.8	14.6	14.6	14.6	14.3	12.3	12.2	12.0	12.0	11.9	11.7	11.3
Latin America & Carib.	25.7	24.6	24.8	23.9	23.4	23.1	22.7	19.4	18.9	18.8	17.6	16.8	16.5	16.4
North America	15.6	15.2	15.6	14.8	14.8	14.4	14.4	15.2	14.9	15.4	15.0	15.1	15.2	15.2
Other countries/areas	19.7	19.7	20.0	19.6	19.6	19.5	19.5	16.1	15.6	15.7	15.7	15.8	16.2	16.3
<b>World</b>	<b>25.5</b>	<b>25.3</b>	<b>25.4</b>	<b>25.9</b>	<b>25.9</b>	<b>26.3</b>	<b>26.6</b>	<b>18.3</b>	<b>18.5</b>	<b>18.5</b>	<b>18.4</b>	<b>18.3</b>	<b>18.0</b>	<b>17.8</b>



## 14. Financial and human resources for education

### 14.2 Financial resources for education

	Public expenditure on education								Public expenditure on education							
	% of GDP								% of total government expenditure							
	1999	2000	2001	2002	2003	2004	2005	2006	1999	2000	2001	2002	2003	2004	2005	2006
<b>East and North-East Asia</b>	3.3	3.4	3.3	3.3	3.4	3.3	3.2									
China	1.9								13.0							
DPR Korea																
Hong Kong, China			3.9	4.0	4.3	4.6	4.2	3.9			22.9	21.9	23.3	23.3	23.0	23.9
Japan	3.6	3.7	3.6	3.6	3.7	3.7	3.5		9.3	10.5	10.5	10.6	9.7	9.8	9.5	
Macao, China	3.9	3.8	3.1	3.1	3.0	2.4	2.4	2.3	13.5	13.9	16.0	16.3	15.2	14.0	14.1	14.9
Mongolia	6.0	5.8	6.9	7.9	6.4	4.7										
Republic of Korea	3.8		4.3	4.2	4.6	4.6	4.4		13.1		14.7	15.5	15.0	16.5	15.3	
<b>South-East Asia</b>			4.2			3.7										
Brunei Darussalam	4.9	3.7							9.3	9.1						
Cambodia	1.0	1.7	1.7	1.7	1.8	1.7			8.7	14.6						
Indonesia			2.5	2.6	3.2	2.7	2.9	3.6			11.5	14.3	16.0	14.2	14.9	17.2
Lao PDR	1.0	1.5	2.0	2.7	2.3	2.3	2.3	3.0		7.4	8.8	10.6	11.0	10.8	11.7	14.0
Malaysia	5.7	6.2	7.9	8.1	8.0	5.9			25.2	26.7	20.0	20.3	28.0	25.2		
Myanmar	0.6	0.6	1.3						8.1	8.7	18.1					
Philippines		3.5	3.2	3.2	3.2	2.7	2.5		13.9	14.0	17.8	17.2	16.4	15.2		
Singapore			3.7													
Thailand	5.0	5.4	5.0			4.2	4.2	4.3	28.1	31.0	28.3			26.8	25.0	25.0
Timor-Leste																
Viet Nam																
<b>South and South-West Asia</b>	4.1	3.9			3.6	3.6	3.5									
Afghanistan																
Bangladesh	2.4	2.4	2.5	2.3	2.4	2.2		2.5	15.3	15.0	15.7	15.8	15.5	14.8		14.2
Bhutan		5.4	5.6				7.0			13.8	12.9				17.2	
India	4.5	4.4			3.7	3.4	3.2		12.7	12.7			10.7			
Iran (Islamic Rep.)	4.5	4.4	4.4	4.9	4.8	4.9	4.7	5.1	18.7	18.3	20.4	21.7	17.7	17.9	22.8	18.6
Maldives				8.1	8.1	7.4	7.8	7.9							15.0	
Nepal	2.9	3.0	3.7	3.2	3.1				12.5	13.2	13.0	13.9	14.9			
Pakistan	2.6	1.8			1.9	1.9	2.3	2.6						6.4	10.9	12.2
Sri Lanka																
Turkey	4.0	3.5	3.7	3.6	3.7	4.0										
<b>North and Central Asia</b>		3.0	3.1	3.7	3.6	3.4	3.6									
Armenia	2.2	2.8	2.5	2.1	2.1	2.5	2.7	2.7		12.8	11.9	11.0	11.1	14.2	14.6	15.0
Azerbaijan	4.2	3.9	3.5	3.2	3.3	3.3	2.3	2.0	24.4	23.8	23.1	20.7	19.2		19.6	17.4
Georgia	2.2	2.2	2.1	2.2	2.1	2.9	2.5	3.0	10.3	11.7	11.5	11.8	11.6	13.1	8.8	9.3
Kazakhstan	3.9	3.3	3.1	3.0	3.0	2.3	2.3		14.4	12.1						
Kyrgyzstan	3.4	2.9	3.1	4.4	4.4		4.9	5.6			18.6					
Russian Federation		2.9	3.1	3.8	3.7	3.5	3.8			10.6	11.5	10.7	12.3	12.9		
Tajikistan	2.1	2.3	2.4	2.8	2.4	2.8	3.5	3.4	11.8			17.8	16.3	16.9	18.0	19.0
Turkmenistan																
Uzbekistan																
<b>Pacific</b>	5.3	5.2	5.3	5.2	5.2	5.1	5.1									
Australia	5.1	5.0	5.1	5.0	4.9	4.9	4.8			13.3						
American Samoa																
Cook Islands	0.3	0.2	0.2						13.1							
Fiji	5.2	5.8	5.6	6.2	6.2	6.2			18.3	22.8	19.4	20.0				
French Polynesia																
Guam																
Kiribati	14.0	15.3	16.8	17.8												
Marshall Islands	16.5	14.5	8.8	8.7	12.1	11.8							15.8			
Micronesia (F.S.)	7.3	7.3														
Nauru																
New Caledonia																
New Zealand	6.9		6.8	6.8	6.7	6.8	6.5	6.2			16.1	16.2	20.9		15.5	
Niue												10.1				
Northern Mariana Is.																
Palau		9.8	9.7	10.3												
Papua New Guinea																
Samoa	4.5	4.0	4.3	4.3					13.3	13.3	14.6	13.7				
Solomon Islands	3.3															
Tonga	6.8	6.3	5.8	4.9	5.3	5.0				16.5	13.9	13.1	13.5			
Tuvalu																
Vanuatu	6.6	7.8	9.8	9.3	9.5				17.4	16.9	26.7					
<b>Asia and the Pacific</b>	3.5	3.6	3.5	3.5	3.6	3.5	3.4									
LLDC			3.3													
LDC	2.3	2.3	2.5	2.3	2.4	2.3										
ASEAN			4.2			3.7										
ECO	3.9	3.4	3.5	3.6	3.6	3.8										
SAARC	4.1	3.9			3.4	3.1	3.1									
Central Asia				3.0	3.0	2.6	2.4									
Pacific island dev. econ.																
Low-income	2.4	2.0			2.1	2.1										
Middle-income	3.1															
High-income	3.8	3.8	3.8	3.9	4.0	4.0	3.9									
<b>Other world regions</b>																
Africa																
Europe	5.0	5.0	5.0	5.2	5.3	5.2	5.2									
Latin America & Carib.	4.1	4.3	4.4	4.5		4.5	4.6									
North America	5.1		5.7	5.7	5.8	5.6	5.3									
Other countries/areas		4.0	4.2	4.2	4.3	3.7										
<b>World</b>	4.6		4.8	4.9	5.0	4.8	4.7									



## 14.3 Public expenditure on education

	per pupil, primary education				per pupil, secondary education				per student, tertiary education			
	% of GDP per capita				% of GDP per capita				% of GDP per capita			
	Earliest	2000	2005	Latest	Earliest	2000	2005	Latest	Earliest	2000	2005	Latest
<b>East and North-East Asia</b>												
China					11.5 (99)				90.1 (99)			
DPR Korea												
Hong Kong, China		12.4 (01)	14.7	12.5 (07)		17.7 (01)	19.6	16.5 (07)		65.0 (03)	59.7	47.3 (07)
Japan	21.1 (99)	21.6	22.2		20.9 (99)	21.2	22.4		15.1 (99)	17.7	19.2	
Macao, China		8.8	8.0 (03)			11.9			64.1 (99)	64.0	22.2	19.2 (06)
Mongolia		31.8 (02)		14.9 (07)		18.2 (02)		14.8 (07)		33.2 (02)		2.2 (07)
Republic of Korea	18.4 (99)		18.8		15.7 (99)		23.4		8.4 (99)		9.3	
<b>South-East Asia</b>												
Brunei Darussalam												
Cambodia		5.9	5.6 (04)			6.4 (01)				43.7 (01)		8.5 (07)
Indonesia												
Lao PDR	2.2 (99)	3.9	9.1		4.3 (99)	5.5	4.7		66.5 (99)	68.3	25.2	
Malaysia		13.0	14.0 (04)			22.6	20.3 (04)			84.3	68.3 (04)	
Myanmar			2.5 (03)			6.8 (01)	2.7 (03)			27.5 (01)		
Philippines		12.6	8.6			10.8	9.1			15.1	11.5	
Singapore		11.4 (01)										
Thailand		17.3	13.8 (04)		15.5 (01)		15.2 (04)			35.1	24.5	28.0 (06)
Timor-Leste				27.6 (07)								
Viet Nam												
<b>South and South-West Asia</b>												
Afghanistan												
Bangladesh	7.9 (99)	8.6	8.3		13.4 (99)	11.9	16.0		50.1 (99)	45.4	54.0	46.2 (06)
Bhutan		9.8				70.1						
India	11.9 (99)	14.5	8.9		24.7 (99)	24.4	16.7			90.8	57.8	
Iran (Islamic Rep.)	9.1 (01)		9.9	15.4 (07)	9.9 (01)		11.2	22.3 (07)	34.8 (01)		23.2	27.7 (07)
Maldives	18.9 (03)		21.5	21.8 (06)				28.9 (06)				
Nepal	9.1 (99)	10.3	11.4 (03)		13.1 (99)	11.6	9.6 (03)			141.6	65.4 (03)	
Pakistan												
Sri Lanka												
Turkey		11.2	14.1 (04)		14.3 (01)		17.8 (04)		45.5 (00)	45.5	40.7 (04)	
<b>North and Central Asia</b>												
Armenia												
Azerbaijan	6.9 (99)	7.6	6.0	5.2 (06)	17.0 (99)	18.2	9.6	8.0 (06)	19.1 (99)	15.9	9.8	11.2 (07)
Georgia												
Kazakhstan		12.0 (02)	9.8			9.9 (02)	7.7			11.4 (02)	5.6	
Kyrgyzstan	6.2 (99)	5.3	7.6 (02)		11.9 (99)	9.9	14.3 (02)		27.7 (99)	16.7	21.8	22.3 (06)
Russian Federation										12.1 (03)	12.6	
Tajikistan		7.3 (02)	8.8			8.9 (02)	11.4			24.8 (02)	14.3	11.8 (07)
Turkmenistan												
Uzbekistan												
<b>Pacific</b>												
Australia	16.9 (99)	17.0	17.3		15.4 (99)	14.7	15.4		27.2 (99)	26.8	23.1	
American Samoa												
Cook Islands	1.0 (99)	0.9			1.2 (99)	1.0						
Fiji			17.5 (04)				16.2 (04)				63.0 (04)	
French Polynesia												
Guam												
Kiribati	37.1 (99)	37.3										
Marshall Islands	71.7 (99)	25.7 (02)			28.0 (99)	30.4 (02)				80.7 (02)		
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	20.1 (99)	20.2	19.5	17.8 (06)	24.3 (99)	23.0	22.6	20.6 (06)	41.6 (99)		25.4	26.4 (06)
Niue												
Northern Mariana Is.												
Palau		44.8 (01)				9.5 (01)				81.5 (01)		
Papua New Guinea												
Samoa	9.2 (99)	8.2	12.1 (02)		10.1 (99)	9.6	10.5 (01)		213.0 (99)	137.5		
Solomon Islands												
Tonga		13.8 (02)	12.2 (04)			9.8 (02)	9.4 (04)				159.6 (04)	
Tuvalu												
Vanuatu	12.3 (99)	15.1			78.4 (99)	70.0			128.9 (99)	166.4		
<b>Asia and the Pacific</b>												
LLDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific island dev. econ.												
Low-income												
Middle-income												
High-income												
<b>Other world regions</b>												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
<b>World</b>												

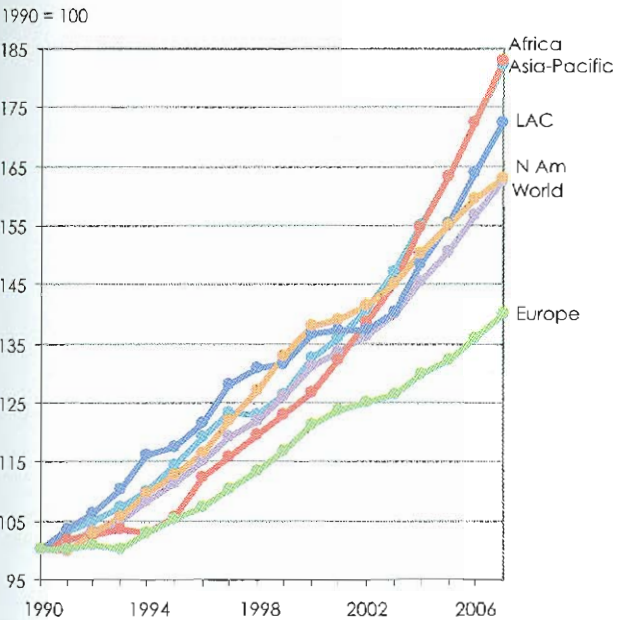


# 15 Economic growth

Except for the period of the 1997-1998 crisis, economic growth in Asia and the Pacific has been robust over the past two decades. The region's real GDP nearly doubled between 1990 and 2007.

Since 1990 the world's developing regions have benefited from accelerated economic growth. Asia and the Pacific has been one of the fastest growing – in 2007, GDP growth was 5.8 per cent, second only to Africa at 6.1 per cent. Asia and the Pacific is now one of the world's most important sources of economic output: in 2007, it was responsible for 27.6 per cent of global output – 1.3 percentage points higher than in 1990 (shares calculated in current prices).

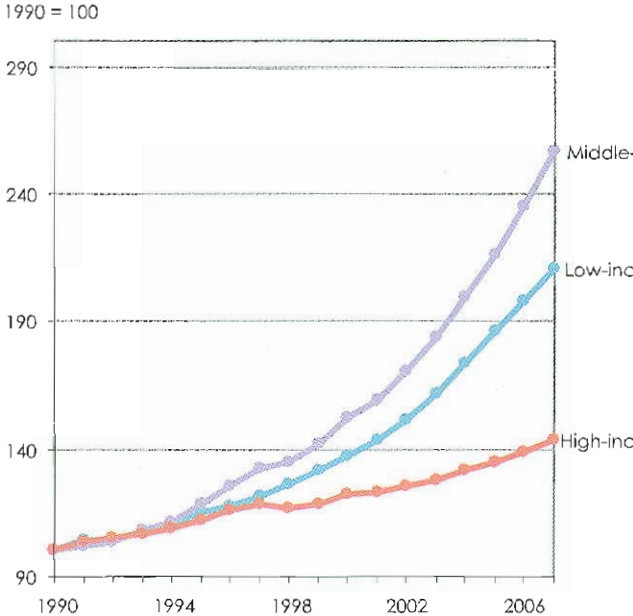
**Figure 15.1** Index of change in GDP, world regions, 1990-2007



Within Asia and the Pacific, the best performers have been the middle-income economies. In 2001 their growth rate was 4.9 per cent but in 2007 they had reached a remarkable 9.1 per cent. Low-income economies are also making progress,

but at a slower pace. And compared with the middle-income economies, their momentum since 2004 appears to have slowed. The high-income economies have been growing more slowly: in most years since 1990 growth has been between 2 and 4 per cent.

**Figure 15.2** Index of change in GDP, by income groupings of Asia-Pacific countries, 1990-2007



Some of the fastest growth has been in North and Central Asia – the result of high commodity prices and heavy public and private investment. In 2007, economies in the subregion grew on average by 8.4 per cent. The most rapid growth was in Azerbaijan (25.1 per cent), but GDP was also growing elsewhere: Georgia (12.4 per cent), Armenia (11.1 per cent), Turkmenistan (8.5 per cent), Kazakhstan (8.7 per cent), Kyrgyzstan (8.2 per cent), the Russian Federation (8.1 per cent), Tajikistan (7.8 per cent) and Uzbekistan (7.4 per cent).

Other subregions had mixed performances. In 2007, South and South-West Asia achieved a record 7.4 per cent GDP growth – though they ranged



from Bhutan with a historically high rate of 22.4 per cent to Nepal where growth was only 2.5 per cent. South-East Asia too had large differences between the best and worst performers – from 16.2 per cent in Timor-Leste to 0.4 per cent in Brunei Darussalam. Similarly, in East and North-East Asia growth ranged from 27.3 per cent in Macao, China to 1.6 per cent in Democratic People's Republic of Korea.

In the Pacific subregion aggregate GDP in 2007 was 3.8 per cent, though this was determined to a large extent by that of Australia. Among the small island States, however, there was significant variation. The tiny economy of Palau, achieved a record-breaking 55 per cent – the result of large inflows of external assistance and a tourist boom. In sharp contrast, in 2007 the economies of Tonga and Fiji both contracted by nearly 4 per cent – suffering respectively from civil disorder and a military coup which hampered their tourism sectors and severely affected the rest of their economies.

The least developed countries have performed fairly well. Since the mid-1990s especially, they have registered rising growth – 6.7 per cent in 2007. The pattern has been similar in the landlocked developing countries for which growth in 2007 was 10 per cent.

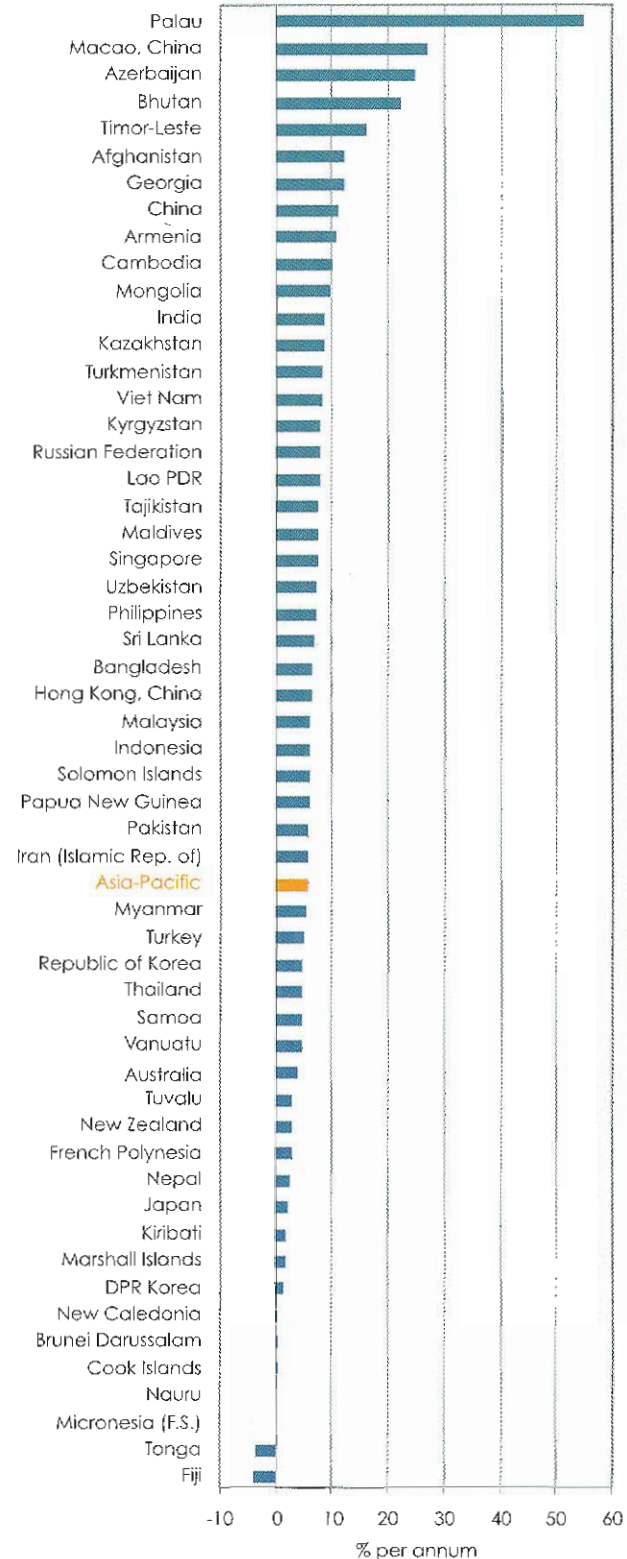
Commentary on economic growth in Asia and the Pacific would be incomplete without a separate focus on the region's two giant economies. China alone contributes 20.1 per cent of the region's GDP and in 10 of the past 18 years has recorded double-digit growth. India with 8.9 per cent of regional GDP has also had rapid growth particularly in recent years.

In assessing economic growth it is also important to consider trends in GDP growth per capita. In Asia and the Pacific the 2007 average was \$2,603. While in global terms this is still a relatively low figure, the growth rate has been more rapid than in other global regions – 4.7 per cent in 2007, compared with 3.9 per cent in Latin America and the Caribbean, 3.7 per cent in Africa, 2.7 per cent in Europe, and 1.2 per cent in North America. In 2007, eight of the region's economies reached double-digit growth in per capita income. In decreasing order these were: Palau; Macao, China; Azerbaijan; Bhutan; Georgia; Timor-Leste; Armenia; and China.

Growth in per capita GDP is strongly influenced by population growth. In 2007, Africa's GDP growth rate at 6.1 per cent was higher than the Asia-Pacific rate of 5.8 per cent and the 5.2 per

Figure 15.3

GDP growth, Asia and the Pacific, 2007



cent in Latin America and the Caribbean. But, as a result of its high population growth rate, Africa had the lowest per capita GDP growth rate of these three global regions.

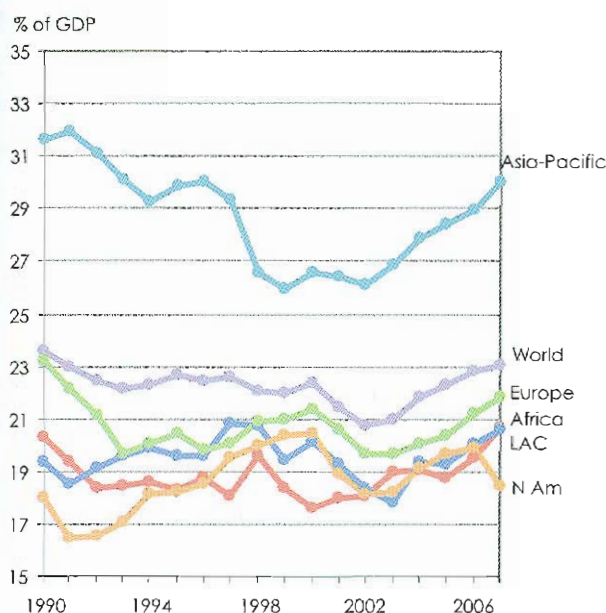
In Asia and the Pacific a high proportion of GDP results from domestic investment. The proportion dropped several percentage points after



1997-1998 but has since returned to near pre-crisis levels. Indeed the baseline investment rates were so high that between 1990 and 2007 only the least developed countries and SAARC members managed to increase their share of domestic investment in GDP.

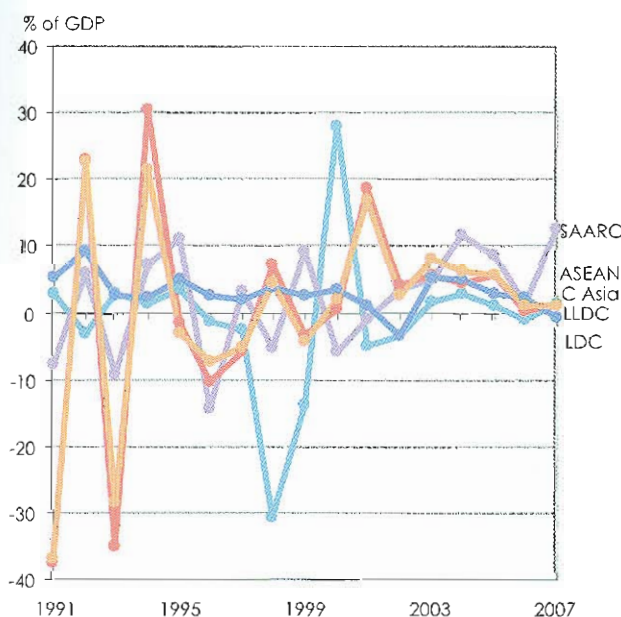
**Figure 15.4**

**Gross domestic investment, world regions, 1990-2007**



**Figure 15.5**

**Gross domestic investment, selected Asia-Pacific country groupings, 1991-2007**

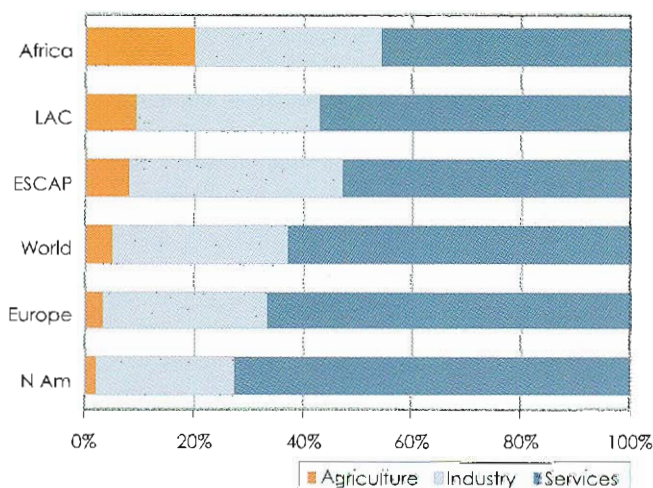


To see which parts of the economy are contributing to economic growth, one can consider value added by sector. During 1990-2007 for Asia and the Pacific as a whole, the share of agriculture in value added declined from 9.5 to 8.1 per cent, that of industry grew from 37.6 to 39 per cent, while that of services remained stable at 52.9 per cent.

Except in the least developed countries of the region, industry has generally grown faster than agriculture. Indeed one of the most notable aspects of growth in Asia and the Pacific region has been the phenomenal growth in industry in the middle-income economies – which in value-added terms has made this the world's most industrialized region.

**Figure 15.6**

**Value added by sector, the regions of the world, 2007**



When assessing the significance of different sectors, however, it is important to look beyond value added and consider their contribution to employment. Agriculture may have only a small share of value added but it still employs the largest share of people and in many developing countries is critical for food security.

This *Yearbook* only covers economic growth up to 2007 which has generally been robust. During 2008, the global economic prospects changed rapidly. For a recent detailed analysis, see the *Economic and Social Survey for Asia and the Pacific*.



**GDP (1990 US dollars) (million 1990 United States dollars)**

The total market value of all final goods and services produced within the country in a given period of time, expressed at constant US dollars. In a series expressed in constant prices, the quantity component of the values changes every period while the price components for each good and service is kept at the level of the base period.

**Aggregates:** Sum of individual country values. **Source:** United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 11 September 2008).

**GDP (Current US dollars) (million United States dollars)**

Gross domestic product (GDP) at current prices is GDP at prices of the current reporting period. Also known as nominal GDP. Price and quantity components of each value are those recorded for the reporting period.

**Aggregates:** Sum of individual country values. **Source:** United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 11 September 2008).

**Average annual GDP (1990 US dollars) growth rate (% per annum)**

Annual growth rates are calculated as an annual average using the geometric growth model. See Statistical methods.

**Aggregates:** Averages are the annual rate of change of the regional aggregates. **Source:** Calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 11 September 2008).

**GDP per capita (1990 United States dollars; current US dollars; 2005 PPP dollars)**

GDP divided by the population size, expressed in constant US dollars (sensitive to exchange rates) and in 2005 international PPP dollars (adjusts for purchasing power and eliminates the volatility caused by US\$ market exchange rate). **Aggregates:** Averages are calculated using the total population figures as weight. **Source:** United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 16 September 2008).

**Average annual GDP per capita (1990 US dollars) growth rate (% per annum)**

Annual growth rates of per capita GDP are calculated as an annual average using constant 1990 prices and the geometric growth model. **Aggregates:** Averages are the annual rate of change of the regional aggregates. **Source:** Calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database. (online database, accessed on 23 September 2008).

**Gross domestic investment rate (percentage of GDP)**

The sum of gross fixed capital formation and changes in stocks divided by the total GDP. **Aggregates:** Averages are calculated using the GDP in current US dollars as weight. **Source:** Calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database. (online database, accessed on 22 September 2008).

**Average annual gross domestic investment growth rate (% per annum)**

The average annual rate of change in gross domestic investment in constant national prices. **Aggregates:** Averages are the annual rate of change of the regional aggregates. **Source:** Calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database. (online database, accessed on 23 September 2008).

**GDP by sector: Agriculture (% of total value added)**

The proportion of gross value added by agriculture sector (agriculture, hunting, forestry and fishing) to GDP. **Aggregates:** Averages are calculated using GDP in 1990 United States dollars as weight. **Source:** United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 22 September 2008).

**GDP by sector: Industry (% of total value added)**

The proportion of gross value added by industry (construction, mining, manufacturing and utilities) to GDP. **Aggregates:** Averages are calculated using GDP in 1990 United States dollars as weight. **Source:** United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 22 September 2008).

**GDP by sector: Services (% of total value added)**

The proportion of gross value added by services sector (transport, storage and communication; wholesale, retail, restaurant, hotels and other activities) to GDP. **Aggregates:** Averages are calculated using GDP in 1990 United States dollars as weight. **Source:** United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 22 September 2008).

**Average annual growth rate of value added: Agriculture (% per annum)**

The average annual rate of change of the total value added by agriculture in constant 1990 United States dollars. **Aggregates:** Averages are the annual rate of change of the regional aggregates. **Source:** Calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 22 September 2008).

**Average annual growth rate of value added: Industry (% per annum)**

The average annual rate of change of the total value added by industry in constant 1990 United States dollars. **Aggregates:** Averages are the annual rate of change of the regional aggregates. **Source:** Calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed on 22 September 2008).

**Average annual growth rate of value added: Services (% per annum)**

The average annual rate of change of the total value added by services in constant 1990 United States dollars. **Aggregates:** Averages are the annual rate of change of the regional aggregates. **Source:** Calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database. (online database, accessed on 22 September 2008).



## 15.1 Gross domestic product (GDP)

	Gross domestic product (GDP)						Average annual GDP (1990 US dollars)			
	Million 1990 US dollars					Million US dollars	growth rate			
	1990	1995	2000	2005	2007	2007	% per annum			
<b>East and North-East Asia</b>	<b>3 782 576</b>	<b>4 476 646</b>	<b>5 113 502</b>	<b>6 120 394</b>	<b>6 779 140</b>	<b>8 981 229</b>	<b>3.4</b>	<b>2.7</b>	<b>3.7</b>	<b>5.3</b>
China	404 494	721 274	1 090 368	1 719 444	2 128 077	3 400 351	12.3	8.6	9.5	11.4
DPR Korea	14 702	12 005	11 538	13 077	13 144	14 753	-4.0	-0.8	2.5	1.6
Hong Kong, China	76 890	99 151	112 915	138 307	157 226	206 706	5.2	2.6	4.1	6.5
Japan	3 018 270	3 254 784	3 417 383	3 645 895	3 812 499	4 379 624	1.5	1.0	1.3	2.1
Macao, China	2 990	3 978	3 893	6 910	10 296	19 115	5.9	-0.4	12.2	27.3
Mongolia	1 454	1 260	1 448	1 983	2 366	3 892	-2.8	2.8	6.5	9.9
Republic of Korea	263 776	384 193	475 957	594 778	655 531	956 788	7.8	4.4	4.6	5.0
<b>South-East Asia</b>	<b>355 519</b>	<b>513 926</b>	<b>582 615</b>	<b>742 210</b>	<b>836 732</b>	<b>1 285 693</b>	<b>7.6</b>	<b>2.5</b>	<b>5.0</b>	<b>6.3</b>
Brunei Darussalam	3 441	3 733	4 241	4 699	4 960	12 388	1.6	2.6	2.1	0.4
Cambodia	1 404	1 920	2 711	4 237	5 172	8 639	6.5	7.1	9.3	10.2
Indonesia	125 720	183 279	190 071	239 450	268 602	432 817	7.8	0.7	4.7	6.3
Lao PDR	866	1 181	1 593	2 164	2 531	4 163	6.4	6.2	6.3	8.0
Malaysia	45 716	71 878	90 829	114 492	128 790	186 720	9.5	4.8	4.7	6.3
Myanmar	5 179	6 878	10 244	18 779	22 320	18 510	5.8	8.3	12.9	5.5
Philippines	44 312	49 325	59 822	74 427	84 235	144 129	2.2	3.9	4.5	7.3
Singapore	36 901	56 791	77 443	95 275	111 011	161 349	9.0	6.4	4.2	7.7
Thailand	85 361	129 105	132 031	169 191	186 284	245 351	8.6	0.4	5.1	4.8
Timor-Leste	146	237	196	205	231	453	10.2	-3.7	0.9	16.2
Viet Nam	6 472	9 600	13 433	19 290	22 595	71 174	8.2	7.0	7.5	8.3
<b>South and South-West Asia</b>	<b>671 852</b>	<b>834 192</b>	<b>1 057 638</b>	<b>1 420 835</b>	<b>1 645 005</b>	<b>2 205 878</b>	<b>4.4</b>	<b>4.9</b>	<b>6.1</b>	<b>7.4</b>
Afghanistan	3 622	3 236	2 713	6 793	8 202	9 358	-2.2	-3.5	20.1	12.4
Bangladesh	30 435	37 852	48 793	63 566	72 193	67 876	4.5	5.2	5.4	6.5
Bhutan	279	336	466	672	893	1 305	3.8	6.8	7.6	22.4
India	326 795	420 046	556 748	779 245	926 270	1 141 346	5.1	5.8	7.0	8.7
Iran (Islamic Rep.)	90 370	108 724	132 594	172 195	191 733	289 933	3.8	4.0	5.4	5.8
Maldives	215	298	445	563	750	1 055	6.8	8.3	4.8	7.7
Nepal	4 097	5 275	6 676	7 710	8 100	11 815	5.2	4.8	2.9	2.5
Pakistan	57 159	71 252	81 353	108 825	122 716	163 290	4.5	2.7	6.0	6.0
Sri Lanka	8 204	10 700	13 696	16 647	19 163	32 347	5.5	5.1	4.0	6.8
Turkey	150 676	176 473	214 154	264 618	294 984	487 552	3.2	3.9	4.3	5.1
<b>North and Central Asia</b>	<b>638 331</b>	<b>393 718</b>	<b>430 701</b>	<b>588 505</b>	<b>684 874</b>	<b>1 478 338</b>	<b>-9.2</b>	<b>1.8</b>	<b>6.4</b>	<b>8.4</b>
Armenia	2 157	1 140	1 464	2 608	3 285	9 177	-12.0	5.1	12.2	11.1
Azerbaijan	6 515	2 728	3 835	7 214	12 130	31 249	-16.0	7.0	13.5	25.1
Georgia	8 532	2 411	3 180	4 548	5 593	10 176	-22.3	5.7	7.4	12.4
Kazakhstan	29 659	18 207	20 594	33 730	40 541	104 143	-9.3	2.5	10.4	8.7
Kyrgyzstan	1 111	563	740	891	994	3 745	-12.7	5.6	3.8	8.2
Russian Federation	569 709	353 709	382 917	515 825	594 967	1 289 582	-9.1	1.6	6.1	8.1
Tajikistan	2 869	1 091	1 091	1 733	1 970	3 738	-17.6	0.0	9.7	7.8
Turkmenistan	3 069	1 939	2 413	2 974	3 518	7 253	-8.8	4.5	4.3	8.5
Uzbekistan	14 710	11 931	14 469	18 983	21 876	19 275	-4.1	3.9	5.6	7.4
<b>Pacific</b>	<b>374 150</b>	<b>439 801</b>	<b>526 962</b>	<b>621 632</b>	<b>664 458</b>	<b>1 102 292</b>	<b>3.3</b>	<b>3.7</b>	<b>3.4</b>	<b>3.8</b>
Australia	319 150	374 924	453 884	535 138	573 823	945 674	3.3	3.9	3.3	3.9
American Samoa										
Cook Islands	59	69	78	94	96	211	3.2	2.5	4.0	0.4
Fiji	1 320	1 500	1 666	1 878	1 870	3 366	2.6	2.1	2.4	-3.9
French Polynesia	2 930	3 145	3 692	4 217	4 459	6 172	1.4	3.3	2.7	3.0
Guam										
Kiribati	26	29	45	48	46	72	2.7	9.0	1.1	2.0
Marshall Islands	69	71	58	69	71	149	0.6	-3.9	3.4	2.0
Micronesia (F.S.)	145	177	165	169	168	253	4.0	-1.4	0.5	0.1
Nauru	28	20	17	17	17	23	-6.6	-3.7	0.3	0.2
New Caledonia	2 529	2 914	2 978	3 057	3 090	7 994	2.9	0.4	0.5	0.5
New Zealand	43 915	51 174	58 366	70 350	73 591	130 449	3.1	2.7	3.8	3.0
Niue										
Northern Mariana Is.										
Palau	77	72	79	84	138	170	-1.2	1.8	1.3	55.0
Papua New Guinea	3 286	4 961	5 149	5 647	6 153	6 032	8.6	0.7	1.9	6.2
Samoa	112	118	144	178	191	514	1.1	4.1	4.3	4.7
Solomon Islands	208	264	231	249	281	485	4.9	-2.6	1.5	6.3
Tonga	135	161	177	188	187	248	3.7	1.8	1.3	-3.5
Tuvalu	10	11	12	17	17	30	3.0	1.9	6.4	3.0
Vanuatu	153	191	223	233	258	451	4.5	3.1	1.0	4.7
<b>Asia and the Pacific</b>	<b>5 822 428</b>	<b>6 658 283</b>	<b>7 711 420</b>	<b>9 493 577</b>	<b>10 610 208</b>	<b>15 053 430</b>	<b>2.7</b>	<b>3.0</b>	<b>4.2</b>	<b>5.8</b>
LLDC	70 407	48 887	57 501	87 455	106 407	209 113	-7.0	3.3	8.7	10.0
LDC	46 751	57 826	74 493	105 416	121 187	124 727	4.3	5.2	7.2	6.7
ASEAN	355 373	513 689	582 419	742 005	836 502	1 285 240	7.6	2.5	5.0	6.3
ECO	359 760	396 144	473 955	617 956	698 664	1 119 536	1.9	3.7	5.4	6.1
SAARC	430 806	548 995	710 890	984 022	1 158 288	1 428 393	5.0	5.3	6.7	8.2
Central Asia	68 622	40 010	47 785	72 680	89 907	188 755	-10.2	3.6	8.7	10.6
Pacific island dev. econ.		13 703	14 712	16 145	17 043	26 170	4.3	1.4	1.9	3.1
Low-income	146 119	168 009	200 735	271 945	308 250	402 852	2.8	3.6	6.3	6.3
Middle-income	1 905 420	2 255 387	2 899 828	4 122 878	4 895 341	7 824 057	3.4	5.2	7.3	9.1
High-income	3 770 792	4 234 788	4 610 751	5 098 626	5 406 488	6 826 259	2.3	1.7	2.0	2.9
<b>Other world regions</b>										
Africa	495 198	523 199	627 279	808 217	906 043	1 300 531	1.1	3.7	5.2	6.1
Europe	7 925 781	8 352 465	9 605 595	10 464 264	11 083 499	17 916 649	1.1	2.8	1.7	2.8
Latin America & Carib.	1 196 941	1 405 877	1 635 481	1 861 230	2 061 522	3 611 444	3.3	3.1	2.6	5.2
North America	6 342 977	7 144 022	8 749 394	9 821 583	10 327 841	15 210 028	2.4	4.1	2.3	2.2
Other countries/areas	303 184	361 663	442 068	543 319	606 305	1 160 619	3.6	4.1	4.2	5.2
<b>World</b>	<b>22 148 902</b>	<b>24 678 950</b>	<b>29 080 803</b>	<b>33 354 836</b>	<b>35 997 455</b>	<b>54 635 982</b>	<b>2.2</b>	<b>3.3</b>	<b>2.8</b>	<b>3.8</b>



## 15. Economic growth

### 15.2 Gross domestic product per capita

	GDP per capita						Average annual GDP per capita (1990 US dollars)			
						2005	growth rate			
	1990 US dollars					PPP dollars	% per annum			
	1990	1995	2000	2005	2007	2007	90-95	95-00	00-05	2007
East and North-East Asia	2 815	3 164	3 464	4 020	4 405	8 050	2.4	1.8	3.0	4.7
China	352	594	859	1 310	1 602	5 046	11.0	7.6	8.8	10.7
DPR Korea	730	553	503	554	553		-5.4	-1.9	1.9	1.3
Hong Kong, China	13 479	15 977	16 949	19 597	21 819	39 953	3.5	1.2	2.9	5.4
Japan	24 432	25 940	26 901	28 507	29 793	31 607	1.2	0.7	1.2	2.1
Macao, China	8 035	9 665	8 826	14 606	21 401	54 134	3.8	-1.8	10.6	26.4
Mongolia	656	527	587	768	900	3 042	-4.3	2.1	5.5	8.9
Republic of Korea	6 153	8 536	10 174	12 425	13 593	23 363	6.8	3.6	4.1	4.6
South-East Asia	807	1 068	1 120	1 331	1 462	4 561	5.8	1.0	3.5	4.9
Brunei Darussalam	13 391	12 656	12 718	12 570	12 716		-1.1	0.1	-0.2	-1.7
Cambodia	145	168	212	304	358	1 701	3.1	4.7	7.4	8.3
Indonesia	688	928	898	1 059	1 160	3 519	6.2	-0.7	3.4	5.0
Lao PDR	212	252	305	382	432	2 020	3.5	3.9	4.6	6.2
Malaysia	2 525	3 490	3 903	4 463	4 847	12 631	6.7	2.3	2.7	4.5
Myanmar	129	159	223	391	457		4.3	7.0	11.9	4.6
Philippines	724	719	785	880	958	3 219	-0.1	1.8	2.3	5.3
Singapore	12 234	16 329	19 277	22 016	25 023	47 488	5.9	3.4	2.7	6.4
Thailand	1 572	2 244	2 176	2 685	2 916	7 682	7.4	-0.6	4.3	4.0
Timor-Leste	197	278	240	192	200	733	7.1	-3.0	-4.3	12.1
Viet Nam	98	131	170	227	259	2 454	6.0	5.3	6.0	6.8
South and South-West Asia	538	599	692	856	960	3 146	2.2	2.9	4.3	5.7
Afghanistan	286	177	131	271	302		-9.1	-5.9	15.7	8.1
Bangladesh	289	300	350	415	455	1 173	2.2	3.1	3.5	4.7
Bhutan	509	662	835	1 055	1 356	4 568	5.4	4.7	4.8	20.6
India	380	440	532	687	792	2 599	3.0	3.9	5.2	7.1
Iran (Islamic Rep. of)	1 595	1 748	2 005	2 480	2 693	10 322	1.9	2.8	4.3	4.4
Maldives	997	1 203	1 630	1 908	2 454	5 036	3.8	6.3	3.2	5.9
Nepal	214	243	273	285	287	976	2.6	2.3	0.8	0.5
Pakistan	506	558	564	688	749	2 383	2.0	0.2	4.1	4.1
Sri Lanka	479	592	732	871	993	4 020	4.3	4.3	3.5	6.3
Turkey	2 628	2 813	3 142	3 626	3 940	11 293	1.4	2.2	2.9	3.7
North and Central Asia	2 966	1 801	1 970	2 697	3 139	10 884	-9.5	1.8	6.5	8.4
Armenia	609	353	475	864	1 094	5 392	-10.3	6.1	12.7	11.4
Azerbaijan	903	350	471	864	1 433	7 058	-17.3	6.1	12.9	24.1
Georgia	1 563	479	674	1 017	1 272	4 405	-21.1	7.1	8.6	13.4
Kazakhstan	1 794	1 144	1 377	2 218	2 629	10 223	-8.6	3.8	10.0	7.9
Kyrgyzstan	253	123	150	171	187	1 869	-13.5	4.0	2.7	7.0
Russian Federation	3 833	2 372	2 597	3 583	4 175	13 918	-9.2	1.8	6.6	8.6
Tajikistan	541	189	177	265	293	1 656	-19.0	-1.3	8.4	6.3
Turkmenistan	837	462	536	615	708		-11.2	3.0	2.8	7.1
Uzbekistan	717	521	585	714	799	2 308	-6.2	2.4	4.1	5.9
Pacific	14 124	15 313	17 106	18 792	19 586	24 346	1.6	2.2	1.9	2.5
Australia	18 914	20 746	23 715	26 348	27 663	33 011	1.9	2.7	2.1	2.9
American Samoa										
Cook Islands	3 292	3 795	4 849	6 744	7 203		2.9	5.0	6.8	2.8
Fiji	1 825	1 953	2 078	2 268	2 229	4 190	1.4	1.2	1.8	-4.5
French Polynesia	14 995	14 572	15 635	16 495	16 971		-0.6	1.4	1.1	1.6
Guam										
Kiribati	356	379	536	517	484	1 339	1.3	7.2	-0.7	0.4
Marshall Islands	1 453	1 384	1 109	1 208	1 194		-1.0	-4.3	1.7	-0.3
Micronesia (F.S.)	1 508	1 650	1 541	1 535	1 511	3 142	1.8	-1.3	-0.1	-0.4
Nauru	3 110	2 027	1 663	1 675	1 670		-8.2	-3.9	0.1	-0.1
New Caledonia	14 786	15 092	13 849	13 055	12 784		0.4	-1.7	-1.2	-1.0
New Zealand	12 875	13 931	15 144	17 171	17 612	25 306	1.6	1.7	2.5	2.0
Niue										
Northern Mariana Is.										
Palau	5 150	4 236	4 097	4 190	6 801		-3.8	-0.7	0.4	54.3
Papua New Guinea	795	1 054	957	930	972	2 168	5.8	-1.9	-0.6	4.0
Samoa	694	702	814	969	1 023	3 773	0.2	3.0	3.6	3.8
Solomon Islands	664	731	557	528	567	1 717	1.9	-5.3	-1.1	3.8
Tonga	1 425	1 655	1 801	1 892	1 866	3 351	3.0	1.7	1.0	-4.0
Tuvalu	1 012	1 129	1 195	1 590	1 656		2.2	1.1	5.9	2.6
Vanuatu	1 023	1 109	1 173	1 084	1 140	3 489	1.6	1.1	-1.6	2.2
Asia and the Pacific	1 777	1 883	2 043	2 378	2 603	5 797	1.2	1.6	3.1	4.7
LLDC	706	437	479	669	784	3 552	-9.1	1.9	6.9	8.0
LDC	233	254	297	382	423	1 226	1.8	3.2	5.2	4.8
ASEAN	808	1 069	1 122	1 333	1 464	4 570	5.8	1.0	3.5	4.9
ECO	1 210	1 193	1 306	1 575	1 723	6 089	-0.3	1.8	3.8	4.4
SAARC	379	433	510	648	739	2 418	2.7	3.3	4.9	6.5
Central Asia	1 030	576	671	979	1 188	4 769	-11.0	3.1	7.9	9.5
Pacific island dev. econ.	1 786	1 965	1 883	1 862	1 893	2 432	1.9	-0.8	-0.2	1.2
Low-income	338	345	374	465	510	1 890	0.4	1.6	4.5	4.6
Middle-income	720	793	957	1 291	1 502	4 789	1.9	3.8	6.2	8.0
High-income	19 199	20 859	22 091	23 949	25 249	30 419	1.7	1.2	1.6	2.6
Other world regions										
Africa	765	721	765	877	940	2 547	-1.2	1.2	2.8	3.7
Europe	13 687	14 419	16 535	17 827	18 829	25 434	1.0	2.8	1.5	2.7
Latin America & Carib.	2 700	2 912	3 133	3 342	3 610	9 184	1.5	1.5	1.3	3.9
North America	22 341	23 840	27 717	29 562	30 481	42 543	1.3	3.1	1.3	1.2
Other countries/areas	3 684	3 849	4 082	4 407	4 690	10 926	0.9	1.2	1.5	2.7
World	4 183	4 315	4 749	5 120	5 396	9 373	0.6	1.9	1.5	2.6



## 15.3 Domestic investment

	Gross domestic investment rate					Average annual gross domestic investment growth rate				
	% of GDP					% per annum				
	1990	1995	2000	2005	2007	90-95	95-00	00-05	2007	90-07
<b>East and North-East Asia</b>	<b>33.5</b>	<b>30.6</b>	<b>27.7</b>	<b>29.8</b>	<b>31.5</b>	<b>-1.8</b>	<b>-2.0</b>	<b>1.5</b>	<b>2.2</b>	<b>-0.4</b>
China	34.9	40.3	35.3	42.7	42.7	2.9	-2.6	3.9	0.3	1.2
DPR Korea										
Hong Kong, China	27.0	34.1	27.5	20.6	21.4	4.7	-4.2	-5.6	-0.3	-1.4
Japan	33.1	28.4	25.4	23.6	23.8	-3.0	-2.2	-1.5	-0.6	-1.9
Macao, China	25.0	29.5	11.6	27.3	35.6	3.3	-17.0	18.7	1.7	2.1
Mongolia	32.8	25.3	29.0	37.0	36.9	-5.1	2.8	5.0	5.2	0.7
Republic of Korea	37.5	37.7	31.0	30.1	28.9	0.1	-3.8	-0.6	-3.0	-1.5
<b>South-East Asia</b>	<b>31.3</b>	<b>33.7</b>	<b>24.8</b>	<b>24.0</b>	<b>24.1</b>	<b>1.5</b>	<b>-6.0</b>	<b>-0.6</b>	<b>1.4</b>	<b>-1.5</b>
Brunei Darussalam	14.3	27.4	13.1	11.4	12.0	13.9	-13.7	-2.7	15.5	-1.0
Cambodia	8.3	13.6	17.5	18.5	20.8	10.3	5.2	1.0	1.1	5.5
Indonesia	27.9	29.1	22.2	25.1	24.9	0.8	-5.2	2.4	-2.1	-0.7
Lao PDR	11.3	11.3	10.4	31.9	39.7	0.1	-1.7	25.2	28.0	7.7
Malaysia	31.8	42.9	26.9	20.0	21.9	6.2	-9.0	-5.7	4.7	-2.2
Myanmar	13.4	14.2	12.4	12.5	15.4	1.3	-2.7	0.1	2.3	0.8
Philippines	24.2	22.5	21.2	14.6	14.7	-1.4	-1.2	-7.2	2.8	-2.9
Singapore	36.4	34.2	33.3	19.9	22.6	-1.3	-0.5	-9.8	12.6	-2.8
Thailand	41.3	42.1	22.8	31.4	26.8	0.4	-11.5	6.6	-5.9	-2.5
Timor-Leste	21.0	21.0	26.7	20.7	28.1	0.0	4.9	-4.9	35.7	1.7
Viet Nam	14.4	27.1	29.6	35.4	41.6	13.6	1.8	3.7	16.6	6.5
<b>South and South-West Asia</b>	<b>27.0</b>	<b>27.0</b>	<b>24.7</b>	<b>29.1</b>	<b>31.6</b>	<b>0.0</b>	<b>-1.8</b>	<b>3.4</b>	<b>6.7</b>	<b>0.9</b>
Afghanistan	13.4	13.1	12.9	21.3	21.0	-0.3	-0.3	10.5	-13.2	2.7
Bangladesh	14.1	19.1	23.0	24.5	24.3	6.3	3.8	1.3	-1.3	3.3
Bhutan	36.3	48.6	47.4	51.4	52.0	6.0	-0.5	1.6	-2.9	2.1
India	27.8	29.3	24.1	32.2	36.9	1.0	-3.8	6.0	14.0	1.7
Iran (Islamic Rep.)	38.2	30.1	34.3	31.1	34.1	-4.6	2.6	-2.0	-2.1	-0.7
Maldives	31.5	31.3	26.3	61.3	46.1	-0.1	-3.4	18.4	-17.1	2.3
Nepal	17.0	23.2	22.3	26.0	25.9	6.4	-0.7	3.1	2.3	2.5
Pakistan	20.4	20.4	17.0	21.8	24.1	0.0	-3.6	5.1	4.8	1.0
Sri Lanka	20.5	25.3	25.4	26.1	27.9	4.3	0.1	0.5	1.6	1.8
Turkey	24.3	25.5	24.5	24.8	21.8	0.9	-0.8	0.2	-8.8	-0.7
<b>North and Central Asia</b>	<b>30.9</b>	<b>25.3</b>	<b>19.1</b>	<b>21.4</b>	<b>25.3</b>	<b>-3.9</b>	<b>-5.5</b>	<b>2.3</b>	<b>17.7</b>	<b>-1.2</b>
Armenia	47.2	18.4	18.6	30.5	34.8	-17.1	0.2	10.3	3.8	-1.8
Azerbaijan	26.5	23.8	20.7	41.5	21.3	-2.2	-2.8	15.0	-28.8	-1.3
Georgia	30.6	24.0	26.6	28.6	29.0	-4.7	2.0	1.5	8.8	-0.3
Kazakhstan	46.7	23.3	18.1	31.0	35.9	-13.0	-4.9	11.3	5.8	-1.5
Kyrgyzstan	24.1	18.3	20.0	16.4	26.3	-5.3	1.8	-3.9	8.8	0.5
Russian Federation	30.1	25.4	18.7	20.1	24.5	-3.3	-6.0	1.5	21.3	-1.2
Tajikistan	12.3	28.7	9.4	11.6	13.3	18.4	-20.0	4.4	-16.9	0.4
Turkmenistan	40.1	33.6	39.2	29.6	27.5	-3.5	3.2	-5.5	0.4	-2.2
Uzbekistan	32.2	24.2	19.6	23.0	21.8	-5.5	-4.2	3.3	17.9	-2.3
<b>Pacific</b>	<b>22.9</b>	<b>22.9</b>	<b>22.0</b>	<b>26.6</b>	<b>27.8</b>	<b>0.0</b>	<b>-0.7</b>	<b>3.8</b>	<b>4.2</b>	<b>1.1</b>
Australia	23.3	22.8	22.1	27.0	28.6	-0.4	-0.7	4.1	4.8	1.2
American Samoa										
Cook Islands	24.0	18.8	16.8	16.1	16.7	-4.8	-2.2	-0.8	2.7	-2.1
Fiji	29.7	22.0	17.2	19.0	19.4	-5.8	-4.8	2.0	-3.4	-2.5
French Polynesia	20.0	21.4	21.8	25.7	25.6	1.3	0.4	3.4	0.6	1.5
Guam										
Kiribati	93.1	53.3	47.8	78.6	75.1	-10.6	-2.1	10.5	-2.5	-1.3
Marshall Islands	88.4	56.3	55.8	55.9	55.9	-8.6	-0.1	0.0	0.0	-2.7
Micronesia (F.S.)	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
Nauru	93.1	53.3	47.8	78.6	75.1	-10.6	-2.1	10.5	-2.5	-1.3
New Caledonia	23.3	21.8	22.9	26.5	26.4	-1.3	1.0	2.9	-2.7	0.7
New Zealand	20.1	23.3	21.6	24.6	22.9	3.1	-1.5	2.6	0.4	0.8
Niue										
Northern Mariana Is.										
Palau	22.0	19.5	29.0	17.5	26.7	-2.4	8.3	-9.7	-20.5	1.1
Papua New Guinea	24.0	21.9	21.9	18.5	15.1	-1.8	0.0	-3.3	-7.6	-2.7
Samoa	22.9	19.6	14.2	10.4	9.1	-3.1	-6.3	-6.0	-6.6	-5.3
Solomon Islands	17.4	17.6	18.3	19.1	18.9	0.3	0.7	0.8	0.3	0.5
Tonga	18.5	19.6	18.7	18.4	18.8	1.2	-1.0	-0.3	6.9	0.1
Tuvalu	93.1	56.3	54.7	55.8	55.8	-9.6	-0.6	0.4	0.1	-3.0
Vanuatu	-43.2	31.9	32.5	30.0	29.9	-5.9	0.3	-1.5	1.8	-2.1
<b>Asia and the Pacific</b>	<b>31.6</b>	<b>29.9</b>	<b>26.6</b>	<b>28.4</b>	<b>30.0</b>	<b>-1.1</b>	<b>-2.3</b>	<b>1.3</b>	<b>3.5</b>	<b>-0.3</b>
LLDC	35.6	23.0	20.6	29.8	30.4	-8.3	-2.2	7.7	1.1	-0.9
LDC	14.4	18.3	21.1	23.3	23.6	4.9	2.9	2.0	-0.9	3.0
ASEAN	31.3	33.7	24.8	24.0	24.1	1.5	-6.0	-0.6	1.4	-1.5
ECO	29.3	25.5	25.0	26.5	26.6	-2.8	-0.4	1.1	-2.7	-0.6
SAARC	25.5	26.9	23.1	30.2	34.5	1.0	-3.0	5.5	12.6	1.8
Central Asia	37.6	24.0	21.1	30.3	30.6	-8.6	-2.6	7.5	1.2	-1.2
Pacific island dev. econ.	24.5	22.3	22.2	23.5	22.6	-1.8	-0.1	1.1	-2.8	-0.5
Low-income	19.1	20.7	20.5	24.4	26.7	1.6	-0.2	3.5	6.6	2.0
Middle-income	31.2	33.0	28.7	33.4	34.4	1.1	-2.7	3.1	3.3	0.6
High-income	32.3	29.0	25.8	24.6	25.1	-2.2	-2.3	-1.0	0.4	-1.5
<b>Other world regions</b>										
Africa	20.3	18.3	17.6	18.7	20.6	-2.0	-0.8	1.3	5.8	0.1
Europe	23.2	20.4	21.3	20.4	21.8	-2.5	0.9	-0.9	2.7	-0.4
Latin America & Carib.	19.3	19.6	20.1	19.3	20.6	0.2	0.6	-0.8	2.7	0.4
North America	18.0	18.2	20.5	19.7	18.4	0.3	2.4	-0.8	-7.2	0.2
Other countries/areas	17.4	23.0	19.7	20.2	23.9	5.6	-3.0	0.5	19.5	1.9
<b>World</b>	<b>23.6</b>	<b>22.7</b>	<b>22.3</b>	<b>22.2</b>	<b>23.1</b>	<b>-0.8</b>	<b>-0.3</b>	<b>-0.1</b>	<b>1.2</b>	<b>-0.1</b>



## 15. Economic growth

### 15.4 Value added by sector

	Agriculture					Industry					Services				
	% of total value added					% of total value added					% of total value added				
	1990	1995	2000	2005	2007	1990	1995	2000	2005	2007	1990	1995	2000	2005	2007
East and North-East Asia	5.4	4.8	4.8	4.6	4.9	38.5	37.6	38.9	41.3	42.4	56.1	57.6	56.2	54.1	52.7
China	26.9	19.8	14.8	12.5	11.7	41.3	47.2	45.9	47.5	49.2	31.8	33.1	39.3	39.9	39.1
DPR Korea	27.4	27.6	30.4	25.0	25.0	54.6	42.0	37.1	42.8	42.3	18.0	30.3	32.4	32.2	32.7
Hong Kong, China	0.2	0.1	0.1	0.1	0.1	24.1	15.2	13.4	9.3	9.3	75.7	84.7	86.5	90.6	90.6
Japan	2.4	1.8	1.7	1.4	1.5	38.2	32.9	31.1	28.7	29.0	59.4	65.3	67.2	69.9	69.5
Macao, China						23.8	15.6	14.8	14.2	12.7	76.2	84.4	85.2	85.8	87.3
Mongolia	16.0	38.8	31.9	23.9	23.2	28.3	24.8	19.8	33.3	29.8	55.7	36.3	48.2	42.8	47.1
Republic of Korea	8.9	6.3	4.9	3.4	3.5	41.6	41.9	40.7	40.3	40.2	49.5	51.8	54.4	56.3	56.3
South-East Asia	16.4	12.6	12.4	11.8	11.7	36.8	39.8	40.6	39.6	39.6	46.9	47.6	46.9	48.6	48.6
Brunei Darussalam	1.0	1.1	1.0	0.9	0.9	68.5	58.1	63.7	71.6	70.9	30.5	40.8	35.3	27.5	28.1
Cambodia	48.1	50.6	37.9	32.4	31.9	13.8	13.9	23.0	26.4	26.8	38.1	35.6	39.1	41.2	41.3
Indonesia	17.6	15.4	15.6	13.1	13.4	39.0	41.6	45.9	46.8	46.2	43.5	43.0	38.5	40.1	40.4
Lao PDR	61.2	55.0	52.5	44.8	44.8	14.5	19.0	22.9	29.5	29.5	24.3	26.0	24.6	25.7	25.7
Malaysia	14.8	12.5	8.3	8.2	10.0	40.0	39.0	46.8	48.7	46.8	45.2	48.4	44.9	43.1	43.2
Myanmar	57.3	60.0	57.2	51.2	49.9	10.5	9.9	9.7	14.5	15.2	32.2	30.1	33.1	34.3	34.9
Philippines	21.9	21.6	15.8	14.3	14.1	34.5	32.1	32.3	31.9	31.3	43.6	46.3	52.0	53.7	54.6
Singapore	0.2	0.1	0.1	0.1	0.1	34.4	35.5	35.2	32.4	30.9	65.4	64.4	64.8	67.5	69.1
Thailand	14.4	10.8	9.0	10.3	11.4	35.9	40.2	42.0	44.0	43.9	49.7	49.0	49.0	45.7	44.7
Timor-Leste	29.5	29.4	25.8	31.8	27.5	25.4	25.5	18.4	15.2	13.9	45.1	45.1	55.8	53.0	58.6
Viet Nam	38.7	27.2	24.5	20.9	21.0	22.7	28.8	36.7	41.0	40.9	38.6	44.1	38.7	38.1	38.0
South and South-West Asia	25.3	22.8	20.3	17.5	17.3	28.0	28.6	28.2	28.8	28.9	46.7	48.6	51.5	53.8	53.8
Afghanistan	35.7	65.7	57.0	40.9	39.3	23.7	10.5	23.2	26.2	26.6	40.6	23.8	19.8	32.9	34.1
Bangladesh	34.7	26.4	25.5	20.1	18.9	20.1	24.6	25.3	27.2	28.5	45.2	49.1	49.2	52.6	52.6
Bhutan	39.0	34.0	28.6	23.5	23.8	28.0	34.8	35.7	37.7	38.2	33.0	31.2	35.7	38.7	38.0
India	30.2	27.0	23.4	18.3	18.2	27.3	27.6	26.2	27.6	27.7	42.5	45.4	50.5	54.1	54.1
Iran (Islamic Rep. of)	17.9	18.3	13.3	9.9	10.6	28.2	34.1	36.6	43.1	42.2	53.9	47.6	50.1	47.0	47.2
Maldives	14.9	11.0	8.4	9.7	6.3	12.8	13.0	14.5	17.3	16.5	72.3	76.0	77.1	73.0	77.2
Nepal	47.2	37.8	36.6	33.9	34.0	12.3	17.7	17.3	16.8	16.8	40.5	44.5	46.1	49.3	49.2
Pakistan	24.9	24.7	24.1	19.4	20.1	25.9	24.2	24.0	27.2	27.0	49.2	51.1	51.9	53.4	52.8
Sri Lanka	25.3	20.5	17.6	13.6	13.3	29.8	30.1	29.9	32.2	31.7	44.9	49.4	52.5	54.2	55.1
Turkey	17.6	15.7	14.2	10.5	10.4	32.1	31.9	28.7	30.3	30.3	50.3	52.4	57.1	59.2	59.3
North and Central Asia	18.3	19.9	18.6	18.7	18.4	47.3	37.9	39.2	40.1	40.4	34.4	42.2	42.1	41.1	41.2
Armenia	17.3	44.6	28.1	20.6	19.2	52.6	25.8	31.0	44.7	45.2	30.1	29.6	40.9	34.6	35.7
Azerbaijan	29.7	26.9	17.0	9.8	6.2	32.9	32.9	45.1	63.2	72.2	37.4	40.3	37.9	27.0	21.5
Georgia	31.5	44.4	21.7	16.5	10.8	34.3	12.7	22.1	26.5	23.8	34.3	43.0	56.1	57.0	65.4
Kazakhstan	33.6	12.8	8.6	6.6	5.8	32.2	31.2	40.1	39.2	38.8	34.2	56.0	51.3	54.2	55.4
Kyrgyzstan	33.7	43.1	36.6	31.3	33.6	37.7	20.1	31.3	22.0	18.9	28.6	36.8	32.1	46.7	47.5
Russian Federation	16.5	7.6	6.7	5.4	4.6	49.1	37.0	37.9	38.5	37.6	34.4	55.5	55.4	56.1	57.8
Tajikistan	30.1	35.9	27.3	23.8	23.1	38.4	36.4	38.4	30.7	31.9	31.5	27.7	34.3	45.6	45.0
Turkmenistan	32.2	16.9	22.9	22.1	22.1	29.6	64.8	41.8	41.5	41.8	38.2	18.3	35.2	36.4	36.1
Uzbekistan	33.2	31.4	34.6	28.1	30.0	34.8	28.1	22.6	28.7	26.6	32.0	40.5	42.9	43.2	43.5
Pacific	4.4	4.1	4.2	3.8	3.6	29.5	28.5	26.6	25.9	26.1	66.2	67.4	69.2	70.3	70.3
Australia	3.6	3.8	4.0	3.1	2.9	30.1	28.4	26.1	28.0	27.8	66.3	67.8	69.9	68.9	69.3
American Samoa															
Cook Islands	11.3	9.5	13.0	12.5	11.9	8.0	7.6	8.1	8.3	9.4	80.7	83.0	78.9	79.2	78.7
Fiji	20.0	18.8	16.5	13.9	13.5	21.9	22.8	21.5	21.3	21.8	58.1	58.3	62.0	64.8	64.8
French Polynesia	4.5	4.1	4.0	2.9	2.8	15.3	13.3	14.5	14.1	13.9	80.2	82.6	81.5	83.0	83.2
Guam															
Kiribati	9.4	12.0	3.9	3.7	4.1	9.0	6.2	10.0	6.6	7.5	81.6	81.8	86.1	89.7	88.4
Marshall Islands	13.9	14.9	10.0	10.0	10.0	12.9	15.0	19.2	19.1	19.2	73.2	70.0	70.8	70.9	70.7
Micronesia (F.S.)	19.1	19.1	19.1	19.1	19.1	4.0	4.0	4.0	4.0	4.0	76.9	76.9	76.9	76.9	76.9
Nauru	11.0	11.0	10.8	11.8	13.9	-2.9	-2.9	-2.9	-10.7	8.6	92.0	91.9	92.1	98.8	77.5
New Caledonia	2.0	1.8	2.4	2.0	2.1	24.9	22.0	26.0	24.1	24.0	73.1	76.2	71.6	73.9	73.9
New Zealand	6.7	7.2	8.6	6.6	6.5	26.8	25.9	24.4	23.6	23.6	66.6	66.9	66.9	69.7	69.9
Niue															
Northern Mariana Is.															
Palau	25.9	5.9	3.9	3.2	3.3	15.5	9.4	15.3	19.2	20.8	58.6	84.7	80.8	77.6	75.9
Papua New Guinea	29.7	35.1	35.2	35.5	35.2	31.2	33.3	40.7	40.3	40.7	39.0	31.6	24.1	24.2	24.1
Samoa	20.5	18.4	16.6	12.6	12.5	28.8	29.4	26.0	27.6	27.1	50.6	52.2	57.4	59.8	60.4
Solomon Islands	45.5	44.7	44.4	44.5	44.5	7.9	10.0	10.2	10.1	10.1	46.6	45.3	45.4	45.4	45.4
Tonga	35.1	28.2	27.1	27.4	26.9	14.4	17.1	15.6	14.0	13.8	50.4	54.7	57.2	58.6	59.3
Tuvalu	25.6	24.0	17.3	16.5	16.6	14.5	14.0	13.1	13.7	13.6	59.8	62.0	69.7	69.8	69.7
Vanuatu	20.0	15.6	14.9	13.0	13.8	13.5	11.6	8.9	8.6	8.4	66.5	72.8	76.3	78.4	77.8
Asia and the Pacific	9.5	8.4	8.1	7.8	8.1	37.6	36.1	36.9	38.3	39.0	52.9	55.5	55.0	53.9	52.9
LLDC	33.4	36.7	32.2	28.4	27.0	31.7	24.3	28.5	32.9	34.1	34.9	39.0	39.3	38.7	38.9
LDC	39.2	37.0	34.9	31.9	31.0	18.3	20.8	23.3	25.7	26.9	42.5	42.2	41.9	42.4	42.1
ASEAN	16.4	12.6	12.4	11.8	11.7	36.8	39.8	40.6	39.6	39.6	46.9	47.6	46.9	48.6	48.6
ECO	21.5	20.0	18.1	16.7	16.6	30.3	29.2	29.8	31.2	31.5	48.2	50.8	52.0	52.1	51.9
SAARC	30.0	26.5	23.0	19.1	18.9	26.4	27.4	26.9	27.5	27.7	43.6	46.1	50.1	53.4	53.5
Central Asia	32.2	34.5													



## 15.5 Change in value added by sector

	Average annual growth rate of value added											
	Agriculture				Industry				Services			
	% per annum				% per annum				% per annum			
	90-95	95-00	00-05	2007	90-95	95-00	00-05	2007	90-95	95-00	00-05	2007
<b>East and North-East Asia</b>	<b>1.0</b>	<b>2.6</b>	<b>2.3</b>	<b>14.5</b>	<b>2.7</b>	<b>3.2</b>	<b>4.5</b>	<b>5.1</b>	<b>3.8</b>	<b>2.0</b>	<b>2.5</b>	<b>4.8</b>
China	4.2	3.5	3.9	18.1	17.4	9.8	10.8	11.7	5.9	7.4	7.6	11.6
DPR Korea	-3.2	1.5	4.3	2.3	-7.5	-3.3	2.6	1.4	1.8	0.1	0.6	1.0
Hong Kong, China	-5.4	-9.4	-0.4	-9.8	-4.9	0.0	-3.2	-1.5	6.8	2.9	5.2	6.7
Japan	-4.4	1.2	-1.5	4.7	-0.5	0.6	0.7	0.2	3.2	1.3	1.6	3.5
Macao, China					-3.2	-1.8	9.8	28.2	7.6	-0.6	10.8	27.6
Mongolia	-0.5	0.4	-0.4	4.7	-3.8	2.6	8.0	7.6	-3.1	4.5	7.8	10.0
Republic of Korea	2.1	1.4	0.3	11.7	7.7	5.5	6.1	3.4	7.6	4.3	4.1	5.8
<b>South-East Asia</b>	<b>2.2</b>	<b>2.3</b>	<b>3.9</b>	<b>6.6</b>	<b>9.4</b>	<b>3.1</b>	<b>4.4</b>	<b>6.1</b>	<b>7.9</b>	<b>2.4</b>	<b>5.7</b>	<b>4.9</b>
Brunei Darussalam	1.7	6.6	7.0	12.8	0.2	2.0	1.3	3.4	5.2	3.6	3.3	-0.6
Cambodia	4.4	3.0	5.0	5.0	9.7	18.0	13.9	8.6	5.6	7.3	10.6	10.2
Indonesia	3.1	1.4	3.2	9.1	10.0	1.6	3.9	7.2	7.9	-0.5	6.5	4.5
Lao PDR	4.1	5.2	3.2	13.5	12.2	10.1	12.0	0.1	6.8	6.7	6.6	8.8
Malaysia	-0.2	1.7	3.2	2.2	10.6	5.9	3.9	3.3	11.0	5.7	5.6	10.0
Myanmar	4.6	7.1	11.4	5.2	9.4	12.0	17.4	6.1	5.6	8.4	13.6	5.6
Philippines	1.5	2.2	3.7	5.1	2.1	4.0	2.7	6.7	2.5	4.7	5.9	-8.0
Singapore	-3.0	-2.3	-0.1	0.2	9.3	6.6	2.4	7.7	9.2	6.1	5.1	8.0
Thailand	0.9	2.3	2.3	3.9	11.4	0.6	6.3	5.3	8.1	-0.4	4.5	4.3
Timor-Leste	6.6	-0.2	5.3	-5.6	11.8	-6.6	-3.7	30.8	11.2	-3.2	0.5	25.0
Viet Nam	4.3	4.4	3.8	13.2	12.6	10.9	10.2	6.1	9.2	5.7	6.9	8.4
<b>South and South-West Asia</b>	<b>2.5</b>	<b>2.4</b>	<b>2.9</b>	<b>11.3</b>	<b>5.0</b>	<b>4.6</b>	<b>6.4</b>	<b>6.4</b>	<b>5.5</b>	<b>6.1</b>	<b>6.9</b>	<b>6.7</b>
Afghanistan	10.4	-6.2	10.2	36.8	-16.9	13.1	20.5	4.9	-12.1	-7.0	33.2	-2.9
Bangladesh	1.4	4.9	2.5	3.2	8.3	6.4	7.4	9.5	4.5	4.9	5.7	6.8
Bhutan	0.4	2.9	2.5	30.7	11.8	14.4	9.8	32.1	3.7	10.2	10.5	20.2
India	2.3	2.6	2.8	14.6	6.1	5.2	7.1	7.6	7.0	8.2	8.5	7.4
Iran (Islamic Rep. of)	4.4	1.9	5.2	5.6	3.1	4.4	6.3	6.2	5.4	4.2	5.5	6.0
Maldives	1.3	2.6	7.5	-17.5	7.9	10.5	8.4	9.9	8.7	8.5	3.4	8.6
Nepal	1.5	3.3	3.2	4.3	10.0	6.5	2.6	2.2	7.4	5.6	3.1	0.9
Pakistan	5.4	2.1	2.9	8.8	4.5	3.2	7.9	6.4	5.0	3.4	6.9	4.0
Sri Lanka	3.0	1.9	0.7	3.3	7.9	6.9	3.5	7.6	6.1	5.3	4.7	7.3
Turkey	0.6	1.7	1.0	7.8	3.9	3.4	4.3	3.0	3.3	4.1	3.9	6.7
<b>North and Central Asia</b>	<b>-8.0</b>	<b>0.5</b>	<b>6.3</b>	<b>7.6</b>	<b>-13.5</b>	<b>2.5</b>	<b>6.7</b>	<b>8.7</b>	<b>-5.7</b>	<b>1.8</b>	<b>5.7</b>	<b>8.8</b>
Armenia	1.7	2.0	8.9	21.7	-19.2	5.3	20.9	4.3	-8.3	4.0	11.4	11.8
Azerbaijan	-15.6	4.0	7.1	4.0	-17.0	16.9	26.6	21.6	-15.9	4.7	6.9	10.4
Georgia	-17.0	-4.4	1.5	-5.7	-36.5	19.4	9.0	7.1	-18.9	9.0	8.6	9.5
Kazakhstan	-11.1	-2.3	5.7	8.5	-17.8	9.8	11.5	9.3	-3.9	1.4	11.0	13.2
Kyrgyzstan	-6.3	8.1	2.6	1.5	-20.5	14.7	-0.6	9.2	-9.9	0.8	4.1	1.3
Russian Federation	-7.7	0.5	6.4	7.5	-13.3	2.2	6.1	8.0	-5.5	1.5	5.4	8.1
Tajikistan	-14.3	-7.3	10.0	9.0	-18.1	-1.1	8.4	8.2	-19.3	2.1	10.1	5.8
Turkmenistan	-20.6	12.1	3.5	10.9	5.8	-3.5	4.1	7.9	-21.9	20.1	5.0	7.8
Uzbekistan	-0.8	2.5	6.5	8.6	-8.5	2.0	4.8	22.9	-3.7	4.6	1.7	23.1
<b>Pacific</b>	<b>2.0</b>	<b>4.3</b>	<b>1.3</b>	<b>18.9</b>	<b>2.5</b>	<b>2.3</b>	<b>2.8</b>	<b>2.9</b>	<b>3.6</b>	<b>4.3</b>	<b>3.7</b>	<b>3.2</b>
Australia	1.2	5.2	1.6	26.8	2.4	2.5	2.9	2.9	3.7	4.5	3.7	3.2
American Samoa												
Cook Islands	-0.5	11.4	5.0	8.6	1.8	7.6	5.6	6.3	5.0	1.4	3.7	-2.0
Fiji	1.9	-0.6	0.4	-2.0	4.3	2.8	2.6	-4.9	2.4	2.5	3.0	-4.5
French Polynesia	-0.4	2.0	-4.1	3.7	-1.4	4.7	1.2	2.6	2.0	2.5	2.2	2.9
Guam												
Kiribati	-5.2	-19.9	-42.5	-152.6	0.3	17.8	-0.8	-9.2	6.2	9.1	3.2	-10.7
Marshall Islands	2.5	-11.7	3.4	2.4	4.2	0.4	3.4	2.5	0.2	-4.1	3.5	2.6
Micronesia (F.S.)	4.0	-1.4	0.5	0.1	4.0	-1.4	0.5	0.1	4.0	-1.4	0.5	0.1
Nauru	-6.6	-4.1	2.2	30.3	-7.2	-3.8	30.5	39.3	-6.6	-3.7	1.7	-6.9
New Caledonia	0.6	4.5	-2.5	2.9	0.3	2.3	-1.1	-0.8	3.8	-2.3	1.0	1.0
New Zealand	2.3	2.2	0.3	1.8	2.7	1.2	2.6	2.3	3.5	3.4	4.1	3.1
Niue												
Northern Mariana Is.												
Palau	-26.9	-6.0	-2.9	60.0	-10.8	12.7	5.7	61.8	6.0	0.9	0.5	54.5
Papua New Guinea	9.1	3.2	1.1	7.4	12.2	1.0	1.3	9.0	4.7	-2.7	3.2	3.6
Samoa	1.7	-2.7	-3.2	4.8	0.8	2.6	5.4	9.2	0.8	8.0	5.8	2.8
Solomon Islands	5.4	-3.9	3.5	6.1	8.4	0.8	-8.8	6.4	4.0	-1.7	1.5	6.6
Tonga	3.4	-0.3	1.8	0.1	3.4	1.0	1.3	3.0	11.7	3.5	0.8	-6.8
Tuvalu	-0.6	0.2	2.0	1.6	3.4	6.4	5.9	2.9	4.2	8.4	5.0	2.6
Vanuatu	1.4	2.3	1.1	4.2	-0.1	-1.4	1.5	5.8	9.2	2.4	1.3	4.9
<b>Asia and the Pacific</b>	<b>0.1</b>	<b>2.3</b>	<b>3.1</b>	<b>11.6</b>	<b>1.8</b>	<b>3.3</b>	<b>4.8</b>	<b>5.5</b>	<b>3.6</b>	<b>2.7</b>	<b>3.5</b>	<b>5.2</b>
LLDC	-5.6	0.5	6.0	11.0	-12.2	6.5	11.7	12.9	-5.3	3.3	8.3	11.3
LDC	3.0	4.1	5.3	6.5	7.0	7.6	9.2	8.5	4.1	5.1	7.4	5.9
ASEAN	2.2	2.3	3.9	6.7	9.4	3.1	4.4	6.0	7.9	2.4	5.7	4.9
ECO	0.6	1.5	3.5	8.1	1.3	3.9	6.2	5.8	3.2	3.9	5.3	6.5
SAARC	2.6	2.6	2.9	12.8	6.0	5.2	7.2	7.6	6.4	7.3	8.1	6.9
Central Asia	-9.3	0.4	5.9	8.1	-15.2	6.6	11.9	13.9	-7.6	3.6	8.0	13.8
Pacific island dev. econ.	6.2	2.1	0.7	5.9	6.0	2.0	1.0	4.9	3.4	0.2	2.2	1.9
Low-income	2.7	3.1	4.4	7.5	1.5	4.1	7.7	7.6	3.8	3.9	6.6	5.6
Middle-income	0.4	2.3	3.8	12.6	4.2	6.2	8.3	9.5	3.4	4.7	6.7	7.8
High-income	-2.3	1.8	-0.6	9.1	0.5	1.3	1.6	1.1	3.7	1.9	2.2	3.9
<b>Other world regions</b>												
Africa	0.8	4.4	5.3	6.5	0.9	3.6	5.1	6.7	1.5	3.9	4.8	5.0
Europe	-1.2	1.8	0.2	7.0	0.1	2.5	1.2	2.9	1.8	3.3	2.1	2.7
Latin America & Carib.	2.6	2.6	3.4	7.0	3.5	2.7	2.2	4.4	3.3	3.2	2.8	5.4
North America	0.6	6.0	2.3	1.4	2.4	3.9	1.3	4.5	2.3	4.6	2.9	1.1
Other countries/areas	-0.3	3.3	2.2	2.6	4.2	4.5	3.2	6.4	3.1	4.6	5.0	4.5
<b>World</b>	<b>0.1</b>	<b>2.8</b>	<b>2.6</b>	<b>8.3</b>	<b>1.5</b>	<b>3.2</b>	<b>2.6</b>	<b>4.5</b>	<b>2.5</b>	<b>3.6</b>	<b>2.8</b>	<b>3.0</b>



# 16 Employment

Asia and the Pacific accounts for around two-thirds of the world's total employment – having six of the ten largest labour markets: China, India, Indonesia, the Russian Federation, Bangladesh, Japan and Pakistan. Because many workers in the developing countries are self-employed or underemployed, measuring their employment requires an extended set of statistical indicators.

If people in the region are to have higher living standards they will need higher wages which will mean working more productively. This why one of the four indicators for the MDG target on decent and productive work is labour productivity. In this respect the region seems to be doing well. Although there are insufficient data to calculate a regional aggregate, individual country estimates confirm that since the 1990s labour productivity has improved significantly – especially in North and Central Asia and China. Economies are thus generally growing faster than the number of jobs.

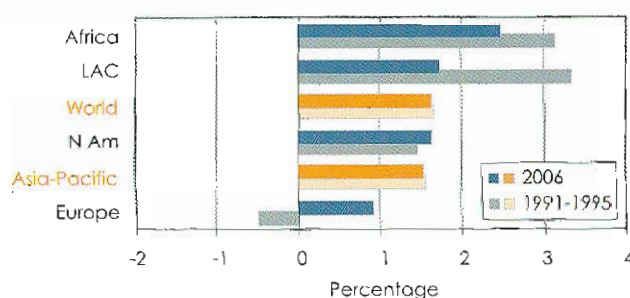
Between 1991 and 2006, average annual employment growth in the region as a whole was 1.5 per cent. This is slower than in Africa and Latin American and the Caribbean, though in these two regions growth was slowing over this period. Growth in Asia and the Pacific has also declined slightly as a result of underlying demographic changes – as families have been having fewer children the population and the labour force have been expanding more slowly. However to assess the overall health of the labour market it is important to consider labour force growth alongside other indicators.

Generally, employment growth has been more rapid in the poorer countries. Between 1991 and 2006, annual employment growth in the low-income economies averaged 2.5 per cent, compared with 1.5 per cent in the middle-income economies and 0.6 per cent in the high-income economies.

Over this period, among the country groupings, the most rapid growth – at least two per

**Figure 16.1**

**Employment growth, world regions, 1991-1995 and 2006**



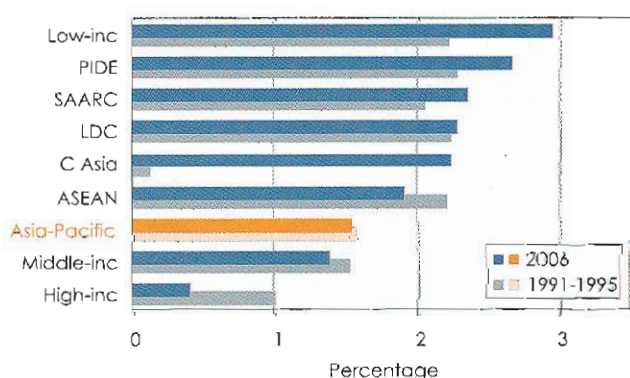
cent – was in the small island developing States, the least developed countries, and the ASEAN and SAARC countries. Central Asia has also performed better in recent years. Between 1991 and 1995, the subregion had minimal employment growth – 0.1 per cent – but it has been catching up, and in 2006, hit a record high of 2.2 per cent.

Of individual countries, those with employment growth in 2006 above 5 per cent included Bhutan (7.2 per cent), Maldives (6.1 per cent), Timor-Leste (5.9 per cent) and Pakistan (5.4 per cent). This was mainly a result of the population growth.

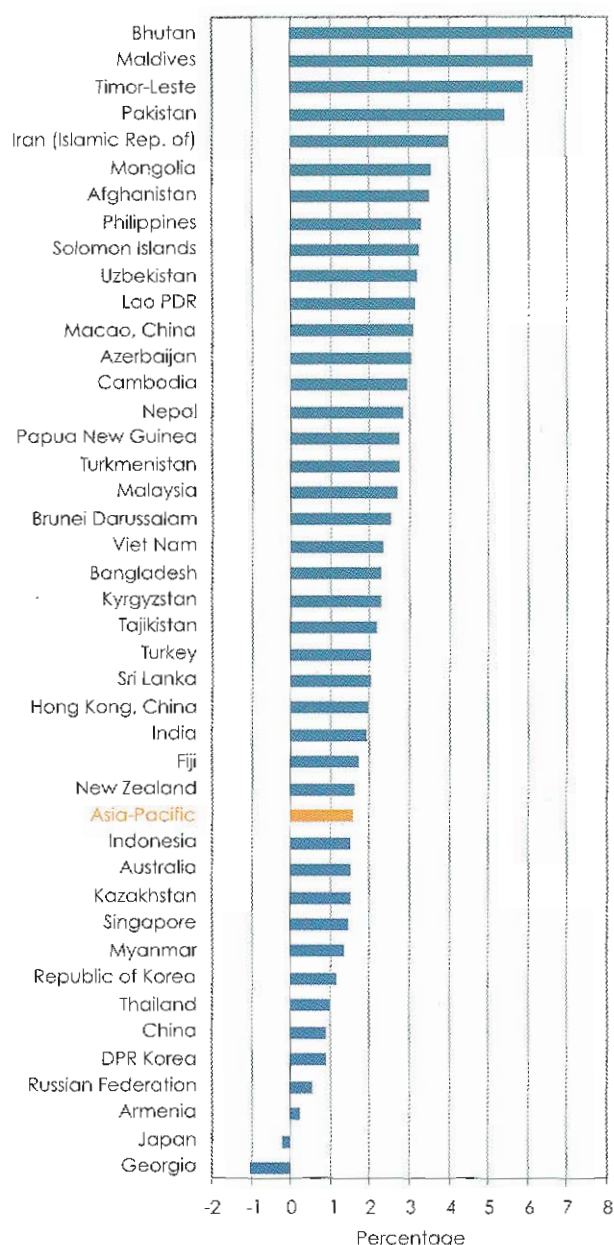
Another way of assessing the evolution of the labour market is to consider what proportion of

**Figure 16.2**

**Employment growth in Asia and the Pacific, selected groupings, 1991-1995 and 2006**





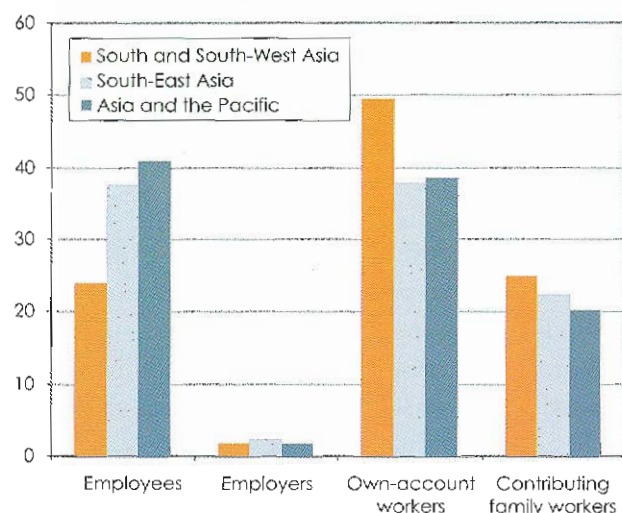
**Figure 16.3****Employment growth, Asia and the Pacific, 2006**

people aged 15 years and older are employed – the employment-to-population ratio. For Asia and the Pacific as a whole, this ratio has been declining: between 1991 and 2007 it fell from 66.4 to 63.1 per cent.

However, there are striking contrasts between subregions: over the past 17 years, East and North-East Asia has had the highest ratio, above 70 per cent, while during most of the same period South and South-West Asia and North and Central Asia had ratios between 55 and 60 per cent.

A further important labour market indicator is job quality. This can be assessed by considering the proportion of employment that involves own-

account workers or contributing family workers. In 2007, in the Asia-Pacific region as a whole, these accounted for 58.8 per cent of employment. That share was the highest in South-East Asia, 74.4 per cent, and South and South-West Asia, 60.1 per cent. These workers and their families are likely to lack social protection against risks of poor health or economic distress and are therefore vulnerable to poverty. Overall therefore the quality of jobs being created in Asia and the Pacific is still rather low.

**Figure 16.4****Employment status in Asia and the Pacific, selected groupings, 2007**

In most countries, economic development results in a higher proportion of workers in the service sector. In Asia and the Pacific since the 1990s this share has been growing continuously: in 1995 it was 25.3 per cent of total employment but by 2007 had reached 40.9 per cent. The highest share is found in North and Central Asia where in 2007 it reached 57.2 per cent. But the most rapid growth in services has been in East and North-East Asia: between 1991 and 2007 its share increased from 17.4 to 46.3 per cent of total employment.

The growth in services has been accompanied nearly everywhere by a declining share for agriculture: between 1991 and 2007 agriculture's share of total employment fell from 55.7 to 37.5 per cent. The most drastic decline, from 57.2 to 32.3 per cent, was in East and North-East Asia, largely as a result of workers moving to the growing services sector. Changes have been slower in the industry sector. Following a slight downward trend in the 1990s, in recent years the trend for the region as a whole has been slightly upwards – reaching 21.7 per cent of total jobs in 2007.



Figure 16.5

Employment by sector, 1991-2007

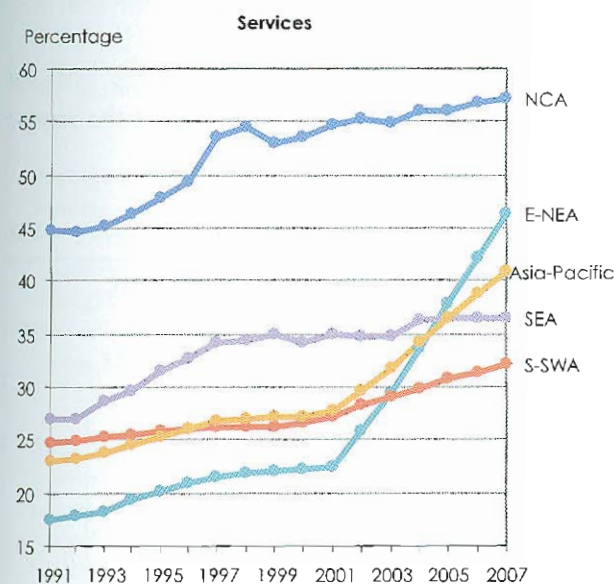
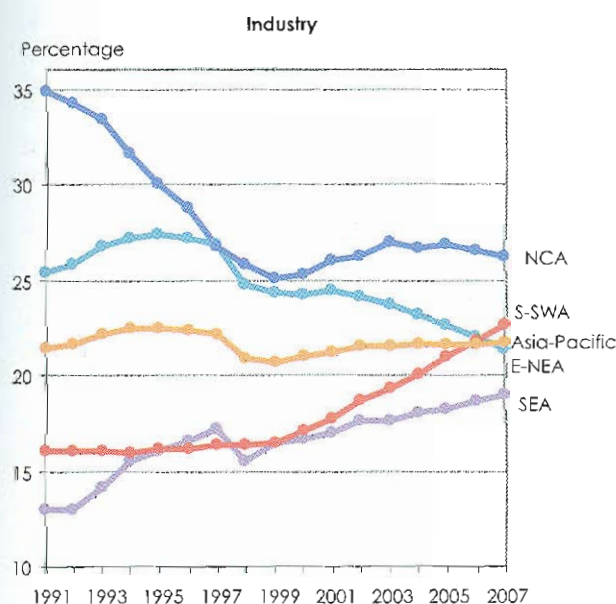
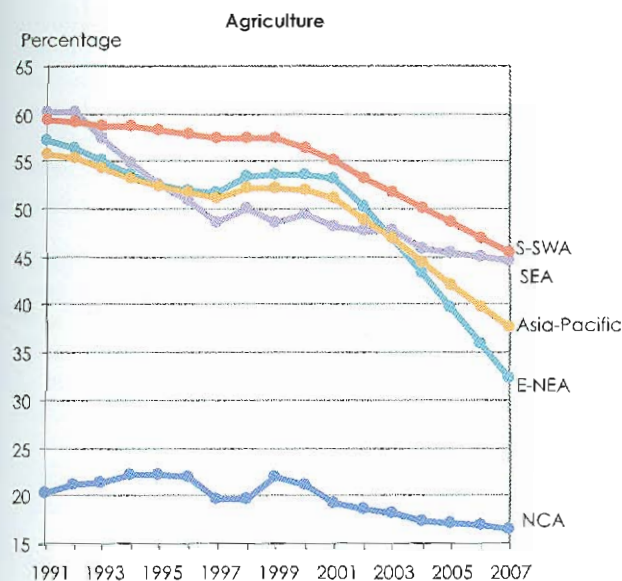
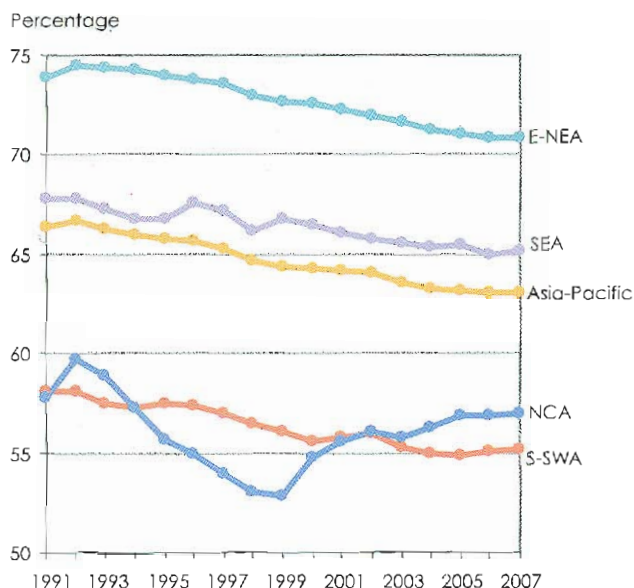


Figure 16.6

Employment to population ratio, by subregion, 1991-2007



When considering employment, one of the most important considerations is gender. Participation rates vary considerably between men and women and between subregions. For most of the past 17 years, women's participation rates have been consistently high, above 65 per cent, in East and North-East Asia, but they have been much lower in South and South-West Asia, below 35 per cent. For men the contrasts between subregions are less marked – the rates are generally slightly below 80 per cent, except in North and Central Asia, where they have been between 62 and 65 per cent.

This gender imbalance is confirmed by another measure – the ratio of women to men in employment. In East and North-East Asia this is around 80 per cent and has been stable for the past 17 years. In the South and South-West Asia subregion, however, women's participation in the labour force was very low and the ratio of women to men was only around 40 per cent.

For the labour market as a whole, particularly in developed economies, one of the strongest indicators of vitality, or the lack of it, is the rate of unemployment. In Asia and the Pacific unemployment over the past 17 years has generally been low and stable, averaging between four and five per cent – with surprisingly little variation between men and women. However, there are some subregional variations: the rate has been much higher, almost double the average, in North and Central Asia – largely a consequence of structural adjustment, as countries in the subregion make the transition to market-based economies.



Figure 16.7

Female employment-to-population ratio, 1991-2007

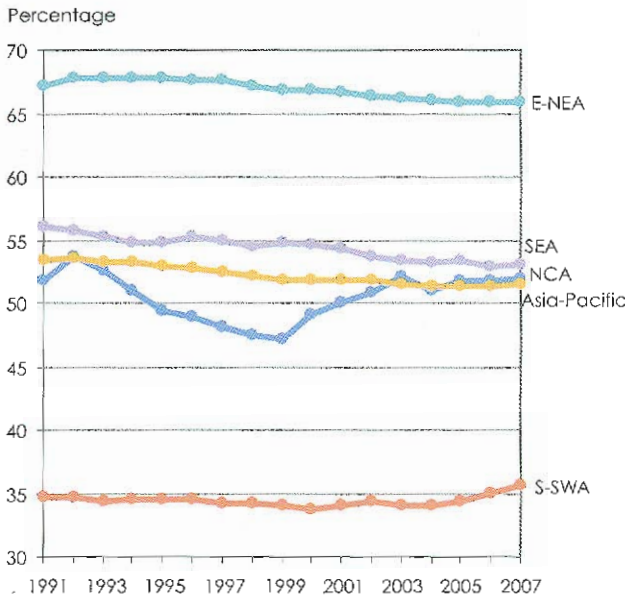
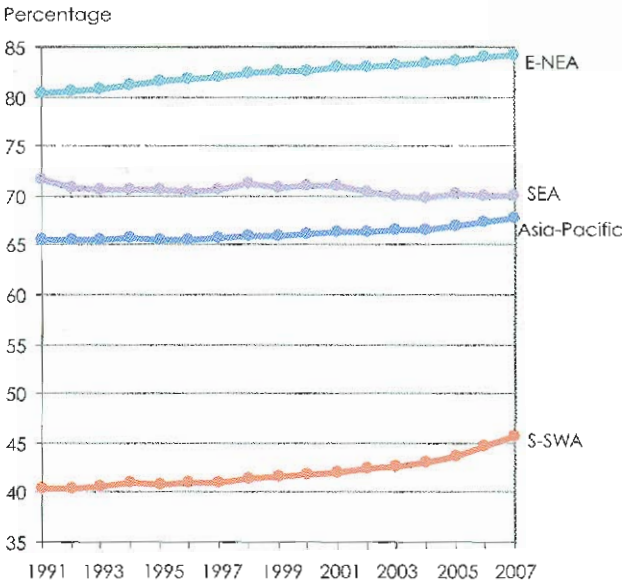


Figure 16.8

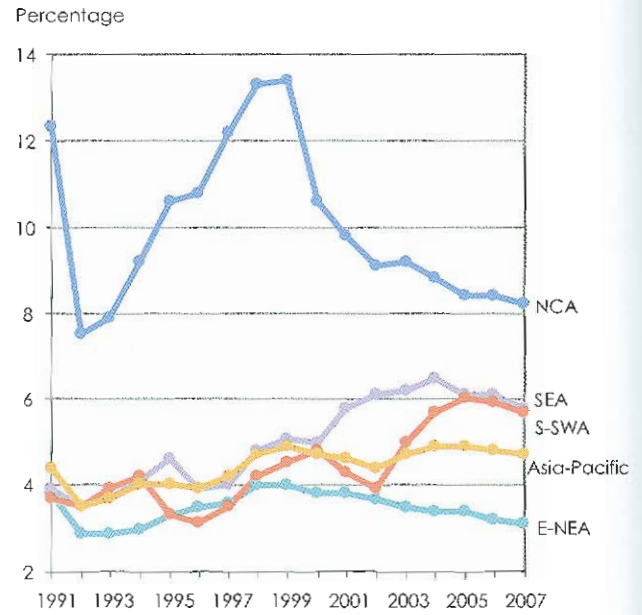
Ratio of women to men in employment, 1991-2007



In developing countries, however, the concept of unemployment may be less useful. Here large proportions of the workforce are engaged in subsistence farming and informal-sector activities, where the issue is more likely to be under-employment. In these circumstances, official unemployment statistics will not reflect the impact of economic downturns.

Figure 16.9

Total unemployment rate, by subregion, 1991-2007





**Total employment (thousands)**

The number of persons of working age who, during a specified brief period, either one week or one day, were in either paid employment or self-employment. **Aggregates:** Sum of individual country values. **Source:** International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Average annual employment growth rate (% per annum)**

The average annual rate of change of total employment. **Aggregates:** Averages are calculated using total employment as weight. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Average annual labour productivity growth rate (% per annum)**

Labour productivity is defined as output per unit of labour input. GDP in market prices is used as an output measure and either the total number of persons employed or the total number of annual hours worked by all persons employed as labour input measure. Gross labour productivity levels are converted to constant 1990 US dollars on the basis of adjusted Geary Khamis purchasing power parity (PPP). **Aggregates:** Averages are calculated using total employment as weight. **Source:** International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Employment by sector: Agriculture (percentage of total employment)**

The proportion of employment in agriculture, hunting, forestry and fishing of total employment, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Employment by sector: Industry (percentage of total employment)**

The proportion of employment in mining and quarrying, manufacturing, construction and public utilities (electricity, gas and water) of total employment, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Employment by sector: Services (percentage of total employment)**

The proportion of employment in wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate and business services, and community, social and personal services, of total employment, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Employment to population ratio; both sexes, women and men (percentage of population aged 15 and above)**

The proportion of the working-age population that is employed. For most countries, the working-age population is defined as persons aged 15 and above, although this may vary slightly from country to country. Data are presented for both sexes and disaggregated by sex. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Unemployment rate; total, women and men (percentage of labour force)**

The number of persons of working age who, during the reference period, were without work, currently available for work and seeking work, divided by the total labour force. National definitions and coverage of unemployment may vary. Data are presented for both sexes and disaggregated by sex. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Youth unemployment rate; total and female (percentage of labour force aged 15-24)**

The number of young persons aged 15-24 who are without work, currently available for work and seeking work, divided by the total labour force of that age group. Data are presented for both sexes and for women. **Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 14 August 2008).

**Employment by status: Employees (percentage of total employment)**

The number of employees divided by the total employment by status, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Employment by status: Employers (percentage of total employment)**

The number of employers divided by the total employment by status, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).

**Employment by status: Other self-employed (percentage of total employment)**

The number of own-account workers, members of producer's cooperatives, and contributing family workers divided by the total employment by status, expressed as a percentage. **Aggregates:** Aggregate values have been calculated by ILO. **Source:** Calculated by ESCAP using data from International Labour Organization, Key Indicators of the Labour Market, Fifth Edition (online database, accessed on 21 May 2008).



## 16.1 Employment and labour productivity

	Total employment					Average annual employment growth rate				Average annual labour productivity growth rate		
	Thousands					% per annum				% per annum		
	1991	1995	2000	2005	2006	91-95	95-00	00-05	2006	91-95	95-00	00-05
<b>East and North-East Asia</b>	<b>664 799</b>	<b>704 333</b>	<b>739 021</b>	<b>779 143</b>	<b>786 404</b>	<b>1.5</b>	<b>1.0</b>	<b>1.1</b>	<b>0.9</b>	<b>5.4</b>	<b>2.3</b>	<b>7.4</b>
China	632 397	669 398	702 909	740 393	747 178	1.4	1.0	1.0	0.9	9.8	3.6	11.0
DPR Korea	9 624	10 077	10 277	10 706	10 802	1.2	0.4	0.8	0.9			
Hong Kong, China	2 860	2 984	3 210	3 480	3 549	1.1	1.5	1.6	2.0	3.5	2.1	3.6
Japan	63 640	64 762	64 455	63 762	63 632	0.4	-0.1	-0.2	-0.2	0.8	0.8	1.2
Macao, China	160	176	207	257	265	2.4	3.3	4.4	3.1			
Mongolia	657	846	907	1 068	1 106	6.5	1.4	3.3	3.6			
Republic of Korea	19 101	20 852	21 511	23 239	23 504	2.2	0.6	1.6	1.1	6.2	3.4	4.0
<b>South-East Asia</b>	<b>194 460</b>	<b>212 263</b>	<b>237 051</b>	<b>261 025</b>	<b>266 050</b>	<b>2.2</b>	<b>2.2</b>	<b>1.9</b>	<b>1.9</b>	<b>5.7</b>	<b>1.3</b>	<b>3.9</b>
Brunei Darussalam	109	122	140	156	160	2.9	2.8	2.2	2.6			
Cambodia	4 331	4 761	5 651	6 625	6 819	2.4	3.5	3.2	2.9	2.4	5.1	7.3
Indonesia	75 848	82 659	93 651	98 550	100 060	2.2	2.5	1.0	1.5	5.7	0.5	3.5
Lao PDR	1 517	1 698	1 941	2 251	2 322	2.9	2.7	3.0	3.2			
Malaysia	7 120	8 041	9 582	10 893	11 185	3.1	3.6	2.6	2.7	7.0	3.5	2.7
Myanmar	19 729	21 486	23 887	26 031	26 388	2.2	2.1	1.7	1.4	6.2	7.2	11.7
Philippines	21 973	25 158	27 715	34 425	35 570	3.4	2.0	4.4	3.3	0.7	1.8	2.5
Singapore	1 566	1 693	1 963	2 115	2 146	2.0	3.0	1.5	1.5	6.2	3.6	2.1
Thailand	30 685	31 667	33 270	35 625	35 989	0.8	1.0	1.4	1.0	7.3	-0.5	4.3
Timor-Leste	284	304	258	388	411	1.7	-3.2	8.5	5.9			
Viet Nam	31 298	34 674	38 993	43 966	45 000	2.6	2.4	2.4	2.4	6.8	5.5	6.3
<b>South and South-West Asia</b>	<b>459 224</b>	<b>497 979</b>	<b>556 094</b>	<b>618 754</b>	<b>633 698</b>	<b>2.0</b>	<b>2.2</b>	<b>2.2</b>	<b>2.4</b>	<b>3.2</b>	<b>3.5</b>	<b>4.9</b>
Afghanistan	4 044	5 425	6 128	7 821	8 096	7.6	2.5	5.0	3.5			
Bangladesh	50 460	54 170	60 263	66 413	67 930	1.8	2.2	2.0	2.3	3.0	3.3	3.3
Bhutan	170	154	182	251	269	-2.4	3.4	6.6	7.2			
India	321 546	348 478	386 323	424 143	432 431	2.0	2.1	1.9	2.0	4.0	4.1	5.5
Iran (Islamic Rep. of)	14 818	16 154	20 229	24 785	25 781	2.2	4.6	4.1	4.0	0.4	3.2	5.1
Maldives	59	70	88	114	121	4.4	4.7	5.3	6.1			
Nepal	6 717	7 345	8 421	9 561	9 833	2.3	2.8	2.6	2.8			
Pakistan	35 208	38 635	44 933	53 755	56 673	2.3	3.1	3.7	5.4	2.5	1.6	3.2
Sri Lanka	6 125	6 205	7 169	7 419	7 570	0.3	2.9	0.7	2.0	4.3	4.0	2.8
Turkey	20 077	21 343	22 358	24 492	24 994	1.5	0.9	1.8	2.0	2.0	2.5	3.1
<b>North and Central Asia</b>	<b>92 808</b>	<b>90 834</b>	<b>92 203</b>	<b>98 747</b>	<b>99 796</b>	<b>-0.5</b>	<b>0.3</b>	<b>1.4</b>	<b>1.1</b>	<b>-10.4</b>	<b>2.0</b>	<b>7.0</b>
Armenia	1 655	1 307	1 173	1 166	1 169	-5.7	-2.1	-0.1	0.3	-9.5	5.3	13.1
Azerbaijan	2 812	2 960	3 306	3 784	3 899	1.3	2.2	2.7	3.0	-20.0	6.8	18.3
Georgia	2 470	2 275	2 101	1 944	1 924	-2.0	-1.6	-1.5	-1.0	-21.1	6.9	7.8
Kazakhstan	7 138	6 851	6 595	7 432	7 545	-1.0	-0.8	2.4	1.5	-8.2	3.5	10.1
Kyrgyzstan	1 626	1 671	1 861	2 102	2 150	0.7	2.2	2.5	2.3	-14.3	4.2	2.6
Russian Federation	67 202	65 097	64 939	68 253	68 618	-0.8	0.0	1.0	0.5	-10.1	1.8	6.7
Tajikistan	1 669	1 681	1 760	1 910	1 952	0.2	0.9	1.6	2.2	-20.4	-3.2	7.7
Turkmenistan	1 295	1 476	1 729	1 963	2 017	3.3	3.2	2.6	2.8	-11.7	2.5	2.5
Uzbekistan	6 941	7 516	8 739	10 193	10 522	2.0	3.1	3.1	3.2	-6.8	2.3	3.8
<b>Pacific</b>	<b>2 146</b>	<b>2 350</b>	<b>2 705</b>	<b>3 099</b>	<b>3 182</b>	<b>2.3</b>	<b>2.9</b>	<b>2.8</b>	<b>2.7</b>	<b>2.8</b>	<b>2.5</b>	<b>2.3</b>
Australia	7 597	8 206	8 978	9 780	9 929	1.9	1.8	1.7	1.5	2.8	2.7	2.3
American Samoa												
Cook Islands												
Fiji	277	301	323	345	351	2.1	1.4	1.3	1.7			
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	1 510	1 708	1 823	2 077	2 111	3.1	1.3	2.6	1.6	3.0	1.2	2.3
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea	1 752	1 914	2 225	2 569	2 640	2.2	3.1	2.9	2.8			
Samoa												
Solomon Islands	117	135	157	185	191	3.6	3.1	3.3	3.2			
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific</b>	<b>1 486 184</b>	<b>1 582 435</b>	<b>1 702 330</b>	<b>1 836 387</b>	<b>1 864 802</b>	<b>1.6</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>3.2</b>	<b>2.1</b>	<b>6.2</b>
LLDC	36 241	38 930	42 742	49 502	50 880	1.8	1.9	3.0	2.8	-10.2	2.9	8.5
LDC	87 428	95 548	106 976	119 640	122 380	2.2	2.3	2.3	2.3	4.0	4.8	6.9
ASEAN	194 176	211 959	236 793	260 637	265 639	2.2	2.2	1.9	1.9	5.7	1.3	3.9
ECO	95 628	103 712	117 638	138 237	143 629	2.0	2.6	3.3	3.9	-1.7	2.2	4.5
SAARC	424 329	460 482	513 507	569 477	582 923	2.1	2.2	2.1	2.4	3.8	3.8	5.0
Central Asia	25 606	25 737	27 264	30 494	31 178	0.1	1.2	2.3	2.2	-11.3	3.2	8.5
Pacific island dev. econ.	2 146	2 350	2 705	3 099	3 182	2.3	2.9	2.8	2.7			
Low-income	175 033	191 188	215 236	244 088	251 318	2.2	2.4	2.5	3.0	1.8	3.7	5.4
Middle-income	1 214 608	1 290 744	1 384 807	1 487 433	1 508 188	1.5	1.4	1.4	1.4	4.4	2.9	8.3
High-income	96 543	100 503	102 287	104 866	105 296	1.0	0.4	0.5	0.4	1.7	1.4	1.8
<b>Other world regions</b>												
Africa	225 710	255 542	289 989	333 812	342 114	3.2	2.6	2.9	2.5	-0.6	1.6	2.6
Europe	246 700	241 908	247 010	253 565	255 913	-0.5	0.4	0.5	0.9	1.0	2.7	1.8
Latin America & Carib.	164 813	188 159	211 128	234 216	238 325	3.4	2.3	2.1	1.8	1.6	1.6	1.3
North America	137 274	145 473	158 417	165 592	168 323	1.5	1.7	0.9	1.6	1.8	2.9	1.4
Other countries/areas	30 075	34 831	40 715	47 833	49 337	3.7	3.2	3.3	3.1	2.8	2.2	1.7
<b>World</b>	<b>2 290 756</b>	<b>2 448 348</b>	<b>2 649 589</b>	<b>2 871 405</b>	<b>2 918 814</b>	<b>1.7</b>	<b>1.6</b>	<b>1.6</b>	<b>1.7</b>	<b>1.7</b>	<b>2.2</b>	<b>3.2</b>



## 16.2 Employment by sector

	Agriculture				Industry				Services			
	% of total employment				% of total employment				% of total employment			
	1990	1995	2000	Latest	1990	1995	2000	Latest	1990	1995	2000	Latest
<b>East and North-East Asia<sup>1</sup></b>		<b>52.5</b>	<b>53.6</b>	<b>32.3 (07)</b>		<b>27.4</b>	<b>24.2</b>	<b>21.4 (07)</b>		<b>20.1</b>	<b>22.2</b>	<b>46.3 (07)</b>
China	64.9	59.3	60.6	56.6 (02)	23.1	25.7	22.7	22.7 (02)	12.1	15.0	16.7	20.7 (02)
DPR Korea												
Hong Kong, China	0.9	0.6	0.3	0.3 (05)	36.7	27.0	20.3	15.2 (05)	62.4	72.4	79.4	84.5 (05)
Japan	7.3	5.7	5.1	4.5 (05)	34.2	33.7	31.4	28.3 (05)	58.5	60.6	63.5	67.2 (05)
Macao, China	0.2	0.2	0.2	0.1 (05)	42.6	32.1	28.2	25.2 (05)	57.3	67.7	71.6	74.7 (05)
Mongolia		46.1	48.6	39.9 (05)		17.9	14.1	16.8 (05)		35.9	37.2	43.3 (05)
Republic of Korea	17.9	12.4	10.6	7.9 (05)	35.4	33.3	28.2	26.9 (05)	46.7	54.3	61.2	65.2 (05)
<b>South-East Asia<sup>1</sup></b>		<b>52.5</b>	<b>49.3</b>	<b>44.5 (07)</b>		<b>16.0</b>	<b>16.6</b>	<b>19.0 (07)</b>		<b>31.5</b>	<b>34.1</b>	<b>36.5 (07)</b>
Brunei Darussalam				1.4 (01)				21.4 (01)				77.2 (01)
Cambodia			73.8	70.3 (01)			8.4	10.5 (01)			17.7	19.1 (01)
Indonesia	56.0	44.0	45.1	44.0 (05)	13.8	18.4	17.5	18.0 (05)	30.3	37.6	37.3	38.0 (05)
Lao PDR		85.4				3.5				11.1		
Malaysia	26.0	20.0	18.4	14.8 (04)	27.5	32.3	32.2	30.1 (04)	46.5	47.7	49.5	55.1 (04)
Myanmar	69.7		62.7 (98)		9.2		12.2 (98)		21.0		25.1 (98)	
Philippines	45.2	44.1	37.5	37.0 (05)	15.0	15.6	16.0	14.9 (05)	39.7	40.3	46.5	48.1 (05)
Singapore		0.2		0.3 (04)		31.2		23.3 (04)		68.5		76.4 (04)
Thailand	64.0	52.0	48.8	42.6 (05)	14.0	19.8	19.0	20.3 (05)	22.0	28.3	32.2	37.1 (05)
Timor-Leste												
Viet Nam			65.3	57.9 (04)			12.4	17.4 (04)			22.3	24.7 (04)
<b>South and South-West Asia<sup>1</sup></b>		<b>58.2</b>	<b>56.4</b>	<b>45.3 (07)</b>		<b>16.1</b>	<b>17.1</b>	<b>22.6 (07)</b>		<b>25.8</b>	<b>26.5</b>	<b>32.1 (07)</b>
Afghanistan												
Bangladesh	69.5		64.8	51.7 (03)	13.6		10.7	13.7 (03)	16.9		24.5	34.6 (03)
Bhutan												
India	69.1	66.7			13.6	12.9			17.3	20.3		
Iran (Islamic Rep. of)	26.4	22.1		25.0 (05)	28.3	31.4		30.4 (05)	45.3	46.5		44.6 (05)
Maldives		23.0	16.5	17.8 (03)		24.8	22.9	24.0 (03)		52.2	60.6	58.2 (03)
Nepal	83.9	74.8		66.9 (01)	2.4	5.2		13.5 (01)	13.8	20.0		19.6 (01)
Pakistan	51.2	46.8	48.4	43.1 (05)	19.8	18.5	18.0	20.3 (05)	29.0	34.6	33.5	36.6 (05)
Sri Lanka	48.6	39.6		35.9 (04)	20.9	24.8		24.5 (04)	30.5	35.6		39.6 (04)
Turkey	46.9	43.4	36.0	29.5 (05)	20.7	22.3	24.0	24.7 (05)	32.4	34.3	40.0	45.8 (05)
<b>North and Central Asia<sup>1</sup></b>		<b>22.1</b>	<b>21.2</b>	<b>16.5 (07)</b>		<b>30.0</b>	<b>25.3</b>	<b>26.2 (07)</b>		<b>47.9</b>	<b>53.5</b>	<b>57.2 (07)</b>
Armenia				46.9 (04)				16.0 (04)				37.1 (04)
Azerbaijan	36.4	36.5	41.0	39.3 (05)	26.9	21.1	10.9	12.1 (05)	36.6	42.4	48.1	48.6 (05)
Georgia			52.2	54.4 (05)			9.8	9.3 (05)			38.0	36.2 (05)
Kazakhstan				33.5 (04)				17.4 (04)				49.1 (04)
Kyrgyzstan	32.7	47.2	53.1	48.0 (05)	27.9	16.7	10.5	12.5 (05)	39.4	36.1	36.5	39.5 (05)
Russian Federation			14.5	10.2 (05)			28.4	29.8 (05)			57.1	60.0 (05)
Tajikistan	82.1	61.4	49.8 (97)		0.0	16.1	18.8 (97)		17.9	22.5	31.4 (97)	
Turkmenistan												
Uzbekistan		43.3	41.4 (99)			20.1	20.9 (99)			36.6	37.8 (99)	
<b>Pacific</b>												
Australia	5.6	5.0	5.0	3.7 (05)	25.1	22.8	21.7	21.1 (05)	69.3	72.2	73.3	75.2 (05)
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia		7.3 (96)				23.7 (96)				68.9 (96)		
New Zealand	10.6	9.7	8.7	7.2 (05)	24.7	25.1	23.3	22.1 (05)	64.7	65.2	68.0	70.8 (05)
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea			73.3	73.3 (00)			3.7	3.7 (00)			23.0	23.0 (00)
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific<sup>1</sup></b>		<b>52.3</b>	<b>51.9</b>	<b>37.5 (07)</b>		<b>22.4</b>	<b>20.9</b>	<b>21.7 (07)</b>		<b>25.3</b>	<b>27.2</b>	<b>40.9 (07)</b>
LLDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific island dev. econ.												
Low-income												
Middle-income												
High-income												
<b>Other world regions</b>												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
<b>World</b>												

<sup>1</sup> Aggregate values calculation based on ILO methodology.



## 16.3 Employment to population ratio

	Both sexes				Women				Men			
	% of population aged 15 and above				% of women aged 15 and above				% of men aged 15 and above			
	1991	1995	2000	2006	1991	1995	2000	2006	1991	1995	2000	2006
<b>East and North-East Asia<sup>1</sup></b>	<b>73.9</b>	<b>74.0</b>	<b>72.6</b>	<b>70.9</b>	<b>67.2</b>	<b>67.7</b>	<b>66.9</b>	<b>65.8</b>	<b>80.3</b>	<b>80.0</b>	<b>78.1</b>	<b>75.9</b>
China	74.9	75.2	73.7	71.7	69.7	69.7	68.1	65.6	79.8	80.4	79.1	77.5
DPR Korea	63.7	63.5	60.4	59.7	49.9	49.0	47.2	46.2	78.4	79.0	74.6	73.8
Hong Kong, China	62.6	59.6	58.0	58.4	47.3	46.0	47.5	51.4	77.6	73.7	69.3	66.1
Japan	62.5	61.4	59.4	57.7	49.6	48.3	47.0	46.2	76.1	75.3	72.6	69.9
Macao, China	56.5	57.9	60.5	65.4	44.3	47.3	52.9	59.4	70.0	69.6	68.9	72.1
Mongolia	49.5	58.0	56.0	58.9	40.1	46.3	45.1	48.9	59.2	69.9	67.0	71.3
Republic of Korea	59.0	60.5	58.1	59.7	46.2	47.7	46.9	48.8	72.0	73.4	69.4	70.8
<b>South-East Asia<sup>1</sup></b>	<b>67.8</b>	<b>66.8</b>	<b>66.5</b>	<b>65.0</b>	<b>56.0</b>	<b>54.8</b>	<b>54.6</b>	<b>52.8</b>	<b>79.9</b>	<b>79.1</b>	<b>78.6</b>	<b>77.4</b>
Brunei Darussalam	62.5	61.7	61.1	59.2	44.3	43.9	43.7	41.4	78.4	77.7	77.0	75.8
Cambodia	78.7	77.8	76.1	75.9	75.3	74.2	73.3	73.2	82.8	82.1	79.2	78.8
Indonesia	63.1	62.5	63.5	60.7	47.4	46.7	47.1	44.3	78.9	78.5	80.1	77.5
Lao PDR	65.3	65.3	65.6	66.0	52.8	53.1	52.9	53.5	78.1	77.8	78.6	79.1
Malaysia	60.9	61.1	61.9	62.0	42.6	42.4	44.1	45.2	78.9	79.4	79.2	78.4
Myanmar	74.6	74.4	74.6	74.4	65.8	65.7	66.0	66.0	83.6	83.4	83.5	83.2
Philippines	59.1	60.6	58.4	64.2	42.0	44.4	43.6	51.6	76.2	76.8	73.3	76.9
Singapore	64.4	62.6	62.5	60.3	50.0	48.4	49.9	47.9	78.8	76.8	75.0	72.7
Thailand	77.4	74.2	71.8	72.2	70.4	65.3	63.9	65.2	84.7	83.6	80.1	79.7
Timor-Leste	61.9	61.4	62.4	66.7	47.3	46.3	48.7	53.4	76.2	75.8	75.5	79.8
Viet Nam	75.4	75.1	74.2	73.4	71.8	71.9	71.2	70.3	79.0	78.4	77.2	76.6
<b>South and South-West Asia<sup>1</sup></b>	<b>58.1</b>	<b>57.5</b>	<b>55.6</b>	<b>55.1</b>	<b>34.6</b>	<b>34.4</b>	<b>33.7</b>	<b>34.9</b>	<b>80.1</b>	<b>79.2</b>	<b>76.2</b>	<b>74.2</b>
Afghanistan	55.8	56.0	56.0	58.4	29.9	30.0	30.2	33.8	79.6	79.9	79.9	81.1
Bangladesh	73.4	71.0	68.9	66.7	60.2	55.2	53.0	50.0	85.8	85.9	83.9	82.6
Bhutan	54.6	53.9	54.5	60.7	28.6	27.9	31.7	43.5	78.8	78.6	76.5	75.5
India	58.6	57.6	56.8	55.7	34.7	33.7	32.7	32.2	80.7	79.8	79.3	77.7
Iran (Islamic Rep. of)	46.1	45.1	47.2	50.8	18.1	21.2	26.5	33.7	72.8	68.4	67.3	67.6
Maldives	49.6	51.6	54.0	60.1	20.9	27.4	36.6	48.9	76.3	74.2	71.7	70.8
Nepal	59.0	58.3	58.4	57.8	43.4	42.8	43.9	43.7	75.0	74.8	73.8	72.8
Pakistan	54.4	54.3	53.4	55.3	24.2	25.5	25.2	30.2	82.6	81.3	80.0	79.0
Sri Lanka	51.6	48.7	52.4	51.7	33.0	29.2	32.9	31.6	70.0	68.2	72.2	72.7
Turkey	53.0	50.8	47.2	46.9	31.9	28.9	25.0	25.0	73.8	72.3	69.1	68.5
<b>North and Central Asia<sup>1</sup></b>	<b>57.8</b>	<b>55.7</b>	<b>54.8</b>	<b>56.9</b>	<b>51.8</b>	<b>49.4</b>	<b>49.1</b>	<b>51.8</b>	<b>64.8</b>	<b>63.0</b>	<b>61.3</b>	<b>62.8</b>
Armenia	67.6	57.5	51.4	48.6	61.3	50.2	45.1	43.5	74.6	65.8	58.9	54.8
Azerbaijan	58.5	57.5	58.8	61.2	52.2	50.3	52.5	56.0	65.3	65.4	65.7	67.0
Georgia	60.4	59.2	56.8	53.2	59.1	56.2	49.0	43.0	62.0	62.6	65.8	65.0
Kazakhstan	62.8	61.3	61.0	64.7	54.6	53.6	54.7	59.9	72.0	69.8	68.1	70.2
Kyrgyzstan	58.7	58.3	57.8	58.7	51.1	50.6	49.3	50.0	66.9	66.4	66.8	68.0
Russian Federation	58.4	55.6	53.8	56.3	52.3	48.9	48.1	50.8	65.6	63.4	60.6	62.9
Tajikistan	54.4	51.7	49.5	47.9	45.0	43.1	41.8	41.1	64.0	60.5	57.4	55.1
Turkmenistan	57.6	58.2	60.2	59.6	52.0	51.9	53.9	54.3	63.5	64.9	66.8	65.2
Uzbekistan	55.9	55.0	56.3	57.7	48.5	47.5	49.2	51.0	63.8	62.8	63.7	64.5
<b>Pacific</b>												
Australia	56.7	57.9	59.1	59.9	46.8	49.1	51.3	53.6	66.8	66.9	67.2	66.4
American Samoa												
Cook Islands												
Fiji	60.7	61.0	61.1	62.5	46.0	46.2	46.9	48.8	75.2	75.5	75.1	75.9
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	56.9	60.4	61.2	64.7	48.6	51.8	53.7	58.7	65.5	69.5	69.1	71.0
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea	70.7	69.3	70.4	71.3	69.1	68.2	69.3	69.8	72.3	70.4	71.6	72.9
Samoa												
Solomon Islands	65.8	66.2	65.2	65.9	53.4	52.6	52.1	51.9	77.5	79.0	77.5	79.1
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific<sup>1</sup></b>	<b>66.4</b>	<b>65.8</b>	<b>64.3</b>	<b>63.1</b>	<b>53.3</b>	<b>52.8</b>	<b>51.8</b>	<b>51.3</b>	<b>79.1</b>	<b>78.5</b>	<b>76.4</b>	<b>74.7</b>
ILDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific island dev. econ.												
Low-income												
Middle-income												
High-income												
<b>Other world regions</b>												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
<b>World</b>												

<sup>1</sup> Aggregate values calculation based on ILO methodology.



## 16.4 Unemployment rate

	Total				Women				Men			
	% of labour force				% of female labour force				% of male labour force			
	1991	1995	2000	2007	1991	1995	2000	2007	1991	1995	2000	2007
<b>East and North-East Asia<sup>1</sup></b>	<b>3.8</b>	<b>3.3</b>	<b>3.8</b>	<b>3.1</b>	<b>3.3</b>	<b>2.9</b>	<b>3.2</b>	<b>2.6</b>	<b>4.2</b>	<b>3.7</b>	<b>4.2</b>	<b>3.5</b>
China	2.3	2.9	3.1	4.2 (05)								
DPR Korea												
Hong Kong, China	1.8	3.2	4.9	4.0	1.6	2.9	4.0	3.4	1.9	3.4	5.6	4.5
Japan	2.1	3.2	4.8	3.9	2.2	3.3	4.5	3.7	1.9	3.1	5.0	4.0
Macao, China	3.0	3.6	6.7	3.0	3.7	3.0	4.6	2.7	2.5	4.1	8.6	3.4
Mongolia			17.5	14.2 (03)			16.6	14.1 (03)			18.2	14.3 (03)
Republic of Korea	2.4	2.1	4.4	3.2	2.0	1.7	3.6	2.6	2.7	2.3	5.0	3.7
<b>South-East Asia<sup>1</sup></b>	<b>3.9</b>	<b>4.6</b>	<b>5.0</b>	<b>5.8</b>	<b>4.0</b>	<b>5.1</b>	<b>4.9</b>	<b>6.5</b>	<b>3.7</b>	<b>4.2</b>	<b>5.1</b>	<b>5.2</b>
Brunei Darussalam	4.7				6.7				3.7			
Cambodia			2.5	1.7 (01)			2.8	2.0 (01)			2.2	1.4 (01)
Indonesia			6.1	9.1			6.7	10.8			5.7	8.1
Lao PDR		2.6		1.4 (05)		2.6		1.4 (05)		2.6		1.3 (05)
Malaysia		3.1	3.0	3.1		3.8	3.1	3.4		2.8	2.9	3.2
Myanmar	6.0 (90)				8.8 (90)				4.7 (90)			
Philippines	9.0	8.4	10.1	6.3	10.5	9.4	9.9	6.0	8.1	7.7	10.3	6.4
Singapore	1.9	2.7	6.0	4.0	1.8	2.8	6.6	4.3	2.0	2.6	5.6	3.7
Thailand	2.7		2.4	1.2	3.5		2.3	1.1	2.0		2.4	1.3
Timor-Leste												
Viet Nam			2.3	2.1 (04)			2.1	2.4 (04)			2.4	1.9 (04)
<b>South and South-West Asia<sup>1</sup></b>	<b>3.7</b>	<b>3.3</b>	<b>4.8</b>	<b>5.7</b>	<b>4.1</b>	<b>3.7</b>	<b>5.0</b>	<b>6.1</b>	<b>3.6</b>	<b>3.1</b>	<b>4.7</b>	<b>5.5</b>
Afghanistan				8.5 (05)				9.5 (05)				7.6 (05)
Bangladesh			3.3	4.3 (05)			3.3	7.0 (05)			3.2	3.4 (05)
Bhutan				3.2 (05)				3.3 (05)				3.0 (05)
India			4.3	5.0 (04)			4.1	5.3 (04)			4.4	4.9 (04)
Iran (Islamic Rep. of)	11.1			10.5	24.4			15.7	9.5			9.3
Maldives		0.8	2.0	14.4 (06)		1.3	2.7	23.7 (06)		0.6	1.6	7.9 (06)
Nepal			8.8 (01)				10.7 (01)				7.4 (01)	
Pakistan	5.9	5.0	7.2	5.3	16.3	14.0	15.8	8.4	4.2	3.7	5.5	4.5
Sri Lanka		12.4	7.6	6.0		19.9	11.1	9.0		8.7	5.8	4.3
Turkey	8.2	7.6	6.5	9.9	7.1	7.3	6.3	10.2	8.7	7.8	6.6	9.8
<b>North and Central Asia<sup>1</sup></b>	<b>12.3</b>	<b>10.6</b>	<b>10.6</b>	<b>8.2</b>	<b>12.2</b>	<b>10.6</b>	<b>10.8</b>	<b>8.1</b>	<b>12.3</b>	<b>10.6</b>	<b>10.5</b>	<b>8.3</b>
Armenia			11.7	9.6 (04)			15.7	13.8 (04)			8.0	5.7 (04)
Azerbaijan			16.3 (99)				18.6 (99)				14.2 (99)	
Georgia			10.8	13.3			10.5	12.6			11.1	13.9
Kazakhstan		11.0	12.8	8.4 (04)				9.8 (04)				7.0 (04)
Kyrgyzstan				8.3 (06)				9.0 (06)				7.7 (06)
Russian Federation		9.7	9.8	6.1		9.5	9.4	5.8		9.8	10.2	6.4
Tajikistan												
Turkmenistan												
Uzbekistan												
<b>Pacific</b>												
Australia	9.6	8.5	6.3	4.4	9.2	8.1	6.1	4.8	9.9	8.8	6.5	4.0
American Samoa			5.1				6.0				4.9	
Cook Islands	7.2				9.5				6.2			
Fiji	5.9	5.4		4.6 (05)				5.9 (05)				4.1 (05)
French Polynesia												
Guam	3.5		11.5				11.5				11.5	
Kiribati												
Marshall Islands			30.9 (99)				37.3 (99)				27.6 (99)	
Micronesia (F.S.)												
Nauru												
New Caledonia		18.6 (96)				22.1 (96)				16.3 (96)		
New Zealand	10.3	6.3	5.9	3.6	9.5	6.3	5.8	3.9	10.9	6.2	6.1	3.3
Niue				2.2 (01)			2.1 (01)				2.3 (01)	
Northern Mariana Is.				4.6 (03)				4.3 (03)				5.0 (03)
Palau												
Papua New Guinea			2.8				1.3				4.3	
Samoa			4.9 (01)				6.2 (01)				4.4 (01)	
Solomon Islands			31.9 (99)				33.7 (99)				31.0 (99)	
Tonga				5.2 (03)				7.4 (03)				3.6 (03)
Tuvalu				6.4 (02)				8.6 (02)				4.9 (02)
Vanuatu			1.6 (99)									
<b>Asia and the Pacific<sup>1</sup></b>	<b>4.4</b>	<b>4.0</b>	<b>4.7</b>	<b>4.7</b>	<b>4.3</b>	<b>4.0</b>	<b>4.4</b>	<b>4.5</b>	<b>4.4</b>	<b>4.0</b>	<b>4.9</b>	<b>4.8</b>
LLDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific island dev. econ.												
Low-income												
Middle-income												
High-income												
<b>Other world regions</b>												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
<b>World</b>												

<sup>1</sup> Aggregate values calculation based on ILO methodology.



## 16.5 Youth unemployment rate

	Total							Female						
	% of labour force aged 15-24							% of women labour force aged 15-24						
	1990	1995	2000	2003	2004	2005	2007	1990	1995	2000	2003	2004	2005	2007
<b>East and North-East Asia<sup>1</sup></b>		6.7	7.8	7.3	7.2	7.1	6.7		5.7	6.5	6.2	6.1	6.0	5.7
China														
DPR Korea														
Hong Kong, China	3.4	6.9	11.2	15.0	12.2	10.9		3.3	5.9	10.4	11.5	9.1	8.0	
Japan	4.3	6.1	9.2	10.1	9.5	8.7		4.1	6.1	7.9	8.6	8.3	7.4	
Macao, China		6.1	9.9	12.4	10.7	8.2			4.3	6.7	7.8	7.4	5.8	
Mongolia			22.8	20.0						23.0	20.7			
Republic of Korea	7.0	6.3	10.8	10.1	10.5	10.2		5.5	5.3	9.0	9.0	9.4	9.0	
<b>South-East Asia<sup>1</sup></b>		11.0	13.2	16.2	17.1	16.5	16.0		11.6	12.8	17.2	18.3	18.1	17.1
Brunei Darussalam														
Cambodia			12.2 (98)							12.0 (98)				
Indonesia		20.0				28.7							33.8	
Lao PDR		5.0						3.9						
Malaysia			8.3							8.3				
Myanmar														
Philippines	15.4	16.1	21.2	20.1	21.7	16.4		19.2	19.1	23.6	23.2	25.9	18.9	
Singapore		5.0		7.8		5.2			5.5		9.5		6.3	
Thailand	4.3		6.6	5.0	4.5	4.8		4.2		6.0	5.1	4.3	4.6	
Timor-Leste														
Viet Nam			4.8	4.8	4.6					4.6	5.1	4.9		
<b>South and South-West Asia<sup>1</sup></b>		7.3	11.0	10.2	11.7	12.2	11.6		7.9	11.8	10.7	12.3	12.8	12.3
Afghanistan														
Bangladesh			10.7	6.6						10.3	5.8			
Bhutan														
India			10.1		10.5					10.2		10.8		
Iran (Islamic Rep. of)						23.1							32.1	
Maldives		1.9	4.4						2.9	5.1				
Nepal			3.0 (99)							2.2 (99)				
Pakistan	5.1	8.9	13.3		11.7			1.3	18.1	29.2		14.9		
Sri Lanka	33.3	32.8	23.6	27.2	28.9	26.2		46.9	41.3	30.9	36.2	39.8	37.1	
Turkey	16.0	15.6	13.1	20.5	19.7	19.3		15.0	13.1	11.9	18.9	18.9	19.3	
<b>North and Central Asia<sup>1</sup></b>		20.9	19.9	18.3	18.1	17.2	17.3		22.2	21.6	17.4	19.4	18.4	18.5
Armenia														
Azerbaijan														
Georgia			21.1	24.9	28.3	28.3				20.5	31.7	33.3	30.6	
Kazakhstan				14.5	14.3						16.4	15.7		
Kyrgyzstan					15.2							17.8		
Russian Federation		20.4	24.7 (99)						21.6	25.9 (99)				
Tajikistan														
Turkmenistan														
Uzbekistan														
<b>Pacific</b>														
Australia	13.0	15.4	12.1	12.2	11.6	10.8		12.8	14.8	11.3	11.6	11.1	10.5	
American Samoa														
Cook Islands														
Fiji														
French Polynesia														
Guam														
Kiribati														
Marshall Islands														
Micronesia (F.S.)														
Nauru														
New Caledonia	33.6 (96)							38.5 (96)						
New Zealand	14.1	11.9	13.2	10.2	9.3	9.4		13.2	11.8	12.0	10.4	10.1	9.8	
Niue														
Northern Mariana Is.														
Palau														
Papua New Guinea			5.3											
Samoa														
Solomon Islands														
Tonga														
Tuvalu														
Vanuatu														
<b>Asia and the Pacific<sup>1</sup></b>		8.1	10.4	10.4	11.1	11.1	10.6		7.9	9.8	9.9	10.6	10.6	10.1
LLDC														
LDC														
ASEAN														
ECO														
SAARC														
Central Asia														
Pacific island dev. econ.														
Low-income														
Middle-income														
High-income														
<b>Other world regions</b>														
Africa														
Europe														
Latin America & Carib.														
North America														
Other countries/areas														
<b>World</b>														

<sup>1</sup> Aggregate values calculation based on ILO methodology.



## 16.6 Employment by status

	Employees				Employers				Other self-employed			
	% of total employment				% of total employment				% of total employment			
	1990	1995	2000	Latest	1990	1995	2000	Latest	1990	1995	2000	Latest
<b>East and North-East Asia</b>												
China												
DPR Korea												
Hong Kong, China		89.2	89.5	87.8 (05)		5.4	4.9	4.5 (05)		5.4	5.7	7.7 (05)
Japan	77.6	81.7	83.3	85.3 (05)	3.1	3.0	2.8	2.6 (05)	19.3	15.3	13.8	12.2 (05)
Macao, China			88.2	89.5 (05)			3.4	4.0 (05)			8.4	6.5 (05)
Mongolia			41.4	39.4 (03)			1.3	0.6 (03)			57.3	60.0 (03)
Republic of Korea	60.5	62.6	63.1	66.4 (05)	28.0	27.9	6.9	7.3 (05)	11.4	9.6	30.0	26.3 (05)
<b>South-East Asia<sup>1</sup></b>		<b>30.3</b>	<b>32.4</b>	<b>37.6 (07)</b>		<b>2.5</b>	<b>2.4</b>	<b>2.3 (07)</b>				
Brunei Darussalam												
Cambodia			15.2	12.9 (04)			0.2	0.2 (04)			84.6	86.8 (04)
Indonesia			32.8	31.4 (01)			2.3	3.3 (01)			64.9	65.3 (01)
Lao PDR		9.7				0.2				90.1		
Malaysia		72.6	74.3	76.2 (03)		2.5	3.0	3.4 (03)		24.9	22.8	20.4 (03)
Myanmar												
Philippines				50.3 (05)				4.5 (05)				45.1 (05)
Singapore		88.5	89.6	86.0 (04)		5.0	5.8	4.9 (04)		6.6	4.6	9.1 (04)
Thailand	28.4	35.7	39.6	43.8 (04)	1.2	2.9	3.3	3.1 (04)	70.3	61.4	57.1	53.1 (04)
Timor-Leste												
Viet Nam			18.7	25.6 (04)			0.2	0.5 (04)			81.1	73.9 (04)
<b>South and South-West Asia<sup>1</sup></b>		<b>19.0</b>	<b>19.7</b>	<b>23.9 (07)</b>		<b>1.9</b>	<b>2.1</b>	<b>1.7 (07)</b>				
Afghanistan												
Bangladesh			15.5	14.1 (03)			0.2	0.4 (03)			84.3	85.5 (03)
Bhutan												
India												
Iran (Islamic Rep. of)		53.4 (96)				3.7 (96)				42.9 (96)		
Maldives		38.4	28.2			5.1	4.0			56.5	67.9	
Nepal												
Pakistan		34.1	35.6	37.9 (05)		1.0	0.8	0.9 (05)		64.9	63.6	61.2 (05)
Sri Lanka				58.2 (03)				2.7 (03)				39.1 (03)
Turkey	56.4	59.3	48.6	54.2 (05)			5.1	5.1 (05)	43.6	40.7	46.3	40.7 (05)
<b>North and Central Asia</b>												
Armenia			82.0 (01)				1.2 (01)				16.8 (01)	
Azerbaijan												
Georgia			37.5	34.5 (05)			1.5	1.1 (05)			61.0	64.4 (05)
Kazakhstan				62.2 (04)				1.1 (04)				36.6 (04)
Kyrgyzstan				48.5 (04)				1.0 (04)				50.4 (04)
Russian Federation		93.2	89.9	92.2 (05)		0.4	0.9	1.3 (05)		6.4	9.2	6.5 (05)
Tajikistan												
Turkmenistan												
Uzbekistan												
<b>Pacific</b>												
Australia	84.9	84.6	85.9	87.0 (05)	4.8	4.4	3.7	3.1 (05)	10.3	11.0	10.4	9.9 (05)
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia		83.8 (96)				15.9 (96)				0.3 (96)		
New Zealand	98.5	79.0	79.2	81.4 (05)		8.2	7.1	6.5 (05)	1.5	12.8	13.6	12.0 (05)
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific<sup>1a</sup></b>		<b>32.7</b>	<b>35.4</b>	<b>39.4 (07)</b>		<b>1.9</b>	<b>2.0</b>	<b>1.7 (07)</b>				
LLDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific island dev. econ.												
Low-income												
Middle-income												
High-income												
<b>Other world regions</b>												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
<b>World</b>												

<sup>1</sup> Aggregate values calculation based on ILO methodology.



## 17 Poverty and inequality

**International poverty estimates were revised in 2008. As a result, more poor people were judged to be living below the international absolute poverty line than previously thought. Of these, 950 million were in Asia and the Pacific.**

The Asia-Pacific region has had some striking successes in poverty reduction. Of the 24 countries in the region for which data are available from both the 1990s and the 2000s, 20 managed to reduced the share of their population living below the revised international poverty line – \$PPP 1.25 at 2005 prices. No recent poverty data are available for the Pacific island economies – though it is possible that these and other countries have more recent data than are presented in this *Yearbook*.

Among the subregions for which data are available, poverty has fallen everywhere, except in North and Central Asia. In East and North-East Asia, between 1990 and 2005, the proportion of the population living on less than \$1.25 a day declined from 60.1 to 15.9 per cent. In this subregion the trend is dominated by China. In Mongolia, the only other country in the subregion for which data are available, poverty actually increased.

Although less spectacularly than in China, poverty also declined in South-East Asia. The best achievements were in Indonesia, where between 1990 and 2005 poverty declined from 54.3 to 21.4 per cent, and in Viet Nam where between 1992 and 2006 the rate fell from 63.7 to 21.5 per cent.

### Revision of poverty estimates in 2008

The revision of poverty estimates follows an expanded 2005 round of collection of comparative prices of goods and services (such as food, housing, and transport) in countries participating in the International Comparison Programme (ICP). The ICP collected prices for an internationally comparable basket of goods and services in a large number of countries. This served as the basis for adjusting market exchange rates for differences in purchasing powers at the national level, yielding exchange rates known as purchasing power parities (PPPs). Technically, a PPP is the conversion rate for a given currency into a reference currency (\$US) that assures parity in terms of purchasing power over commodities, whether or not they are traded internationally. Global economic comparisons, including poverty, have used PPP rates rather than market exchange rates, because market exchange rates reflect purchasing power in terms of internationally traded goods but not non-traded commodities, including services, as well as certain goods like food staples.

The new poverty estimates were calculated by the World Bank on the basis of a revised international poverty line set at \$1.25 per day (2005 PPP prices), which represents the average of the national poverty lines of the world's poorest 15 countries. Two of these 15 countries were from Asia and the Pacific. PovcalNet (<http://go.worldbank.org/NT2AIXUWP0>) – a website maintained by the World Bank – allows readers to calculate poverty estimates based on grouped income data for regions as well as for countries, using various poverty lines.

The new estimates are more reliable than the previous ones dating from 1993, for three reasons: (i) improvements in the design, implementation and analysis of the ICP price surveys provide better estimates of the cost of living in developing countries; (ii) the international poverty line has been recalculated on the basis of national poverty lines for the poorest 15 countries in terms of consumption per capita; and (iii) a much larger number of household surveys were used as a basis for estimating poverty.

However it is not easy to capture adequately the prices actually paid by the poor. Even in the new round, price data were often collected primarily from urban areas, which may lead to a bias, as in most developing countries rural areas tend to have lower prices. Another problem lies in selecting weights for household consumption; usually this means using the consumption pattern of the general population rather than that of the poor. In order to capture the consumption basket of the poor more accurately, during the latest ICP round the Asian Development Bank conducted poverty-specific price surveys in 16 countries in Asia and the Pacific. While the re-weighting produced only minor changes in the poverty estimates, ADB found that there were changes resulting from changing the product list to account for the consumption of the poor (see ADB 2008).

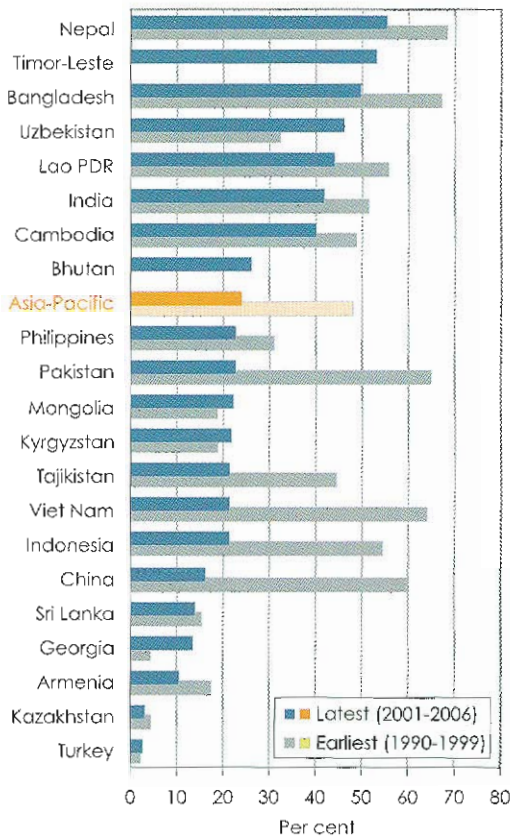


17. Poverty and inequality

Poverty rates also went down in South and South-West Asia. One of the most striking achievements was in Pakistan where between 1990 and 2004 the share of the population living on less than \$1.25 a day declined from 64.7 to 22.6 per cent. Other countries in the subregion, except Turkey, also made progress, if more slowly than Pakistan. In India, for instance, between 1990 and 2005 the poverty rate fell from 51.3 to 41.6 per cent in 2005. Since these countries have large populations, falling rates mean that many millions of people are escaping poverty.

In North and Central Asia, the situation is more mixed. For the subregion as a whole, poverty increased in the 1990s and declined somewhat in the 2000s. Armenia, Azerbaijan, Kazakhstan, the Russian Federation and Tajikistan saw a decrease between the 1990s and the 2000s, while in Georgia, Kyrgyzstan and Uzbekistan poverty increased.

**Figure 17.1**  
Percentage of the population living below \$1.25 a day, Asia and the Pacific, 1990-2006



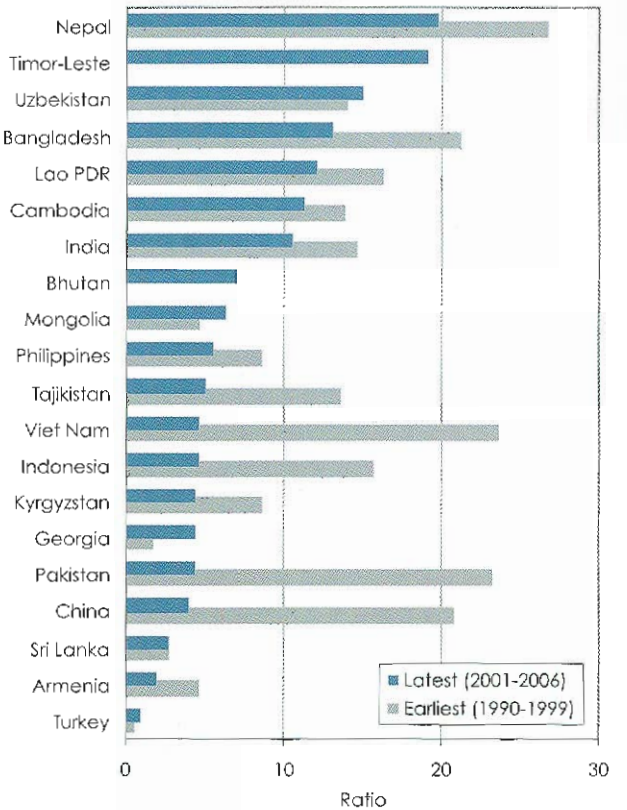
The data presented so far refer to the international poverty line of 1.25 \$PPP per day. This is useful for comparing rates across countries. But for individual countries it is more useful to consider national poverty lines. These have the advantage that they will better reflect local circum-

stances, being based on the official minimum standard of living. However they are not comparable across countries and may not even be comparable over time so assessments based on national poverty lines are likely to differ from international poverty figures.

Of the countries for which data are available from both the early 1990s and the 2000s, most have reduced significantly the share of their population living below the national poverty line. The exceptions are Mongolia and Indonesia where there was little change.

Another important measure is the poverty gap ratio – which is based on the international poverty line and measures the extent of extreme poverty indicating how far the extreme poor fall below the poverty line. In most Asian countries during the last decade the poverty gap has narrowed. The highest poverty gap ratios in the region are found in the least developed countries – confirming that the pockets of extreme poverty are concentrated among the poorest and most vulnerable countries. Among the countries that provide data, the highest poverty gap ratios are in Nepal, with 20 per cent, and Timor-Leste with 19 per cent. Ratios are also high

**Figure 17.2**  
Poverty gap ratio (based on international poverty line), Asia and the Pacific countries, earliest and latest available values for the period 1990-2006





in Bangladesh with 13 per cent, Cambodia with 11 per cent and the Lao People's Democratic Republic with 12 per cent – even if these ratios have declined over the past decade. In Central Asia, the highest poverty gap ratio is in Uzbekistan at 15 per cent. No country in the Pacific has recent data for this indicator.

Extreme poverty is more pronounced in rural areas, as indicated by poverty gap ratios for China, India and Indonesia disaggregated by urban and rural areas. This is especially true of China: both the urban and rural poverty gaps have declined consistently since the early 1990s, though the rural poor fall much further below the poverty line than do the urban poor. The difference is much less marked in India and Indonesia.

#### Rural and urban poverty gap ratios of the three largest countries in Asia and the Pacific

		Poverty gap ratio		Gini index	
		Urban	Rural	Urban	Rural
China	1990	5	27	26	31
	2005	0	6	35	36
India	1993	11	14	34	29
	2004	10	11	38	30
Indonesia	1990	15	16	35	26
	2005	4	5	40	30

The region has thus seen fairly consistent declines in the extent and depth of poverty. But the trend is less clear for income inequality. This can be assessed by considering the proportion of national output consumed by the poorest 20 per

cent, or "quintile", of the population. This proportion ranges from 10.6 per cent in Japan to 4.3 per cent in China. The poorest tend to receive the smallest share in the middle- and higher-income economies such as Turkey, the Islamic Republic of Iran, Thailand, Malaysia and Singapore. On the other hand they do better in, India with 8.1 per cent, Pakistan with 9.1 per cent, and Bangladesh with 8.8 per cent.

A more comprehensive measure of inequality is the Gini index. Nevertheless this gives similar results. On this basis the greatest inequality is in Papua New Guinea (with data from 1996), Nepal, the Philippines, Turkey and Thailand.

Unlike the situation with poverty, for inequality there is no clear regional trend. Since the early 1990s inequality seems to have increased in Sri Lanka, Bangladesh, Nepal, Cambodia and Indonesia, but decreased in the Islamic Republic of Iran, Malaysia and Thailand, as well as in the Russian Federation and in most North and Central Asian countries.

In the region's three largest countries the Gini index has been disaggregated for rural and urban areas. In all three, this indicates that inequality has increased in both rural and urban areas. In India and Indonesia most of the wealthy people are in the cities so inequality is notably lower in rural than in urban areas. In China, the position is different: inequality in the cities and the countryside is now similar, largely because between 1990 and 2005 there was a notable increase in urban inequality as the Gini index increased from 26 to 35.



### Population living below \$1.25 (2005 PPP) a day (percentage)

The proportion of the population living on less than \$1.25 a day at 2005 international prices, adjusted for purchasing power parity (PPP). **Aggregates:** Aggregates have been calculated through World Bank's PovcalNet. **Source:** World Bank, PovcalNet (online database, accessed on 12 November 2008).

### Population living below the national poverty line (percentage)

The national poverty rate is the proportion of the population living below the national poverty line. The figures are not comparable across countries and may not be comparable over time within a country. **Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 29 September 2008).

### Poverty gap (ratio)

Poverty gap is the mean shortfall from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects

the depth of poverty among those who fall below the international poverty line. Value 0.5 per cent means that the poverty gap for that particular country is 0.5 per cent or less. **Aggregates:** None. **Source:** World Bank, PovcalNet (online database, accessed on 12 November 2008).

### Share of poorest quintile in income or consumption (percentage)

Percentage share of income or consumption that accrues to subgroups of population indicated by deciles or quintiles. **Aggregates:** None. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed on 29 September 2008).

### Gini index (index)

Gini coefficient multiplied by 100. The extent to which the distribution of income (or consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. An index value of 0 corresponds to perfect equality (all earn the same income) and a value of 100 to perfect inequality (one person receives all the income). **Aggregates:** None. **Source:** World Bank, World Development Indicators (online database, accessed in May 2008).



## 17.1 Poverty

	Population living below \$1.25 (2005 PPP) a day				Population living below the national poverty line	
	Percentage				Percentage	
	1990	1996	2002	2005	Earliest	Latest
<b>East and North-East Asia</b>	<b>60.1</b>	<b>36.3</b>	<b>28.3</b>	<b>15.9</b>		
China	60.2	36.4	28.4	15.9	6.0 (96)	4.6 (98)
DPR Korea						
Hong Kong, China						
Japan						
Macao, China						
Mongolia		18.8	15.5	22.4	36.3 (95)	36.1 (02)
Republic of Korea						
<b>South-East Asia</b>	<b>39.2</b>	<b>35.1</b>	<b>25.5</b>	<b>18.9</b>		
Brunei Darussalam						
Cambodia	48.6 (94)			40.2 (04)	47.0 (94)	35.0 (04)
Indonesia	54.3	43.4	29.3	21.4	17.5 (96)	16.7 (04)
Lao PDR	55.7 (92)	49.3 (97)	44.0		45.0 (93)	33.0 (03)
Malaysia	1.6 (92)	2.1 (95)		0.5 (04)		
Myanmar						
Philippines	30.7 (91)	21.6 (97)	22.5	22.6 (06)	32.1 (94)	25.1 (97)
Singapore						
Thailand	5.5 (92)	1.9	0.7	0.4 (04)	32.5 (92) <sup>1</sup>	12.0 (04) <sup>1</sup>
Timor-Leste			52.9 (01)			
Viet Nam	63.7 (92)	49.7 (98)	40.1	21.5 (06)	37.4 (98)	28.9 (02)
<b>South and South-West Asia</b>	<b>47.0</b>	<b>42.3</b>	<b>38.7</b>	<b>35.5</b>		
Afghanistan						
Bangladesh	66.8 (91)	59.4 (95)	57.8 (00)	49.6	58.8 (92) <sup>2</sup>	40.0 (05) <sup>2</sup>
Bhutan				26.2 (03)		
India	51.3	46.6	43.9	41.6	36.0 (94)	27.5 (05) <sup>3</sup>
Iran (Islamic Rep. of)	3.9	1.3 (98)		1.5		
Maldives						
Nepal		68.4 (95)		55.1 (03)	41.8 (96)	30.9 (04)
Pakistan	64.7	48.1	35.9 (01)	22.6 (04)	28.6 (93)	22.3 (06) <sup>4</sup>
Sri Lanka	15.0	16.3 (95)	14.0		20.0 (91)	15.2 (07) <sup>5</sup>
Turkey	2.1 (94)		2.0	2.7	28.3 (94)	27.0 (02)
<b>North and Central Asia</b>	<b>2.9</b>	<b>8.1</b>	<b>8.4</b>	<b>6.6</b>		
Armenia		17.5	15.0	10.6 (03)	55.1 (99)	50.9 (01)
Azerbaijan		15.6 (95)	6.3 (01)	0.0	68.1 (95)	49.6 (01)
Georgia		4.5	15.1	13.4	52.1 (02)	54.5 (03)
Kazakhstan	4.2 (93)	5.0	0.5 (01)	3.1 (03)	34.6 (96)	15.4 (02)
Kyrgyzstan	18.6 (93)	31.8 (98)	34.0	21.8 (04)	47.6 (01)	43.1 (05)
Russian Federation	2.8 (93)	3.5	0.3	0.2	30.9 (94)	19.6 (02)
Tajikistan		44.5 (99)		21.5 (04)		74.9 (99)
Turkmenistan	63.5 (93)	24.8 (98)				
Uzbekistan		32.1 (98)	42.3	46.3 (03)		27.5 (00)
<b>Pacific</b>						
Australia						
American Samoa						
Cook Islands						
Fiji						
French Polynesia						
Guam						
Kiribati						
Marshall Islands						
Micronesia (F.S.)						
Nauru						
New Caledonia						
New Zealand						
Niue						
Northern Mariana Is.						
Palau						
Papua New Guinea		35.8			37.5 (96)	
Samoa						
Solomon Islands						
Tonga						
Tuvalu						
Vanuatu						
<b>Asia and the Pacific</b>	<b>47.8</b>	<b>36.5</b>	<b>30.9</b>	<b>23.9</b>		
LLDC						
LDC						
ASEAN	39.1	35.0	25.5	18.8		
ECO						
SAARC						
Central Asia						
Pacific island dev. econ.						
Low-income	47.1	49.1	39.8	27.6		
Middle-income	47.8	30.6	23.4	14.2		
High-income						
<b>Other world regions</b>						
Africa	47.2	48.5	45.9	42.5		
Europe	1.0	1.5	1.0	0.4		
Latin America & Carib.	9.8	10.8	11.0	8.4		
North America						
Other countries/areas						
<b>World</b>	<b>41.7</b>	<b>34.1</b>	<b>30.0</b>	<b>24.5</b>		

<sup>1</sup> Source: National Statistical Office, Core Economic Indicators of Thailand 2005; <sup>2</sup> Source: Ministry of finance of Bangladesh; <sup>3</sup> Source: Ministry of Finance of India; <sup>4</sup> Source: Ministry of Finance of Pakistan; <sup>5</sup> Source: Central Bank of Sri Lanka, Annual report 2007.



## 17.2 Inequalities

	Poverty gap ratio				Share of poorest quintile in income or consumption, %		Gini index			
	1990	1996	2002	2005	Earliest	Latest	1990	1996	2002	2005
<b>East and North-East Asia</b>										
China	20.7	10.7	8.7	4.0		4.3 (04)	29.2	32.2	36.3	35.4
DPR Korea										
Hong Kong, China					5.3 (96)					
Japan					10.6 (93)					
Macao, China										
Mongolia		4.6 (95)	3.6	6.2	7.3 (95)	7.5 (02)		33.2 (95)	32.8	33.0
Republic of Korea						7.9 (98)				
<b>South-East Asia</b>										
Brunei Darussalam										
Cambodia	13.8 (94)			11.3 (04)	8.0 (94)	6.8 (04)	38.3 (94)			41.9 (04)
Indonesia	15.6	11.4	6.0	4.6	8.3 (93)	7.1 (05)	29.0	31.2	29.9	34.5
Lao PDR	16.2 (92)	14.9 (97)	12.1		9.6 (92)	8.1 (02)	30.4 (92)	34.9 (97)	32.6	
Malaysia	0.1 (92)	0.3 (95)		0.1 (04)	4.6 (92)	4.4 (97)	47.7 (92)	48.5 (95)		37.9 (04)
Myanmar										
Philippines	8.6 (91)	5.3 (97)	5.5 (00)	5.5 (06)	5.9 (91)	5.4 (03)	43.8 (91)	46.2 (97)	46.1 (00)	44.0 (06)
Singapore					5.0 (98)	5.0 (98)				
Thailand	0.4 (92)	0.1	0.0	0.0 (04)	5.6 (92)	6.3 (02)	46.2 (92)	43.4	42.0	42.5 (04)
Timor-Leste			19.1 (01)						39.5 (01)	
Viet Nam	23.6 (92)	15.1 (98)	11.2	4.6 (06)	7.7 (93)	7.1 (04)	35.7 (92)	35.5 (99)	37.6	37.8 (06)
<b>South and South-West Asia</b>										
Afghanistan										
Bangladesh	21.1 (91)	17.9 (95)	17.3 (00)	13.1	9.4 (92)	8.8 (05)	26.2 (91)	30.6 (95)	30.7 (00)	31.0
Bhutan				7.0 (03)						46.8 (03)
India	14.6	12.4	11.4	10.5		8.1 (04)	30.9	30.7	32.0	32.5
Iran (Islamic Rep. of)	1.0	0.2 (98)		0.3	5.2 (90)	6.5 (05)	43.6	44.1 (98)		38.3
Maldives										
Nepal		26.7 (95)		19.7 (03)	7.5 (96)	6.0 (04)		37.7 (95)		47.3 (03)
Pakistan	23.2	11.7	7.9 (01)	4.4 (04)	8.1 (91)	9.1 (05)	33.2	28.7	30.4 (01)	31.2 (04)
Sri Lanka	2.7	3.0 (95)	2.6		9.0 (90)	7.0 (02)	32.5	35.4 (95)	41.1	
Turkey	0.5 (94)		0.5	0.9	5.8 (94)	5.3 (03)	41.5 (94)		42.7	43.2
<b>North and Central Asia</b>										
Armenia		4.7	3.1	1.9 (03)	5.4 (96)	8.5 (03)		44.4	35.7	33.8 (03)
Azerbaijan		4.4 (95)	1.1 (01)	0.0	6.9 (95)	7.4 (01)		35.0 (95)	36.5 (01)	16.8
Georgia		1.7	4.7	4.4	6.1 (96)	5.4 (05)		37.1	40.3	40.8
Kazakhstan	0.5 (93)	0.9	0.1 (01)	0.5 (03)	7.5 (93)	7.4 (03)	32.7 (93)	35.3 (96)	31.3 (01)	33.9 (03)
Kyrgyzstan	8.6 (93)	9.0 (98)	8.8	4.4 (04)	2.5 (93)	8.9 (03)	53.7 (93)	36.0 (98)	31.7	32.9 (04)
Russian Federation	1.3 (93)	1.8	0.1	0.0	4.4 (93)	6.1 (02)	48.3 (93)	46.2	35.7	37.5
Tajikistan		13.7 (99)		5.1 (04)	8.1 (99)	7.8 (04)		31.5 (99)		33.6 (04)
Turkmenistan	25.8 (93)	7.0 (98)			6.9 (93)	6.1 (98)	35.4 (93)	40.8 (98)		
Uzbekistan		13.9 (98)	12.4	15.0 (03)	7.3 (93)	7.2 (03)		45.4 (98)	34.6	36.7 (03)
<b>Pacific</b>										
Australia					5.9 (94)					
American Samoa										
Cook Islands										
Fiji										
French Polynesia										
Guam										
Kiribati										
Marshall Islands										
Micronesia (F.S.)										
Nauru										
New Caledonia										
New Zealand						6.4 (97)				
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea		12.3			4.5 (96)			50.9		
Samoa										
Solomon Islands										
Tonga										
Tuvalu										
Vanuatu										
<b>Asia and the Pacific</b>										
LLDC										
LDC										
ASEAN										
ECO										
SAARC										
Central Asia										
Pacific island dev. econ.										
Low-income										
Middle-income										
High-income										
<b>Other world regions</b>										
Africa										
Europe										
Latin America & Carib.										
North America										
Other countries/areas										
<b>World</b>	<b>14.2</b>	<b>10.8</b>	<b>9.4</b>	<b>7.3</b>						



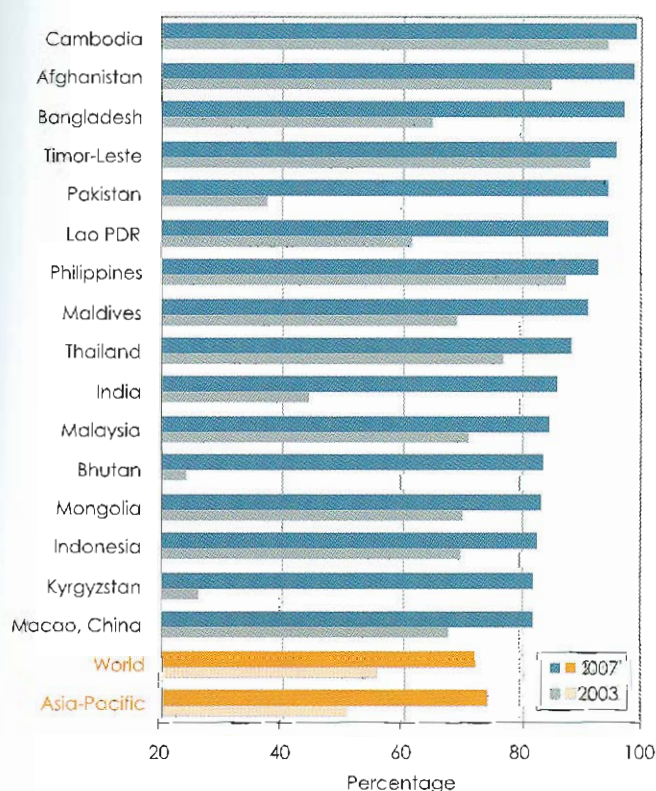
# 18 Information and communication technology

**Asia and the Pacific as a whole is making significant progress in mobile and Internet connectivity. Three-quarters of telephone connections are via mobiles. China has the world's highest number of Internet users.**

In Asia and the Pacific the main communications means for the majority of people in low-income economies are mobile telephones. The region has entered a period of rapid mobile expansion, increasing the number of affordable phones and decreasing the calling rates. Many developing countries are also increasing the number of fixed-line telephones, but at a much slower pace than previously. In the high-income economies, the growth in mobile penetration is clearly slowing down and in some cases the number of fixed lines is declining.

**Figure 18.1**

**Developing countries where mobile telephones comprised over 80 per cent of total telephones in 2007**



Across the region as a whole, mobile telephone subscriptions have surpassed those of fixed-line systems. Nevertheless the number of fixed-line connections has also been increasing, if more slowly: between 2003 and 2007 the number of lines per 100 people increased from 13 lines to 17. However, it is clear that some countries are progressing much more rapidly than others. The slowest growth has been in the Pacific.

At the same time there has been a rapid increase in many countries in broadband networking – which is set to become an important platform for many communications purposes, including Internet access and voice and video communications. Nevertheless average broadband penetration in the region is still low – in 2007, there were 3.5 broadband subscribers per 100 people. Much of the most recent expansion has been in the high-income economies, where almost 90 per cent of the growth in the number of Internet users is based on broadband connections. However, for the Asia-Pacific region as a whole the proportion is less than one-fifth. Many people still rely on other forms of access, including dial-up connections and Internet cafés.

Although there are few reliable comparable statistics on the access to personal computers in the Asia-Pacific region there appear to be wide disparities – as expressed by the “digital divide”.

In the poorer developing countries most of the expansion in communications has been via mobile telephone connectivity, mostly based on voice and simple data services through SMS. When people need larger screens or higher bandwidth they turn to telecentres or Internet cafés. These countries find it difficult to expand fixed line-based Internet services because of the poor quality or unavailability of fixed telephone lines. Nevertheless quite sophisticated services are now becoming available via mobile connections. The Philippines, for example, now has banking systems that allow people to pay, receive and transfer money using a mobile telephone.



Figure 18.2

Change in telephone lines per 100 population between 2003 and 2007

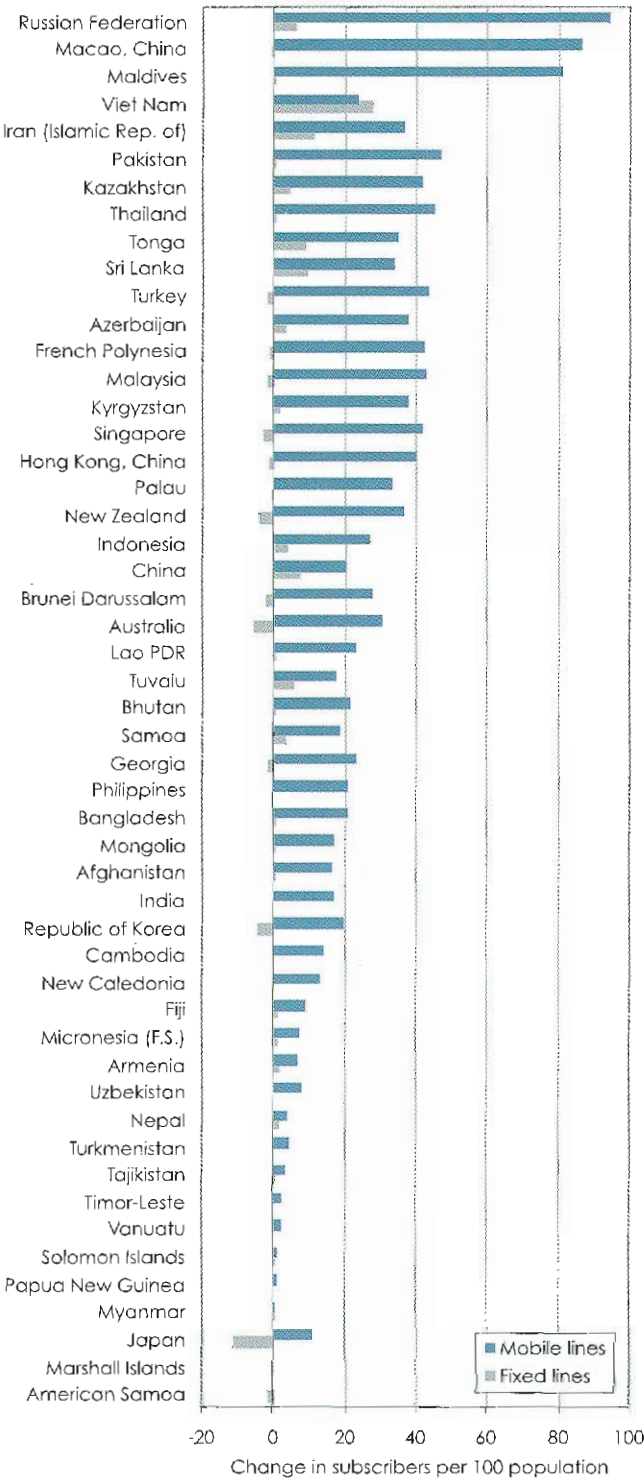
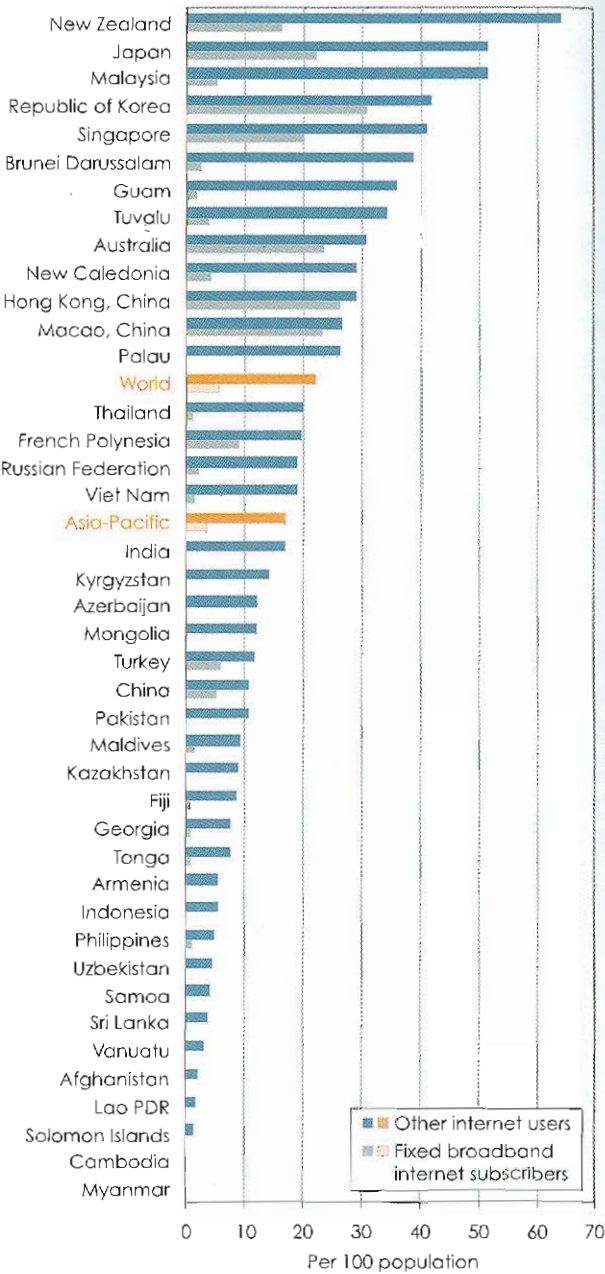


Figure 18.3

Fixed-line broadband subscribers and other Internet users, 2007





In lower-income economies most current broadband technologies use wired infrastructure – cable, copper line, or fibre to the home. But they also have the option of newer technology using peer-to-peer wireless to distribute Internet access to villages.

The extent to which a country connects with the rest of the world can be gauged by its available international bandwidth. This varies hugely by country. Where it is low, this adds a further hurdle for extending Internet use since many developing countries rely on content from overseas.

In many countries in the region, the statistics on the actual use and impact of personal computers and the Internet are very limited. The forms of data also vary from country to country so it is difficult to make international comparisons. Because it will become increasingly important to gather reliable data, the international statistical community is currently revising and expanding the list of recommended ICT indicators and definitions.

**Total international bandwidth  
(Megabits per second per 100 population)**

Afghanistan (2007)	0.1
Timor-Leste (2006)	0.6
Bangladesh (2006)	0.8
Cambodia (2007)	1.7
India (2006)	2.3
Lao People's Democratic Republic (2007)	3.2
Pakistan (2007)	4.3
Bhutan (2007)	6.8
Philippines (2007)	11.4
Malaysia (2005)	12.4
Thailand (2007)	39.0
Republic of Korea (2006)	103.6
Japan (2004)	103.8
Maldives (2007)	130.9
Singapore (2004)	578.0

#### **Fixed telephone mainlines (per 100 population)**

Fixed telephone lines refer to telephone lines connecting a subscriber's terminal equipment to the public switched telephone network (PSTN) and which have a dedicated port on a telephone exchange. Fixed telephone lines per 100 population is calculated by dividing the number of fixed telephone lines by the population and multiplying by 100. **Aggregates:** Averages are calculated using total population as weight. **Source:** International Telecommunication Union, ICT Statistics Database (online database, accessed on 23 June 2008).

#### **Mobile cellular subscribers (per 100 population)**

The number of users of portable telephones subscribing to a public mobile telephone service using cellular technology, which provides access to the PSTN, expressed per 100 population. This includes analogue and digital cellular systems, including IMT-2000 (Third Generation, 3G). Post-paid and prepaid subscribers are included. **Aggregates:** Averages are calculated using total population as weight. **Source:** International Telecommunication Union, ICT Statistics Database (online database, accessed on 23 June 2008).

#### **Mobile cellular phone as share of total phone lines (percentage)**

The proportion of mobile phones of all telephones. **Aggregates:** Averages are calculated using total population as weight. **Source:** International Telecommunication Union, ICT Statistics Database (online database, accessed on 23 June 2008).

#### **Internet users (per 100 population)**

The total number of Internet users via fixed and mobile networks irrespective of the device used, expressed per 100 population. **Aggregates:** Averages are calculated using total population as weight. **Source:** International Telecommunication Union, ICT Statistics Database. (online database, accessed on 23 June 2008).

#### **Fixed broadband Internet subscribers (per 100 population)**

The number of users of the Internet subscribing to paid high-speed access to the public Internet, expressed per 100 population. High speed is at least 256 kbit/s, in one or both directions. Fixed broadband Internet includes cable modem, DSL, fibre and other fixed broadband technology (such as satellite broadband Internet, Ethernet LANs, fixed-wireless access, Wireless Local Area Network, WiMAX etc.). Subscribers with access to data communications (including the Internet) via mobile cellular networks are excluded. **Aggregates:** Averages are calculated using total population as weight. Missing data have been imputed. **Source:** International Telecommunication Union, ICT Statistics Database (online database, accessed on 23 June 2008).

#### **International Internet bandwidth (bits/second/population)**

The total backbone bandwidth that the operators have to the international Internet divided by the total population. **Aggregates:** None. **Source:** International Telecommunication Union, Asia-Pacific Telecommunication/ICT Indicators 2008.



## 18. Information and communication technology

### 18.1 Fixed and mobile phones

	Number of fixed telephone mainlines				Number of mobile cellular telephone subscribers				Mobile cellular telephone as share of total telephone lines			
	Per 100 population				Per 100 population				Per 100 population			
	1995	2000	2003	2007	1995	2000	2003	2007	1995	2000	2003	2007
<b>East and North-East Asia</b>	<b>8.9</b>	<b>16.1</b>	<b>23.5</b>	<b>28.6</b>	<b>1.3</b>	<b>12.7</b>	<b>26.9</b>	<b>46.4</b>	<b>8.9</b>	<b>38.9</b>	<b>51.7</b>	<b>61.0</b>
China	3.4	11.4	20.3	27.5	0.3	6.7	20.8	41.2	8.2	37.1	50.7	60.0
DPR Korea	2.3	2.2	4.2	4.2								
Hong Kong, China	52.8	58.9	55.1	53.8	12.9	81.8	106.4	146.4	19.6	58.1	65.9	73.1
Japan	49.6	48.8	47.2	35.8	9.3	52.6	67.9	78.6	15.8	51.9	59.0	68.7
Macao, China	37.2	40.1	37.9	37.0	8.7	32.0	78.9	165.1	19.0	44.4	67.6	81.7
Mongolia	3.3	4.8	5.5	6.0		6.3	12.6	29.5		56.8	69.8	83.0
Republic of Korea	41.3	55.3	52.9	48.3	3.6	57.3	70.7	90.2	8.1	50.9	57.2	65.1
<b>South-East Asia</b>	<b>2.9</b>	<b>4.8</b>	<b>5.4</b>	<b>11.2</b>	<b>0.7</b>	<b>4.3</b>	<b>15.0</b>	<b>40.8</b>	<b>12.7</b>	<b>37.7</b>	<b>64.2</b>	<b>74.9</b>
Brunei Darussalam	23.1	24.1	22.9	20.6	12.2	28.5	49.6	77.3	34.5	54.1	68.4	79.0
Cambodia	0.1	0.2	0.2	0.3	0.1	1.0	3.7	17.9	62.4	80.9	94.1	98.6
Indonesia	1.7	3.1	3.7	7.7	0.1	1.7	8.4	35.3	6.0	35.5	69.7	82.1
Lao PDR	0.4	0.8	1.3	1.6	0.0	0.2	2.0	25.2	8.3	23.7	61.7	94.0
Malaysia	16.2	19.9	18.5	16.4	4.9	22.0	45.0	87.9	23.2	52.5	70.9	84.3
Myanmar	0.4	0.6	0.8	1.0	0.0	0.0	0.1	0.4	1.7	4.7	15.5	29.8
Philippines	2.1	4.0	4.1	4.1	0.7	8.5	27.7	48.7	25.9	67.8	87.1	92.2
Singapore	41.1	48.4	44.8	41.9	8.8	68.4	84.7	126.7	17.6	58.5	65.4	75.1
Thailand	6.1	9.2	10.7	11.0	2.3	5.0	35.1	80.4	27.2	35.3	76.7	88.0
Timor-Leste			0.2	0.2			2.1	4.3			91.0	95.3
Viet Nam	1.1	3.2	5.3	32.7	0.0	1.0	3.3	27.2	2.9	23.7	38.4	45.4
<b>South and South-West Asia</b>	<b>2.4</b>	<b>4.2</b>	<b>5.1</b>	<b>5.3</b>	<b>0.0</b>	<b>1.4</b>	<b>4.4</b>	<b>26.4</b>	<b>1.1</b>	<b>14.1</b>	<b>45.6</b>	<b>85.5</b>
Afghanistan		0.1	0.2	0.3			0.9	17.2			84.5	98.3
Bangladesh	0.2	0.4	0.5	0.7	0.0	0.2	0.9	21.7	0.9	36.2	64.8	96.7
Bhutan	1.0	2.5	4.1	4.5			1.3	22.7			24.1	83.3
India	1.3	3.1	3.8	3.4	0.0	0.3	3.1	20.0	0.6	9.9	44.5	85.6
Iran (Islamic Rep. of)	8.2	14.3	22.6	33.5	0.0	1.5	5.1	41.8	0.3	9.2	18.4	55.5
Maldives	5.6	8.9	10.5	10.9		2.8	23.2	104.0		23.8	68.8	90.5
Nepal	0.4	1.1	1.4	2.7		0.0	0.3	4.1		3.7	18.1	60.2
Pakistan	1.7	2.1	2.7	3.0	0.0	0.2	1.6	48.1	1.9	9.1	37.3	94.1
Sri Lanka	1.1	4.1	5.0	14.2	0.3	2.3	7.3	41.4	20.1	35.9	59.7	74.4
Turkey	20.9	27.0	26.6	24.6	0.7	23.7	39.2	82.8	3.2	46.7	59.6	77.1
<b>North and Central Asia</b>	<b>14.3</b>	<b>17.5</b>	<b>19.8</b>	<b>23.9</b>	<b>0.1</b>	<b>1.9</b>	<b>18.3</b>	<b>86.8</b>	<b>0.3</b>	<b>9.3</b>	<b>42.2</b>	<b>73.7</b>
Armenia	18.1	17.3	18.6	19.8		0.6	3.8	10.6		3.2	16.9	34.9
Azerbaijan	8.2	9.8	11.4	14.8	0.1	5.2	12.8	50.8	0.9	34.4	52.9	77.4
Georgia	11.0	10.8	14.6	12.6	0.0	4.1	15.6	38.8	0.0	27.7	51.6	75.5
Kazakhstan	12.3	12.3	14.8	19.0	0.0	1.3	8.9	50.8	0.2	9.7	37.4	72.8
Kyrgyzstan	7.8	7.6	7.8	9.1		0.2	2.7	40.5		2.3	25.9	81.7
Russian Federation	16.8	21.8	24.8	30.8	0.1	2.2	24.8	119.3	0.4	9.2	50.0	79.5
Tajikistan	4.6	3.5	3.8	4.2		0.0	0.7	3.9		0.5	16.3	48.6
Turkmenistan	7.6	8.1	8.0	8.0		0.2	0.2	4.4		2.0	2.4	35.3
Uzbekistan	6.7	6.7	6.6	6.6	0.0	0.2	1.2	9.1	0.2	3.1	15.7	58.2
<b>Pacific</b>	<b>37.9</b>	<b>39.6</b>	<b>39.1</b>	<b>35.0</b>	<b>11.0</b>	<b>33.3</b>	<b>53.5</b>	<b>76.9</b>	<b>18.3</b>	<b>38.5</b>	<b>50.2</b>	<b>65.5</b>
Australia	49.2	52.5	52.7	47.1	12.4	44.7	72.3	102.5	20.1	46.0	57.8	68.5
American Samoa	18.6	18.1	17.5	15.6	2.3	3.5	3.4	3.3	10.9	16.3	16.4	17.5
Cook Islands												
Fiji	8.4	10.8	12.5	13.4	0.3	6.9	13.4	22.2	3.3	38.9	51.9	62.3
French Polynesia	22.6	22.7	21.6	20.4	0.6	16.9	24.2	66.5	2.4	42.6	52.9	76.5
Guam	47.5	48.0	49.0		3.4	17.5	48.9	56.5	6.7	26.8	49.9	
Kiribati	2.6	4.0	5.1			0.4	0.6	0.6		8.1	10.0	
Marshall Islands	6.3	7.7	8.3	7.6	0.6	0.8	1.1	1.0	8.6	9.1	11.8	11.8
Micronesia (F.S.)	7.4	9.0	10.2	11.2			5.4	12.7			34.7	53.2
Nauru	16.1	17.9	17.9		5.0	12.0	14.9		23.8	40.0	45.5	
New Caledonia	22.6	23.7	22.9	22.9	0.4	23.2	42.8	55.6	1.8	49.5	65.2	70.8
New Zealand	46.8	47.5	45.0	40.8	9.9	40.0	65.0	101.6	17.5	45.7	59.1	71.3
Niue												
Northern Mariana Is.	26.9	30.4	27.6		2.1	4.3	24.5	24.5	7.2	12.5	47.0	
Palau			37.2	36.9			19.6	52.7			34.5	58.8
Papua New Guinea	0.9	1.2	1.1	1.0		0.2	0.3	1.2		11.7	21.8	54.1
Samoa	4.6	4.8	7.3	10.4		1.4	5.8	24.3		22.7	44.1	70.0
Solomon Islands	1.8	1.9	1.4	1.5	0.1	0.3	0.2	1.2	3.0	13.5	15.1	44.8
Tonga	6.8	9.9	12.2	20.9	0.3	0.2	11.3	46.3	4.3	2.0	48.3	68.9
Tuvalu	5.1	6.9	6.8	12.3				17.1				58.1
Vanuatu	2.4	3.5	3.2	3.1	0.1	0.2	3.8	5.6	2.3	5.7	54.5	64.5
<b>Asia and the Pacific</b>	<b>6.1</b>	<b>10.0</b>	<b>13.3</b>	<b>16.2</b>	<b>0.7</b>	<b>6.5</b>	<b>15.6</b>	<b>39.6</b>	<b>6.0</b>	<b>27.0</b>	<b>50.4</b>	<b>74.0</b>
LLDC	6.2	5.2	5.6	6.5	0.0	0.9	3.0	19.0	1.1	9.0	36.9	70.7
LDC	0.3	0.5	0.6	1.0	0.0	0.2	0.9	15.7	5.0	28.5	54.5	81.7
ASEAN	2.9	4.8	5.4	11.2	0.7	4.3	15.0	40.8	12.7	37.7	64.1	74.8
ECO	8.1	10.0	11.6	13.4	0.2	5.3	9.7	47.5	1.6	16.5	38.9	79.2
SAARC	1.2	2.7	3.3	3.1	0.0	0.3	2.7	23.0	1.1	12.8	46.2	87.2
Central Asia	9.0	8.8	9.8	10.9	0.2	5.8	54.7	250.1	0.3	9.4	26.6	62.7
Pacific island dev. econ.	4.7	5.1	5.2	4.2	0.6	2.4	5.0	8.9	3.7	16.8	28.6	55.7
Low-income	1.3	1.8	2.4	6.6	0.0	0.3	1.5	26.2	3.4	20.0	44.2	77.9
Middle-income	3.9	8.7	12.9	16.3	0.3	4.3	14.4	38.9	5.7	26.4	50.9	73.7
High-income	47.5	50.7	49.0	40.5	8.4	53.7	70.4	87.3	14.7	51.3	58.9	68.3
<b>Other world regions</b>												
Africa	1.7	2.4	2.8	3.7	0.1	1.9	6.1	27.4	4.9	32.4	68.3	87.8
Europe	39.1	46.1	45.9	44.9	4.2	47.4	70.6	111.3	7.5	45.0	58.6	71.5
Latin America & Carib.	9.0	14.6	16.9	17.7	0.8	12.1	23.4	66.3	7.9	44.1	57.2	77.9
North America	59.2	67.6	62.5	57.0	12.1	37.5	53.4	80.9	17.0	35.6	46.0	58.5
Other countries/areas	9.1	11.6	12.7	13.2	1.7	11.7	21.1	64.8	7.3	26.6	45.0	81.4
<b>World</b>	<b>11.9</b>	<b>15.7</b>	<b>17.7</b>	<b>19.1</b>	<b>1.7</b>	<b>11.9</b>	<b>22.1</b>	<b>49.1</b>	<b>6.8</b>	<b>31.3</b>	<b>53.9</b>	<b>75.5</b>



## 18.2 Internet

	Number of Internet users								Number of fixed broadband Internet subscribers							
	Per 100 population								Per 100 population							
	2000	2001	2002	2003	2004	2005	2006	2007	2000	2001	2002	2003	2004	2005	2006	2007
<b>East and North-East Asia</b>	<b>8.6</b>	<b>11.1</b>	<b>13.8</b>	<b>15.5</b>	<b>18.3</b>	<b>19.9</b>	<b>21.6</b>	<b>26.4</b>	<b>0.4</b>	<b>0.9</b>	<b>1.6</b>	<b>2.6</b>	<b>3.9</b>	<b>5.0</b>	<b>6.2</b>	<b>7.4</b>
China	1.8	2.6	4.6	6.1	7.2	8.5	10.4	15.8	0.0	0.0	0.3	0.9	1.9	2.8	3.9	5.0
DPR Korea																
Hong Kong, China	27.8	38.6	42.8	46.5	49.8	50.0	52.9	55.0	6.7	10.6	15.2	18.3	21.7	23.4	24.5	26.1
Japan	29.9	38.4	46.5	48.3	62.2	66.7	88.4	73.5	0.7	3.0	7.4	11.7	15.3	18.2	20.7	22.1
Macao, China	13.6	22.6	25.3	26.0	32.1	35.9	45.4	49.5	0.8	2.2	3.7	6.0	9.7	14.4	19.3	23.0
Mongolia	1.2	1.6	2.0	5.6	7.8	10.4	11.9	12.2			0.0	0.0	0.0	0.1	0.1	0.1
Republic of Korea	40.7	51.8	55.6	61.5	66.2	69.0	71.0	72.2	8.3	16.6	22.0	23.5	25.0	25.5	29.2	30.6
<b>South-East Asia</b>	<b>3.3</b>	<b>4.7</b>	<b>5.9</b>	<b>7.3</b>	<b>7.9</b>	<b>9.3</b>	<b>10.8</b>	<b>12.4</b>		<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.5</b>	<b>0.9</b>
Brunei Darussalam	9.0	12.9	15.3	19.5	29.5	36.1	41.7	40.8		0.6	0.8	1.1	1.7	2.2	2.4	2.3
Cambodia	0.0	0.1	0.2	0.3	0.3	0.3	0.5	0.5				0.0	0.0	0.0	0.0	0.0
Indonesia	0.9	2.0	2.1	3.7	2.5	3.5	4.6	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Lao PDR	0.1	0.2	0.3	0.3	0.4	0.9	1.2	1.7						0.0	0.0	0.1
Malaysia	21.4	26.7	32.3	35.0	42.2	48.9	53.6	56.5		0.0	0.1	0.4	1.0	2.0	3.4	5.2
Myanmar	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1						0.0	0.0	0.0
Philippines	2.0	2.6	4.4	4.9	5.3	5.5	5.8	6.0		0.0	0.0	0.1	0.1	0.1	0.1	1.1
Singapore	32.4	41.5	50.4	50.6	56.7	57.8	59.3	60.9	1.9	3.7	6.5	10.0	12.8	15.4	18.3	19.9
Thailand	3.8	5.8	7.8	9.7	11.1	11.6	13.3	21.0		0.0	0.0	0.1	0.1	0.2	0.2	0.9
Timor-Leste						0.1	0.1	0.1								
Viet Nam	0.3	1.3	1.8	3.7	7.6	12.6	17.0	20.5			0.0	0.0	0.1	0.2	0.6	1.5
<b>South and South-West Asia</b>	<b>0.8</b>	<b>1.1</b>	<b>2.0</b>	<b>3.0</b>	<b>5.3</b>	<b>7.0</b>	<b>11.2</b>	<b>16.2</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>0.5</b>
Afghanistan		0.0	0.0	0.1	0.1	1.2	2.1	2.1					0.0	0.0	0.0	0.0
Bangladesh	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3								
Bhutan	0.4	0.9	1.7	2.5	3.2	3.9	4.6	6.1								
India	0.5	0.7	1.5	1.7	3.1	5.3	10.4	17.1		0.0	0.0	0.0	0.0	0.1	0.2	0.3
Iran (Islamic Rep. of)	0.9	1.5	4.7	7.1	15.4	17.7	25.6	32.3	0.0	0.0	0.0	0.0	0.0	0.0		
Maldives	2.2	3.6	5.3	5.9	6.5	6.8	8.9	10.8			0.1	0.2	0.2	1.1	1.6	1.5
Nepal	0.2	0.2	0.3	0.4	0.5	0.8	1.1	1.2								
Pakistan	0.2	0.3	0.7	5.2	8.4	6.6	7.5	10.7					0.0		0.0	0.1
Sri Lanka	0.6	0.8	1.1	1.5	1.5	1.8	2.6	4.0		0.0	0.0	0.0	0.1	0.1	0.1	0.3
Turkey	3.7	5.1	6.1	8.4	14.2	15.4	17.8	17.6		0.0	0.0	0.3	0.8	2.2	3.8	5.8
<b>North and Central Asia</b>	<b>1.6</b>	<b>2.5</b>	<b>3.5</b>	<b>6.9</b>	<b>10.5</b>	<b>12.6</b>	<b>15.1</b>	<b>17.7</b>			<b>0.0</b>	<b>0.2</b>	<b>0.3</b>	<b>0.8</b>	<b>1.4</b>	<b>1.4</b>
Armenia	1.3	1.6	2.0	4.6	5.0	5.3	5.7	5.8					0.0	0.1	0.1	0.1
Azerbaijan	0.1	0.3	3.6	4.2	4.9	8.1	9.9	12.2				0.0	0.0	0.0	0.0	0.0
Georgia	0.5	1.0	1.6	2.6	3.9	6.1	7.5	8.2		0.0	0.0	0.0	0.0	0.1	0.6	0.6
Kazakhstan	0.7	1.0	1.7	2.0	2.6	4.0	8.1	9.1				0.0	0.0	0.0	0.2	0.2
Kyrgyzstan	1.0	3.0	3.0	3.9	5.1	10.6	12.4	14.1				0.0	0.0	0.0	0.1	0.1
Russian Federation	2.0	2.9	4.1	8.3	12.8	15.1	17.9	21.1			0.0	0.2	0.5	1.1	2.0	2.0
Tajikistan	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.3								
Turkmenistan	0.1	0.2	0.3	0.4	0.8	1.0	1.3	1.4								
Uzbekistan	0.5	0.6	1.1	1.9	2.6	3.3	4.1	4.4				0.0	0.0	0.0	0.0	0.0
<b>Pacific</b>	<b>32.8</b>	<b>37.9</b>	<b>43.2</b>	<b>45.5</b>	<b>45.9</b>	<b>46.9</b>	<b>48.1</b>	<b>54.4</b>		<b>0.6</b>	<b>1.3</b>	<b>2.5</b>	<b>4.1</b>	<b>8.0</b>	<b>16.7</b>	<b>20.2</b>
Australia	34.5	39.8	45.9	47.9	47.3	46.8	46.3	54.0		0.6	1.3	2.6	4.2	8.8	19.0	23.3
American Samoa																
Cook Islands																
Fiji	1.5	1.9	6.2	6.7	7.4	8.5	9.6	9.5						0.8	0.8	0.8
French Polynesia	6.4	6.2	8.2	14.1	17.9	21.5	25.1	28.5				0.4	1.7	4.3	7.0	8.9
Guam	16.1	25.4	31.2	33.7	38.2	38.6	38.0	37.5		1.1	1.1	1.1	1.1	1.1		1.6
Kiribati	1.8	2.3	2.3	2.3	2.2	2.2	2.1	2.1								
Marshall Islands	1.5	1.7	2.2	2.6	3.6	3.9	3.8	3.7								
Micronesia (F.S.)	3.7	4.7	5.6	9.2	11.0	12.7	14.5	14.4								
Nauru		3.0	3.0	3.0	3.0	3.0										
New Caledonia	14.0	18.3	22.4	26.5	30.4	32.5	33.6	33.1		0.0	0.3	0.7	2.2	4.1	4.0	4.0
New Zealand	39.3	45.2	48.3	52.8	58.0	67.2	77.3	80.4	0.1	0.4	1.1	2.1	4.7	8.1	13.9	16.1
Niue																
Northern Mariana Is.																
Palau			20.2	21.6	27.0	26.8	26.7	26.6					0.5	0.5	0.5	0.5
Papua New Guinea	0.8	0.9	1.3	1.4	1.5	1.7	1.8	1.7								
Samoa	0.6	1.7	2.2	2.8	3.0	3.3	4.3	4.3						0.1	0.1	0.1
Solomon Islands	0.5	0.5	0.5	0.6	0.7	0.8	1.7	1.6					0.0	0.1	0.1	0.1
Tonga	2.4	2.8	2.9	3.0	3.0	3.1	8.4					0.3	0.6	0.6	0.8	
Tuvalu	4.9	9.8	11.7	14.5	19.2	12.5	19.1	38.0						1.9	1.9	3.8
Vanuatu	2.1	2.8	3.5	3.7	3.6	3.5	3.4	3.3						0.0	0.0	0.0
<b>Asia and the Pacific</b>	<b>4.9</b>	<b>6.4</b>	<b>8.2</b>	<b>9.8</b>	<b>12.2</b>	<b>13.8</b>	<b>16.3</b>	<b>20.5</b>		<b>0.4</b>	<b>0.7</b>	<b>1.2</b>	<b>1.7</b>	<b>2.3</b>	<b>2.9</b>	<b>3.5</b>
LLDC	0.5	0.7	1.3	2.0	2.5	3.8	5.2	5.8						0.0	0.1	0.1
ILDC	0.1	0.1	0.1	0.2	0.2	0.4	0.5	0.5								
ASEAN	3.3	4.7	5.9	7.3	7.9	9.4	10.8	12.4		0.0	0.1	0.1	0.2	0.3	0.5	0.9
ECO	1.4	2.0	3.3	5.9	10.0	11.2	14.4	17.1					0.2		0.9	1.4
SAARC	0.4	0.6	1.3	2.0	3.2	4.9	8.9	14.3		0.0	0.0	0.0	0.0	0.1	0.2	0.2
Central Asia	7.2	10.8	15.5	29.7	44.7	53.1	62.9	72.4				0.6	1.1	2.6	4.7	4.6
Pacific island dev. econ.	3.8	5.1	7.2	8.4	9.4	10.3	10.9	11.0								
Low-income	0.2	0.4	0.6	2.3	3.2	4.2	5.3	6.7								
Middle-income	1.5	2.2	3.6	4.8	6.3	7.9	11.0	16.2		0.0	0.1	0.4	0.9	1.3	1.9	2.5
High-income	32.8	41.6	48.3	51.1	60.9	64.3	66.1	70.3	2.8	6.0	10.2	13.4	16.3	18.8	22.3	24.0
<b>Other world regions</b>																
Africa	0.8	1.0	1.5	2.0	3.0	4.0	5.4	6.5						0.1	0.2	0.2
Europe	19.2	23.7	28.3	33.5	37.8	42.0	47.8	51.1	0.4	1.4	2.8	4.8	8.1	10.9	14.6	17.8
Latin America & Carib.	4.0	5.9	8.5	10.1	11.8	15.6	19.3	22.9	0.0	0.1	0.3	0.5	1.2	1.8	2.6	3.8
North America	43.4	49.2	54.1	55.1	62.3	66.2	70.1	73.2	2.7	4.9	7.3	9.9	13.0	16.4	19.6	20.1
Other countries/areas	5.5	4.9	6.2	7.8	9.1	10.6	13.7	16.5								
<b>World</b>	<b>9.9</b>	<b>11.9</b>	<b>14.3</b>	<b>16.1</b>	<b>18.8</b>	<b>21.1</b>	<b>24.1</b>	<b>27.5</b>		<b>0.8</b>	<b>1.3</b>	<b>1.9</b>	<b>2.8</b>	<b>3.6</b>	<b>4.6</b>	<b>5.4</b>



# 19 Transport

Economic development depends critically on expanding transport infrastructure. Progress can be monitored using data on cargo and passenger capacities, and on infrastructure and road safety, as well as data on energy use and environmental impact.

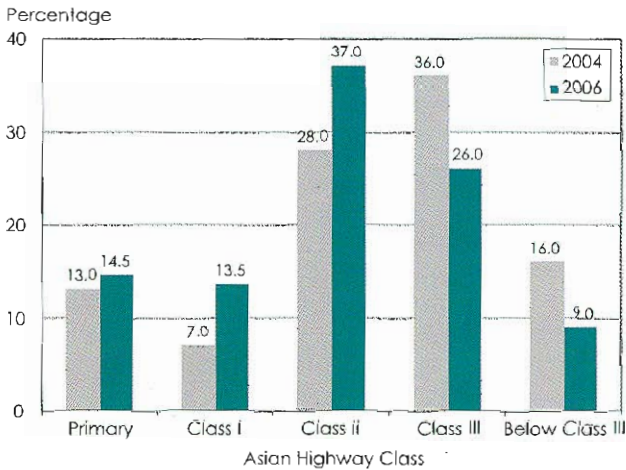
Between 2005 and 2006, the number of twenty-foot equivalent unit containers handled by the world's ports increased by 12 per cent, to 427 million. Of this throughput, more than half was in the Asia-Pacific region, which that year increased its share from 60 to 61 per cent. In 2006, of the world's top 25 container ports in terms of throughput, 17 were in Asia. The economies handling the most traffic were: China; Singapore; Hong Kong, China; Japan; and Republic of Korea.

Railway density in the Asia-Pacific region remains low in comparison with more advanced regions. Nevertheless, there has been a substantial increase in the demand for rail transport services, measured as freight ton-kilometres and passenger-kilometres. Between 2004 and 2005, total rail freight transport in Asia and the Pacific increased by 4.7 per cent, to 4,500 billion ton-kilometres, while total rail passenger transport increased by 5.1 per cent to 1,709 billion passenger-kilometres. The largest rail freight volume in 2006 was in China whose throughput in 2004 had surpassed that of the railways of the Russian Federation.

Since 2007 there has been little change in the region's road densities. However, the quality of many roads, particularly those on the Asian Highway routes has improved significantly. Between 2004 and 2006, 7 per cent, or about 10,000 kilometres, of the routes were upgraded to meet the minimum Asian Highway standards. The Asian Highway network now comprises over 141,000 kilometres of roads passing through 32 countries, extending from Tokyo in the east to Kapikule, Turkey in the west, and from Saint Petersburg, Russian Federation, in the north, to Denpasar, Indonesia, in the south.

Figure 19.1

Progress in upgrading the Asian Highway, 2004 and 2006



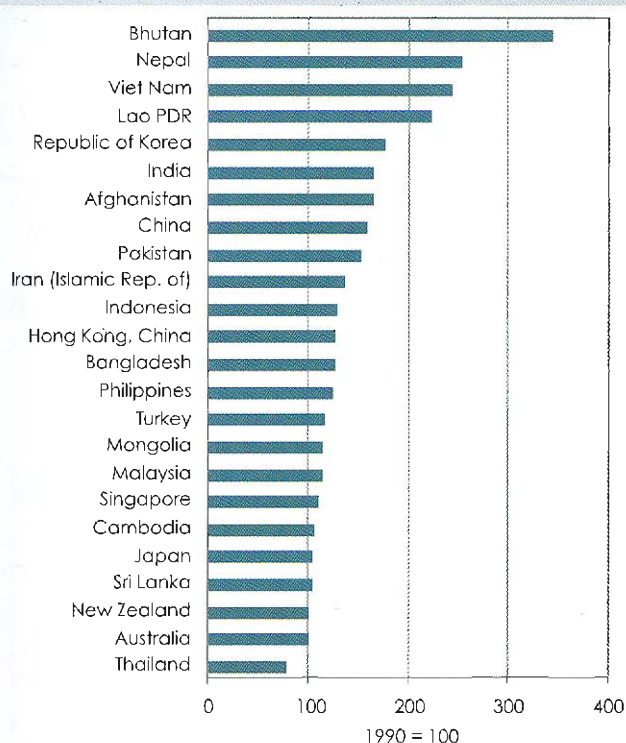
The Intergovernmental Agreement on the Asian Highway Network entered into force in 2005 and 23 States became parties to the Agreement. The Agreement classifies Asian highways into four categories: Primary refers to access-controlled highways; Class I refers to highways with four or more lanes; and Class II and Class III to highways of two lanes. Class III is regarded as the minimum desirable standard. As a result of the recent upgrades, the most typical category of Asian Highway roads is now Class II, with a 37 per cent share of the network, while the share of Class III has been reduced to 26 per cent. Between 2004 and 2006, Uzbekistan upgraded all its Asian Highway roads to meet the minimum standard while Cambodia, China and Bangladesh also achieved noticeable results in reaching the minimum standard.

Motorization continued unabated although there are few recent data. China registered 16.2 passenger cars per 1,000 people in 2005, a 22 per cent increase over 2004. The Russian Federation has also seen substantial increases: between 1990 and 2005, passenger cars per 1,000 increased from 60 to 177. However the greatest car density per person in the region was still in Brunei Darussalam: in 2005 the country had 642 cars per 1,000 people.



Figure 19.2

Index of change in road density, Asia and the Pacific, 1990-latest available year



As motorization rates continue to rise, leading to higher vehicle densities, there has also been an increase in road traffic accidents. Worldwide, every year road accidents kill an estimated 1.2 million people and injure or disable up to 50 million. Most road traffic fatalities occur in developing countries, where they rank as a leading cause of death.

#### Railway freight (100,000 ton km)

Transport of goods by rail, expressed in hundred thousand tons over a distance of one kilometre. The distance to be considered is the distance actually run on the national network of the reporting country. **Aggregates:** Sum of individual country values. **Source:** World Bank railway database (online database, accessed on 8 June 2008).

#### Railway passenger kilometres (100,000 passenger km)

Transport of passenger by rail, expressed in hundred thousand rail passengers over a distance of one kilometre. **Aggregates:** Sum of individual country values. **Source:** World Bank railway database (online database, accessed on 8 June 2008).

#### International marine container handled (TEU)

The volume of containers landed and shipped, expressed in twenty-foot equivalent container units (TEU). The indicator covers intermodal freight containers of 20 feet minimum length, but excluding platform flats. Both international and domestic traffic, and transhipped containers are counted twice. The TEU calculation are based only on container length, not height. **Aggregates:**

Roughly half of all road fatalities in the Asia-Pacific region occur in China and India. In these countries they represent a smaller proportion of total deaths than in other parts of the region, but here too the share is rising. In China, between the early 1990s and 2003 the number of traffic deaths per 100,000 total deaths increased from 592 to 1,206. In India, between 1990 and 2003 the number increased from 618 to 885.

The transport sector is a major consumer of energy – particularly petroleum. It is also a major emitter of the carbon dioxide that is contributing to global warming. In 2006, the world transport sector consumed 2,226 million tons of oil equivalent. Of that, Asia and the Pacific was responsible for only 26.6 per cent, 593 million tons. The bulk of this, 72.9 per cent (1,624 million tons), was consumed by road transport, followed by shipping 8.2 per cent, international aviation 6 per cent, domestic aviation 5 per cent, pipeline 3.2 per cent, rail 2.6 per cent, domestic navigation 1.7 per cent and others 0.3 per cent.

In 2005, the transport sector in Asia and the Pacific was responsible for 1,505 million tons of CO<sub>2</sub> emissions, compared with 1,974 million tons in North America and 1,038 million tons in Europe. Most of this comes from road transport which in 2006 released 1,224 million tons. In contrast, railways emitted only 64.3 million tons, strong justification for a modal shift from road to rail.

Sum of individual country values. **Source:** Calculated by ESCAP from data from Containerisation International Yearbook 2008.

#### Railway density (km per 1,000 km<sup>2</sup>)

The length of rail lines divided by the land area. Rail lines are the length of railway route available for train service measured in kilometres, irrespective of the number of parallel tracks. **Aggregates:** Averages are calculated using land area as weight. **Source:** World Bank, World Development Indicators (online database, accessed in June 2008).

#### Roads density (km per 1,000 km<sup>2</sup>)

The total road network divided by the land area. Total road network includes motorways, highways, and main or national roads, secondary or regional roads, and all other roads measured in kilometres in a country. **Aggregates:** Averages are calculated using land area as weight. Missing data for roads density have been imputed. **Source:** World Bank, World Development Indicators (online database, accessed in June 2008).



**Paved roads (% of total roads)**

The share of roads surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, concrete, or cobblestones, expressed as a percentage of the length of all roads. **Aggregates:** Averages are calculated using land area as weight. Missing data for paved roads have been imputed. **Source:** World Bank, World Development Indicators (online database, accessed in June 2008).

**Asian highway, total length (km)**

The Asian Highway is a cooperative network of highway routes of international importance within Asia, determined by an intergovernmental agreement initiated by ESCAP. The total Asian Highway Network is divided into five major classes (primary, I, II, III, below III) depending on road design standards. **Aggregates:** Sum of individual country values. **Source:** ESCAP, Transport Division.

**Asian highway, primary (km)**

The total length of primary class roads in the Asian Highway Network. Primary class refers to access-controlled highways. Access-controlled highways are used exclusively by automobiles. Access to the access-controlled highways is at grade-separated interchanges only. Mopeds, bicycles and pedestrians should not be allowed to enter the access-controlled highway in order to ensure traffic safety and the high running speed of automobiles. **Aggregates:** Sum of individual country values. **Source:** ESCAP, Transport Division.

**Asian highway, Class I (km)**

The total length of Class I roads in the Asian Highway Network. Class I refers to asphalt or cement concrete roads with 4 or more lanes. **Aggregates:** Sum of individual country values. **Source:** ESCAP, Transport Division.

**Asian highway, Class II (km)**

The total length of Class II roads in the Asian Highway Network. Class II refers to asphalt or cement concrete roads with 2 lanes. **Aggregates:** Sum of individual country values. **Source:** ESCAP, Transport Division.

**Asian highway, Class III (km)**

The total length of Class III roads in the Asian Highway Network. Class III refers to double bituminous treated roads with 2 lanes. Class III is also regarded as the minimum desirable standard. **Aggregates:** Sum of individual country values. **Source:** ESCAP, Transport Division.

**Asian highway, below Class III (km)**

The total length of Asian Highway roads that are below the minimum desirable standard. **Aggregates:** Sum of individual country values. **Source:** ESCAP, Transport Division.

**Passenger cars in use (per 1,000 population)**

The number of passenger cars, expressed per 1,000 population. Covers road motor vehicles designed for the conveyance of passengers and seating not more than nine persons including the driver. Taxies, jeep-type vehicles and station wagons are included. Special-purpose vehicles, such as two-wheeled or three-wheeled cycles or motorcycles, trams, trolley-buses, ambulances, hearses, and military vehicles operated by police or other governmental security organizations, are excluded. **Aggregates:** Averages are calculated using total population as weight. **Source:** United Nations Common database (online database, accessed on 18 June 2008).

**Traffic accidents casualties (per 100,000 deaths)**

The total number of deaths caused by traffic accidents during a given period divided by the total number of deaths from all causes during the same period, expressed per 100,000 deaths. **Aggregates:** Averages are calculated as the sum of accident casualties divided by the sum of total deaths. Missing data for traffic accident casualties have been imputed. **Source:** Asia-Pacific Road Accident Database (APRAD), ESCAP, Transport Division.

**Energy consumption transport, international and domestic aviation (thousand tons of oil equivalent)**

Total deliveries of aviation fuels for any type of aircraft used in international and domestic aviation. Excludes airline use of fuel for road transport. **Aggregates:** Sum of individual country values. **Source:** IEA (online database, accessed on 14 October 2008).

**Energy consumption in road transport (thousand tons of oil equivalent)**

Total amount of fuels used in road vehicles. Excludes military consumption as well as motor gasoline used in stationary engines and diesel oil for use in tractors that are not for highway use. **Aggregates:** Sum of individual country values. **Source:** International Energy Agency (online database, accessed in October 2008).

**Energy consumption in rail transport (thousand tons of oil equivalent)**

Total amount of energy used in rail traffic, including industrial railways. **Aggregates:** Sum of individual country values. **Source:** International Energy Agency (online database, accessed in October 2008).

**Energy consumption in transport sector (thousand tons of oil equivalent)**

Energy consumed in all transport activities (in mobile engines) regardless of the economic sector to which it is contributing [ISIC Divisions 60, 61 and 62]. **Aggregates:** Sum of individual country values. **Source:** International Energy Agency (online database, accessed in September 2008).



## 19. Transport

### 19.1 Railway and maritime freight and passenger traffic

	Railways freight				Railways passenger kilometres				International marine container handled	
	Hundred thousand ton km				Hundred thousand passenger km				Million TEU	
	1990	1995	2000	2005	1990	1995	2000	2005	2005	2006
<b>East and North-East Asia</b>	<b>1 105 654</b>	<b>1 328 796</b>	<b>1 371 015</b>	<b>1 976 209</b>	<b>531 514</b>	<b>633 337</b>	<b>711 428</b>	<b>861 509</b>		
China	1 060 100	1 287 420	1 333 606	1 934 612	263 530	354 261	441 468	583 320	67.25	84.69
DPR Korea										
Hong Kong, China									22.60	23.54
Japan	26 803	24 747	22 313	22 632	237 551	248 993	240 793	245 957	16.85	18.07
Macao, China										
Mongolia	5 088		4 293	8 857	570		1 070	1 228		
Republic of Korea	13 663	13 838	10 803	10 108	29 863	29 292	28 097	31 004	14.98	15.63
<b>South-East Asia</b>	<b>9 156</b>	<b>11 039</b>			<b>28 731</b>	<b>36 096</b>				
Brunei Darussalam										
Cambodia	24	6	92		34	39	45	45	0.21	0.22
Indonesia	3 190	4 170			9 290	15 520			3.56	3.65
Lao PDR										
Malaysia	1 404	1 416	907	1 178	1 840	1 270	1 312	1 181	11.99	13.40
Myanmar	388				3 702					
Philippines	12	5	1		341	220	171		3.35	3.40
Singapore									24.10	25.61
Thailand	3 291	3 242	3 384	4 037	11 612	12 975	9 935	9 195	5.12	5.57
Timor-Leste										
Viet Nam	847	1 751	1 902	2 928	1 913	2 133	3 200	4 558	2.50	2.96
<b>South and South-West Asia</b>	<b>259 243</b>	<b>296 778</b>	<b>333 760</b>	<b>441 568</b>	<b>333 959</b>	<b>364 846</b>	<b>469 591</b>	<b>624 646</b>		
Afghanistan										
Bangladesh	651	689	777	817	4 587	3 333	3 941	4 164	0.78	0.88
Bhutan										
India	235 785	270 489	305 201	407 398	295 644	326 197	430 666	575 702	4.97	6.17
Iran (Islamic Rep. of)	9 041	11 870	14 179	19 127	4 573	7 294	7 119	11 149	1.33	1.53
Maldives										
Nepal										
Pakistan	5 709	5 077	3 754	5 013	19 964	18 904	18 495	24 237	1.69	1.70
Sri Lanka	164	137	88	135	2 781	3 321		4 358	2.46	3.08
Turkey	7 894	8 516	9 761	9 078	6 410	5 797	5 832	5 036	3.15	3.61
<b>North and Central Asia</b>	<b>3 006 268</b>	<b>1 382 587</b>	<b>1 523 660</b>	<b>2 064 810</b>	<b>302 178</b>	<b>212 595</b>	<b>180 471</b>	<b>187 983</b>		
Armenia	4 884	403	354	654	316	165	47	27		
Azerbaijan	37 076	2 409	5 770	10 067		791	493	878		
Georgia	15 477	1 246	3 912	6 127	1 969	371	453	720	0.11	0.11
Kazakhstan	406 963		124 983	171 855	19 734		10 215	12 129		
Kyrgyzstan										
Russian Federation	2 523 000	1 214 000	1 373 200	1 858 100	274 000	192 117	167 100	172 217	1.79	2.33
Tajikistan										
Turkmenistan										
Uzbekistan		16 830	15 441	18 007		2 497	2 163	2 012		
<b>Pacific</b>										
Australia									5.15	5.65
American Samoa										
Cook Islands										
Fiji										
French Polynesia									0.07	0.07
Guam									0.15	0.15
Kiribati										
Marshall Islands										
Micronesia (F.S.)										
Nauru										
New Caledonia									0.07	0.08
New Zealand	2 744	3 202	4 078			366			1.50	1.69
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea										
Samoa										
Solomon Islands										
Tonga										
Tuvalu										
Vanuatu										
<b>Asia and the Pacific</b>	<b>4 383 065</b>	<b>3 022 401</b>	<b>3 244 208</b>	<b>4 500 309</b>	<b>1 196 751</b>	<b>1 247 240</b>	<b>1 396 288</b>	<b>1 709 395</b>	<b>195.72</b>	<b>223.77</b>
LLDC			150 841	209 440						
LDC					8 322					
ASEAN	9 156	11 039			28 731	36 096				
ECO	485 550	192 401	173 888	233 147	56 840	51 937	44 317	55 441		
SAARC	242 308	276 392	309 820	413 363	322 975	351 755	456 640	608 461		
Central Asia	483 268		150 460	206 710			13 371	15 766		
Pacific island dev. econ.										
Low-income	26 486	24 802	22 415	27 306	35 567	30 845	31 783	38 955		
Middle-income	4 313 368	2 955 813	3 184 599	4 436 185	893 401	937 744	1 095 615	1 393 479		
High-income	43 210	41 787	37 194	36 818	267 784	278 651	268 890	276 961		
<b>Other world regions</b>										
Africa									10.59	12.18
Europe									74.53	80.71
Latin America & Carib.									25.29	29.75
North America									42.43	44.99
Other countries/areas									33.72	35.68
<b>World</b>									<b>382.28</b>	<b>427.10</b>



## 19.2 Railways and roads infrastructure

	Railway density			Roads density				Paved roads				
	Km per 1,000 km <sup>2</sup>			Km per 1,000 km <sup>2</sup>				% of total roads				
	1990	2000	2005	1990	2000	2003	2004	1990	2000	2003	2004	2005
<b>East and North-East Asia</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>211</b>	<b>239</b>	<b>276</b>	<b>281</b>			<b>68</b>	<b>70</b>	<b>70</b>
China	6	6	7	127	150	194	201			79	81	82
DPR Korea				231	259			6	6			
Hong Kong, China				1 374		1 742	1 750	100		100	100	100
Japan	56	55	55	3 057	3 200			69	77			
Macao, China					12 756	12 637	13 164	100	100	100	100	
Mongolia	1	1	1	27	31			10	4			
Republic of Korea	31	32	34	574	881	985	1 016	72	75	77	87	77
<b>South-East Asia</b>				<b>180</b>	<b>224</b>			<b>37</b>				
Brunei Darussalam				192	218			31	35			77
Cambodia	3	3	4	203			217	8			6	
Indonesia				159	196	205	206	45	57	58	55	
Lao PDR				61	94	135		24		14		
Malaysia	5	5	5	262	201	281	300	70	75	81	81	
Myanmar	5			38	43			11	11			
Philippines	2	2	2	538	676	671				10		
Singapore				4 176	4 584	4 606	4 627	97	100	100	100	100
Thailand	8	8	8	141	112			55	99			
Timor-Leste												
Viet Nam	9	10	9	295	693		717	24				
<b>South and South-West Asia</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>415</b>	<b>622</b>				<b>46</b>			
Afghanistan				32	32		53	13	13		24	
Bangladesh	21	21	22	1 444	1 594	1 838			10	10		
Bhutan				50		171		77		62		
India	21	21	21	673	1 115				47			
Iran (Islamic Rep. of)	3	4	4	80		110				67		
Maldives												
Nepal			0	48	92	111	121	38	31	54	57	
Pakistan	11	10	10	219	311	330	335	54	56	60	65	
Sri Lanka	22		19	1 439		1 505				81		
Turkey	11	11	11	477		554	555					
<b>North and Central Asia</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>61</b>	<b>41</b>			<b>72</b>				
Armenia	29	30	25	267		271	271	99		91	90	90
Azerbaijan		28	26	617	332		715				49	
Georgia	22	22	22	305	293	291	291	94		39	39	
Kazakhstan	5	5	5	57		33	33	55		94	93	83
Kyrgyzstan			2	97	96			90	91			
Russian Federation	5	5	5	53	32			74				
Tajikistan			4	209	198			72				
Turkmenistan			5	44	51			74	81			
Uzbekistan		9	9	167	192			79	87			
<b>Pacific</b>	<b>1</b>			<b>110</b>	<b>110</b>	<b>110</b>		<b>34</b>				
Australia	1	1	1	105	106	106		35				
American Samoa												
Cook Islands												
Fiji			33	167	188			45	49			
French Polynesia												
Guam												
Kiribati					827							
Marshall Islands												
Micronesia (F.S.)					343			16	18			
Nauru												
New Caledonia												
New Zealand	15			346	344	347	348	57	63	64	65	65
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea				41	43			3	4			
Samoa												
Solomon Islands				43	50			2	2			
Tonga					944				27			
Tuvalu												
Vanuatu					88			22	24			
<b>Asia and the Pacific</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>160</b>	<b>191</b>							
LLDC			5	66	59			44	58			
LDC	7		8	143	155	189			17	18		
ASEAN				180	224			37	48			
ECO	6	7	7	132		151	153					
SAARC	19	19	18	519	815				43			
Central Asia		7	6	91	74			64				
Pacific island dev. econ.				51	56			5	6			
Low-income	9	10	8	162	214			32	34			
Middle-income	7	7	7	141	175							
High-income	4	4	4	247	257			38	42			
<b>Other world regions</b>												
Africa		4	4	54	62			26				
Europe	46	49	45	964	1 063	1 095		83	84	81		
Latin America & Carib.	6			141	156	159	160	18	17			
North America	21	17	12	387	412	429	430			53	52	53
Other countries/areas				89	107			44	38			
<b>World</b>				<b>189</b>	<b>141</b>	<b>67</b>	<b>2</b>	<b>36</b>	<b>36</b>			



## 19. Transport

### 19.3 Asian highway

	Primary		Class I		Class II		Class III		Below Class III and other		Total	
	Km											
	2004	2006	2004	2006	2004	2006	2004	2006	2004	2006	2004	2006
East and North-East Asia												
China	12 940	14 859	1 719	2 255	7 599	5 788	2 228	3 237	1 443	42	25 929	26 181
DPR Korea	0	0	0	492	0	0	0	15	1 320	955	1 320	1 462
Hong Kong, China									0	0		
Japan	1 111	1 111	0	0	0	0	0	0	0	0	1 111	1 111
Macao, China									0	0		
Mongolia	0	0	0	16	440	432	345	595	3 501	3 243	4 286	4 286
Republic of Korea	466	466	197	255	244	186	0	0	0	0	907	907
South-East Asia												
Brunei Darussalam									0	0		
Cambodia	0	0	0	0	398	453	743	879	199	3	1 340	1 335
Indonesia	335	409	18	188	1 600	1 734	1 965	1 550	34	89	3 952	3 970
Lao PDR	0	0	0	0	0	0	2 375	2 032	3	285	2 378	2 317
Malaysia	795	795	67	67	733	733	0	0	0	0	1 595	1 595
Myanmar	0	0	147	147	144	0	983	1 585	1 729	1 271	3 003	3 003
Philippines	0	0	17	134	27	928	2 872	1 917	601	538	3 517	3 517
Singapore	11	11	8	8	0	0	0	0	0	0	19	19
Thailand	182	182	2 572	2 926	1 226	1 187	1 128	813	4	2	5 112	5 110
Timor-Leste									0	0		
Viet Nam	0	0	408	338	1 915	2 018	104	85	251	190	2 678	2 631
South and South-West Asia												
Afghanistan	0	0	0	10	621	2 314	77	77	3 549	1 846	4 247	4 247
Bangladesh	0	0	20	20	441	1 718	476	0	868	30	1 805	1 768
Bhutan	0	0	0	6	6	0	0	0	161	161	167	167
India	0	90	484	3 787	0	1 962	10 869	5 690	105	121	11 458	11 650
Iran (Islamic Rep. of)	752	752	1 067	2 468	9 334	7 933	0	0	0	0	11 153	11 153
Maldives									0	0		
Nepal	0	0	0	0	311	208	1 003	1 098	12	8	1 326	1 314
Pakistan	358	358	1 116	1 272	160	349	2 569	2 224	1 174	1 174	5 377	5 377
Sri Lanka	0	0	0	49	269	337	190	151	191	113	650	650
Turkey	1 212	1 251	155	885	1 219	797	2 685	2 312	0	0	5 271	5 245
North and Central Asia												
Armenia	0	0	142	147	377	710	479	109	0	0	998	986
Azerbaijan	0	0	82	97	1 012	1 017	348	348	228	0	1 670	1 462
Georgia	0	0	8	17	788	924	358	160	0	0	1 154	1 101
Kazakhstan	0	0	72	557	767	4 671	10 004	6 835	2 346	793	13 189	12 856
Kyrgyzstan	0	0	0	60	464	981	511	338	720	316	1 695	1 695
Russian Federation	0	0	1 147	1 532	8 334	13 085	3 210	670	4 178	1 759	16 869	17 046
Tajikistan	0	0	0	20	289	707	603	977	1 033	221	1 925	1 925
Turkmenistan	0	0	0	60	0	0	2 180	2 120	24	24	2 204	2 204
Uzbekistan	0	0	255	1 185	765	1 111	1 618	870	328	0	2 966	2 966
Pacific												
Australia												
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand												
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
Asia and the Pacific	18 162	20 284	9 701	18 998	39 483	52 283	49 923	36 487	24 002	13 184	141 271	141 236
LLDC												
LDC												
ASEAN												
ECO												
SAARC												
Central Asia												
Pacific island dev. econ.												
Low-income												
Middle-income												
High-income												
Other world regions												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
World												



## 19.4 Passenger cars and traffic casualties

	Passenger cars in use					Traffic accidents casualties				
	Per 1,000 population					Per 100,000 deaths				
	1990	1995	2000	2003	2004	1990	1995	2000	2003	2004
<b>East and North-East Asia</b>	<b>40</b>	<b>47</b>	<b>53</b>	<b>56</b>	<b>58</b>	<b>778</b>	<b>974</b>	<b>1 188</b>	<b>1 204</b>	
China	1	3	7	11	13	592	857	1 118	1 206	
DPR Korea										
Hong Kong, China	38	49	53	52	52	1 056	780	503	548	
Japan	362	420	449			1 367	1 165	1 061		
Macao, China	67	85	111	124	130		1 188	860	853	
Mongolia						1 805				
Republic of Korea	140	180				4 893	4 163	4 057	2 778	2 403
<b>South-East Asia</b>	<b>14</b>	<b>19</b>	<b>27</b>			<b>675</b>			<b>1 201</b>	
Brunei Darussalam	415	480	548	592	616	5 384	6 569	4 409	2 840	
Cambodia	1	1	1				74	307	617	
Indonesia	12	15	26			687			606	
Lao PDR						183	600		941	
Malaysia	14	17				3 495	5 758	5 701	5 666	
Myanmar	2	3	4	4	4	130	209	235	273	
Philippines	17	24	28	30	31	345			244	
Singapore	95	105	103	101	103	1 550	1 338	1 118	1 043	
Thailand	23	33	44	55	48	1 451	3 758	2 363	2 480	
Timor-Leste										
Viet Nam						395			2 622	
<b>South and South-West Asia</b>	<b>5</b>	<b>8</b>				<b>580</b>	<b>694</b>	<b>783</b>	<b>781</b>	
Afghanistan	2			2	2					
Bangladesh	0	0				135		253		
Bhutan						96				
India	4	6				618	764	871	885	
Iran (Islamic Rep. of)										
Maldives	1	7	15							
Nepal	1	2	2			212	336	412		
Pakistan	5	6	7	8	9	396	472	431	414	449
Sri Lanka	10	13	18	23	27	1 613	1 393	1 603		
Turkey	29	49	65	66	75		1 442	1 372	957	
<b>North and Central Asia</b>	<b>59</b>	<b>85</b>	<b>121</b>	<b>139</b>	<b>144</b>	<b>2 021</b>	<b>1 555</b>	<b>1 302</b>	<b>1 512</b>	
Armenia						2 749	1 079	807	926	
Azerbaijan	36	36	41	48	53	2 463	1 760	1 088	1 261	1 382
Georgia	66	49					887	998	1 121	
Kazakhstan	63	63	94			2 842	1 714	1 196	1 710	
Kyrgyzstan	45	41	41			193	1 675	1 545	2 211	
Russian Federation	60	95	137	160	166	1 967	1 602	1 330	1 540	
Tajikistan		29	19			1 919	1 110	936	992	986
Turkmenistan						2 248	1 261		1 368	
Uzbekistan						2 116	1 184	1 290		
<b>Pacific</b>	<b>433</b>	<b>454</b>		<b>498</b>	<b>508</b>	<b>1 751</b>	<b>1 431</b>	<b>1 221</b>	<b>1 097</b>	
Australia	455	479		522	529	1 951	1 600	1 376	1 191	
American Samoa	91	89	128	110	104					
Cook Islands										
Fiji	56	65	76	92	98	1 947	1 734			
French Polynesia										
Guam	596	443								
Kiribati										
Marshall Islands										
Micronesia (F.S.)										
Nauru										
New Caledonia	316	273	405	425	443					
New Zealand	440	453	494	510	530	2 686	2 125	1 647	1 627	
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea						655				
Samoa	27	37	29	38	49	1 626				
Solomon Islands										
Tonga	21	82	51	71		1 961				
Tuvalu										
Vanuatu										
<b>Asia and the Pacific</b>	<b>27</b>	<b>33</b>				<b>786</b>	<b>931</b>	<b>1 014</b>	<b>1 048</b>	
LLDC						1 454	1 086	990		
LDC	1	1				142		282		
ASEAN	14	19	27			675			1 201	
ECO	18	23	28	29	31		878	802	774	
SAARC	4	6				539	665	764	776	
Central Asia						2 258	1 393	1 181		
Pacific island dev. econ.						802				
Low-income	3	4				308		505		
Middle-income	9	13	19	22	23	792	965	1 045	1 103	
High-income	309	355	386			2 143	1 758	1 602		
<b>Other world regions</b>										
Africa	18									
Europe	319	354	397							
Latin America & Carib.										
North America	700	691	727	739						
Other countries/areas	126	131								
<b>World</b>	<b>105</b>	<b>110</b>								



## 19.5 Energy consumption by type of transport

	International and domestic aviation			Road			Railway			Total		
	1990	2000	2006	1990	2000	2006	1990	2000	2006	1990	2000	2006
Thousand tons of oil equivalent												
<b>East and North-East Asia</b>	<b>11 905</b>	<b>21 251</b>	<b>30 215</b>	<b>98 435</b>	<b>151 337</b>	<b>188 324</b>	<b>14 750</b>	<b>16 976</b>	<b>17 843</b>	<b>133 726</b>	<b>205 809</b>	<b>256 824</b>
China	863	5 551	11 013	21 008	46 628	84 580	12 489	14 588	15 415	37 167	73 787	126 484
DPR Korea				1 560	563	331				1 560	563	331
Hong Kong, China	1 897	2 803	4 732	1 470	3 721	1 459				3 369	6 524	6 191
Japan	6 931	10 213	10 471	63 381	77 952	74 818	1 751	1 828	1 849	76 244	94 582	91 129
Macao, China												
Mongolia	4	19	44	383	259	316	138	69	122	526	347	482
Republic of Korea	2 209	2 666	3 955	10 633	22 214	26 821	372	491	457	14 860	30 006	32 208
<b>South-East Asia</b>	<b>5 774</b>	<b>9 685</b>	<b>12 217</b>	<b>28 061</b>	<b>57 699</b>	<b>69 444</b>	<b>140</b>	<b>152</b>	<b>605</b>	<b>35 454</b>	<b>70 133</b>	<b>85 175</b>
Brunei Darussalam	38	69	79	188	274	346				226	343	425
Cambodia		19	27		286	391					305	420
Indonesia	625	1 143	1 341	9 639	18 880	22 243				11 037	21 779	25 223
Lao PDR												
Malaysia	654	1 576	2 010	4 845	10 489	13 055		4	7	5 499	12 075	15 198
Myanmar	30	66	80	420	1 104	1 201				451	1 175	1 313
Philippines	539	901	1 109	1 811	6 898	6 037		3	424	2 655	8 394	8 327
Singapore	1 900	2 903	3 557	1 342	1 968	2 273	16	25	33	3 258	4 896	5 862
Thailand	1 887	2 791	3 610	8 558	14 452	17 689	105	99	104	10 916	17 402	21 473
Timor-Leste												
Viet Nam	100	217	405	1 259	3 348	6 208	19	21	37	1 412	3 764	6 933
<b>South and South-West Asia</b>	<b>3 406</b>	<b>5 793</b>	<b>8 650</b>	<b>48 557</b>	<b>73 639</b>	<b>90 602</b>	<b>4 932</b>	<b>2 902</b>	<b>3 545</b>	<b>57 833</b>	<b>83 376</b>	<b>105 682</b>
Afghanistan												
Bangladesh	92	127	283	394	741	1 119	52	109	168	636	1 125	1 801
Bhutan												
India	1 786	2 396	4 234	21 667	28 500	31 222	4 308	2 209	2 845	28 347	33 663	39 045
Iran (Islamic Rep. of)	501	910	1 060	13 030	24 220	36 447				13 531	25 129	37 507
Maldives												
Nepal	17	57	66	110	269	281	0	1	1	127	327	347
Pakistan	470	769	917	4 212	7 839	7 622	286	292	267	4 970	8 999	10 061
Sri Lanka	61	273	320	729	1 552	1 547	27	22	27	819	1 854	1 931
Turkey	480	1 261	1 770	8 413	10 618	12 365	259	270	237	9 404	12 279	14 990
<b>North and Central Asia</b>	<b>20 167</b>	<b>9 823</b>	<b>12 222</b>	<b>63 752</b>	<b>41 881</b>	<b>50 454</b>	<b>7 222</b>	<b>5 564</b>	<b>6 975</b>	<b>140 192</b>	<b>89 396</b>	<b>110 018</b>
Armenia	199	63	40	1 016	197	181		6	7	1 249	270	231
Azerbaijan	239	120	498	1 103	666	1 519		33	30	1 576	857	2 186
Georgia	202	15	38	1 168	310	524	127	49	28	1 537	374	597
Kazakhstan	1 205	291	347	4 130	2 722	3 138	1 014	385	392	6 356	3 428	3 986
Kyrgyzstan	88	39	132	1 040	168	242		4	7	1 141	216	385
Russian Federation	18 155	8 988	10 928	52 020	34 380	40 965	6 081	4 957	6 402	124 769	78 952	96 974
Tajikistan		3	4	541	707	1 342		3	2	558	714	1 348
Turkmenistan				841	675	949		13	17	930	688	966
Uzbekistan	78	303	234	1 892	2 057	1 595		114	89	2 076	3 898	3 345
<b>Pacific</b>	<b>3 224</b>	<b>5 172</b>	<b>5 827</b>	<b>21 316</b>	<b>26 051</b>	<b>27 646</b>	<b>719</b>	<b>758</b>	<b>806</b>	<b>25 976</b>	<b>32 850</b>	<b>35 252</b>
Australia	2 495	4 269	4 613	18 710	22 330	23 247	714	750	798	22 559	28 070	29 496
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	729	903	1 214	2 607	3 721	4 398	5	8	8	3 417	4 780	5 755
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific</b>	<b>44 476</b>	<b>51 724</b>	<b>69 131</b>	<b>260 121</b>	<b>350 607</b>	<b>426 471</b>	<b>27 763</b>	<b>26 351</b>	<b>29 773</b>	<b>393 181</b>	<b>481 564</b>	<b>592 951</b>
LLDC	1 831	895	1 365	11 057	7 720	9 562	1 152	627	667	14 540	10 744	13 277
LDC	138	269	456	925	2 400	2 992	52	109	168	1 214	2 932	3 882
ASEAN	5 774	9 685	12 217	28 061	57 699	69 444	140	152	605	35 454	70 133	85 175
ECO	3 061	3 696	4 963	35 203	49 572	65 218	1 559	1 114	1 041	40 542	56 208	74 775
SAARC	2 426	3 622	5 821	27 113	38 902	41 790	4 673	2 632	3 307	34 898	45 967	53 185
Central Asia	2 012	834	1 294	11 731	7 502	9 489	1 141	606	573	15 424	10 444	13 045
Pacific island dev. econ.												
Low-income	875	1 600	2 148	11 430	17 083	20 331	357	543	570	12 931	21 086	26 283
Middle-income	27 401	26 298	38 362	150 362	201 345	272 777	24 548	22 706	26 059	256 316	291 278	395 601
High-income	16 200	23 826	28 621	98 330	132 180	133 363	2 858	3 102	3 144	123 934	169 200	171 067
<b>Other world regions</b>												
Africa	4 778	7 756	8 239	33 624	45 868	57 093	788	728	708	39 663	56 427	68 581
Europe	33 409	48 054	54 325	265 790	298 736	326 820	10 396	9 943	9 766	321 436	367 793	404 491
Latin America & Carib.	7 940	12 389	12 438	96 178	131 464	157 500	1 512	1 298	1 622	108 263	149 367	178 160
North America	81 045	92 838	87 458	424 366	529 978	576 934	12 826	12 205	15 911	544 690	660 691	705 126
Other countries/areas	10 917	12 299	14 479	43 976	60 056	78 992	75	65	123	55 244	72 854	94 159
<b>World</b>	<b>182 565</b>	<b>225 060</b>	<b>246 070</b>	<b>1 124 056</b>	<b>1 416 710</b>	<b>1 623 809</b>	<b>53 360</b>	<b>50 590</b>	<b>57 904</b>	<b>1 462 476</b>	<b>1 788 697</b>	<b>2 043 469</b>



## 20 **Financing** **for development**

**Most foreign direct investment in the region goes to the middle and high-income economies. The poor countries rely more on official development assistance – though this still comprises only a small proportion of total development finance.**

### **Foreign direct investment**

In 2007, foreign direct investment (FDI) to Asia and the Pacific climbed another 28 per cent, to reach \$372 billion – 2.4 times the yearly average for 2001-2005. The fastest growth was in the low-income economies, at 73 per cent, and in the least developed countries, at 42 per cent. The largest increases were in countries that had low starting levels, including Bhutan, Timor-Leste and Myanmar.

Although the largest percentage increases were in the poorer countries, the highest inflows, at \$220 billion, and the highest annual increases, were in the middle- and high-income economies. China continued to receive the largest amount, \$83.5 billion in 2007, followed by Hong Kong, China at \$59.9 billion, and the Russian Federation at \$52.5 billion. The next tier of recipients, at around \$20-25 billion each, included Singapore, India, Japan, Australia and Turkey. The largest absolute increases were in Japan; followed by the Russian Federation; Hong Kong, China; and China.

As a proportion of GDP, however, the highest FDI inflows, went to the low-income economies (3.9 per cent in 2007), followed by the middle-income economies (2.8 per cent) and the high-income economies (2.0 per cent). This pattern is even more pronounced when inflows are considered as a proportion of domestic investment, or gross fixed capital formation: for the low-income economies, 16.2 per cent; for the middle-income economies, 8.7 per cent; and for the high-income economies, 8.1 per cent.

Among individual economies, FDI inflows relative to GDP were highest in Hong Kong, China

(23.9 per cent during 2005-2007), followed by Singapore, Kiribati, Georgia and Macao, China (in the 14.9-11 per cent range). Although Marshall Islands almost tripled its FDI in relation to GDP over the same period, that was probably because the country was being used for the transfer of funds, for example through special purpose vehicles, rather than as a destination for investments in the country itself.

In most Asia-Pacific countries, FDI still only makes a small contribution to the extra capital needed for investment, averaging around eight per cent of gross fixed capital formation (GFCF). The key financing source thus remains domestic investment. Nevertheless, FDI represents an important source of capital and foreign exchange, and can also offer additional benefits in the form of technology and knowledge transfer. It should also be noted that there are differences between FDI and GFCF. While FDI measures capital transfers – both new investments and purchases of existing companies – GFCF measures fresh additions to the capital stock.

As a result of these flows of FDI, by 2007, the accumulated stock in the region as a whole reached \$3,362 billion, the largest stock being in Hong Kong, China at \$1,184 billion, followed by China, the Russian Federation, Australia and Singapore. Considering FDI stock as a proportion of GDP, the leading recipient was Hong Kong, China at 573 per cent, followed by Kiribati (219 per cent), Singapore (155 per cent), Vanuatu (115 per cent) and Tuvalu (106 per cent).

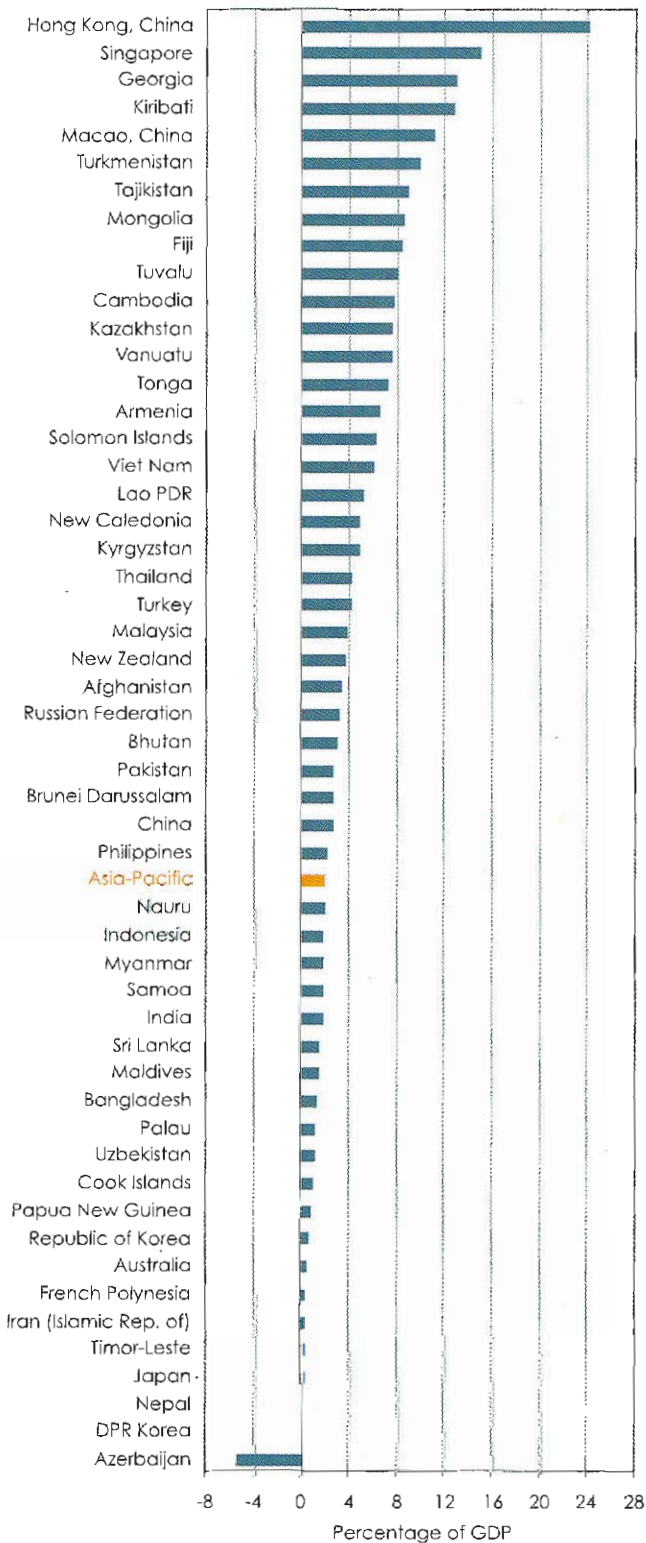
Of the inflows to Asia and the Pacific, according to UNCTAD, and as reported by the selling country, \$199 billion was accounted for by mergers and acquisitions. At 53 per cent of total FDI inflows this was lower than the worldwide average of 89 per cent.

There has also been a steady rise in FDI flows from the region – with a 39 per cent increase in 2007 to \$291 billion. Overall these outward flows were equivalent to 1.9 per cent of GDP; the rate



Figure 20.1

FDI inflows as a proportion of GDP, annual average 2005-2007



was by far the highest in Hong Kong, China (25.7 per cent of GDP) followed by Malaysia (5.9 per cent).

The outward FDI stock reached \$2,575 billion in 2007, representing an increase of 163 per cent over the previous five year period (2002-2007). The

highest stock was registered in Hong Kong, China (\$1,026 billion), followed by Japan, Australia, the Russian Federation and Singapore.

Between 2002 and 2007, the largest relative increases in outward FDI stock were registered in Central Asia, in particular Armenia, Georgia and Azerbaijan. This was followed by the SAARC region, where India increased its outward FDI stock by \$25 billion or over 600 per cent. Among ASEAN countries, the Philippines and Malaysia increased their outward FDI stock most: by more than 400 per cent each over the same period.

The internationalization of companies is also evident in the UNCTAD list of the top 100 non-financial transnational corporations (TNCs) from developing economies. Of the 100 companies ranked in 2006, 61 were from Asia and the Pacific, in the following order: Hong Kong, China (26); Singapore (11); China (9); Malaysia (6) and Republic of Korea (5). In addition, Taiwan Province of China hosted another 16. The 61 TNCs from Asia and the Pacific had total sales of \$780 billion and assets worth \$1,108 billion, and employed 3.5 million people. In a similar top 100 list covering all countries, 15 companies were from the region, most from Japan (9), followed by the Republic of Korea (2).

With regard to FDI statistics, it is important to bear in mind that a large share of FDI to and from economies such as China and Hong Kong, China is due to round-tripping – the channelling of funds to special purpose entities abroad and the subsequent return of the funds to the local economy in the form of direct investment. For inward FDI to China the proportion due to round-tripping could be anywhere between 25 and 50 per cent. However, the OECD has now prepared benchmark definitions for FDI, so some of the problems with FDI statistics may be corrected.

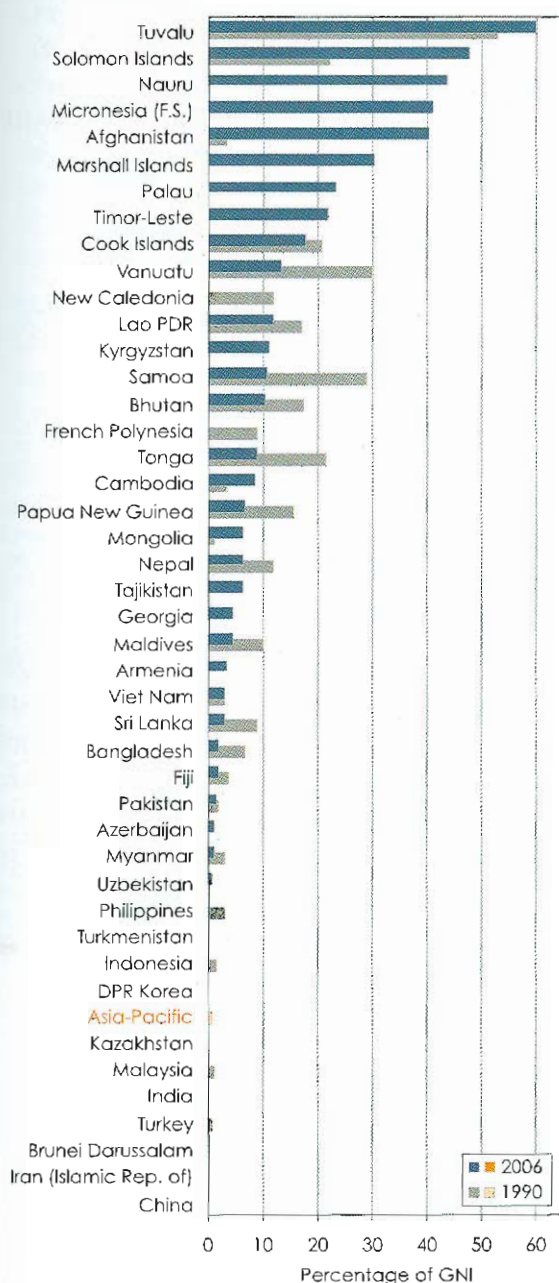
Workers remittances

Many countries in the region have become highly dependent on remittances from overseas migrants. In 2006, workers' remittances accounted for 28 per cent of GNI in Tonga. Remittances have also become very important to Kyrgyzstan and Tajikistan, accounting for over 26 per cent of GNI, as well as to Nepal at 16.8 per cent and the Philippines at 9.7 per cent. Remittances have also been growing steadily in Bangladesh and Sri Lanka, reaching 8.4 per cent of GNI.



Figure 20.2

Proportion of ODA received in relation to GNI, Asia and the Pacific, 1990 and 2006



### Official development assistance

For the poorest countries, another important source of foreign funds is official development assistance (ODA). In 2006, Asia and the Pacific received \$19.0 billion in grants and loans, a decline of 7.1 per cent from the previous year. Globally ODA declined slightly less, by 6.1 per cent.

The share of Asia and the Pacific of global ODA peaked in 1999 at 39 per cent, from which it has steadily fallen to currently only 23.2 per cent. Nowadays, around half of ODA goes to Africa. In Asia and the Pacific, the flows of ODA have been affected by the Asian tsunami of December 2004, which led donors in 2005 to provide more

assistance, including debt relief, to the affected countries. In 2006, the biggest declines in ODA in the region were experienced by Indonesia, by 44 per cent and India, 20 per cent, respectively. In contrast, Net ODA of Pakistan increased by 32 per cent.

At the global level, net ODA (excluding debt relief for Iraq and Nigeria in 2005) by 2006 had increased 116 per cent since the turning point of 1997. However, during the same period aid to Asia and the Pacific increased only by 46 per cent.

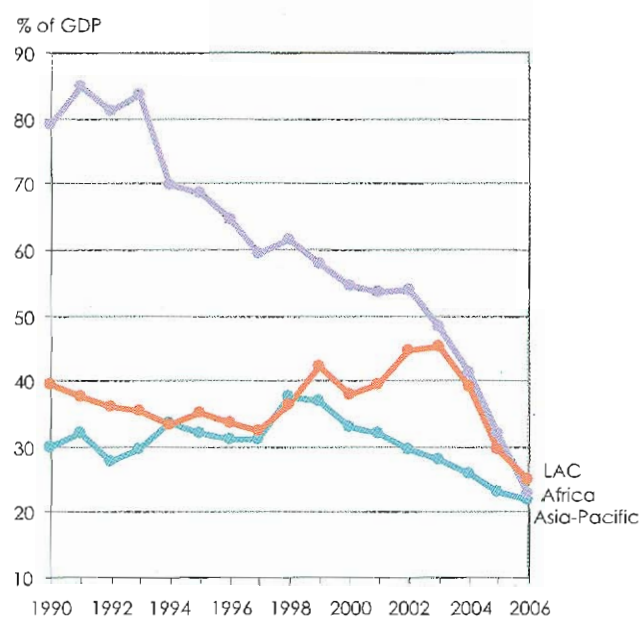
As a percentage of GNI, ODA in 2006 was most significant for Tuvalu at 60.3 per cent, followed by Solomon Islands at 47.8 per cent, Nauru at 43.7 per cent, the Federated States of Micronesia at 41.3 per cent, and Afghanistan at 40.3 per cent.

### External debt

In Asia and the Pacific, net external debt relative to GDP dropped between 1998 and 2006 from 37.7 to 21.9 per cent. The region's economies tended to have lower net external debt as a proportion of GDP than Latin America and the Caribbean and Africa but in recent years the differences between world regions have rapidly narrowed.

Figure 20.3

Net external debt as a proportion of GDP, global regions, 1990-2006

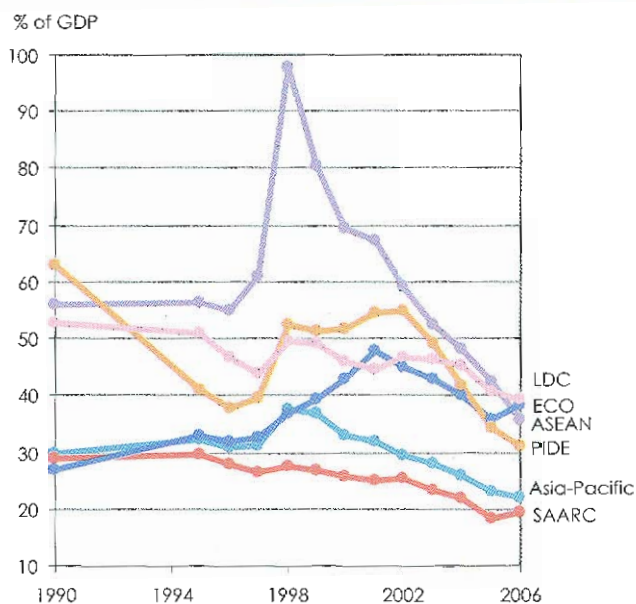


Since the Asian financial crisis in 1998, when the region as a whole displayed a ratio of 37.7 per cent, the trends have been downwards. There are, however, wide variations among Asia-Pacific subregions. The downward trend has been most



Figure 20.4

Net external debt as a proportion of GDP,  
selected Asia-Pacific groupings, 1990-2006

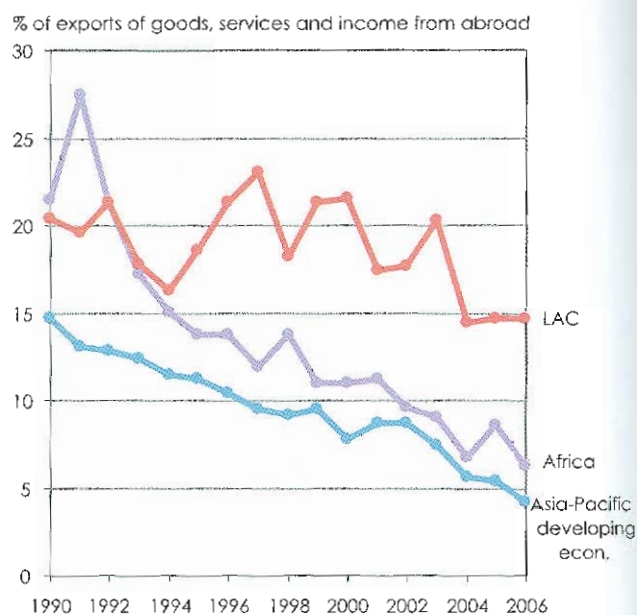


pronounced in the ASEAN group, which includes former crisis economies such as Thailand, Malaysia and Indonesia. In 1998 ASEAN members' external debt almost equalled their GDP, but has steadily declined, to 35.7 per cent by 2006. The highest levels of net external debt in the Asia-Pacific region are found in Central Asian countries, which in 2006 had an average debt to GDP ratio of 60.8 per cent.

The developing economies in Asia and the Pacific have maintained lower debt-service ratios

Figure 20.5

Debt services ratio, selected country  
groupings, 1990-2006



than other global regions. Between 1990 and 2006, their debt-service ratios as a proportion of exports of goods, services and income from abroad fell from 14.7 to 4.2 per cent, while the ratios in Africa fell from 21.5 to 6.3 per cent and those in Latin America and the Caribbean from 20.5 to 14.8 per cent. It should be noted that there is a wide variation in the debt service ratios among Asia-Pacific developing economies.

#### FDI inward and outward stock (million US dollars; % of GDP)

*Inward FDI stock* is the value of the share of capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise, when the parent enterprise is resident in a different economy. *Outward FDI stock* refers to the value of capital and reserves in another economy attributable to a parent enterprise resident in the economy.

**Aggregates:** Sum of individual country values for the unit of million US dollars; Averages are calculated using total GDP in United States dollars as weight for the unit % of GDP. **Source:** United Nations Conference on Trade and Development, Foreign Direct Investment (online database, accessed on 9 June 2008) for the value of FDI inward and outward stock. The % of GDP is calculated by ESCAP using data from UNSD National Accounts Main Aggregates database (online database, accessed in September 2008).

#### FDI net inflows and outflows (million US dollars; % of GDP)

Foreign direct investment *inflows* comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an FDI enterprise in the reporting economy. FDI *outflows* are capital received by a foreign direct investor from entities resident in the reporting economy. Ownership or control of less than 10 per cent of a business is not considered to be foreign direct investment. FDI includes (1) equity capital which is the foreign direct investor's purchase of shares of an enterprise in a country other than that of its residence; (2) reinvested earnings comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested; and (3) intra-company loans or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between direct



investors (parent enterprises) and affiliate enterprises.

**Aggregates:** Sum of individual country values for the unit of million US dollars; Averages are calculated using total GDP in United States dollars as weight for the unit % of GDP. **Source:** United Nations Conference on Trade and Development, Foreign Direct Investment (online database, accessed on 9 June 2008) for the value of FDI net inflows and outflows. The % of GDP is calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates database (online database, accessed in September 2008).

#### **Workers remittances (million US dollars; % of GNI)**

Current transfers from abroad by migrants who are employed or intend to remain employed for more than a year in another economy in which they are considered residents, expressed in million US dollars and as a percentage of gross national income (GNI). **Aggregates:** Sum of individual country values for the unit of million US dollars; Averages are calculated using total GNI as weight for the unit of % of GNI. **Source:** International Monetary Fund, Balance of Payment Statistics (CD-ROM June 2008) for the value of workers remittances. The % of GNI is calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates Database (online database, accessed in September 2008).

#### **ODA received (million US dollars; % change; % of GNI.)**

The amount of official development assistance (ODA) received in grants and loans during the reporting period, expressed in million US dollars, % change, and as a percentage of the gross national income (GNI). GNI is GDP less net taxes on production and imports, less compensation of employees and property income payable to the rest of the world plus the corresponding items receivable from the rest of the world. **Aggregates:** Sum of individual country values for the unit of million US dollars; Averages are calculated using total GNI as weight for the unit of % of GNI. **Source:** Organization for Economic Co-operation and Development, Development Database on Aid from DAC Members (online database, accessed on 4 March 2008) for the value of ODA received. The % of

GNI is calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates database (online database, accessed in September 2008).

#### **Net external debt (million US dollars; % of GDP)**

The outstanding net amount of those current, and not contingent, liabilities owed to non-residents by residents of an economy that require payments either of principal and/or interest by the debtor at some point in the future. Residents comprise the general government, individuals, private non-profit bodies and enterprises. **Aggregates:** Million US dollars: Sum of the individual country values; % of GDP: Averages are calculated using GDP in current United States dollars as weight. **Source:** World Bank, World Development Indicators (online database, accessed on 10 October 2008) for the value of net external debt. The % of GDP is calculated by ESCAP using data from United Nations Statistics Division, National Accounts Main Aggregates database (online database, accessed in September 2008).

#### **Debt service ratio (% of exports of goods, services and income from abroad)**

Debt service is the sum of principle repayments and interest payments made to non-residents in foreign currency, goods, or services. This series differs from the standard debt to exports ratios. It covers only long-term public and publicly guaranteed debt and repayments (repurchases and charges) to the International Monetary Fund (IMF). Long-term refers to debt that has an original or extended maturity of more than one year. IMF repurchases are total repayments of outstanding drawings from the general resources account during the year specified, excluding repayments due in the reserve tranche. Exports of goods, services and income are the sum of goods (merchandise) exports, exports of (non-factor) services and income (factor) receipts and do not include workers' remittances. **Aggregates:** Averages are calculated using the value of exports of goods, services and net income from abroad as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed in July 2008) and International Monetary Fund; International Financial Statistics CD-ROM September 2008.



## 20. Financing for development

### 20.1 Inward foreign direct investment

	FDI stock					FDI net inflows				
	Million	% of GDP				Million	% of GDP			
	US dollars	2007	90-95	96-00	01-05	2007	2007	90-95	96-00	01-05
<b>East and North-East Asia</b>	<b>1 775 349</b>	<b>5.7</b>	<b>9.0</b>	<b>12.0</b>	<b>19.8</b>	<b>171 093</b>	<b>0.5</b>	<b>1.3</b>	<b>1.4</b>	<b>1.9</b>
China	327 087	9.7	16.0	13.5	9.6	83 521	3.6	4.1	3.3	2.5
DPR Korea	1 378	6.4	9.4	10.6	9.3	53	0.1	0.6	0.7	0.4
Hong Kong, China	1 184 471	190.2	188.5	253.8	573.0	59 899	4.4	14.7	13.8	29.0
Japan	132 851	0.4	0.8	1.9	3.0	22 549	0.0	0.1	0.2	0.5
Macao, China	8 606	55.5	44.5	44.1	45.0	2 115	0.0	0.0	6.2	11.1
Mongolia	1 326	1.4	9.3	27.4	34.1	328	0.5	2.5	6.6	8.4
Republic of Korea	119 630	2.0	4.7	12.0	12.5	2 628	0.2	1.2	0.9	0.3
<b>South-East Asia</b>	<b>550 952</b>	<b>20.4</b>	<b>36.7</b>	<b>42.9</b>	<b>42.9</b>	<b>60 514</b>	<b>3.5</b>	<b>4.5</b>	<b>3.8</b>	<b>4.7</b>
Brunei Darussalam	10 045	3.6	52.1	105.1	81.1	184	2.6	12.9	15.7	1.5
Cambodia	3 821	6.0	35.4	41.2	44.2	867	2.2	6.3	3.6	10.0
Indonesia	58 955	8.1	15.9	7.9	13.6	6 928	1.3	0.5	0.6	1.6
Lao PDR	1 180	5.9	28.6	28.1	28.3	324	2.6	4.3	1.0	7.8
Malaysia	76 748	28.2	49.0	35.3	41.1	8 403	7.0	5.2	2.6	4.5
Myanmar	5 433	11.4	41.4	44.8	29.3	428	3.0	7.2	2.3	2.3
Philippines	18 952	12.4	19.2	14.7	13.1	2 928	1.8	2.1	1.2	2.0
Singapore	249 667	77.1	104.5	156.2	154.7	24 137	10.9	14.3	13.8	15.0
Thailand	85 749	10.7	17.3	32.4	34.9	9 575	1.6	3.4	3.8	3.9
Timor-Leste	167	19.0	25.2	46.4	36.8	2	5.2	0.0	5.4	0.3
Viet Nam	40 235	29.8	56.1	66.5	56.5	6 739	7.7	6.4	3.7	9.5
<b>South and South-West Asia</b>	<b>256 579</b>	<b>3.4</b>	<b>5.2</b>	<b>7.2</b>	<b>11.6</b>	<b>52 649</b>	<b>0.3</b>	<b>0.6</b>	<b>1.0</b>	<b>2.4</b>
Afghanistan	1 116	0.4	0.5	4.5	11.9	288	0.0	0.0	2.3	3.1
Bangladesh	4 404	4.7	6.9	9.1	6.5	666	0.1	1.1	0.9	1.0
Bhutan	106	1.0	1.0	1.7	8.1	78	0.1	0.1	0.5	6.0
India	76 226	0.9	3.0	5.2	6.7	22 950	0.2	0.7	0.9	2.0
Iran (Islamic Rep. of)	5 295	2.1	2.2	2.1	1.8	754	0.0	0.0	0.2	0.3
Maldives	209	13.9	17.3	22.4	19.8	15	2.3	2.1	1.8	1.4
Nepal	126	0.3	1.1	1.6	1.1	6	0.0	0.2	0.1	0.0
Pakistan	20 086	4.5	9.8	7.5	12.3	5 333	0.6	0.6	1.0	3.3
Sri Lanka	3 456	9.3	11.5	10.1	10.7	529	1.0	1.4	1.1	1.6
Turkey	145 556	8.4	9.1	14.7	29.9	22 029	0.5	0.4	1.5	4.5
<b>North and Central Asia</b>	<b>389 192</b>	<b>1.1</b>	<b>8.1</b>	<b>24.6</b>	<b>26.3</b>	<b>61 912</b>	<b>0.3</b>	<b>1.6</b>	<b>2.5</b>	<b>4.2</b>
Armenia	2 448	2.3	18.4	30.2	26.7	661	0.7	5.8	5.0	7.2
Azerbaijan	6 598		62.9	102.3	21.1	-4 817	0.6	13.9	24.4	-15.4
Georgia	5 259	0.3	13.4	34.0	51.7	1 659	0.1	4.8	7.0	16.3
Kazakhstan	43 381		33.8	52.8	41.7	10 259	2.0	6.3	7.7	9.9
Kyrgyzstan	819		21.7	25.3	21.9	208	1.3	3.6	2.8	5.6
Russian Federation	324 065		5.6	21.4	25.1	52 475	0.2	1.1	1.7	4.1
Tajikistan	1 046	0.8	9.3	13.1	28.0	401	0.3	1.8	4.7	10.7
Turkmenistan	3 928	4.2	22.7	34.6	54.2	804	2.6	3.4	5.9	11.1
Uzbekistan	1 648	0.4	3.2	8.8	8.6	262	0.1	0.8	0.9	1.4
<b>Pacific</b>	<b>390 255</b>	<b>26.0</b>	<b>30.0</b>	<b>35.3</b>	<b>35.4</b>	<b>26 199</b>	<b>2.3</b>	<b>2.0</b>	<b>1.4</b>	<b>2.4</b>
Australia	312 275	25.2	27.1	33.5	33.0	22 266	2.0	1.8	1.2	2.4
American Samoa										
Cook Islands	40	18.9	66.2	25.4	18.8	1	1.0	4.8	0.1	0.5
Fiji	1 464	25.4	26.3	21.4	43.5	269	3.3	2.9	4.7	8.0
French Polynesia	250	3.0	3.6	3.9	4.1	17	0.3	0.2	0.3	0.3
Guam										
Kiribati	159	2.4	72.3	204.3	219.2	11	0.4	28.5	23.6	15.8
Marshall Islands						361	-1.4	38.0	124.5	242.0
Micronesia (F.S.)							0.0	-7.1	0.0	
Nauru						1	-0.7	1.2	4.5	3.0
New Caledonia	1 360	2.8	3.0	5.3	17.0	288	0.3	0.2	0.8	3.6
New Zealand	71 312	33.2	52.3	49.6	54.7	2 768	4.3	3.3	2.1	2.1
Niue	7					0				
Northern Mariana Is.	0									
Palau	123		57.4	87.3	72.3	3	0.6	17.0	3.3	2.0
Papua New Guinea	2 337	36.6	43.2	59.7	38.7	96	5.7	6.0	1.3	1.6
Samoa	82	13.4	20.8	16.9	16.0	17	3.1	2.1	0.0	3.2
Solomon Islands	220	37.7	40.5	44.5	45.4	42	4.0	1.3	0.6	8.8
Tonga	74	2.6	6.0	13.0	30.0	24	0.8	0.7	2.9	9.8
Tuvalu	31		1.0	106.4	106.4	2	0.4	-1.2	27.2	5.9
Vanuatu	520	90.0	130.7	143.1	115.2	34	12.9	9.4	5.3	7.5
<b>Asia and the Pacific</b>	<b>3 362 327</b>	<b>7.5</b>	<b>11.8</b>	<b>15.9</b>	<b>22.3</b>	<b>372 367</b>	<b>0.8</b>	<b>1.5</b>	<b>1.6</b>	<b>2.5</b>
LLDC	63 721	3.4	20.6	39.6	30.5	8 801	1.1	4.1	6.8	4.2
LDC	17 574	5.6	12.9	15.8	14.1	2 780	0.7	2.0	1.3	2.2
ASEAN	550 786	20.4	36.7	42.9	42.9	60 513	3.5	4.5	3.8	4.7
ECO	229 472	5.4	9.1	13.8	20.5	35 522	0.5	0.8	1.9	3.2
SAARC	105 729	2.0	4.5	5.8	7.4	29 866	0.3	0.7	1.0	2.1
Central Asia	65 126	3.6	23.6	46.6	34.5	9 437	1.2	4.8	8.1	5.0
Pacific island dev. econ.	6 668	19.3	22.4	24.2	25.9	1 165	3.3	3.0	2.4	4.5
Low-income	83 849	7.2	17.2	20.8	20.8	15 713	1.2	2.0	1.6	3.9
Middle-income	1 187 933	7.2	13.1	14.5	15.2	219 801	1.6	2.5	2.4	2.8
High-income	2 090 468	7.7	11.0	16.7	30.6	136 850	0.4	1.1	1.0	2.0
<b>Other world regions</b>										
Africa	393 429	14.4	21.3	28.1	30.3	52 982	0.9	1.7	2.8	4.1
Europe	7 362 272	10.7	16.7	31.9	41.1	870 478	1.0	3.3	2.8	4.9
Latin America & Carib.	1 140 007	10.5	18.1	32.0	32.4	126 266	1.2	3.9	3.3	3.5
North America	2 615 076	8.0	10.8	14.5	17.2	341 529	0.7	2.3	1.0	2.2
Other countries/areas	334 970	11.6	12.4	16.6	24.7	69 701	0.6	1.3	2.7	5.3
<b>World</b>	<b>15 210 560</b>	<b>9.3</b>	<b>14.0</b>	<b>21.5</b>	<b>27.9</b>	<b>1 833 324</b>	<b>0.9</b>	<b>2.7</b>	<b>2.0</b>	<b>3.4</b>



## 20.2 Outward foreign direct investment

	FDI stock					FDI outflows				
	Million US dollars	% of GDP				Million US dollars	% of GDP			
	2007	90-95	96-00	01-05	2007	2007	90-95	96-00	01-05	2007
<b>East and North-East Asia</b>	<b>1 733 113</b>	<b>5.8</b>	<b>9.3</b>	<b>11.5</b>	<b>19.3</b>	<b>165 307</b>	<b>0.8</b>	<b>1.0</b>	<b>1.0</b>	<b>1.8</b>
China	95 799	2.0	2.3	2.4	2.8	22 469	0.4	0.2	0.3	0.7
DPR Korea							0.1	0.0		
Hong Kong, China	1 026 587	33.5	152.1	225.3	496.6	53 187	11.6	17.6	12.9	25.7
Japan	542 614	5.9	6.1	7.9	12.4	73 549	0.6	0.6	0.8	1.7
Macao, China	1 893			5.4	9.9	827			0.1	4.3
Mongolia										
Republic of Korea	66 220	1.5	4.3	4.4	6.9	15 276	0.5	1.0	0.6	1.6
<b>South-East Asia</b>	<b>242 727</b>	<b>4.9</b>	<b>12.4</b>	<b>18.2</b>	<b>20.3</b>	<b>33 466</b>	<b>1.2</b>	<b>1.7</b>	<b>1.8</b>	<b>2.7</b>
Brunei Darussalam	698	4.3	8.6	7.7	5.6	38	1.4	0.5	0.6	0.3
Cambodia	284	4.1	4.7	4.9	3.3	1			0.2	0.0
Indonesia	21 425	1.3	3.7	4.1	5.0	4 790	0.6	0.1	0.6	1.1
Lao PDR	20	0.2	1.0	0.9	0.5			0.2		
Malaysia	58 175	3.0	13.6	11.5	31.2	10 989	1.6	2.3	1.5	5.9
Myanmar										
Philippines	5 573	1.4	2.3	1.7	3.9	3 442	0.3	0.2	0.2	2.4
Singapore	149 526	29.9	64.4	96.7	92.7	12 300	5.1	7.8	8.6	7.6
Thailand	7 025	0.9	1.9	2.4	2.9	1 756	0.3	0.3	0.2	0.7
Timor-Leste										
Viet Nam						150				0.2
<b>South and South-West Asia</b>	<b>44 513</b>	<b>0.3</b>	<b>0.5</b>	<b>1.2</b>	<b>2.0</b>	<b>16 271</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.7</b>
Afghanistan										
Bangladesh	123	0.1	0.2	0.2	0.2	21	0.0	0.0	0.0	0.0
Bhutan										
India	29 412	0.1	0.3	1.0	2.6	13 649	0.0	0.0	0.3	1.2
Iran (Islamic Rep. of)	1 473	0.0	0.4	0.3	0.5	302	0.0	0.1	0.0	0.1
Maldives										
Nepal										
Pakistan	1 002	0.4	0.4	0.7	0.6	98	0.0	0.0	0.0	0.1
Sri Lanka	293	0.2	0.4	0.6	0.9	95	0.0	0.1	0.1	0.3
Turkey	12 210	0.8	1.2	2.6	2.5	2 106	0.0	0.2	0.2	0.4
<b>North and Central Asia</b>	<b>262 146</b>	<b>0.6</b>	<b>2.9</b>	<b>16.6</b>	<b>18.1</b>	<b>49 169</b>		<b>0.7</b>	<b>1.7</b>	<b>3.4</b>
Armenia	13			0.1	0.1	-3			0.1	0.0
Azerbaijan	4 676		0.1	18.9	15.0	286			9.0	0.9
Georgia	80				0.8	74			-0.3	0.7
Kazakhstan	2 149		0.0	-0.8	2.1	3 161		0.0	-0.6	3.0
Kyrgyzstan	18			3.6	0.5	0			0.5	0.0
Russian Federation	255 211		3.3	18.5	19.8	45 652		0.7	1.7	3.5
Tajikistan										
Turkmenistan										
Uzbekistan		0.0	0.0	0.0						
<b>Pacific</b>	<b>292 518</b>	<b>11.7</b>	<b>18.0</b>	<b>25.7</b>	<b>26.8</b>	<b>27 140</b>	<b>1.0</b>	<b>0.8</b>	<b>0.4</b>	<b>2.5</b>
Australia	277 917	11.8	19.1	28.0	29.4	24 209	0.8	1.0	0.5	2.6
American Samoa										
Cook Islands						1		-1.6	0.5	0.4
Fiji	76	2.1	2.1	2.2	2.3	5	0.2	-0.6	0.2	0.2
French Polynesia	68				1.1	13				0.2
Guam										
Kiribati										
Marshall Islands						26				17.6
Micronesia (F.S.)										
Nauru										
New Caledonia						27				0.3
New Zealand	14 169	12.1	12.0	12.8	10.9	2 840	2.3	-0.2	-0.6	2.2
Niue						2				
Northern Mariana Is.										
Palau										
Papua New Guinea	273	3.7	6.6	7.2	4.5	8	0.7	0.2	0.0	0.1
Samoa						0				0.0
Solomon Islands						8			0.1	1.7
Tonga										
Tuvalu										
Vanuatu	16	0.0	0.0	3.2	3.6	1	0.0	0.0	0.2	0.1
<b>Asia and the Pacific</b>	<b>2 575 018</b>	<b>5.3</b>	<b>8.9</b>	<b>11.9</b>	<b>17.3</b>	<b>291 353</b>	<b>0.7</b>	<b>0.9</b>	<b>0.9</b>	<b>1.9</b>
LLDC	6 876	0.0	0.1	2.2	4.5	3 443		0.1	1.1	2.3
LDC	444	0.4	0.5	0.6	0.5	31	0.0	0.0	0.0	0.0
ASEAN	242 727	4.9	12.4	18.2	20.3	33 466	1.2	1.7	1.8	2.7
ECO	21 528	0.4	0.8	1.8	2.0	5 952	0.0	0.1	0.2	0.6
SAARC	30 830	0.1	0.3	0.9	2.2	13 863	0.0	0.0	0.3	1.0
Central Asia	6 936	0.0	0.1	2.1	4.4	3 518		0.0	1.0	2.2
Pacific island dev. econ.	433	3.2	5.0	3.5	2.7	92	0.5	0.0	0.3	0.4
Low-income	1 720	0.5	0.6	0.8	0.7	286	0.0	0.0	0.0	0.1
Middle-income	493 607	1.1	2.4	4.5	6.3	108 799	0.3	0.3	0.6	1.4
High-income	2 079 891	6.9	12.1	17.2	30.5	182 265	0.9	1.3	1.2	2.7
<b>Other world regions</b>										
Africa	72 752	5.7	7.4	6.4	6.3	6 055	0.4	0.4	0.1	0.5
Europe	8 851 893	13.0	23.0	40.9	49.4	1 217 643	1.5	4.9	3.4	6.8
Latin America & Carib.	493 213	5.1	7.3	14.4	14.5	52 336	0.3	1.2	1.3	1.5
North America	3 313 018	9.1	13.0	18.1	21.8	368 005	0.9	1.7	1.4	2.4
Other countries/areas	296 665	3.1	3.5	5.8	12.7	61 279	0.0	0.5	1.0	4.3
<b>World</b>	<b>15 602 339</b>	<b>9.0</b>	<b>14.7</b>	<b>23.1</b>	<b>28.6</b>	<b>1 996 514</b>	<b>1.0</b>	<b>2.5</b>	<b>1.9</b>	<b>3.7</b>



## 20. Financing for development

### 20.3 Workers' remittances

	Workers' remittances							
	Million US dollars				% of GNI			
	1995	2000	2005	2006	1995	2000	2005	2006
<b>East and North-East Asia</b>								
China	350.0	556.2	5 494.7	6 830.5	0.0	0.0	0.2	0.3
DPR Korea								
Hong Kong, China								
Japan		504.8	733.4	1 026.1		0.0	0.0	0.0
Macao, China			54.1				0.4	
Mongolia		12.0	177.6	179.8		1.1	7.4	5.7
Republic of Korea	291.4	62.9	64.1	136.1	0.1	0.0	0.0	0.0
<b>South-East Asia</b>								
Brunei Darussalam								
Cambodia	10.0	100.0	160.0	180.0	0.3	3.2	3.0	2.9
Indonesia	651.0	1 190.2	5 296.3	5 560.3	0.3	0.9	1.9	1.6
Lao PDR								
Malaysia								
Myanmar	81.4	76.7	87.0	65.7	1.0	1.1	0.7	0.5
Philippines	432.0	5 161.0	10 868.0	12 481.0	0.6	6.4	10.0	9.7
Singapore								
Thailand								
Timor-Leste								
Viet Nam								
<b>South and South-West Asia</b>								
Afghanistan								
Bangladesh	1 201.7	1 958.1	4 302.4	5 417.7	3.1	4.2	7.1	8.4
Bhutan								
India	6 139.0	12 744.9	21 030.3	25 108.9	1.7	2.8	2.6	2.8
Iran (Islamic Rep. of)								
Maldives								
Nepal	56.8	111.5	1 126.3	1 373.3	1.3	2.0	14.8	16.8
Pakistan	1 712.2	1 075.0	4 277.0	5 113.0	2.1	1.4	3.3	3.5
Sri Lanka	789.8	1 142.3	1 968.5	2 325.5	6.0	7.0	8.2	8.4
Turkey	3 327.0	4 560.0	851.0	1 111.0	1.9	2.3	0.2	0.3
<b>North and Central Asia</b>								
Armenia	12.4	9.3	47.2	76.5	1.0	0.5	1.0	1.2
Azerbaijan		57.1	490.2	662.3		1.1	4.2	3.6
Georgia		94.9	93.8	153.0		3.0	1.4	1.9
Kazakhstan		63.9	55.8	73.0		0.4	0.1	0.1
Kyrgyzstan	1.2	2.2	313.3	730.6	0.1	0.2	13.2	26.1
Russian Federation			621.4	766.3			0.1	0.1
Tajikistan			465.2	1 015.0			15.7	26.5
Turkmenistan								
Uzbekistan								
<b>Pacific</b>								
Australia								
American Samoa								
Cook Islands								
Fiji		25.7	134.6	126.6		1.5	4.4	4.0
French Polynesia			11.3	14.4			0.2	0.3
Guam								
Kiribati								
Marshall Islands								
Micronesia (F.S.)								
Nauru								
New Caledonia			5.3	3.7			0.1	0.1
New Zealand								
Niue								
Northern Mariana Is.								
Palau								
Papua New Guinea			5.7				0.2	
Samoa	39.2				20.3			
Solomon Islands			2.7	9.5			0.7	2.2
Tonga			62.2	68.5			29.2	28.2
Tuvalu								
Vanuatu	6.1	11.0	0.1	0.1	2.8	4.6	0.0	0.0
<b>Asia and the Pacific</b>								
LLDC								
LDC								
ASEAN								
ECO								
SAARC								
Central Asia								
Pacific island dev. econ.								
Low-income								
Middle-income								
High-income								
<b>Other world regions</b>								
Africa								
Europe								
Latin America & Carib.								
North America								
Other countries/areas								
<b>World</b>								



## 20.4 Official development assistance

	ODA received										
	Million US dollars					% change	% of GNI				
	1990	1995	2000	2005	2006	2006	1990	1995	2000	2005	2006
East and North-East Asia	2 141.5	3 763.8	2 018.3	2 109.3	1 502.6	-28.8	0.3	0.3	0.2	0.1	0.1
China	2 030.4	3 470.6	1 727.5	1 801.9	1 245.5	-30.9	0.5	0.5	0.1	0.1	0.0
DPR Korea	7.7	13.5	73.3	86.8	54.5	-37.2	0.0	0.3	0.7	0.7	0.4
Hong Kong, China	38.2	17.7					0.0	0.0			
Japan											
Macao, China	0.2	-4.0					0.0	-0.1			
Mongolia	13.1	209.0	217.4	220.6	202.6	-8.2	1.0	14.8	20.1	9.2	6.4
Republic of Korea	52.0	57.0					0.0	0.0			
South-East Asia	4 783.1	5 012.2	5 669.0	6 021.2	5 087.4	-15.5	1.4	0.8	1.2	0.8	0.6
Brunei Darussalam	3.9	4.3					0.1	0.1			
Cambodia	41.3	551.0	395.9	540.7	529.0	-2.2	3.3	18.3	12.6	10.0	8.4
Indonesia	1 715.9	1 301.2	1 654.4	2 521.9	1 404.5	-44.3	1.6	0.7	1.2	0.9	0.4
Lao PDR	149.1	306.9	281.6	295.7	364.2	23.1	17.2	17.3	17.0	11.4	11.9
Malaysia	468.5	108.1	45.4	27.6	240.3	772.1	1.1	0.1	0.1	0.0	0.2
Myanmar	160.8	150.2	105.6	144.7	146.6	1.3	3.1	1.9	1.5	1.2	1.1
Philippines	1 270.6	902.1	575.2	564.2	562.3	-0.3	2.9	1.2	0.7	0.5	0.4
Singapore	-3.1	16.7					0.0	0.0			
Thailand	795.6	837.0	698.2	-165.4	-215.6	30.4	0.9	0.5	0.6	-0.1	-0.1
Timor-Leste	0.1	0.0	231.3	184.7	209.7	13.5	0.1	0.0	71.6	26.6	22.0
Viet Nam	180.6	834.8	1 681.4	1 907.0	1 846.4	-3.2	3.0	4.0	5.5	3.7	3.1
South and South-West Asia	7 265.2	5 654.6	4 650.8	9 789.0	9 882.4	1.0	1.1	0.7	0.5	0.6	0.6
Afghanistan	121.7	212.5	136.0	2 752.1	2 999.8	9.0	3.4	6.6	5.0	40.2	40.3
Bangladesh	2 092.8	1 281.5	1 167.8	1 336.2	1 222.7	-8.5	6.8	3.3	2.5	2.2	1.9
Bhutan	46.0	71.2	53.1	89.6	94.1	5.0	17.6	27.7	11.9	10.9	10.2
India	1 398.9	1 729.0	1 462.7	1 728.0	1 378.9	-20.2	0.4	0.5	0.3	0.2	0.2
Iran (Islamic Rep. of)	104.8	186.5	129.9	104.3	121.0	16.1	0.1	0.2	0.1	0.1	0.1
Maldives	20.9	57.8	19.2	77.0	38.6	-49.9	10.2	15.2	3.2	10.8	4.4
Nepal	422.8	428.6	387.3	424.9	514.3	21.0	11.8	9.9	7.0	5.6	6.3
Pakistan	1 126.6	820.9	692.4	1 626.4	2 147.2	32.0	1.9	1.0	0.9	1.2	1.5
Sri Lanka	728.3	553.8	275.7	1 192.0	795.9	-33.2	9.1	4.2	1.7	5.0	2.9
Turkey	1 202.3	312.7	326.8	458.7	569.9	24.2	0.8	0.2	0.2	0.1	0.1
North and Central Asia		1 071.2	1 268.6	1 669.8	1 676.9	0.4		2.3	2.7	1.7	1.3
Armenia		217.6	215.9	192.9	213.3	10.6		16.9	11.4	4.1	3.5
Azerbaijan		118.6	139.1	224.5	205.7	-8.4		3.9	2.7	1.9	1.1
Georgia		209.1	169.4	309.1	360.6	16.6		7.8	5.3	4.8	4.6
Kazakhstan		64.6	188.7	225.0	171.6	-23.7		0.3	1.1	0.4	0.2
Kyrgyzstan		284.7	214.7	268.4	311.2	16.0		19.3	16.7	11.3	11.1
Russian Federation											
Tajikistan		65.1	123.5	251.2	239.8	-4.5		4.3	11.7	8.5	6.3
Turkmenistan		27.9	31.5	29.3	26.2	-10.7		1.3	0.8	0.5	0.4
Uzbekistan		83.7	185.8	169.4	148.6	-12.3		0.6	1.4	1.2	0.9
Pacific	1 304.4	1 797.0	696.1	904.3	886.6	-1.9	12.0	11.8	10.6	9.8	9.0
Australia											
American Samoa											
Cook Islands	12.1	13.0	4.3	7.8	32.3	316.4	20.7	14.0	5.3	4.2	17.8
Fiji	49.6	44.4	29.1	64.0	55.9	-12.6	3.7	2.3	1.7	2.1	1.8
French Polynesia	259.7	450.9					8.9	12.0			
Guam											
Kiribati	20.2	15.3	17.9	27.8	-44.9 <sup>1</sup>	-261.4	46.5	23.1	25.8	29.5	-48.4 <sup>1</sup>
Marshall Islands		38.9	57.2	56.6	55.0	-2.7		32.1	39.9	33.0	30.6
Micronesia (F.S.)		77.2	101.5	106.4	108.5	2.0		33.7	43.1	41.6	41.3
Nauru	0.2	2.7	4.0	9.1	17.4	90.8	0.4	8.4	15.2	24.5	43.7
New Caledonia	302.4	451.2					12.0	12.4			
New Zealand											
Niue	7.2	8.2	3.2	21.1	9.0	-57.5					
Northern Mariana Is.	63.1	-0.7									
Palau		142.3	39.1	23.5	37.3	59.1		145.1	31.2	15.8	23.5
Papua New Guinea	412.4	370.3	275.4	265.7	279.0	5.0	15.5	8.7	8.7	7.1	6.7
Samoa	47.6	43.2	27.4	44.0	47.1	7.1	28.9	22.3	11.8	11.0	10.6
Solomon Islands	45.7	47.7	68.3	198.2	204.5	3.2	22.3	13.3	20.2	52.9	47.8
Tonga	29.8	38.8	18.8	31.8	21.5	-32.3	21.5	22.9	12.2	14.9	8.8
Tuvalu	5.1	7.9	4.0	9.0	15.3	70.8	53.1	66.7	32.9	35.9	60.3
Vanuatu	49.5	45.6	45.8	39.5	48.8	23.6	30.2	20.9	19.0	11.5	13.4
Asia and the Pacific	15 494.3	17 298.8	14 302.7	20 493.5	19 036.0	-7.1	0.9	0.6	0.5	0.4	0.3
LLDC	752.7	2 090.4	2 174.6	5 143.6	5 491.3	6.8	7.8	3.8	3.9	4.5	3.7
LDC	3 223.5	3 219.4	2 941.0	6 164.1	6 389.7	3.7	6.9	5.3	4.2	6.3	6.0
ASEAN	4 783.0	5 012.2	5 437.7	5 836.5	4 877.7	-16.4	1.4	0.8	1.2	0.8	0.5
ECO	2 555.5	2 177.2	2 168.5	6 109.1	6 940.9	13.6	0.8	0.5	0.5	0.8	0.8
SAARC	5 958.1	5 155.3	4 194.1	9 226.1	9 191.4	-0.4	1.4	1.0	0.7	0.9	0.8
Central Asia		1 071.2	1 268.6	1 669.8	1 676.9	0.4		2.3	2.7	1.7	1.3
Pacific island dev. econ.	1 304.4	1 797.0	696.1	904.3	886.6	-1.9	12.0	11.8	10.6	9.8	9.0
Low-income	4 761.4	5 451.3	5 788.8	10 267.4	11 007.7	7.2	3.7	2.9	2.8	3.3	3.1
Middle-income	9 992.0	10 822.6	8 498.3	10 179.2	7 954.3	-21.9	1.8	0.6	0.3	0.2	0.2
High-income	716.4	993.1					0.2	0.1			
Other world regions											
Africa	24 174.5	20 794.8	14 457.1	33 200.8	40 936.6	23.3	6.7	4.1	2.7	3.5	3.7
Europe	63.0	1 829.7	3 015.0	3 062.1	3 826.9	25.0	0.3	2.0	4.2	1.4	1.5
Latin America & Carib.	4 679.7	5 806.5	3 714.4	5 664.0	6 025.7	6.4	0.4	0.3	0.2	0.2	0.2
North America	42.2	-2.1					2.1	-0.1			
Other countries/areas	3 959.5	2 576.0	2 080.9	24 601.8	11 881.0	-51.7	1.3	0.6	0.7	5.3	2.2
World											

<sup>1</sup> The 2006 negative disbursement for Kiribati may be considered a recovery on a grant.



## 20.5 Net external debt

	Net external debt									
	Million US dollars					% of GDP				
	1990	1995	2000	2005	2006	1990	1995	2000	2005	2006
<b>East and North-East Asia</b>	<b>55 301</b>	<b>118 620</b>	<b>146 625</b>	<b>282 939</b>	<b>324 290</b>	<b>14</b>	<b>16</b>	<b>12</b>	<b>12</b>	<b>12</b>
China	55 301	118 090	145 729	281 612	322 845	14	16	12	12	12
DPR Korea										
Hong Kong, China										
Japan										
Macao, China										
Mongolia		531	896	1 327	1 444		37	82	58	45
Republic of Korea										
<b>South-East Asia</b>	<b>175 452</b>	<b>333 805</b>	<b>347 940</b>	<b>328 095</b>	<b>332 581</b>	<b>56</b>	<b>57</b>	<b>69</b>	<b>42</b>	<b>36</b>
Brunei Darussalam										
Cambodia	1 845	2 284	2 628	3 515	3 527	131	69	72	56	48
Indonesia	69 872	124 398	144 159	130 709	130 956	56	56	87	46	36
Lao PDR	1 768	2 165	2 502	2 690	2 985	204	122	144	94	86
Malaysia	15 328	34 343	41 874	51 981	52 526	34	37	45	38	34
Myanmar	4 695	5 771	5 928	6 645	6 828	91	74	81	56	50
Philippines	30 580	39 379	58 304	61 718	60 324	69	53	77	63	51
Singapore										
Thailand	28 094	100 039	79 720	51 625	55 233	33	60	65	29	27
Timor-Leste										
Viet Nam	23 270	25 428	12 825	19 211	20 202	360	123	41	36	33
<b>South and South-West Asia</b>	<b>182 827</b>	<b>247 345</b>	<b>285 118</b>	<b>381 254</b>	<b>455 270</b>	<b>27</b>	<b>31</b>	<b>31</b>	<b>24</b>	<b>25</b>
Afghanistan					1 771					24
Bangladesh	12 439	15 927	15 717	18 928	20 521	41	42	35	33	34
Bhutan	84	106	204	649	713	30	36	46	78	77
India	83 628	94 464	99 099	123 128	153 075	26	26	21	15	17
Iran (Islamic Rep. of)	9 020	21 879	7 978	21 260	20 113	10	20	8	11	9
Maldives	78	155	206	368	459	36	39	33	49	51
Nepal	1 627	2 410	2 869	3 197	3 409	40	49	46	35	34
Pakistan	20 663	30 229	32 781	33 173	35 909	36	37	42	26	25
Sri Lanka	5 863	8 395	9 157	11 271	11 446	71	63	55	46	41
Turkey	49 424	73 781	117 108	169 279	207 854	33	44	59	47	52
<b>North and Central Asia</b>		<b>130 527</b>	<b>186 306</b>	<b>286 445</b>	<b>339 460</b>		<b>29</b>	<b>60</b>	<b>33</b>	<b>30</b>
Armenia		371	916	1 861	2 073		29	48	38	32
Azerbaijan		321	1 328	1 815	1 900		10	25	14	9
Georgia		1 240	1 622	1 898	1 964		46	53	30	25
Kazakhstan		3 750	12 433	43 378	74 148		18	68	76	92
Kyrgyzstan		609	1 827	2 027	2 382		41	133	82	84
Russian Federation		121 401	159 993	229 073	251 067		30	62	30	25
Tajikistan		634	1 034	1 034	1 154		51	120	45	41
Turkmenistan		402	2 518	1 058	881		18	61	18	14
Uzbekistan		1 799	4 634	4 302	3 892		13	34	31	23
<b>Pacific</b>	<b>3 301</b>	<b>3 194</b>	<b>3 183</b>	<b>3 105</b>	<b>3 115</b>	<b>63</b>	<b>41</b>	<b>52</b>	<b>35</b>	<b>31</b>
Australia										
American Samoa										
Cook Islands										
Fiji	403	246	134	232	237	31	13	8	8	8
French Polynesia										
Guam										
Kiribati										
Marshall Islands										
Micronesia (F.S.)										
Nauru										
New Caledonia										
New Zealand										
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea	2 594	2 506	2 556	1 886	1 675	79	52	73	41	32
Samoa	92	170	197	656	858	82	85	85	154	191
Solomon Islands	120	159	155	166	173	58	44	46	44	41
Tonga	54	64	65	82	85	40	38	42	38	36
Tuvalu										
Vanuatu	38	49	74	82	86	25	20	30	22	22
<b>Asia and the Pacific</b>	<b>416 882</b>	<b>833 492</b>	<b>969 173</b>	<b>1 281 837</b>	<b>1 454 715</b>	<b>30</b>	<b>32</b>	<b>33</b>	<b>23</b>	<b>22</b>
LLDC	3 478	13 098	31 162	63 338	96 752	66	25	57	55	60
LDC	22 786	29 195	30 481	36 899	41 332	53	51	46	41	39
ASEAN	175 452	333 805	347 940	328 095	332 581	56	57	69	42	36
ECO	79 108	133 404	181 641	277 325	350 003	27	33	43	36	38
SAARC	124 383	151 685	160 033	190 716	227 303	29	30	26	19	20
Central Asia		9 127	26 313	57 372	88 393		20	54	54	61
Pacific island dev. econ.	3 301	3 194	3 183	3 105	3 115	63	41	52	35	31
Low-income	69 022	89 919	85 457	96 776	104 429	63	50	44	33	31
Middle-income	347 860	743 573	883 716	1 185 061	1 350 287	27	31	32	23	21
High-income										
<b>Other world regions</b>										
Africa	270 611	337 704	298 688	297 918	245 884	79	68	54	32	23
Europe	100 387	127 084	183 680	366 941	499 713	52	34	47	44	52
Latin America & Carib.	441 183	608 475	754 291	746 890	734 499	39	35	38	30	25
North America										
Other countries/areas	36 458	44 035	50 508	45 957	48 847	110	88	68	42	39
<b>World</b>	<b>1 265 521</b>	<b>1 950 791</b>	<b>2 256 340</b>	<b>2 739 543</b>	<b>2 983 659</b>	<b>41</b>	<b>37</b>	<b>38</b>	<b>28</b>	<b>25</b>



## 20.6 Debt service

	Debt service								
	% of exports of goods, services and income from abroad								
	1990	1995	2000	2001	2002	2003	2004	2005	2006
<b>East and North-East Asia</b>									
China	10.6	9.0	5.1	4.2	3.5	2.7	1.2	1.0	0.8
DPR Korea									
Hong Kong, China									
Japan									
Macao, China									
Mongolia		10.1	6.0	6.9	7.2	33.7	2.8	2.5	2.3
Republic of Korea									
<b>South-East Asia</b>	<b>16.7</b>	<b>7.9</b>	<b>6.5</b>	<b>8.4</b>	<b>9.4</b>	<b>8.2</b>	<b>6.9</b>	<b>5.0</b>	<b>5.6</b>
Brunei Darussalam									
Cambodia		0.7	1.4	0.8	0.8	0.9	0.8	0.7	0.6
Indonesia	25.6	17.5	11.1	13.7	13.6	12.7	13.6	8.4	12.0
Lao PDR	8.5	6.1	7.8	9.0					
Malaysia	10.6	2.9	2.8	3.6	5.0	4.7	3.6	3.6	1.9
Myanmar	18.2	18.8	3.4	2.6	3.6	3.6	3.3	2.2	1.4
Philippines	25.6	14.3	10.2	14.7	14.5	14.9	15.8	12.5	15.5
Singapore									
Thailand	11.4	3.7	5.8	8.2	10.6	8.0	4.2	2.4	2.1
Timor-Leste									
Viet Nam			7.2	6.6	5.9	3.3	2.4	2.3	
<b>South and South-West Asia</b>	<b>17.7</b>	<b>26.9</b>	<b>13.7</b>	<b>13.1</b>	<b>15.7</b>	<b>17.2</b>	<b>12.4</b>	<b>10.0</b>	<b>4.4</b>
Afghanistan						4.0	1.9	1.8	1.8
Bangladesh	34.8	16.4	10.7	9.5	10.2	8.1	6.9	7.2	4.8
Bhutan									
India	29.3	31.6	15.7	12.7	16.2	19.0	11.7	10.5	3.6
Iran (Islamic Rep. of)	1.3	27.1	9.1						
Maldives	4.0	3.3	4.0	4.4	4.3	3.5	4.6	6.8	4.7
Nepal	14.7	7.7	7.3	7.7	10.3	10.1	9.0	8.2	9.7
Pakistan	22.9	24.5	20.7	21.1	19.6	17.1	22.7	9.9	8.9
Sri Lanka	14.8	8.8	10.8	9.8	9.6	7.7	8.9	4.3	9.8
Turkey									
<b>North and Central Asia</b>		<b>6.1</b>	<b>7.5</b>	<b>11.2</b>	<b>8.2</b>	<b>7.8</b>	<b>5.8</b>	<b>10.1</b>	<b>7.9</b>
Armenia		3.2	7.9	8.1	8.2	8.7	6.5	3.2	2.7
Azerbaijan		1.2	5.2	4.4	4.6	4.9	3.1	1.4	0.8
Georgia			13.3	7.6	8.7	9.8	11.5	6.5	8.3
Kazakhstan		3.5	8.6	4.8	7.4	3.1	3.8	4.0	0.8
Kyrgyzstan		13.2	9.0	11.9	10.9	8.1	6.3	6.3	5.1
Russian Federation		6.3	7.4	11.9	8.3	8.3	6.0	11.1	9.1
Tajikistan					9.0	5.4	5.6	5.5	7.6
Turkmenistan									
Uzbekistan									
<b>Pacific</b>									
Australia									
American Samoa									
Cook Islands									
Fiji	9.0	3.6	2.2	1.5	1.4	1.0	0.7	0.8	0.8
French Polynesia									
Guam									
Kiribati									
Marshall Islands									
Micronesia (F.S.)									
Nauru									
New Caledonia									
New Zealand									
Niue									
Northern Mariana Is.									
Palau									
Papua New Guinea	18.4	10.1	8.0	7.1	7.9	7.3	8.6	5.9	
Samoa	10.6	6.6					5.8	4.7	5.5
Solomon Islands	11.3	1.3	2.8	1.8	2.8	5.6	3.8	4.8	2.0
Tonga	3.5			7.7	6.8	5.4	7.0	6.3	6.1
Tuvalu									
Vanuatu	1.6	1.1	0.9	0.9	1.2	1.1	1.3	0.9	1.5
<b>Asia and Pacific</b>	<b>14.7</b>	<b>11.3</b>	<b>7.8</b>	<b>8.8</b>	<b>8.7</b>	<b>7.4</b>	<b>5.6</b>	<b>5.4</b>	<b>4.2</b>
LLDC						5.3	4.1	3.7	1.3
LDC									
ASEAN	16.7	7.9	6.5	8.4	9.4	8.2	6.9	5.0	5.6
ECO									
SAARC	27.1	26.8	15.3	13.1	15.7	17.2	12.4	10.0	4.4
Central Asia					7.3	4.3	4.4	3.7	1.5
Pacific island dev. econ.									
Low-income	23.8	17.9	10.5	10.1	9.9	7.9	8.2	5.0	6.0
Middle-income		10.1	7.0	7.7	7.4	6.7	4.6	4.6	3.6
High-income									
<b>Other world regions</b>									
Africa	21.5	13.8	11.0	11.2	9.7	9.1	6.8	8.7	6.3
Europe									
Latin America & Carib.	20.5	18.6	21.6	17.5	17.7	20.3	14.5	14.6	14.8
North America									
Other countries/areas									
<b>World</b>									



## 21 International trade

International trade has been growing rapidly, faster than global production. Globally since 1990, the volume of merchandise trade has more than tripled, while in Asia and the Pacific it has almost quadrupled, and the speed of growth is increasing all the time.

### Trade in goods

During the period 2000-2006, merchandise exports from Asia and the Pacific grew annually by 12.9 per cent, two percentage points faster than the world average. Annual growth was highest in the Asian-Pacific middle-income economies, 18.4 per cent, while the high-income economies it was only 8.2 per cent. It should be noted, that commodity and services statistics in this *Yearbook* are in current US dollars, and are therefore affected by inflation and by fluctuations in exchange rates.

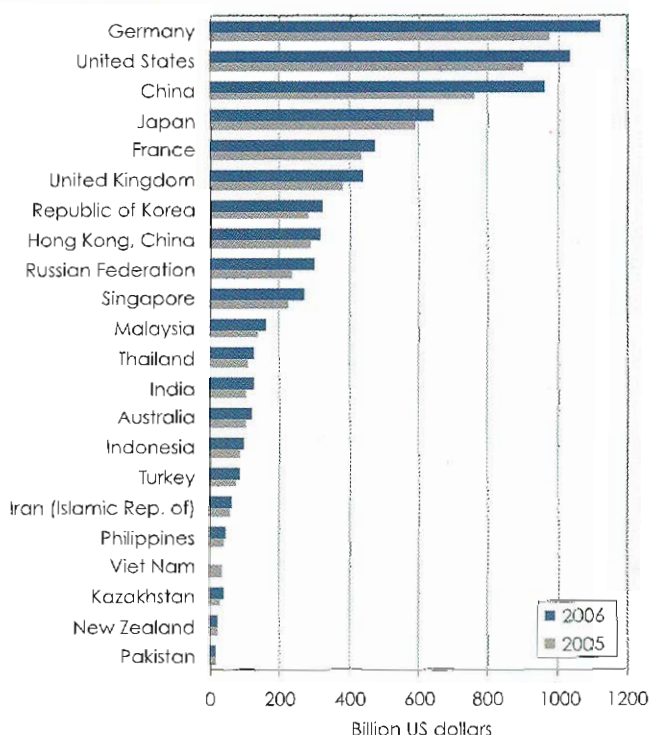
The leading exporters in Asia and the Pacific are China and Japan. However, while during the period 2000-2006 exports from Japan grew only 5.1 per cent annually, those from China grew by 25.4 per cent. China is rapidly catching up with Germany and the United States as the world's largest exporter. In 2007, a year for which data are not yet consistently available and therefore not included in the Yearbook tables, Chinese exports reached \$1.2 trillion. Nevertheless, given the size of its economy, Chinese exports as a proportion of GDP, 35 per cent in 2006, were still relatively low, compared with smaller economies such as Singapore; Hong Kong, China; and Malaysia which had ratios topping 100 per cent.

India despite its economic size is a relatively small exporter. But it has started fulfilling its potential. Since 2000, annual growth has been more than 20 per cent, though slightly slower in 2007. Despite this, its exports in 2007 of \$146 billion were less than one-eighth those of China.

Among the subregions, the highest annual growth rates in merchandise exports during 2000-2006 were in North and Central Asia, 20.0 per cent,

Figure 21.1

Merchandise exports, selected countries/areas, 2005 and 2006



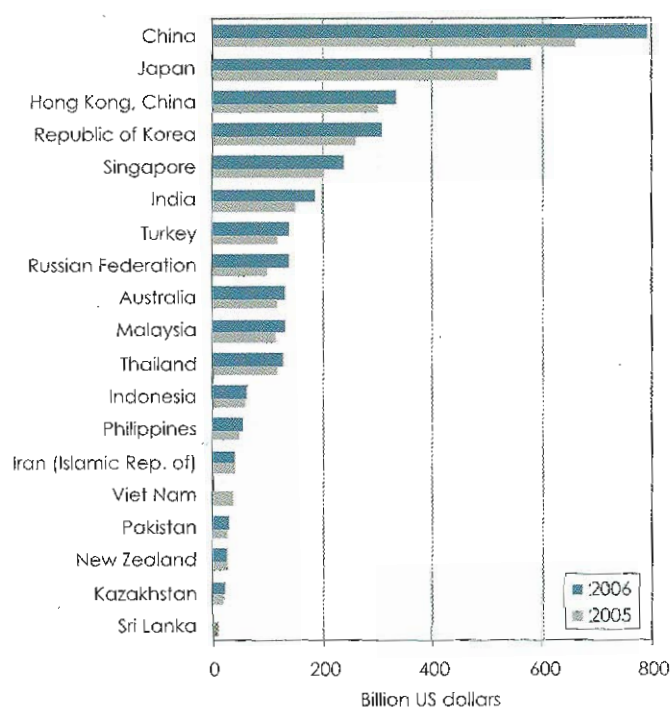
and in South and South-West Asia, 16.8 per cent. The highest growth rates were in Azerbaijan and Kazakhstan in 2006, largely based on increasing oil and gas exports.

At the same time there has also been a growth in imports. For the region's middle-income economies during 2000-2006 imports grew at an average annual rate of 18.9 per cent – placing the region second in the world for growth after Africa.

The largest importers are clustered in East and North-East Asia. Top of the list are: China; Japan; Hong Kong, China; and Republic of Korea. However, during 2000-2006 imports grew fastest in North and Central Asia, followed by South and South-West Asia (19.2 per cent), East and North-East Asia (12.8 per cent) and the Pacific (10.9 per cent).

Merchandise imports have risen steadily in relation to GDP – reaching 26.1 per cent in 2006.



**Figure 21.2****Merchandise imports, selected Asia-Pacific countries/areas, 2005 and 2006**

Some economies also have strikingly high ratios – 175-177 per cent in 2006 in Singapore, and Hong Kong, China, for example. Since 1995, China and India have increased their ratios of imports to GDP by nearly 10 percentage points. The developed economies in the region, on the other hand, have seen much slower growth in imports.

### Trade in services and current account balances

There are now more data on trade in services. During the period 2000-2005 world total services exports increased from \$1,540 billion to \$2,540 billion in current US dollars, representing an average annual growth rate of 10.5 per cent. The Asia-Pacific region, with \$580 billion, ranked second after Europe. More than half of the regional trade in services is taking place in East and North-East Asia: of the five largest exporters of services, only India comes from outside that subregion. Growth was fastest, however, in North and Central Asia, averaging 20.5 per cent annually, and in South and South-West Asia, averaging 17.8 per cent annually.

There has also been significant growth in service imports. During 2000-2005, among the subregions, East and North-East Asia followed by South-East Asia were the largest total importers of services. China with a growth rate of over 20 per cent in recent years is rapidly catching up with

Japan. During 2000-2005, the trade in services also grew fast in North and Central Asia, especially in Tajikistan (43.3 per cent annually), Azerbaijan (40.5 per cent) and Kazakhstan (32.3 per cent). Much of this growth has been in transportation and travel services: since the data are in nominal values the totals have therefore been boosted by high transport prices.

Each country's balance of trade is a major contributor to its current account balance. In 2007, China's current account balance was positive at 11.1 per cent of GDP, which contributed further to its massive build-up of foreign reserves. India, on the other hand, recorded another small deficit, of 1.8 per cent of GDP. By far the highest current account surplus, however, was in Timor-Leste at 253.3 per cent, followed by Brunei Darussalam with 57.3 per cent, Azerbaijan with 28.8 per cent, Singapore with 24.3 per cent, and Uzbekistan with 23.8 per cent. Other economies, however, had high current account deficits, in the 23-45 per cent range – as in Maldives, Solomon Islands, Kiribati, and the Lao People's Democratic Republic.

### Export market orientation

Many of the region's economies, particularly the poorest ones, depend on very few export markets. A large number of the least developed, landlocked developing countries and Pacific island developing countries thus have high export concentration indices. However, the indices are also high in some richer countries, such as Brunei Darussalam and the Islamic Republic of Iran.

Within ASEAN, nearly one fourth of total merchandise trade is between ASEAN members. Lao People's Democratic Republic and Myanmar in particular have a very high proportion of their trade, both imports and exports, with ASEAN partners. Trade is also concentrated in the ASEAN+3 group which includes China, Japan and the Republic of Korea. Within the ASEAN+3 group, the share of intraregional imports reaches 47-94 per cent for ASEAN members and about 40 per cent for the other three countries. The share of total exports going to ASEAN+3 is lower, but reaches more than half for the Lao People's Democratic Republic, Myanmar and Indonesia. The intraregional trade dependency within ASEAN+3 has generally increased over time, which is consistent with the increasing number of agreements that have lowered trade barriers.

Another important trade agreement is the Asia-Pacific Trade Agreement (APTA), previously

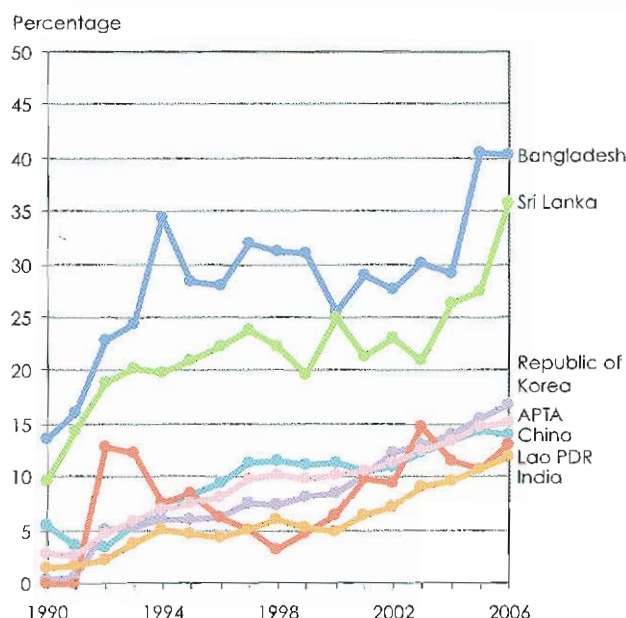


known as the Bangkok Agreement. Signed in 1975, APTA is the oldest preferential trade agreement between Asia-Pacific developing countries and is the only truly region-wide arrangement spanning East, South-East and South Asia. APTA is also the only operational trade agreement linking China and India, two of the world's fastest-growing markets with a consumer base of 2.4 billion people, as well as other major markets such as the Republic of Korea. Members of the agreement have been expanding trade to each other, especially imports, more rapidly than to non-agreement partners.

A more recent agreement is the South Asian Free Trade Area (SAFTA) which was reached in 2004 among Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Afghanistan joined in 2007, so the group now includes five least developed countries. Afghanistan, Bhutan and Nepal have large shares of their merchandise trade with other members of SAFTA.

Figure 21.3

Shares of intra-APTA imports, by country, 1990-2006



#### Imports of merchandise (million US dollars)

The value of all goods which add to the material resources of a country as a result of their movement into or out of the country. Thus, ordinary commercial transactions, government trade (including foreign aid, war reparations and trade in military goods), postal trade and all kind of silver (except silver coins after their issue), are included. Since their movement affects monetary rather than material resources, monetary gold, and currency and titles of ownership after their issue into circulation, are excluded.

**Aggregates:** Sum of individual country values. Missing data have been imputed. **Source:** Calculated by ESCAP using data from United Nations Comtrade (online database, accessed in September 2008).

#### Exports of merchandise (million US dollars)

The value of all goods which subtract from the material resources of a country as a result of their movement into or out of the country. See *Imports of merchandise* for type of merchandise included. **Aggregates:** Sum of individual country values. Missing data have been imputed. **Source:** Calculated by ESCAP using data from United Nations Comtrade (online database, accessed in September 2008).

#### Imports of merchandise as share of GDP (% of GDP)

The sum of merchandise imports divided by GDP. **Aggregates:** Averages are calculated using GDP in US dollars as weight. Missing data have been imputed. **Source:** Calculated by ESCAP using data from United Nations Comtrade (online database, accessed in September 2008).

#### Exports of Merchandise as share of GDP (% of GDP)

The sum of merchandise exports divided by GDP. **Aggregates:** Averages are calculated using GDP in US dollars as weight. Missing data have been imputed. **Source:** Calculated by ESCAP using data from United Nations Comtrade (online database, accessed in September 2008).

#### Ratio of total imports and exports to GDP (percentage)

The sum of total merchandise exports and imports divided by GDP. **Aggregates:** Averages are calculated using GDP in US dollars as weight. Missing data have been imputed. **Source:** Calculated by ESCAP using data from United Nations Comtrade (online database, accessed in September 2008).

#### Average annual growth rate of imports of merchandise (% per annum)

Average annual rate of change in imports of merchandise. **Aggregates:** Averages are calculated using GDP in United States dollars as weight. Missing data have been imputed. **Source:** Calculated by ESCAP using data from United Nations Comtrade (online database, accessed in September 2008).

#### Average annual growth rate of exports of merchandise (% per annum)

Average annual rate of change in exports of merchandise. **Aggregates:** Averages are calculated using GDP in United States dollars as weight. Missing data have been imputed. **Source:** Calculated by ESCAP using data from United Nations Comtrade (online database, accessed in September 2008).



Nations Comtrade (online database, accessed in September 2008).

### **Current account balance (% of GDP)**

The net difference between credit and debit flows from goods, services and income divided by GDP. It also includes current transfers crossing national borders, but not transactions in financial assets and liabilities which are recorded in the capital account. **Aggregates:** None. **Source:** World Economic Outlook Database April 2008 (online database, accessed on 23 May 2008).

### **Import and export of services (million US dollars)**

The total value of non-resident to resident (imports) and resident to non-resident (exports) trade in services. While the 1993 SNA defines services as outputs produced to order and which cannot be traded separately from their production, in practice service industries (or activities) are taken to be those in sections G to Q, inclusive, of ISIC, Rev. 3. **Aggregates:** Sum of individual country values. Missing data have been imputed. **Source:** United Nations service trade (online database, accessed in October 2008).

### **Average annual growth rate of imports and exports of services (% per annum)**

Average annual rate of change in imports and exports of services. **Aggregates:** Averages are calculated using GDP in US dollars as weight. **Source:** Calculated by ESCAP using data from United Nations service trade (online database, accessed in October 2008).

### **Transportation services in total services imports and exports (percentage)**

The proportion of transport services in services trade. Imports and exports take place when a resident of one economy performs transport services for non-resident, involving the carriage of passengers, the movement of goods (freight), rentals (charters) of carriers with crew, and

related supporting and auxiliary services. Excluded are freight insurance (included in insurance services); goods procured in ports by non-resident carriers and repairs of transportation equipment (both are treated as goods, not services); repairs of railway facilities, harbours and airfield facilities (included in construction services); and rentals or charters of carriers without crew (included in operational leasing services). **Aggregates:** Averages are calculated using total imports and exports as weight. **Source:** Calculated by ESCAP using data from United Nations service trade (online database, accessed in October 2008).

### **Travel services in total services imports (percentage)**

The proportion of travel services in services trade. Covers primarily the goods and services acquired from an economy by travellers during visits of less than one year to that economy. The goods and services are purchased by, or on behalf of, the traveller or provided, without a quid pro quo (that is, are provided as a gift), for the traveller to use or give away. Excluded are transportation of travellers within the economies that they are visiting, where such transportation is provided by carriers not resident in the particular economy being visited, as well as the international carriage of travellers, both of which are covered in passenger services under transportation. **Aggregates:** Averages are calculated using total imports and exports of services as weight. **Source:** Calculated by ESCAP using data from United Nations service trade (online database, accessed in October 2008).

### **Regional export concentration index (index)**

The degree of export market concentration measured by the Herfindahl-Hirschmann index. A high value indicates that the country depends on few export markets. **Aggregates:** Averages are calculated using exports of goods and services as weight. **Source:** United Nations Conference on Trade and Development, Handbook of Statistics (online database, accessed in September 2008).



## 21.1 Merchandise trade

	Imports of merchandise					Exports of merchandise				
	Million US dollars					Million US dollars				
	1990	1995	2000	2005	2006	1990	1995	2000	2005	2006
<b>East and North-East Asia</b>	<b>514 547</b>	<b>801 839</b>	<b>982 153</b>	<b>1 742 754</b>	<b>2 022 379</b>	<b>558 615</b>	<b>893 093</b>	<b>1 106 413</b>	<b>1 937 180</b>	<b>2 267 886</b>
China		132 083	225 094	659 953	791 461		148 779	249 203	761 953	968 936
DPR Korea										
Hong Kong, China		196 072	214 042	300 160	335 754		173 871	202 683	292 119	322 669
Japan	234 799	336 094	379 663	515 866	579 064	286 947	442 937	479 248	594 941	646 725
Macao, China	1 533	2 025	2 261		5 236	1 701	2 025	2 547		2 557
Mongolia			615	1 183	1 486			466	1 064	1 542
Republic of Korea	69 840	135 113	160 479	261 236	309 379	65 016	125 056	172 267	284 418	325 457
<b>South-East Asia</b>	<b>173 340</b>	<b>357 161</b>	<b>367 342</b>	<b>581 062</b>	<b>654 779</b>	<b>153 183</b>	<b>324 768</b>	<b>424 592</b>	<b>649 850</b>	<b>754 632</b>
Brunei Darussalam					1 676					7 636
Cambodia			1 439					1 389		
Indonesia	21 837	40 629	33 515	57 701	61 065	25 675	45 418	62 124	85 660	100 799
Lao PDR										
Malaysia	29 246	77 046	81 290	114 584	131 127	29 453	73 778	98 230	140 963	160 669
Myanmar										
Philippines		28 487	37 007	49 487	54 078		17 447	38 078	41 255	47 410
Singapore	60 790	124 503	134 546	200 050	238 704	52 716	118 263	137 806	229 652	271 801
Thailand	33 371	70 781	61 921	118 164	128 584	23 069	58 439	68 819	110 110	130 580
Timor-Leste				102					43	
Viet Nam			15 637	36 761				14 483	32 447	
<b>South and South-West Asia</b>	<b>75 172</b>	<b>109 808</b>	<b>145 335</b>	<b>352 704</b>	<b>417 067</b>	<b>58 867</b>	<b>87 266</b>	<b>121 245</b>	<b>268 293</b>	<b>307 163</b>
Afghanistan										
Bangladesh	3 432	5 438	7 611			1 556	3 407	5 493		
Bhutan										
India	23 799	36 592	51 377	149 750	185 385	17 940	31 699	45 250	103 404	126 126
Iran (Islamic Rep.of)			13 626	38 675	40 686			28 345	60 012	63 247
Maldives		268	389	745	927		50	76	154	136
Nepal			1 558					709		
Pakistan	7 356	11 704	11 070	25 097	29 826	5 573	8 158	9 201	16 050	16 933
Sri Lanka	2 634			8 307		1 913			6 160	
Turkey	22 301	35 707	54 150	116 774	138 581	12 959	21 599	27 485	73 476	85 526
<b>North and Central Asia</b>			<b>44 619</b>	<b>127 990</b>	<b>176 674</b>			<b>117 946</b>	<b>279 321</b>	<b>352 155</b>
Armenia			840	1 692	2 194			294	937	1 004
Azerbaijan			1 172	4 211	5 267			1 745	4 347	6 372
Georgia			709	2 491	3 675			323	866	992
Kazakhstan		3 805	5 033	17 352	23 663		5 227	8 789	27 849	38 244
Kyrgyzstan		522	554	1 108	1 718		412	504	672	794
Russian Federation			33 880	98 707	137 728			103 093	241 452	301 551
Tajikistan			644					692		
Turkmenistan			1 786					2 506		
Uzbekistan										
<b>Pacific</b>	<b>52 618</b>	<b>75 903</b>	<b>89 462</b>	<b>152 349</b>	<b>166 549</b>	<b>51 949</b>	<b>70 496</b>	<b>80 904</b>	<b>132 358</b>	<b>150 583</b>
Australia	38 633	57 423	71 263	118 922	132 651	38 781	53 001	63 766	105 751	123 323
American Samoa										
Cook Islands	52			81				7	5	
Fiji	755		776	1 607	1 804	496		469	702	679
French Polynesia			1 072	1 702	1 547			244	210	186
Guam										
Kiribati	27	34		74		3	7		4	
Marshall Islands										
Micronesia (F.S.)										
Nauru										
New Caledonia			1 017	1 774	1 998			635	1 114	1 135
New Zealand	9 483	13 958	13 904	26 219	26 424	9 470	13 745	13 272	21 730	22 409
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea			1 035					2 407		
Samoa				239					87	
Solomon Islands										
Tonga			69					9		
Tuvalu										
Vanuatu			87			14		23		
<b>Asia and the Pacific</b>	<b>884 847</b>	<b>1 413 881</b>	<b>1 628 910</b>	<b>2 956 860</b>	<b>3 437 449</b>	<b>919 445</b>	<b>1 472 454</b>	<b>1 851 100</b>	<b>3 267 001</b>	<b>3 832 419</b>
LLDC										
LDC			12 188					8 432		
ASEAN	173 226	357 048	367 228	580 961	654 678	153 078	324 662	424 486	649 806	754 589
ECO		68 707	88 034	205 846	242 170		55 895	79 268	185 605	214 314
SAARC	38 691	59 920	77 559	197 255	237 801	27 482	47 242	65 415	134 805	158 390
Central Asia			10 739	29 283	38 946			14 853	37 869	50 604
Pacific island dev. econ.			4 295					3 866		
Low-income			40 166					35 329		
Middle-income		510 181	609 187	1 443 921	1 718 555		514 065	740 188	1 663 153	2 042 759
High-income	545 916	869 164	979 503	1 431 818	1 632 433	577 165	931 837	1 075 576	1 539 093	1 723 899
<b>Other world regions</b>										
Africa		114 505	120 165	230 567	253 987		95 916	131 136	208 769	234 901
Europe	1 787 528	2 220 456	2 587 373	4 312 022	4 990 859	1 694 705	2 282 514	2 535 968	4 256 428	4 841 650
Latin America & Carib.	134 908	245 987	367 903	503 810	593 269	130 504	225 667	350 456	557 377	660 236
North America	635 101	936 247	1 499 123	2 047 952	2 270 071	520 222	774 509	1 057 779	1 285 280	1 425 592
Other countries/areas		214 887	276 030	444 756	492 335		228 160	351 332	620 854	705 107
<b>World</b>	<b>3 672 958</b>	<b>5 145 963</b>	<b>6 479 504</b>	<b>10 495 967</b>	<b>12 037 969</b>	<b>3 506 404</b>	<b>5 079 220</b>	<b>6 277 771</b>	<b>10 175 710</b>	<b>11 699 906</b>



## 21. International trade

### 21.2 Merchandise trade as a share of GDP

	Imports of merchandise					Exports of merchandise					Ratio of total imports and exports to GDP				
	% of GDP					% of GDP					Percentage				
	1990	1995	2000	2005	2006	1990	1995	2000	2005	2006	1990	1995	2000	2005	2006
<b>East and North-East Asia</b>	<b>13.6</b>	<b>12.0</b>	<b>15.0</b>	<b>22.2</b>	<b>24.5</b>	<b>14.8</b>	<b>13.4</b>	<b>16.9</b>	<b>24.7</b>	<b>27.5</b>	<b>28.4</b>	<b>25.4</b>	<b>31.8</b>	<b>46.9</b>	<b>51.9</b>
China		17.4	18.9	28.7	28.5		19.7	20.9	33.1	34.9		37.1	39.8	61.7	63.5
DPR Korea															
Hong Kong, China		135.9	126.6	168.8	176.9		120.6	119.8	164.3	170.0		256.5	246.4	333.1	346.9
Japan	7.8	6.4	8.1	11.3	13.2	9.5	8.4	10.3	13.1	14.8	17.3	14.8	18.4	24.4	28.0
Macao, China	51.3	29.2	37.1		36.3	56.9	29.2	41.7		17.7	108.1	58.3	78.8		54.1
Mongolia			56.4	51.3	46.6			42.8	46.2	48.4			99.2	97.4	95.0
Republic of Korea	26.5	26.1	31.4	33.0	34.8	24.6	24.2	33.7	35.9	36.6	51.1	50.3	65.0	68.9	71.5
<b>South-East Asia</b>	<b>48.8</b>	<b>52.6</b>	<b>61.2</b>	<b>64.4</b>	<b>60.7</b>	<b>43.1</b>	<b>47.8</b>	<b>70.7</b>	<b>72.0</b>	<b>69.9</b>	<b>91.8</b>	<b>100.4</b>	<b>131.9</b>	<b>136.4</b>	<b>130.6</b>
Brunei Darussalam					14.5					66.0					80.5
Cambodia			39.2					37.9					77.1		
Indonesia	17.4	18.3	20.3	20.2	16.7	20.4	20.5	37.6	30.0	27.6	37.8	38.7	58.0	50.1	44.4
Lao PDR															
Malaysia	64.0	83.5	86.7	83.1	83.8	64.4	80.0	104.7	102.2	102.7	128.4	163.5	191.4	185.2	186.6
Myanmar															
Philippines		38.4	48.8	50.1	46.0		23.5	50.2	41.8	40.3		62.0	98.9	91.9	86.3
Singapore	164.7	148.3	145.1	167.0	174.8	142.9	140.9	148.6	191.7	199.0	307.6	289.2	293.7	358.7	373.8
Thailand	39.1	42.1	50.5	67.0	62.2	27.0	33.6	56.1	62.4	63.2	66.1	75.7	106.5	129.4	125.4
Timor-Leste				29.0					12.4					41.5	
Viet Nam			50.2	69.6				46.5	61.4				96.6	131.0	
<b>South and South-West Asia</b>	<b>11.2</b>	<b>13.9</b>	<b>15.8</b>	<b>22.2</b>	<b>23.3</b>	<b>8.8</b>	<b>11.1</b>	<b>13.2</b>	<b>16.9</b>	<b>17.2</b>	<b>20.0</b>	<b>25.0</b>	<b>29.0</b>	<b>39.0</b>	<b>40.5</b>
Afghanistan															
Bangladesh	11.3	14.4	16.7			5.1	9.0	12.1			16.4	23.4	28.8		
Bhutan															
India	7.3	9.9	11.0	18.5	20.4	5.5	8.6	9.7	12.8	13.9	12.8	18.5	20.7	31.3	34.2
Iran (Islamic Rep. of)			13.2	20.1	18.3			27.5	31.3	28.4			40.8	51.4	46.6
Maldives		67.1	62.2	99.2	102.2		12.5	12.2	20.5	15.0		79.6	74.4	119.8	117.1
Nepal			25.1					11.4					36.5		
Pakistan	12.9	14.4	14.1	19.7	20.6	9.7	10.0	11.7	12.6	11.7	22.6	24.4	25.8	32.2	32.4
Sri Lanka	32.1			34.2		23.3			25.4		55.4			59.6	
Turkey	14.8	21.1	27.2	32.2	34.3	8.6	12.8	13.8	20.3	21.2	23.4	33.8	41.0	52.5	55.5
<b>North and Central Asia</b>			<b>14.5</b>	<b>14.7</b>	<b>15.6</b>			<b>38.2</b>	<b>32.1</b>	<b>31.2</b>			<b>52.7</b>	<b>46.8</b>	<b>46.8</b>
Armenia			44.0	34.5	34.4			15.4	19.1	15.7			59.3	53.6	50.1
Azerbaijan			22.2	31.8	25.1			33.1	32.8	30.4			55.3	64.6	55.5
Georgia			23.2	38.9	47.4			10.6	13.5	12.8			33.8	52.4	60.2
Kazakhstan		18.5	27.5	30.4	29.2		25.4	48.0	48.8	47.2		44.0	75.6	79.1	76.4
Kyrgyzstan		35.0	40.4	45.0	60.6		27.6	36.8	27.3	28.0		62.6	77.3	72.3	88.6
Russian Federation			13.0	12.9	14.0			39.7	31.6	30.6			52.7	44.5	44.6
Tajikistan			74.8					80.5					155.3		
Turkmenistan			43.0					60.3					103.2		
Uzbekistan															
<b>Pacific</b>	<b>14.1</b>	<b>16.5</b>	<b>19.2</b>	<b>17.5</b>	<b>18.1</b>	<b>13.9</b>	<b>15.3</b>	<b>17.4</b>	<b>15.2</b>	<b>16.4</b>	<b>27.9</b>	<b>31.7</b>	<b>36.6</b>	<b>32.7</b>	<b>34.5</b>
Australia	12.1	15.0	17.8	16.1	16.8	12.2	13.8	16.0	14.3	15.7	24.3	28.7	33.8	30.4	32.5
American Samoa															
Cook Islands				44.3				9.1	2.9					47.1	
Fiji	57.2		46.0	53.6	58.0	37.6		27.8	23.4	21.8	94.7		73.9	77.0	79.9
French Polynesia			33.1	32.6	28.3			7.5	4.0	3.4			40.6	36.6	31.7
Guam															
Kiribati	105.1	89.2		120.9		11.2	18.8		5.8		116.4	108.0		126.8	
Marshall Islands															
Micronesia (F.S.)															
Nauru															
New Caledonia			29.8	28.4	29.4			18.6	17.8	16.7			48.4	46.2	46.1
New Zealand	21.6	22.8	26.4	23.7	24.6	21.6	22.4	25.2	19.7	20.9	43.2	45.2	51.6	43.4	45.5
Niue															
Northern Mariana Is.															
Palau															
Papua New Guinea			29.6					68.8					98.4		
Samoa				56.2					20.5					76.7	
Solomon Islands															
Tonga			44.8					5.7					50.5		
Tuvalu															
Vanuatu			35.4			9.0		9.5			9.0		44.9		
<b>Asia and the Pacific</b>	<b>15.2</b>	<b>15.6</b>	<b>18.4</b>	<b>24.5</b>	<b>26.1</b>	<b>15.8</b>	<b>16.3</b>	<b>20.9</b>	<b>27.0</b>	<b>29.1</b>	<b>31.0</b>	<b>31.9</b>	<b>39.3</b>	<b>51.5</b>	<b>55.2</b>
LLDC															
EDC			17.6					12.2					29.7		
ASEAN	48.7	52.6	61.2	64.4	60.7	43.1	47.8	70.7	72.0	69.9	91.8	100.4	131.9	136.4	130.6
ECO		16.9	20.6	26.2	26.6		13.8	18.6	23.7	23.6		30.7	39.2	49.9	50.2
SAARC	9.0	11.7	12.5	19.0	20.5	6.4	9.2	10.6	13.0	13.6	15.4	21.0	23.1	32.1	34.1
Central Asia			22.1	27.6	26.8			30.5	35.7	34.8			52.6	63.4	61.6
Pacific island dev. econ.			32.0					28.8					60.8		
Low-income			19.4					17.1					36.4		
Middle-income		21.2	22.3	27.5	27.3		21.3	27.1	31.7	32.4		42.5	49.3	59.2	59.7
High-income	14.5	13.5	16.6	21.9	25.0	15.3	14.4	18.2	23.6	26.4	29.8	27.9	34.8	45.5	51.4
<b>Other world regions</b>															
Africa		21.9	20.4	23.5	22.5		18.3	22.3	21.3	20.8		40.3	42.8	44.9	43.3
Europe	22.8	22.8	28.9	29.5	32.1	21.6	23.4	28.3	29.2	31.1	44.4	46.2	57.2	58.7	63.2
Latin America & Carib.	11.3	13.4	17.3	18.8	19.1	10.9	12.3	16.5	20.8	21.2	22.2	25.7	33.8	39.5	40.3
North America	10.0	11.8	14.3	15.2	15.7	8.2	9.8	10.1	9.4	9.9	18.2	21.6	24.4	24.5	25.6
Other countries/areas		55.6	50.0	50.4	47.6		59.1	63.6	70.3	68.2		114.7	113.6	120.7	115.9
<b>World</b>	<b>16.6</b>	<b>21.1</b>	<b>22.5</b>	<b>31.8</b>	<b>35.1</b>	<b>15.9</b>	<b>20.8</b>	<b>21.8</b>	<b>30.8</b>	<b>34.1</b>	<b>32.5</b>	<b>41.8</b>	<b>44.3</b>	<b>62.7</b>	<b>69.2</b>



## 21.3 Growth in international trade

	Average annual growth rate of imports of merchandise			Average annual growth rate of exports of merchandise			Current account balance			
	% per annum			% per annum			% of GDP			
	90-95	95-00	00-06	90-95	95-00	00-06	1990	1995	2000	2007
<b>East and North-East Asia</b>	<b>9.3</b>	<b>4.1</b>	<b>12.8</b>	<b>9.8</b>	<b>4.4</b>	<b>12.7</b>				
China		11.3	23.3		10.9	25.4	3.1	0.2	1.7	11.1
DPR Korea										
Hong Kong, China		1.8	7.8		3.1	8.1	6.2	-6.3	4.1	12.3
Japan	7.4	2.5	7.3	9.1	1.6	5.1	1.4	2.1	2.6	4.9
Macao, China	5.7	2.2	15.0	3.5	4.7	0.1				
Mongolia			15.9			22.1		1.8	-5.0	-0.6
Republic of Korea	14.1	3.5	11.6	14.0	6.6	11.2	-0.8	-1.7	2.4	0.6
<b>South-East Asia</b>	<b>15.6</b>	<b>0.6</b>	<b>10.1</b>	<b>16.2</b>	<b>5.5</b>	<b>10.1</b>				
Brunei Darussalam							71.9	33.7	50.0	57.3
Cambodia							-3.9	-5.0	-2.8	-0.9
Indonesia	13.2	-3.8	10.5	12.1	6.5	8.4	-2.5	-3.0	4.8	2.5
Lao PDR							-8.9	-6.9	-10.6	-23.1
Malaysia	21.4	1.1	8.3	20.2	5.9	8.5	-2.1	-9.6	9.0	14.0
Myanmar							-21.9	-3.7	-0.8	4.0
Philippines		5.4	6.5		16.9	3.7	-6.1	-2.6	-2.9	4.4
Singapore	15.4	1.6	10.0	17.5	3.1	12.0	8.5	17.1	11.6	24.3
Thailand	16.2	-2.6	13.0	19.6	4.0	11.3	-8.3	-7.9	7.6	6.1
Timor-Leste									-15.0	253.3
Viet Nam							-4.0	-12.8	3.5	-9.6
<b>South and South-West Asia</b>	<b>7.9</b>	<b>5.8</b>	<b>19.2</b>	<b>8.2</b>	<b>6.8</b>	<b>16.8</b>				
Afghanistan										-0.8
Bangladesh	9.6	7.0		17.0	10.0		-3.1	-2.3	-1.4	0.5
Bhutan							-10.0	3.4	-9.7	8.8
India	9.0	7.0	23.9	12.1	7.4	18.6	-2.5	-1.6	-1.0	-1.8
Iran (Islamic Rep. of)			20.0			14.3	-3.2	3.7	13.0	10.4
Maldives		7.7	15.6		8.9	10.1	11.2	-4.6	-8.2	-45.0
Nepal							-7.6	-2.1	2.7	0.6
Pakistan	9.7	-1.1	18.0	7.9	2.4	10.7	-2.8	-2.9	-0.3	-4.9
Sri Lanka							-4.7	-6.0	-6.5	-4.6
Turkey	9.9	8.7	17.0	10.8	4.9	20.8	-1.3	-0.2	-3.7	-5.7
<b>North and Central Asia</b>			<b>25.8</b>			<b>20.0</b>				
Armenia			17.4			22.7		-17.0	-14.6	-6.5
Azerbaijan			28.5			24.1		-13.2	-3.5	28.8
Georgia			31.5			20.6		-18.3	-7.9	-19.7
Kazakhstan		5.8	29.4		11.0	27.8		-1.3	3.0	-6.6
Kyrgyzstan		1.2	20.8		4.1	7.9		-16.0	-4.3	-6.5
Russian Federation			26.3			19.6		2.2	18.0	5.9
Tajikistan								-17.9	-1.6	-9.5
Turkmenistan								-9.1	8.2	16.8
Uzbekistan								-0.2	1.8	23.8
<b>Pacific</b>	<b>7.6</b>	<b>3.3</b>	<b>10.9</b>	<b>6.3</b>	<b>2.8</b>	<b>10.9</b>				
Australia	8.2	4.4	10.9	6.4	3.8	11.6	-5.1	-5.2	-3.8	-6.2
American Samoa										
Cook Islands										
Fiji			15.1			6.4	-9.9	-0.9	-4.8	-14.9
French Polynesia			6.3			-4.4				
Guam										
Kiribati	4.8			20.1			2.7	11.1	-1.2	-31.1
Marshall Islands										
Micronesia (F.S.)										
Nauru										
New Caledonia			11.9			10.2				
New Zealand	8.0	-0.1	11.3	7.7	-0.7	9.1	-3.2	-5.0	-5.1	-8.1
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea							5.6	18.3	8.5	4.3
Samoa							8.7	4.9	1.0	-6.1
Solomon Islands							-13.0	3.7	-10.6	-40.0
Tonga							-14.5	-11.3	-6.2	-10.5
Tuvalu										
Vanuatu							2.7	-2.2	2.0	-13.2
<b>Asia and the Pacific</b>	<b>9.8</b>	<b>2.9</b>	<b>13.3</b>	<b>9.9</b>	<b>4.7</b>	<b>12.9</b>				
LLDC										
LDC										
ASEAN	15.6	0.6	10.1	16.2	5.5	10.1				
ECO		5.1	18.4		7.2	18.0				
SAARC	9.1	5.3	20.5	11.4	6.7	15.9				
Central Asia			24.0			22.7				
Pacific island dev. econ.										
Low-income										
Middle-income		3.6	18.9		7.6	18.4				
High-income	9.7	2.4	8.9	10.1	2.9	8.2				
<b>Other world regions</b>										
Africa		1.0	13.3		6.5	10.2				
Europe	4.4	3.1	11.6	6.1	2.1	11.4				
Latin America & Carib.	12.8	8.4	8.3	11.6	9.2	11.1				
North America	8.1	9.9	7.2	8.3	6.4	5.1				
Other countries/areas		5.1	10.1		9.0	12.3				
<b>World</b>	<b>7.0</b>	<b>4.7</b>	<b>10.9</b>	<b>7.7</b>	<b>4.3</b>	<b>10.9</b>				



## 21. International trade

### 21.4 International trade in services

	Imports					Exports				
	Total			Average annual growth rate		Total			Average annual growth rate	
	Million US dollars			% per annum		Million US dollars			% per annum	
	2000	2005	2006	00-05	2006	2000	2005	2006	00-05	2006
<b>East and North-East Asia</b>	<b>212 220</b>	<b>313 054</b>	<b>346 250</b>	<b>8.1</b>	<b>10.6</b>	<b>175 567</b>	<b>302 759</b>	<b>343 087</b>	<b>11.5</b>	<b>13.3</b>
China	36 031	83 796	100 833	18.4	20.3	30 431	74 404	91 999	19.6	23.6
DPR Korea										
Hong Kong, China	24 699	33 977	37 062	6.6	9.1	40 433	63 700	72 741	9.5	14.2
Japan	116 534	134 442	135 617	2.9	0.9	69 073	110 497	117 374	9.9	6.2
Macao, China		1 576			0.0		8 614			0.0
Mongolia		476	526		10.6		414	486		17.2
Republic of Korea	33 381	58 788	70 637	12.0	20.2	30 534	45 129	51 874	8.1	14.9
<b>South-East Asia</b>	<b>74 300</b>	<b>114 721</b>		<b>9.1</b>		<b>68 391</b>	<b>109 965</b>		<b>10.0</b>	
Brunei Darussalam	768	941	1 034	4.1	10.0	198	617	744	25.5	20.7
Cambodia	328	647	790	14.6	22.1	428	1 118	1 296	21.1	15.9
Indonesia	15 637	22 049	21 625	7.1	-1.9	5 214	12 927	11 518	19.9	-10.9
Lao PDR	43				0.0	176				0.0
Malaysia	16 747	21 956	23 720	5.6	8.0	13 941	19 576	21 831	7.0	11.5
Myanmar	328	502	563	8.9	12.1	478	259	280	-11.5	7.9
Philippines	5 247	5 858		2.2	0.0	3 377	4 439		5.6	0.0
Singapore	22 731				0.0	28 008				0.0
Thailand	9 219	15 371		10.8	0.0	13 869	20 165		7.8	0.0
Timor-Leste										
Viet Nam	3 252	5 282		10.2	0.0	2 702	4 176		9.1	0.0
<b>South and South-West Asia</b>	<b>31 648</b>	<b>63 618</b>		<b>15.0</b>		<b>42 041</b>	<b>95 506</b>		<b>17.8</b>	
Afghanistan										
Bangladesh	1 620	2 207	2 340	6.4	6.1	815	1 249	1 334	8.9	6.8
Bhutan	36	63		11.6	0.0	32	62		14.0	0.0
India	14 576	38 345		21.3	0.0	16 268	60 610		30.1	0.0
Iran (Islamic Rep. of)	2 296				0.0	1 382				0.0
Maldives	110	204	233	13.2	14.2	348	323	473	-1.5	46.5
Nepal	200	435	493	16.8	13.4	506	380	386	-5.5	1.4
Pakistan	2 160	6 613		25.1	0.0	1 384	3 318		19.1	0.0
Sri Lanka	1 621	2 089	2 394	5.2	14.6	939	1 540	1 625	10.4	5.5
Turkey	9 028	11 368	11 195	4.7	-1.5	20 367	26 642	24 560	5.5	-7.8
<b>North and Central Asia</b>	<b>19 414</b>	<b>50 941</b>	<b>58 114</b>	<b>21.3</b>	<b>14.1</b>	<b>11 774</b>	<b>29 927</b>	<b>36 751</b>	<b>20.5</b>	<b>22.8</b>
Armenia	193	391		15.2	0.0	137	332		19.4	0.0
Azerbaijan	485	2 653		40.5	0.0	260	683		21.3	0.0
Georgia	216	625		23.7	0.0	214	698		26.7	0.0
Kazakhstan	1 850	7 496	8 720	32.3	16.3	1 053	2 228	2 808	16.2	26.0
Kyrgyzstan	149				0.0	62				0.0
Russian Federation	16 230	38 865	44 839	19.1	15.4	9 565	24 970	31 102	21.2	24.6
Tajikistan	41	252		43.4	0.0	36	146		32.6	0.0
Turkmenistan										
Uzbekistan	251	425	400	11.2	-6.0	447	660	773	8.1	17.2
<b>Pacific</b>	<b>25 643</b>	<b>42 382</b>	<b>43 956</b>	<b>10.6</b>	<b>3.7</b>	<b>26 354</b>	<b>42 325</b>	<b>44 291</b>	<b>9.9</b>	<b>4.6</b>
Australia	18 928	30 498	32 224	10.0	5.7	19 825	31 018	33 100	9.4	6.7
American Samoa										
Cook Islands										
Fiji	325	516		9.6	0.0	397	783		14.5	0.0
French Polynesia		728	718		-1.4		1 072	1 102		2.8
Guam										
Kiribati	23				0.0	6				0.0
Marshall Islands	15	18	18	4.0	-3.8	9	10	10	2.2	5.3
Micronesia (F.S.)	52	57		1.7	0.0	19	19		-0.1	0.0
Nauru										
New Caledonia		890	1 174		32.0		483	554		14.8
New Zealand		8 240	7 804		-5.3		8 299	8 059		-2.9
Niue										
Northern Mariana Is.										
Palau										
Papua New Guinea	772	1 167		8.6	0.0	243	302		4.5	0.0
Samoa		53	57		7.9		112	134		20.2
Solomon Islands		36			0.0		41			0.0
Tonga		50	58		15.9		37	31		-16.2
Tuvalu	31				0.0	4				0.0
Vanuatu	70	74	71	1.0	-3.4	130	139	146	1.4	5.0
<b>Asia and the Pacific</b>	<b>363 226</b>	<b>584 716</b>	<b>628 651</b>	<b>10.0</b>	<b>7.5</b>	<b>324 126</b>	<b>580 482</b>	<b>629 017</b>	<b>12.4</b>	<b>8.4</b>
LLDC	3 751	12 456	13 763	27.1	10.5	3 046	5 281	6 050	11.6	14.6
LDC	2 910	4 308	4 734	8.2	9.9	3 068	3 859	4 328	4.7	12.1
ASEAN	74 300	114 721		9.1		68 391	109 965		10.0	
ECO	16 260	31 337		14.0		24 990	35 269		7.1	
SAARC	20 324	49 955		19.7		20 292	67 482		27.2	
Central Asia	3 184	12 076	13 275	30.6	9.9	2 209	4 957	5 649	17.5	14.0
Pacific island dev. econ.		3 644					3 007			
Low-income	9 223	17 832		14.1		7 326	12 025		10.4	
Middle-income	130 581	254 699	280 496	14.3	10.1	118 409	252 501	275 903	16.4	9.3
High-income	223 390	312 163	329 930	6.9	5.7	198 387	315 953	340 684	9.8	7.8
<b>Other world regions</b>										
Africa	39 020	73 335		13.4		33 872	61 334		12.6	
Europe	688 572	1 150 791	1 235 752	10.8	7.4	732 529	1 295 251	1 412 296	12.1	9.0
Latin America & Carib.	74 207	99 781	109 399	6.1	9.6	71 224	95 110	101 662	6.0	6.9
North America	268 259	381 834	416 522	7.3	9.1	340 209	446 108	479 701	5.6	7.5
Other countries/areas	73 894	100 345	120 402	6.3	20.0	36 995	60 794	67 045	10.4	10.3
<b>World</b>	<b>1 507 178</b>	<b>2 390 802</b>	<b>2 588 986</b>	<b>9.7</b>	<b>8.3</b>	<b>1 538 956</b>	<b>2 539 079</b>	<b>2 757 720</b>	<b>10.5</b>	<b>8.6</b>



## 21.5 Changes in shares of transport and travel in total services trade

	Transportation services in total services imports			Transportation services in total services exports			Travel services in total services imports			Travel services in total services exports		
	Percentage			Percentage			Percentage			Percentage		
	2000	2005	2006	2000	2005	2006	2000	2005	2006	2000	2005	2006
<b>East and North-East Asia</b>	<b>29.7</b>	<b>31.9</b>	<b>32.6</b>	<b>31.9</b>	<b>31.7</b>	<b>31.4</b>	<b>30.6</b>	<b>28.3</b>	<b>24.3</b>	<b>21.0</b>	<b>21.8</b>	<b>19.7</b>
China	28.9	33.9	34.1	12.1	20.7	22.8	36.4	26.0	24.1	53.3	39.4	36.9
DPR Korea												
Hong Kong, China	25.3	30.8	31.3	31.6	31.9	30.8	50.6	39.2	37.9	14.6	16.2	16.0
Japan	30.0	30.0	31.6	37.0	32.4	32.1	27.3	28.0	19.8	4.9	11.3	7.2
Macao, China		14.7			4.6			22.7			92.6	
Mongolia		45.4	48.9		48.1	44.1		26.4	32.7		42.7	46.3
Republic of Korea	33.1	34.3	33.1	44.8	52.9	49.8	21.4	26.2	25.8	22.4	12.9	10.3
<b>South-East Asia</b>	<b>28.2</b>	<b>30.8</b>			<b>27.3</b>		<b>19.9</b>	<b>19.6</b>		<b>37.3</b>	<b>28.7</b>	
Brunei Darussalam		34.2	35.6		50.8	51.2		39.8	39.5		31.0	30.1
Cambodia	51.9	55.7	55.2	16.7	11.4	12.9	10.1	15.0	15.5	70.9	75.1	74.3
Indonesia	25.7	33.8	37.8		22.0	18.2	20.4	16.3	16.6	95.4	35.0	38.6
Lao PDR	11.4			11.2			18.8			64.8		
Malaysia	35.2	38.2	40.4	20.1	20.7	19.4	12.4	16.9	16.9	35.9	45.2	47.8
Myanmar	77.4	39.3	45.1	15.9	46.2	46.6	7.7	6.2	6.6	34.0	26.1	16.6
Philippines	39.1	53.3		13.7	21.7		31.3	21.8		63.8	49.1	
Singapore	31.7			42.5			20.0			18.4		
Thailand	12.4	25.8		23.4	22.9		30.1	24.7		54.0	47.5	
Timor-Leste												
Viet Nam												
<b>South and South-West Asia</b>	<b>34.8</b>	<b>29.3</b>		<b>16.9</b>	<b>14.3</b>		<b>17.7</b>	<b>17.9</b>		<b>29.7</b>	<b>28.9</b>	
Afghanistan												
Bangladesh	62.5	70.0	68.7	11.2	9.0	6.6	17.9	6.2	6.0	6.2	5.6	6.0
Bhutan	18.0	3.4		18.2	20.6		67.9	78.2		41.3	49.0	
India	24.4	19.3		12.6	10.4		19.2	16.7		21.5	12.9	
Iran (Islamic Rep. of)	49.7			48.6			8.9			36.3		
Maldives	48.8	46.3	49.5	5.8	6.8	5.5	42.1	34.3	33.6	92.0	88.8	91.7
Nepal	32.4	37.0	37.8	12.1	8.6	9.1	36.7	37.5	37.6	31.2	34.5	33.1
Pakistan		34.5			32.0		10.1	17.7		5.5	5.3	
Sri Lanka	60.4	60.7	61.1	42.6	43.7	46.2	14.8	15.1	15.6	26.4	27.9	25.3
Turkey	27.2	41.6	38.5	14.5	18.0	17.2	18.9	25.2	24.5	37.4	68.1	68.6
<b>North and Central Asia</b>	<b>16.0</b>	<b>14.6</b>	<b>15.5</b>	<b>36.8</b>	<b>36.4</b>	<b>32.3</b>	<b>49.2</b>	<b>36.7</b>	<b>33.5</b>	<b>34.0</b>	<b>23.7</b>	<b>24.1</b>
Armenia	60.2	48.7		46.7	27.8		20.6	30.0		27.6	42.4	
Azerbaijan	29.7	14.3		46.0	35.0		27.2	6.2		24.2	11.4	
Georgia	41.2	45.3		50.7	45.1		51.1	27.0		45.2	34.6	
Kazakhstan	17.8	15.6		43.8	46.7		22.0	10.0		33.8	31.5	
Kyrgyzstan	47.0			26.9			10.5			24.7		
Russian Federation	14.4	13.2	15.0	37.2	36.5	32.4	54.5	44.9	40.7	35.8	23.5	24.5
Tajikistan	66.2	71.0		36.5	38.2		1.3	1.5		0.6	1.1	
Turkmenistan												
Uzbekistan												
<b>Pacific</b>	<b>33.1</b>	<b>34.7</b>	<b>34.4</b>	<b>21.8</b>	<b>20.0</b>	<b>19.6</b>	<b>31.6</b>	<b>34.4</b>	<b>33.9</b>	<b>47.3</b>	<b>54.7</b>	<b>54.4</b>
Australia	33.2	35.3	35.2	21.7	19.9	19.2	33.8	36.9	36.3	46.7	54.3	54.0
American Samoa												
Cook Islands												
Fiji	47.5	55.8		31.5	36.2		25.4	20.6		46.3	56.1	
French Polynesia		27.9	30.5		23.0	22.1		41.6	41.6		48.6	50.6
Guam												
Kiribati	66.8			11.7			19.5			7.5		
Marshall Islands	9.3	9.2	10.7	12.9	18.9	20.0	1.3	2.2	2.3	35.3	60.0	66.0
Micronesia (F.S.)	21.0	21.3					10.2	9.7		91.4	92.4	
Nauru												
New Caledonia		23.8	21.9		13.2	13.7		19.2	15.9		52.4	46.6
New Zealand		34.1	33.3		19.7	20.6		32.3	32.4		58.6	58.9
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea	21.1	23.9		4.9	10.3		6.5	4.8		3.0	1.2	
Samoa		38.8	53.3		4.5	3.7		17.1	9.8		68.6	66.9
Solomon Islands		24.9			19.3			13.0			3.8	
Tonga		59.4	59.1		8.4	6.5		7.6	13.8		39.9	50.2
Tuvalu	49.7			3.2			26.9			36.5		
Vanuatu	34.2	58.1	61.4	22.1	18.4	16.1	12.7	15.2	12.0	43.2	61.6	63.4
<b>Asia and the Pacific</b>	<b>29.4</b>	<b>30.1</b>	<b>30.7</b>	<b>28.7</b>	<b>27.4</b>	<b>27.2</b>	<b>28.4</b>	<b>26.6</b>	<b>24.3</b>	<b>28.2</b>	<b>26.8</b>	<b>25.5</b>
LLDC												
LDC	57.6	57.4	57.6	12.5	12.7	12.0	18.4	13.5	13.5	40.9	43.9	45.6
ASEAN	28.2	30.8			27.3		19.9	19.6		37.3	28.7	
ECO	36.4	31.8		20.4	22.4		16.5	16.7		34.5	55.8	
SAARC	36.6	25.5		17.2	12.1		18.2	16.7		21.5	13.2	
Central Asia		18.9			36.2			10.4			25.0	
Pacific island dev. econ.		31.1			22.2			18.7			47.2	
Low-income		28.6			13.5		7.8	9.6		12.2	12.2	
Middle-income	26.9	29.0	29.6	18.5	20.5	20.7	28.8	24.7	23.8	44.4	35.4	34.9
High-income	30.4	31.1	31.6	35.3	33.5	32.9	29.0	29.1	25.5	19.1	20.4	18.3
<b>Other world regions</b>												
Africa	29.8	29.6		25.3	27.5		20.7	22.2		40.4	39.0	
Europe	23.3	22.6	23.1	23.2	22.4	21.7	30.3	27.6	26.7	28.9	24.3	24.1
Latin America & Carib.	29.6	30.1	29.9	18.2	19.1	19.1	27.0	25.3	25.4	49.9	48.4	47.4
North America	28.0	27.0	26.4	17.1	16.4	16.5	28.8	23.0	23.4	27.5	21.5	25.4
Other countries/areas	22.7	32.1	29.8									
<b>World</b>	<b>26.1</b>	<b>26.1</b>	<b>26.3</b>	<b>22.7</b>	<b>22.4</b>	<b>22.0</b>	<b>28.6</b>	<b>26.1</b>	<b>25.1</b>	<b>29.9</b>	<b>25.9</b>	<b>26.1</b>



## 21. International trade

### 21.6 Regional export concentration

Regional export concentration index

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>East and North-East Asia</b>	<b>0.11</b>	<b>0.11</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>
China	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.10	0.11	0.11	0.11
DPR Korea	0.14	0.12	0.13	0.11	0.10	0.11	0.13	0.21	0.24	0.17	0.11	0.09
Hong Kong, China	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.12	0.13	0.14	0.15	0.16
Japan	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.14	0.14	0.15
Macao, China	0.29	0.33	0.36	0.34	0.33	0.33	0.33	0.31	0.32	0.31	0.30	0.30
Mongolia	0.50	0.50	0.47	0.37	0.37	0.38	0.36	0.33	0.34	0.41	0.42	0.44
Republic of Korea	0.15	0.14	0.15	0.15	0.15	0.16	0.14	0.15	0.15	0.16	0.16	0.16
<b>South-East Asia</b>	<b>0.18</b>	<b>0.19</b>	<b>0.20</b>	<b>0.21</b>	<b>0.23</b>	<b>0.23</b>	<b>0.21</b>	<b>0.22</b>	<b>0.21</b>	<b>0.21</b>	<b>0.21</b>	<b>0.21</b>
Brunei Darussalam	0.61	0.61	0.61	0.60	0.60	0.60	0.60	0.59	0.60	0.60	0.67	0.72
Cambodia	0.40	0.30	0.30	0.38	0.38	0.38	0.41	0.40	0.42	0.42	0.35	0.37
Indonesia	0.14	0.14	0.15	0.12	0.12	0.13	0.12	0.12	0.12	0.10	0.13	0.13
Lao PDR	0.26	0.27	0.25	0.26	0.43	0.32	0.31	0.37	0.35	0.35	0.29	0.41
Malaysia	0.18	0.18	0.19	0.20	0.22	0.22	0.20	0.22	0.22	0.20	0.19	0.19
Myanmar	0.31	0.28	0.27	0.25	0.26	0.27	0.29	0.28	0.30	0.34	0.41	0.46
Philippines	0.16	0.28	0.33	0.42	0.47	0.43	0.39	0.42	0.43	0.38	0.36	0.35
Singapore	0.22	0.23	0.24	0.25	0.25	0.28	0.26	0.26	0.25	0.26	0.26	0.27
Thailand	0.09	0.10	0.10	0.11	0.11	0.11	0.10	0.09	0.09	0.09	0.09	0.09
Timor-Leste	0.27	0.22	0.32	0.36	0.52	0.99	0.37	0.43	0.25	0.25	0.35	0.26
Viet Nam	0.21	0.21	0.21	0.22	0.22	0.26	0.23	0.22	0.21	0.22	0.23	0.21
<b>South and South-West Asia</b>	<b>0.30</b>	<b>0.29</b>	<b>0.28</b>	<b>0.25</b>	<b>0.30</b>	<b>0.32</b>	<b>0.28</b>	<b>0.28</b>	<b>0.28</b>	<b>0.28</b>	<b>0.29</b>	<b>0.28</b>
Afghanistan	0.38	0.30	0.24	0.28	0.34	0.39	0.34	0.37	0.34	0.28	0.31	0.30
Bangladesh	0.36	0.38	0.38	0.44	0.43	0.41	0.41	0.40	0.41	0.37	0.40	0.40
Bhutan	0.33	0.34	0.34	0.34	0.42	0.42	0.42	0.43	0.31	0.29	0.31	0.39
India	0.14	0.12	0.13	0.15	0.17	0.13	0.13	0.13	0.12	0.13	0.14	0.14
Iran (Islamic Rep. of)	0.83	0.83	0.83	0.76	0.82	0.87	0.82	0.80	0.81	0.83	0.82	0.78
Maldives	0.41	0.46	0.45	0.43	0.38	0.35	0.36	0.42	0.47	0.42	0.50	0.77
Nepal	0.47	0.51	0.51	0.42	0.30	0.30	0.17	0.17	0.17	0.17	0.15	0.15
Pakistan	0.24	0.24	0.24	0.23	0.23	0.22	0.22	0.22	0.23	0.22	0.23	0.23
Sri Lanka	0.22	0.22	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.23	0.22	0.22
Turkey	0.11	0.11	0.10	0.11	0.10	0.10	0.09	0.10	0.10	0.10	0.09	0.13
<b>North and Central Asia</b>	<b>0.26</b>	<b>0.26</b>	<b>0.28</b>	<b>0.24</b>	<b>0.28</b>	<b>0.33</b>	<b>0.34</b>	<b>0.35</b>	<b>0.37</b>	<b>0.38</b>	<b>0.41</b>	<b>0.41</b>
Armenia	0.25	0.25	0.25	0.36	0.36	0.33	0.26	0.40	0.42	0.32	0.36	0.29
Azerbaijan	0.61	0.61	0.54	0.44	0.51	0.60	0.75	0.70	0.70	0.64	0.55	0.63
Georgia	0.17	0.17	0.16	0.17	0.17	0.17	0.19	0.21	0.20	0.22	0.20	0.17
Kazakhstan	0.21	0.23	0.27	0.30	0.38	0.48	0.48	0.52	0.52	0.55	0.61	0.60
Kyrgyzstan	0.14	0.18	0.18	0.36	0.23	0.40	0.46	0.35	0.43	0.38	0.34	0.28
Russian Federation	0.26	0.26	0.28	0.23	0.27	0.30	0.32	0.32	0.34	0.35	0.38	0.38
Tajikistan	0.47	0.48	0.43	0.54	0.54	0.54	0.54	0.54	0.57	0.53	0.45	0.77
Turkmenistan	0.45	0.45	0.45	0.42	0.42	0.53	0.53	0.53	0.81	0.81	0.61	0.61
Uzbekistan	0.49	0.54	0.51	0.45	0.44	0.37	0.33	0.29	0.37	0.30	0.29	0.28
<b>Pacific</b>	<b>0.14</b>	<b>0.14</b>	<b>0.14</b>	<b>0.15</b>	<b>0.13</b>	<b>0.14</b>	<b>0.14</b>	<b>0.14</b>	<b>0.14</b>	<b>0.15</b>	<b>0.18</b>	<b>0.17</b>
Australia	0.12	0.12	0.12	0.13	0.11	0.12	0.12	0.13	0.12	0.13	0.17	0.17
American Samoa						0.28	0.50	0.53	0.54	0.31	0.29	0.81
Cook Islands	0.33	0.29	0.31	0.90	0.90	0.90	0.90	0.62	0.61	0.48	0.55	0.50
Fiji	0.38	0.36	0.29	0.28	0.28	0.28	0.30	0.27	0.27	0.24	0.29	0.29
French Polynesia	0.64	0.64	0.64	0.56	0.63	0.71	0.63	0.69	0.63	0.61	0.60	0.58
Guam						0.83	0.40	0.30	0.59	0.38	0.47	0.43
Kiribati	0.72	0.62	0.71	0.61	0.70	0.70	0.70	0.89	0.83	0.57	0.38	0.48
Marshall Islands	0.63	0.76	0.56	0.85	0.71	0.62	0.73	0.75	0.73	0.51	0.90	0.94
Micronesia (F.S.)	0.90	0.76	0.69	0.68	0.77	0.76	0.79	0.76	0.81	0.85	0.83	0.95
Nauru	0.71	0.73	0.83	0.82	0.72	0.77	0.60	0.53	0.40	0.33	0.40	0.25
New Caledonia	0.62	0.63	0.61	0.61	0.61	0.65	0.64	0.67	0.69	0.66	0.67	0.66
New Zealand	0.12	0.13	0.13	0.13	0.12	0.13	0.14	0.13	0.13	0.13	0.14	0.14
Niue	0.42	0.39	0.30	0.69	0.20	0.38	0.51	0.47	0.54	0.23	0.32	0.37
Northern Mariana Is.	0.26	0.33	0.44	0.51	0.51	0.51	0.48	0.42	0.39	0.46	0.37	0.31
Palau	0.68	0.57	0.58	0.51	0.53	0.61	0.53	0.46	0.79	0.80	0.90	0.93
Papua New Guinea	0.38	0.42	0.42	0.42	0.50	0.50	0.39	0.33	0.37	0.39	0.36	0.39
Samoa	0.72	0.65	0.66	0.61	0.64	0.64	0.64	0.60	0.68	0.70	0.73	0.72
Solomon Islands	0.60	0.62	0.55	0.47	0.50	0.59	0.57	0.63	0.65	0.66	0.72	0.77
Tonga	0.58	0.64	0.67	0.55	0.55	0.55	0.55	0.55	0.45	0.55	0.48	0.45
Tuvalu	0.42	0.50	0.49	0.35	0.33	0.21	0.28	0.34	0.30	0.46	0.23	0.45
Vanuatu	0.30	0.33	0.60	0.41	0.41	0.39	0.41	0.41	0.52	0.48	0.61	0.72
<b>Asia and the Pacific</b>	<b>0.15</b>	<b>0.15</b>	<b>0.16</b>	<b>0.16</b>	<b>0.17</b>	<b>0.18</b>	<b>0.17</b>	<b>0.17</b>	<b>0.18</b>	<b>0.18</b>	<b>0.19</b>	<b>0.19</b>
LLDC	0.30	0.31	0.33	0.35	0.40	0.49	0.51	0.52	0.56	0.56	0.57	0.58
LDC	0.37	0.36	0.37	0.41	0.40	0.40	0.38	0.38	0.39	0.37	0.38	0.39
ASEAN	0.18	0.19	0.20	0.21	0.23	0.23	0.21	0.22	0.21	0.21	0.21	0.21
ECO	0.39	0.38	0.37	0.31	0.39	0.46	0.41	0.41	0.41	0.42	0.44	0.44
SAARC	0.18	0.17	0.18	0.20	0.21	0.18	0.18	0.17	0.17	0.17	0.17	0.17
Central Asia	0.28	0.29	0.31	0.34	0.40	0.49	0.52	0.53	0.57	0.57	0.58	0.59
Pacific Island dev. econ.	0.43	0.45	0.44	0.44	0.49	0.51	0.43	0.40	0.44	0.45	0.44	0.46
Low-income	0.28	0.28	0.28	0.30	0.30	0.30	0.28	0.27	0.27	0.27	0.26	0.26
Middle-income	0.17	0.17	0.17	0.17	0.19	0.20	0.19	0.19	0.19	0.19	0.20	0.20
High-income	0.14	0.14	0.14	0.15	0.15	0.16	0.15	0.16	0.16	0.16	0.17	0.17
<b>Other world regions</b>												
Africa	0.39	0.43	0.43	0.39	0.44	0.48	0.47	0.45	0.47	0.46	0.44	0.46
Europe	0.09	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Latin America & Carib.	0.20	0.21	0.20	0.17	0.19	0.21	0.19	0.20	0.20	0.22	0.24	0.26
North America	0.09	0.09	0.09	0.10	0.11	0.10	0.10	0.10	0.09	0.09	0.09	0.09
Other countries/areas	0.38	0.40	0.35	0.35	0.39	0.44	0.43	0.41	0.43	0.42	0.48	0.48
<b>World</b>	<b>0.13</b>	<b>0.14</b>	<b>0.14</b>	<b>0.13</b>	<b>0.15</b>	<b>0.16</b>	<b>0.15</b>	<b>0.16</b>	<b>0.16</b>	<b>0.16</b>	<b>0.17</b>	<b>0.17</b>



## 21.7 Intraregional trade

	% of total imports or exports								
	1990	1995	2000	2001	2002	2003	2004	2005	2006
<b>Imports from ASEAN</b>									
Brunei Darussalam	43.4	59.6	57.4	51.6	39.4	47.4	60.4	63.7	47.7
Cambodia	42.7	74.7	39.1	38.9	35.9	36.5	34.0	50.9	53.2
Indonesia	2.3	3.9	8.0	7.5	8.5	23.9	23.2	27.6	31.2
Lao PDR	61.0	70.0	70.3	78.1	77.2	73.8	71.0	78.3	79.1
Malaysia	18.5	17.3	24.2	22.8	23.1	24.3	24.0	24.7	24.5
Myanmar	46.3	51.5	45.5	43.1	43.3	44.3	48.0	51.3	47.1
Philippines	13.4	11.6	15.9	15.6	15.9	16.9	18.9	18.8	19.8
Singapore	19.5	24.5	29.3	29.5	30.7	29.0	27.1	25.9	26.0
Thailand	11.5	12.2	15.5	15.0	15.5	15.5	15.1	16.6	16.4
Viet Nam	10.0	31.4	27.8	25.3	23.8	23.2	24.0	24.5	27.1
ASEAN	16.6	19.0	23.2	22.3	22.8	23.9	23.5	24.2	24.8
<b>Exports to ASEAN</b>									
Brunei Darussalam	13.0	20.4	21.2	22.1	22.5	20.2	17.5	25.5	24.8
Cambodia	77.6	66.1	5.3	4.8	4.8	4.8	3.0	9.3	8.4
Indonesia	1.7	5.0	6.8	7.2	8.3	18.0	20.0	18.6	18.5
Lao PDR	75.4	30.7	51.3	48.1	46.8	45.9	43.2	55.8	66.3
Malaysia	27.4	26.5	26.0	24.9	25.6	24.7	25.3	26.2	25.9
Myanmar	47.0	42.3	23.1	35.4	39.7	39.0	49.1	55.7	56.1
Philippines	7.0	12.8	15.7	15.5	15.7	18.2	17.2	17.3	17.2
Singapore	22.1	28.6	29.4	29.2	30.0	32.0	30.9	30.7	30.5
Thailand	10.5	19.0	19.1	19.7	20.2	20.8	21.8	20.8	19.6
Viet Nam	16.2	14.2	17.5	16.5	14.1	14.3	15.0	15.7	13.9
ASEAN	18.4	22.7	22.2	21.9	22.5	24.8	25.4	25.4	24.8
<b>Imports from ASEAN+3</b>									
China	38.5	37.5	39.8	38.0	40.4	42.4	41.9	41.6	41.0
Japan	16.0	29.3	35.1	37.0	38.2	39.6	39.9	39.3	38.9
Republic of Korea	33.1	36.9	38.8	39.5	42.0	42.9	43.4	43.0	42.1
Brunei Darussalam	49.1	65.7	63.5	62.9	59.0	64.6	73.0	78.1	70.0
Cambodia	59.6	84.4	56.6	58.2	57.3	58.1	59.5	70.4	72.5
Indonesia	31.2	36.4	36.6	35.9	35.8	50.9	51.5	54.8	56.0
Lao PDR	78.9	83.3	79.0	89.3	89.2	90.4	83.7	90.3	93.5
Malaysia	45.2	51.2	53.9	51.5	54.3	55.9	55.2	56.0	55.6
Myanmar	66.3	86.2	81.2	80.5	80.3	86.0	87.0	87.1	87.9
Philippines	42.3	41.1	44.9	45.0	46.1	47.3	48.7	47.1	47.3
Singapore	42.6	53.3	55.4	52.9	54.5	52.0	51.5	50.0	50.2
Thailand	46.2	49.2	49.5	47.2	50.6	52.0	51.7	51.8	51.4
Viet Nam	44.3	63.4	62.6	60.3	59.0	57.9	60.0	61.5	62.7
ASEAN+3	30.6	39.9	42.2	41.8	43.7	44.9	45.0	44.8	44.4
<b>Exports to ASEAN+3</b>									
China	33.7	29.7	28.0	28.3	26.7	25.0	24.1	22.7	21.2
Japan	16.6	29.3	27.0	27.4	29.8	32.5	33.8	34.0	33.9
Republic of Korea	26.5	34.2	34.1	33.8	35.2	37.4	37.5	39.7	39.2
Brunei Darussalam	77.9	87.7	81.6	84.1	80.9	79.0	75.7	78.8	72.8
Cambodia	86.9	70.0	7.9	6.9	6.3	6.2	5.2	13.5	12.4
Indonesia	49.6	42.3	41.4	40.9	41.7	53.6	48.4	55.7	56.0
Lao PDR	83.3	44.5	56.6	52.6	51.7	51.0	48.2	61.7	73.6
Malaysia	47.9	44.6	45.5	45.9	45.6	44.7	45.7	45.6	45.6
Myanmar	56.7	61.0	36.4	45.3	50.3	51.0	62.1	69.9	68.9
Philippines	34.0	32.4	35.2	36.9	38.4	43.6	46.8	48.0	46.7
Singapore	33.1	41.5	44.5	45.1	46.8	48.1	48.2	48.3	48.9
Thailand	29.4	40.1	39.7	41.3	42.1	44.1	45.1	44.8	43.4
Viet Nam	68.5	53.2	48.4	45.4	40.6	40.6	41.6	41.2	37.3
ASEAN+3	29.0	34.3	33.4	33.7	34.2	35.4	35.2	35.1	34.0
<b>Imports from APTA</b>									
China	5.4	8.3	11.3	10.7	11.0	12.2	13.4	14.3	13.9
Republic of Korea	0.4	6.1	8.6	10.3	12.3	13.0	14.0	15.6	16.9
Lao PDR	0.0	8.5	6.5	9.9	9.4	14.8	11.5	10.8	13.2
Bangladesh	13.6	28.5	25.7	29.1	27.6	30.2	29.2	40.6	40.4
India	1.4	4.7	4.9	6.4	7.3	9.2	9.7	10.7	12.0
Sri Lanka	9.7	20.9	25.0	21.5	23.2	21.0	26.3	27.4	35.8
APTA	2.8	7.6	10.1	10.5	11.4	12.5	13.4	14.7	15.1
<b>Exports to APTA</b>									
China	3.4	5.4	5.5	5.9	6.0	5.8	6.1	5.9	6.1
Republic of Korea	1.4	8.7	11.8	13.7	16.0	20.0	21.4	23.5	23.0
Lao PDR	0.4	2.5	2.0	2.4	2.9	3.1	3.2	4.6	6.3
Bangladesh	0.7	2.9	1.1	1.0	1.3	1.5	2.6	2.5	3.0
India	3.4	5.8	5.0	7.0	8.9	10.6	11.6	10.3	8.6
Sri Lanka	1.9	2.8	2.5	2.5	4.8	5.7	7.9	9.9	7.7
APTA	3.9	6.8	7.8	8.4	9.2	10.1	10.7	10.7	10.3
<b>Imports from SAFTA</b>									
Afghanistan	14.2	13.4	21.3	29.1	24.2	30.8	28.7	33.8	31.1
Bangladesh	9.5	15.3	9.5	12.4	14.8	15.5	12.6	16.6	14.3
Bhutan	18.1	49.4	10.0	25.7	61.0	73.7	36.5	69.2	60.5
India	0.4	0.4	0.8	0.4	0.3	0.8	0.5	0.5	0.2
Maldives	9.2	11.8	9.5	24.0	26.3	24.3	21.3	17.4	9.7
Nepal	16.2	22.4	37.7	31.1	45.2	53.6	59.3	63.9	62.5
Pakistan	1.6	1.0	2.0	2.9	2.0	2.4	3.0	2.5	3.7
Sri Lanka	6.7	10.3	12.6	13.2	15.5	18.0	19.0	19.0	24.7
SAFTA	2.2	3.4	4.0	3.5	4.0	4.9	3.8	3.9	3.7
<b>Exports to SAFTA</b>									
Afghanistan	14.0	22.9	43.0	46.2	50.0	40.0	51.4	42.8	43.4
Bangladesh	2.4	2.4	1.5	0.9	1.2	4.5	5.0	2.0	2.2
Bhutan	44.8	92.1	82.3	82.2	89.7	94.4	91.4	75.7	67.1
India	3.0	5.5	4.4	4.7	5.3	6.7	5.6	5.4	5.1
Maldives	8.6	22.5	17.3	17.9	14.5	13.3	10.0	14.4	13.6
Nepal	6.5	13.5	45.1	47.8	48.8	53.7	50.7	56.8	51.6
Pakistan	4.0	3.4	4.5	4.3	4.6	6.3	7.2	11.2	10.4
Sri Lanka	3.8	3.0	2.8	3.4	5.4	7.0	9.1	10.4	8.4
SAFTA	3.3	4.9	4.6	4.8	5.4	7.0	6.4	6.4	5.9



## 22 Fiscal balance

Since the Asian economic crisis, Governments in Asia and the Pacific have managed to improve their fiscal positions significantly. In 1998, for the region as a whole the annual budget deficit as a proportion of GDP was 7.2 per cent, but by 2007 this had come down to 0.9 per cent.

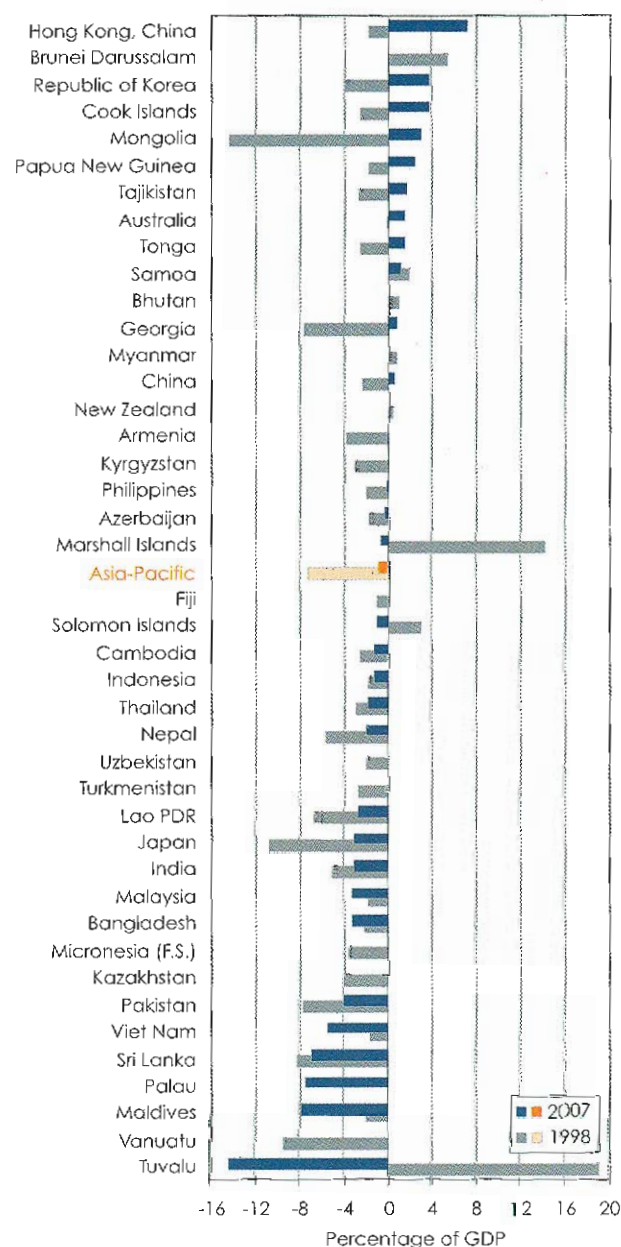
Across Asia and the Pacific many countries have improved their fiscal positions, particularly during the past couple of years – reducing deficits to less than 1.0 per cent of GDP, levels not seen since the early 1990s. They have done so largely by steadily boosting government revenue while keeping government expenditures stable, so the gap between the two has narrowed. Between 2006 and 2007, the fiscal situation remained unchanged in all subregions, except South-East Asia which went from a surplus of 0.2 per cent to a deficit of 1.7 per cent.

Compared with the difficult situation in 1998 following the Asian crisis, the 2007 fiscal situation represents a major improvement. In East and North-East Asia, governments managed to boost their revenues and restrain expenditures. As a result, between 1998 and 2007 they cut their fiscal deficit from 8.4 to 0.6 per cent of GDP. Other subregions also recorded significant improvements over the same period. South and South-West Asia reduced its deficit from 5.3 to 3.3 per cent. The Pacific went from a balanced budget to a surplus of 1.6 per cent. South-East Asia also reduced the deficit, though only marginally, from 2.0 to 1.7 per cent of GDP.

Among individual economies, the most notable fiscal improvements were in China, the Republic of Korea and India. In the late 1990s, China had budget deficits between 2 and 3 per cent of GDP, but in 2007 the country recorded its first fiscal surplus since 1990, largely by boosting government revenue. In the same year the Republic of Korea recorded its highest surplus since the beginning of the 1990s, 3.8 per cent of GDP. India also made progress: between 2006 and 2007 it further reduced its deficit, from 3.4 to 3.1 per cent of GDP in 2007 – also its best fiscal position since 1990.

Figure 22.1

Fiscal balance relative to GDP, Asia and the Pacific, 1998 and 2007



In Japan on the other hand the situation deteriorated. Between 2006 and 2007, the fiscal deficit grew from 1.1 to 3.0 per cent of GDP. This reflected a fall in government revenue, which as a proportion of GDP fell from 14.5 to 11.5 per cent.



## 22. Fiscal balance

Government expenditure also fell, but rather less – from 15.5 to 14.5 per cent of GDP.

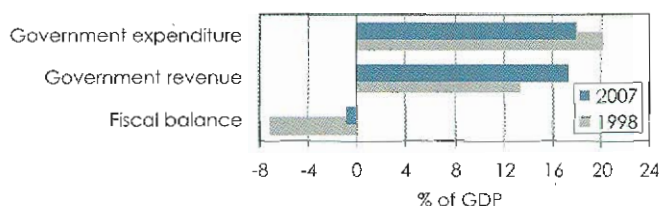
The most dramatic improvement, however, occurred in Timor-Leste as a result of taxes and royalties received from gas and oil in the Timor Sea. In 2007, the country achieved an unprecedented fiscal surplus of 220 per cent of GDP.

This is all very different from the region's situation during and immediately after the 1997/98 financial crisis. Between 1998 and 2007, overall government revenue went from 13.3 to 17.3 per cent of GDP, while government expenditure fell from 20.3 to 18.1 per cent. As a result, governments were in a better position to invest in infrastructure and improve social services. Healthy

government accounts meant they had less need to borrow, reducing the competition for domestic credit and thus opening up opportunities for the private sector.

**Figure 22.2**

**Fiscal balance, expenditure and revenue relative to GDP, Asia and the Pacific, 1998 and 2007**



### Government revenue (% of GDP)

Total current and capital revenues received by the central Government. **Aggregates:** Averages are calculated using total GDP in US dollars as weight. **Source:** Asian Development Bank, Key Indicators 2008 (online database, accessed in September 2008).

### Government expenditure (% of GDP)

The sum of current and capital expenditures of the central Government. **Aggregates:** Averages are calculated

using total GDP in US dollars as weight. **Source:** Asian Development Bank, Key Indicators 2008 (online database, accessed in September 2008).

### Fiscal balance (% of GDP)

The difference between total revenues and total expenditures of the central Government. **Aggregates:** Averages are calculated using total GDP in US dollars as weight. **Source:** Asian Development Bank, Key Indicators 2008 (online database, accessed in September 2008).



## 22.1 Fiscal balance

	Government revenue				Government expenditure				Fiscal balance			
	% of GDP				% of GDP				% of GDP			
	1998	2000	2006	2007	1998	2000	2006	2007	1998	2000	2006	2007
<b>East and North-East Asia</b>	<b>12.3</b>	<b>13.3</b>	<b>17.0</b>	<b>16.9</b>	<b>20.3</b>	<b>18.0</b>	<b>17.6</b>	<b>17.4</b>	<b>-8.4</b>	<b>-5.0</b>	<b>-0.7</b>	<b>-0.6</b>
China	11.7	13.5	18.3	20.6	14.1	16.3	19.1	19.9	-2.4	-2.8	-0.8	0.7
DPR Korea												
Hong Kong, China	16.7	17.1	19.5	21.8	18.5	17.7	15.5	14.7	-1.8	-0.6	4.0	7.2
Japan	11.6	11.9	14.5	11.5 <sup>1</sup>	22.2	18.3	15.5	14.5 <sup>1</sup>	-10.7	-6.4	-1.1	-3.0 <sup>1</sup>
Macao, China												
Mongolia	26.5	34.0	36.5	40.8	31.4	36.0	31.2	36.6	-14.3	-7.7	3.3	2.9
Republic of Korea	20.0	23.5	24.7	27.0	18.8	18.9	23.6	22.5	-3.9	1.1	0.4	3.8
<b>South-East Asia</b>	<b>17.1</b>	<b>18.2</b>	<b>20.0</b>	<b>18.8</b>	<b>19.4</b>	<b>18.6</b>	<b>19.6</b>	<b>20.5</b>	<b>-2.0</b>	<b>-0.7</b>	<b>0.2</b>	<b>-1.7</b>
Brunei Darussalam	28.3	49.1	50.0		59.4	40.6	28.7		5.4	10.9	12.8	
Cambodia	8.0	10.0	10.9	12.1	13.4	14.8	14.2	15.4	-2.4	-2.1	-0.8	-1.2
Indonesia	16.4	14.7	19.0	17.9	18.1	15.8	20.0	19.1	-1.7	-1.1	-0.9	-1.2
Lao PDR	8.7	12.4	11.8	13.6	18.6	19.6	17.4	19.1	-6.6	-4.3	-3.2	-2.7
Malaysia	20.0	17.4	21.5	21.8	21.8	22.9	24.9	25.0	-1.8	-5.5	-3.3	-3.2
Myanmar	7.3	4.2			6.5	3.5			0.8	0.7		
Philippines	17.3	15.3	16.2	17.1	19.2	19.3	17.3	17.1	-1.9	-4.0	-1.1	-0.2
Singapore		30.3	22.4			18.8	15.7			10.0	6.7	
Thailand	15.5	15.1	17.7	17.2	18.2	17.3	16.3	19.2	-2.8	-2.2	1.1	-1.7
Timor-Leste			157.8	261.3			25.0	39.1			129.7	220.6
Viet Nam	19.6	20.1	26.8	24.9	20.3	22.6	27.5	28.1	-1.6	-4.3	-1.8	-5.4
<b>South and South-West Asia</b>		<b>10.4</b>	<b>11.3</b>	<b>12.4</b>		<b>16.1</b>	<b>15.0</b>	<b>15.8</b>		<b>-5.6</b>	<b>-3.5</b>	<b>-3.3</b>
Afghanistan		0.4	8.3			2.8	10.9					
Bangladesh	9.5	8.5	10.8	10.6	12.9	14.5	14.7	14.3	-2.1	-4.5	-3.3	-3.3
Bhutan	20.7	22.8	17.0		30.3	41.4	32.2		0.9	-3.8	-0.8	
India	9.5	9.8	10.6	12.1	14.6	15.5	14.1	15.1	-5.1	-5.7	-3.4	-3.1
Iran (Islamic Rep. of)												
Maldives	27.8	30.0	44.6	49.4	33.3	37.3	59.6	66.9	-1.9	-4.4	-6.7	-7.9
Nepal	10.2	10.5	10.8	11.7	17.3	16.3	14.5	16.0	-5.5	-4.3	-1.6	-2.0
Pakistan	16.0	13.4	14.3	14.9	23.7	18.9	18.7	19.3	-7.6	-5.4	-3.7	-4.0
Sri Lanka	16.7	16.4	16.3	15.8	24.3	25.0	24.2	23.2	-8.2	-9.3	-7.0	-6.9
Turkey												
<b>North and Central Asia</b>												
Armenia	16.0	15.9	16.0	17.9	20.0	20.1	17.4	17.4	-3.8	-4.9	-1.5	0.1
Azerbaijan	13.5	14.7	20.6	22.4	15.4	16.2	20.2	22.6	-1.8	-1.0	0.4	-0.2
Georgia	14.7	14.9	30.8	33.9	22.2	18.6	28.6	33.6	-7.6	-3.9	3.4	0.8
Kazakhstan	17.5	22.9	22.9		20.3	22.2	21.1		-3.9	-0.1	0.8	
Kyrgyzstan	17.8	14.2	21.8	24.5	22.0	18.0	22.4	25.7	-3.0	-2.0	-0.2	0.1
Russian Federation												
Tajikistan	11.2	14.1	19.3	28.6	14.2	14.7	19.0	27.1	-2.7	-0.6	0.5	1.7
Turkmenistan	22.0	23.5	22.7		24.6	23.9	16.8		-2.6	-0.3	5.9	
Uzbekistan	31.1	28.0	19.5		33.1	28.9	20.8		-2.0	-1.0	-1.3	
<b>Pacific</b>	<b>25.1</b>	<b>26.9</b>	<b>28.4</b>	<b>26.6</b>	<b>25.2</b>	<b>25.2</b>	<b>26.3</b>	<b>25.0</b>	<b>0.0</b>	<b>1.8</b>	<b>2.2</b>	<b>1.6</b>
Australia	23.5	25.9	26.9	26.6	23.5	24.0	25.2	24.9	0.0	1.8	1.7	1.6
American Samoa												
Cook Islands	31.6	30.6	28.5	28.6	41.3	35.2	34.2	32.4	-2.5	-1.8	2.1	3.6
Fiji	34.6	25.4	25.4		35.6	30.2	29.5		-0.9	-4.8	-4.0	
French Polynesia												
Guam												
Kiribati	169.1	136.5	129.3		118.0	126.4	204.5		99.7	59.6	26.0	
Marshall Islands	23.3	22.6	25.2	24.1	52.7	60.4	64.9	67.0	14.1	8.4	1.0	-0.7
Micronesia (F.S.)	27.5	24.2	23.1		77.9	72.2	64.5		-3.5	-3.7	-5.5	
Nauru												
New Caledonia												
New Zealand	35.7	35.0	39.0		35.4	32.9	33.1		0.4	2.1	5.9	
Niue												
Northern Mariana Is.												
Palau		24.3	26.4	23.1	55.1	70.6	64.4	63.3		-15.1	-1.2	-7.5
Papua New Guinea	24.1	23.3	31.7	33.9	27.3	29.8	33.9	35.3	-1.8	-1.8	3.1	2.5
Samoa	26.4	25.5	25.9	28.4	32.4	31.1	29.4	32.9	2.0	-0.7	0.3	1.1
Solomon Islands	34.2	21.6	31.8	31.8	33.8	31.6	39.5	36.3	3.0	-0.6	-4.0	-1.1
Tonga	28.0	27.1	30.6	30.3	33.0	28.5	34.7	31.2	-2.4	-0.4	1.5	1.5
Tuvalu	99.5	243.2	47.4	48.7	96.4	210.2	73.7	74.3	19.1	-2.2	18.7	-14.3
Vanuatu	20.6	20.9	20.0		28.4	29.0	20.6		-9.4	-7.0	1.2	
<b>Asia and the Pacific</b>	<b>13.3</b>	<b>14.2</b>	<b>17.7</b>	<b>17.3</b>	<b>20.3</b>	<b>18.3</b>	<b>18.2</b>	<b>18.1</b>	<b>-7.2</b>	<b>-4.3</b>	<b>-0.6</b>	<b>-0.9</b>
LLDC	20.1	20.3	20.5		23.4	21.9	19.9		-3.5	-1.4	0.4	
LDC	9.9	8.7	11.9	12.8	13.5	13.9	15.4	15.8	-2.1	-3.7	-2.3	-1.8
ASEAN	17.1	18.2	20.0	18.7	19.4	18.6	19.6	20.4	-2.0	-0.7	0.2	-1.8
ECO												
SAARC	10.6	10.4	11.3	12.4	16.1	16.1	15.0	15.8	-5.3	-5.6	-3.5	-3.3
Central Asia	20.9	22.3	22.2		23.8	23.0	20.9		-3.3	-1.0	0.7	
Pacific island dev. econ.												
Low-income	15.8	13.9	16.3	16.5	20.6	18.4	19.6	20.4	-4.4	-4.2	-2.8	-3.8
Middle-income	12.4	13.3	17.0	18.5	15.4	16.7	18.3	19.0	-3.0	-3.4	-1.3	-0.5
High-income	13.6	14.6	18.2		22.1	18.9	18.1		-8.9	-4.7	-0.1	
<b>Other world regions</b>												
Africa												
Europe												
Latin America & Carib.												
North America												
Other countries/areas												
<b>World</b>												

<sup>1</sup> Data from national source.



## 23 Inflation and interest rates

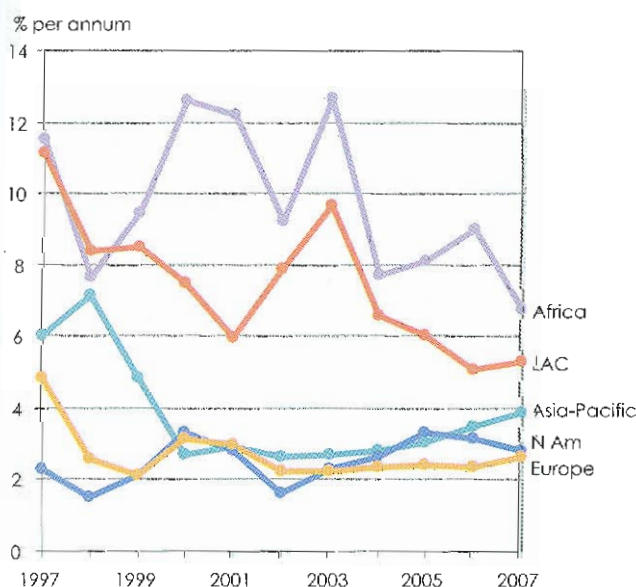
**Inflation accelerated further in 2007, as a result of rising prices for food and energy which had a significant effect on household expenditure. Some countries moderated the impact on consumers through price controls and subsidies.**

### Inflation

Between 2006 and 2007, average inflation in Asia and the Pacific rose from 3.5 to 3.9 per cent. This was slightly higher than in Europe at 2.7 per cent and in North America at 2.8 per cent, but lower than in Latin America and the Caribbean, at 5.3 per cent, and in Africa, at 6.7 per cent, or 41.8 per cent if Zimbabwe is included.

**Figure 23.1**

**Inflation by world region, 1997-2007**



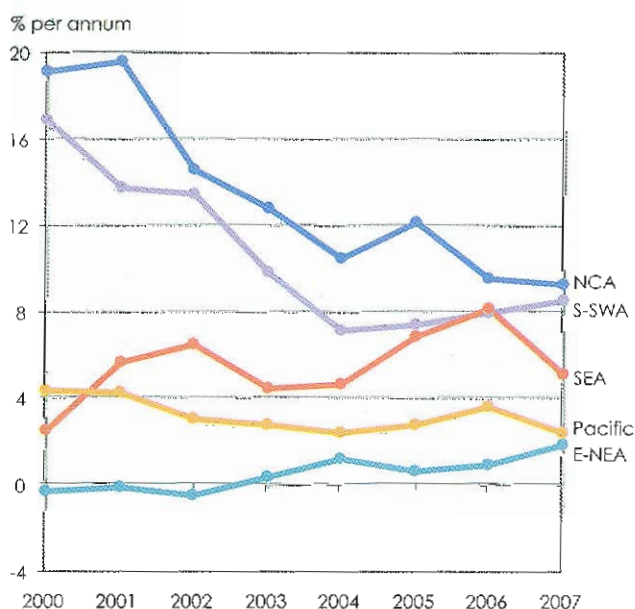
Inflation has been rising since 2002 but although the 2007 rate was the highest since 1999 it was still significantly lower than the average during most of the 1990s. In early 1990s, the situation was worst in the CIS countries which suffered from hyperinflation, culminating in 1993 when the average for Asia and the Pacific reached a record 51.1 per cent.

Among the subregions, the rate in 2007 was lowest in East and North-East Asia at 1.7 per cent, though this was double the rate of the previous year and the highest level since 1997 – due mainly to a substantial rise in the Chinese consumer price index (CPI), from 1.5 to 4.8 per cent. Mongolia and Republic of Korea also recorded significant increases in their CPIs. In South and South-West Asia average inflation increased to 8.5 per cent, the highest rate since 2003 and an increase of 0.6 percentage points from 2006. In India and the Islamic Republic of Iran inflation reached levels not seen since the 1990s.

In South-East Asia, on the other hand, average inflation fell in 2007 to 5.0 per cent, the lowest rate since 2004, as Indonesia, the Philippines and Thailand all recorded significant falls in consumer prices. Inflation also came down in North and Central Asia, to 9.2 per cent in 2007, a decrease of 0.3 per cent from 2006 and the lowest inflation rate since the beginning of the available series. This

**Figure 23.2**

**Inflation in selected Asia-Pacific groupings, 2000-2007**





## 23. Inflation and interest rates

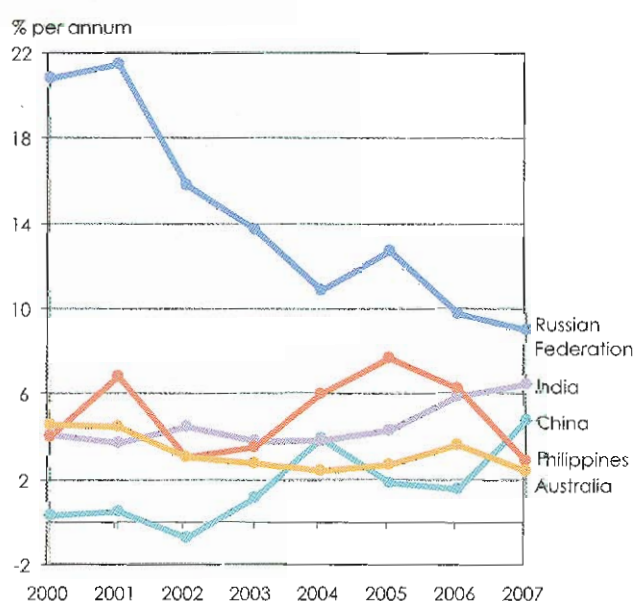
reflected a drop in the Russian Federation to 9.0 per cent, the lowest rate since 1993. Inflation also fell in the Pacific, to 2.3 per cent in 2007, the lowest rate since 1999, as both Australia and New Zealand recorded falls in consumer prices.

This *Yearbook* includes data only to 2007, so it does not reflect the full impact of peaking food and oil prices. Their impact on inflation differs substantially from country to country depending on the interplay between subsidies, price regulations, exchange rates and the varying proportions of income spent on food and energy.

Throughout 2007, a number of countries continued subsidizing or regulating oil prices – as in India, Indonesia, Malaysia, Thailand, and Viet Nam. Similarly some countries either subsidized or regulated prices for food. To some extent the global rises in prices of energy and food, traded in US dollars, were offset by movements in exchange rates, since during 2007 most currencies in Asia and the Pacific appreciated against the dollar. Generally people in the poorer countries devote a higher share of their household budgets to food and energy than those in the richer countries and so are harder hit by price increases.

**Figure 23.3**

**Inflation in selected Asia-Pacific countries, 2000-2007**



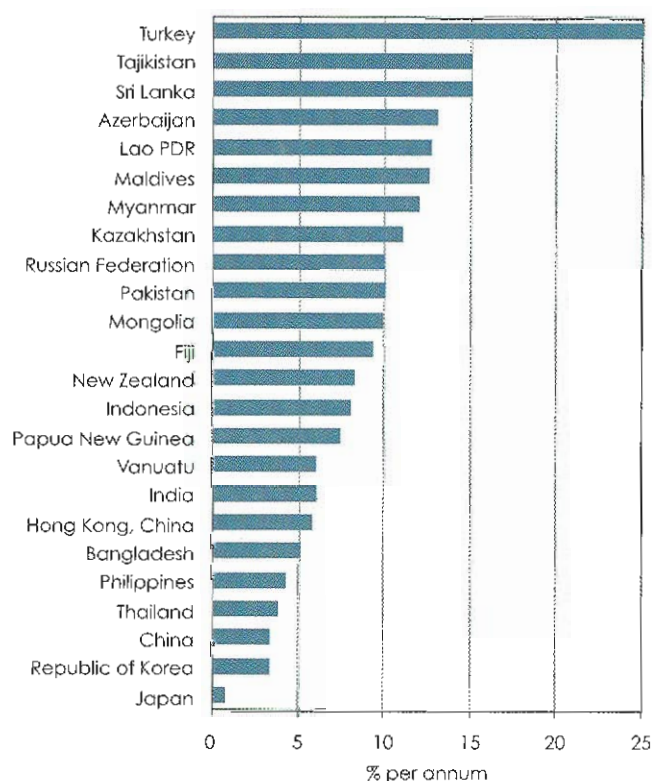
Many central banks consider it crucial to monitor and control inflation. They thus set strict inflation targets – rates they see as optimal for their economies; when the actual or forecast inflation rates move outside these brackets they take corrective or preventive measures.

## Interest rates

One of the main tools for central banks is the discount rate. During 2007 when making their monetary policy decisions central banks in Asia and the Pacific had to take a number of issues into account – including rising crude oil and food prices, increasing money supplies, overheating or sluggish economies, and expansionary government fiscal policies. They also had to consider the depreciation of the US dollar which partly offset the increases in the costs of imported crude oil and food products, but also significantly affected the dynamics of exports and imports.

**Figure 23.4**

**Central bank discount rate, selected Asian and Pacific economies, 2007**

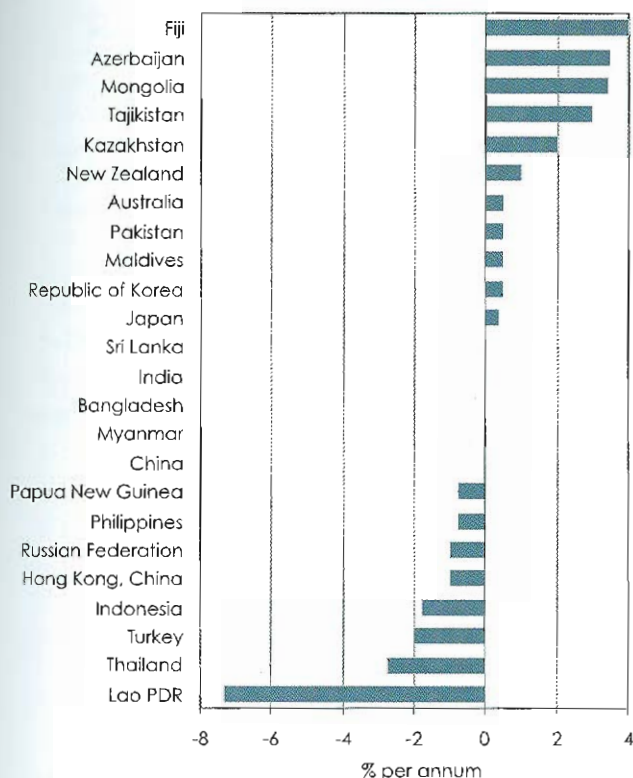


Across the Asia-Pacific region applied interest rates vary considerably, reflecting the different economic realities. The rate in 2007 was lowest in Japan, at 0.8 per cent which was the lowest interest rate among the major economies – though this was actually Japan's highest rate in over a decade. Other countries have much higher rates. In Mongolia, for example, in 2007 the central bank, on the other hand, took drastic measures to contain rising inflation and a runaway economy, by almost tripling its discount rate. The People's Bank of China maintained its discount rate unchanged at 3.3 per cent, but the government took other measures to



Figure 23.5

Central bank discount rates, difference between 2007 and 2006, selected Asia-Pacific countries



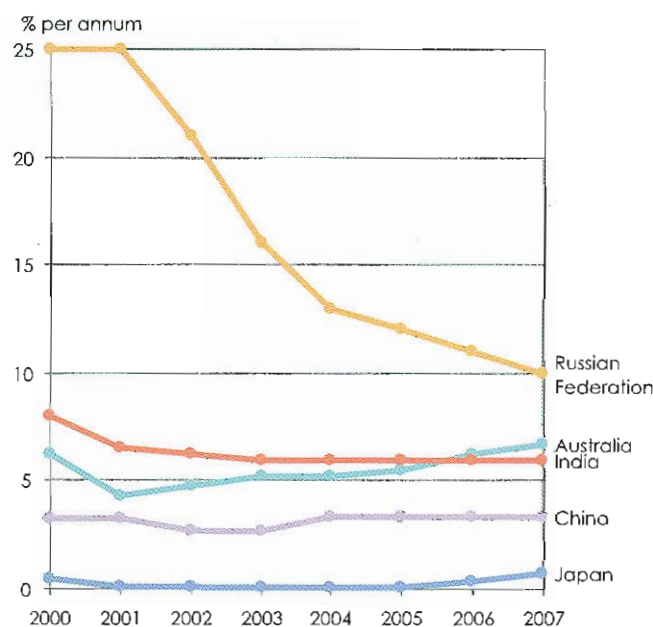
control inflation – repeatedly raising the reserve requirement ratio and the benchmark rate at which banks can lend to their customers.

Some central banks in South-East Asia reduced their discount rates. The Bank of Thailand, for instance reduced its benchmark interest rate five times, from 6.5 per cent in 2006 to 3.8 per cent in 2007. The main factors contributing to this decision were sluggish consumer spending and low consumer confidence following the 2006 coup during a period of low inflationary pressure. The reductions in the Philippines and Indonesia were somewhat smaller. In the South and South-West Asia region, most central banks did not significantly change their discount rates.

In Azerbaijan and Kazakhstan, on the other hand, policy was moving in the other direction. Both countries recorded significant financial inflows related to oil revenues which resulted in increased money supply and inflationary pressures. In response, Azerbaijan in 2007 increased the discount rate by 3.5 percentage points to 11.0 per cent, and Kazakhstan by 2.0 percentage points to 11.0 per cent. The direction was the same in Australia, New Zealand and Fiji, which all increased their discount rates. Australia and New Zealand with strong economic growth, tight labour markets, and capacity constraints had some of the highest interest rates in the developed economies.

Figure 23.6

Central bank discount rate of selected countries, 2000-2007



## Exchange rates

Movements in interest rates are linked to movements in exchange rates. But the relationship is not always direct because the exchange rate is also influenced by many other factors including perceptions about the country's economic future, economic growth, international trade and in particular the current account deficit.

For commodities such as crude oil, iron and wheat the standard unit of currency in international markets continues to be the dollar. Additionally the dollar is still a major reserve currency. China, for example, at the beginning of 2008 held \$1.7 trillion in foreign exchange while Japan held \$1.0 trillion. However, in recent years the dollar has lost some of its dominance as the world's top reserve currency to other currencies, in particular the euro. There have also been extensive international discussions of the dollar's role as the standard unit of currency in international markets.

As can be seen in figures 23.7 and 23.8, since 2001 the dollar has steadily depreciated against most other major currencies. This is due to a combination of economic and other factors, including large current account deficits, interest rate movements and property market turmoil. During 2001-2007, the dollar depreciated against the Euro (35 per cent), the Swiss franc (29 per cent), the pound (28 per cent), the Australian dollar (38 per cent), the New Zealand dollar (43 per cent), the Russian rouble (12 per cent), the Thai baht (22 per cent),



23. Inflation and interest rates

the Indian rupee (13 per cent) and the Japanese yen (3 per cent). Furthermore, during the same period the government of China allowed the Yuan to appreciate against the dollar by 8 per cent. The dollar did appreciate sharply, however, during the latter half of 2008, though this is not reflected in the tables and charts in this *Yearbook*.

Figure 23.7

Indexed exchange rate of selected major currencies against the US dollar, 2001-2007

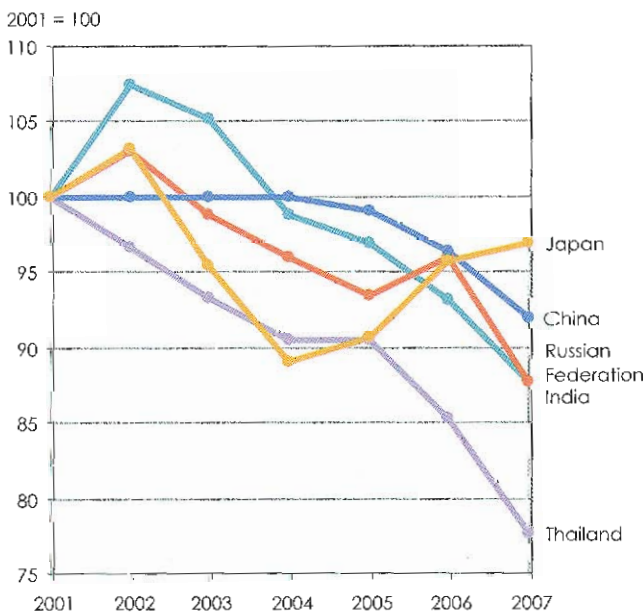
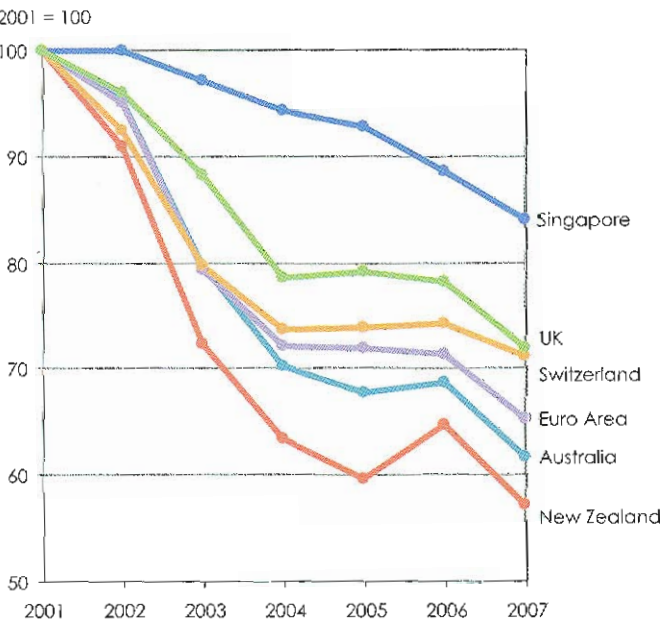
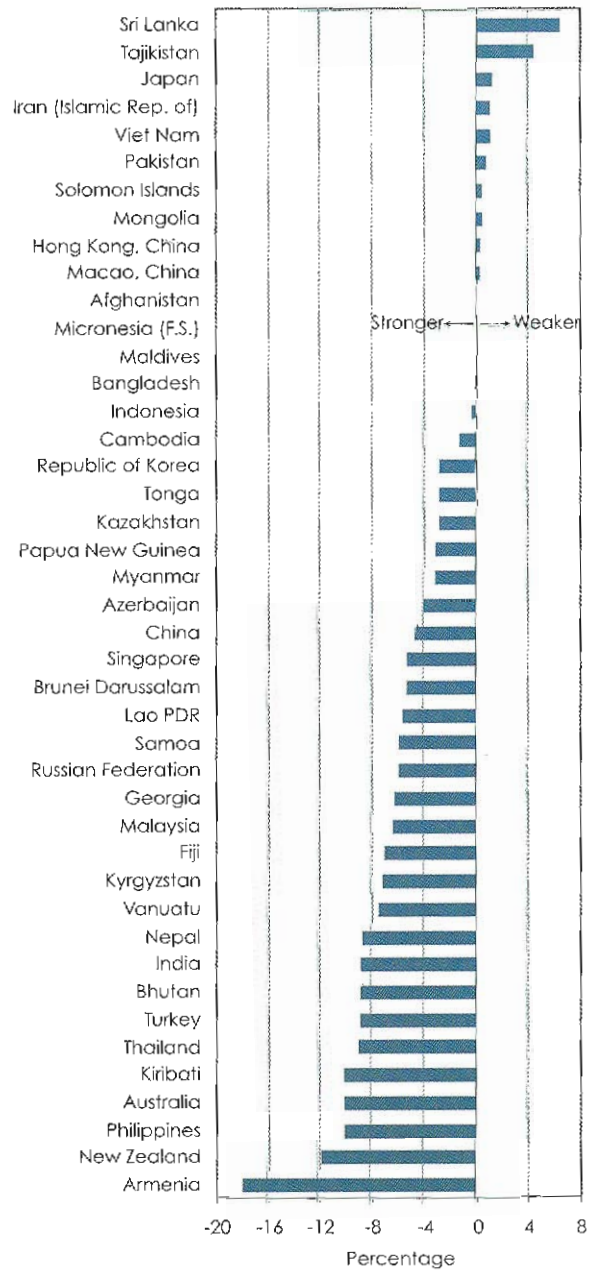


Figure 23.8

Currency movements against the US dollar, Asia and the Pacific, 2007



The falling dollar will have a significant effect on trade. The American public now finds Asian products more expensive, and also has less money to spend because of rising oil and food prices. As a result in 2007 total Asian imports fell. At the same time the weaker dollar has made American exports to the rest of the world more attractive.

The global economic environment changed dramatically during the latter half of 2008, affecting exchange rates and many other indicators. For an analysis of the latest developments, please refer to the Economic and Social Survey for Asia and the Pacific: <[http://unescap.org/pdd/publications/index\\_survey.asp](http://unescap.org/pdd/publications/index_survey.asp)>



**Inflation rate (% per annum)**

The annualized rate of increase of the level of prices, measured as a change in the consumer price index during a given period. **Aggregates:** Averages are calculated using the household consumption expenditure component of the GDP in US dollars as weight. **Source:** International Monetary Fund, International Financial Statistics (CD-ROM June 2008).

**Central bank discount rate (% per annum)**

The rate at which the central bank lends or discounts eligible paper for deposit money to banks, typically reported on an end-of-period basis. **Aggregates:** None. **Source:** International Monetary Fund, International Financial Statistics (CD-ROM June 2008).

**Average exchange rate (national currency per US dollar)**

The units of national currency required to purchase one US dollar, usually representing the period average. For some countries or areas, mid-point rates, or the average of buying and selling rates, are used. **Aggregates:** None. **Source:** International Monetary Fund, International Financial Statistics (CD-ROM June 2008).

**Exchange rate change over period (percentage)**

The average annual rate of change of the exchange rate of the national currency against the US dollar for the period indicated. A positive value means that the national currency has weakened, a negative value indicates a stronger national currency. **Aggregates:** None. **Source:** Calculated by ESCAP using data of indicator Average exchange rate (International Monetary Fund, International Financial Statistics (CD-ROM June 2008)).



## 23.1 Inflation and interest rates

	Inflation rate						Central bank discount rate					
	% per annum						% per annum					
	1990	1995	2000	2005	2006	2007	1990	1995	2000	2005	2006	2007
<b>East and North-East Asia</b>	3.6	2.1	-0.4	0.5	0.8	1.7						
China	3.1	16.9	0.3	1.8	1.5	4.8	7.9	10.4	3.2	3.3	3.3	3.3
DPR Korea												
Hong Kong, China	10.3	9.0	-3.8	0.9	2.1	2.0		6.3	8.0	5.8	6.8	5.8
Japan	3.1	-0.1	-0.7	-0.3	0.2	0.1	6.0	0.5	0.5	0.1	0.4	0.8
Macao, China	8.0	8.6	-1.6	4.4	5.1	5.6						
Mongolia		0.0	11.6	12.7	5.1	9.0		150.0	8.7	4.4	6.4	9.9
Republic of Korea	8.6	4.5	2.3	2.8	2.2	2.5	7.0	5.0	3.0	2.0	2.8	3.3
<b>South-East Asia</b>	7.4	6.9	2.4	6.8	8.0	5.0						
Brunei Darussalam												
Cambodia		1.1	-0.8	5.7	4.7	5.9						
Indonesia	7.8	9.4	3.7	10.5	13.1	6.4	18.8	14.0	14.5	12.8	9.8	8.0
Lao PDR	35.6	19.6	25.1	7.2	6.8	4.5		32.1	35.2	20.0	20.0	12.7
Malaysia	2.6	3.5	1.5	3.0	3.6	2.0						
Myanmar	17.6	25.2	-0.1	9.4	20.0	35.0		12.5	10.0	10.0	12.0	12.0
Philippines	12.7	6.7	4.0	7.6	6.2	2.8	14.0	10.8	13.8	5.7	5.0	4.3
Singapore	3.5	1.7	1.4	0.4	1.0	2.1						
Thailand	5.9	5.8	1.6	4.5	4.6	2.2	12.0	10.5	4.0	5.5	6.5	3.8
Timor-Leste				1.1	3.9	10.3						
Viet Nam			-1.7	8.3	7.4	8.9			6.0	5.0	5.0	
<b>South and South-West Asia</b>	20.6	32.6	16.9	7.3	7.9	8.5						
Afghanistan												
Bangladesh	6.1	10.2	2.2	7.0	6.8	9.1	9.8	6.0	7.0	5.0	5.0	5.0
Bhutan	10.0	9.5	4.0	5.3	5.0	5.2						
India	9.0	10.2	4.0	4.2	5.8	6.4	10.0	12.0	8.0	6.0	6.0	6.0
Iran (Islamic Rep. of)	7.6	49.7	14.5	13.4	11.9	17.2						
Maldives	3.6	5.5	-1.2	1.3	0.3	7.4				18.0	12.0	12.5
Nepal	8.2	7.6	2.5	6.8	7.6	6.1	11.0	11.0	7.5	6.0	6.3	
Pakistan	9.1	12.3	4.4	9.1	7.9	7.6	10.0	17.0	13.0	9.0	9.5	10.0
Sri Lanka	21.5	7.7	6.2	11.6	10.0	15.8	15.0	17.0	25.0	15.0	15.0	15.0
Turkey	60.3	88.1	54.9	10.1	10.5	8.8	45.0	50.0	60.0	23.0	27.0	25.0
<b>North and Central Asia</b>		198.1	19.1	12.1	9.5	9.2						
Armenia		176.0	-0.8	0.6	2.9	4.4		77.8				
Azerbaijan		411.7	1.9	11.6	8.3	16.7		80.0	10.0	9.0	9.5	13.0
Georgia		162.7	4.1	8.2	9.2	9.2						
Kazakhstan		176.2	13.2	7.6	8.6	10.8		52.5	14.0	8.0	9.0	11.0
Kyrgyzstan			18.7	4.4	5.6	10.2						
Russian Federation		197.5	20.8	12.7	9.7	9.0		160.0	25.0	12.0	11.0	10.0
Tajikistan									20.6	9.0	12.0	15.0
Turkmenistan												
Uzbekistan												
<b>Pacific</b>	7.1	4.6	4.3	2.7	3.5	2.3						
Australia	7.3	4.6	4.5	2.7	3.5	2.3	15.2	5.8	6.2	5.5	6.3	6.8
American Samoa												
Cook Islands												
Fiji	8.2	2.2	1.1	2.4	2.5	4.8	8.0	6.0	8.0	2.8	5.3	9.3
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	5.5	3.8	2.6	3.0	3.4	2.4	13.3	9.8	6.5	7.3	7.3	8.3
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea	7.0	17.3	15.6	1.8	2.4	0.9	9.3	18.0	9.8	9.7	8.1	7.4
Samoa	15.2	-2.9	1.0	1.8	3.7	5.6						
Solomon Islands	8.7	9.6	7.9	7.3	11.2	7.7						
Tonga	9.7	1.5	6.3	8.3	6.4	5.9						
Tuvalu												
Vanuatu	4.8	2.2	2.5	1.2	2.0	4.0			7.0	6.3	6.0	6.0
<b>Asia and the Pacific</b>	6.8	14.7	2.7	3.0	3.5	3.9						
LLDC												
LDC	8.4	11.6	2.5	7.1	8.6	12.9						
ASEAN	7.4	6.9	2.4	6.8	8.1	5.0						
ECO	35.2	70.4	33.7	10.4	10.1	10.6						
SAARC	9.0	10.5	3.9	5.4	6.3	7.0						
Central Asia				7.4	8.0	10.9						
Pacific island dev. econ.												
Low-income	8.7	12.2	2.9	8.2	8.0	9.5						
Middle-income	14.1	53.0	9.1	6.2	6.1	6.7						
High-income	4.0	0.8	-0.1	0.5	1.0	0.9						
<b>Other world regions</b>												
Africa	17.5	34.5	12.6	8.1	9.0	41.8						
Europe	11.6	6.7	3.2	2.4	2.4	2.7						
Latin America & Carib.	1 725.3	39.9	7.5	6.0	5.1	5.3						
North America	5.3	2.8	3.3	3.3	3.1	2.8						
Other countries/areas	10.1	7.7	0.2	2.7	4.2	3.6						
<b>World</b>	29.3	15.3	4.3	3.6	3.5	3.8						



## 23.2 Exchange rates

	Average exchange rate						Exchange rate change over period				
	National currency per US dollar						Percentage				
	1990	1995	2000	2005	2006	2007	90-95	95-00	00-05	00-07	2007
<b>East and North-East Asia</b>											
China	4.78	8.35	8.28	8.19	7.97	7.61	74.6	-0.9	-1.0	-8.1	-4.6
DPR Korea											
Hong Kong, China	7.79	7.74	7.79	7.78	7.77	7.80	-0.7	0.7	-0.2	0.1	0.4
Japan	144.79	94.06	107.77	110.22	116.30	117.75	-35.0	14.6	2.3	9.3	1.3
Macao, China	8.02	7.97	8.03	8.01	8.00	8.04	-0.7	0.7	-0.2	0.1	0.4
Mongolia	8.01	448.61	1 076.67	1 205.22	1 165.37	1 170.96	5 500.7	140.0	11.9	8.8	0.5
Republic of Korea	707.76	771.27	1 130.96	1 024.12	954.79	929.26	9.0	46.6	-9.4	-17.8	-2.7
<b>South-East Asia</b>											
Brunei Darussalam	1.81	1.42	1.72	1.66	1.59	1.51	-21.8	21.6	-3.5	-12.6	-5.2
Cambodia	426.25	2 450.83	3 840.75	4 092.50	4 103.25	4 056.17	475.0	56.7	6.6	5.6	-1.1
Indonesia	1 842.81	2 248.61	8 421.78	9 704.74	9 159.32	9 143.36	22.0	274.5	15.2	8.6	-0.2
Lao PDR	707.75	804.69	7 887.64	10 655.20	10 159.90	9 603.16	13.7	880.2	35.1	21.7	-5.5
Malaysia	2.70	2.50	3.80	3.79	3.67	3.44	-7.4	51.7	-0.3	-9.5	-6.3
Myanmar	6.28	5.61	6.43	5.76	5.78	5.61	-10.6	14.5	-10.3	-12.7	-3.0
Philippines	24.31	25.71	44.19	55.09	51.31	46.15	5.8	71.9	24.6	4.4	-10.1
Singapore	1.81	1.42	1.72	1.66	1.59	1.51	-21.8	21.6	-3.5	-12.6	-5.2
Thailand	25.59	24.92	40.11	40.22	37.88	34.52	-2.6	61.0	0.3	-13.9	-8.9
Timor-Leste											
Viet Nam	6 482.80	11 038.30	14 167.70	15 858.90	15 994.30	16 178.90	70.3	28.4	11.9	14.2	1.2
<b>South and South-West Asia</b>											
Afghanistan	0.05	0.83	61.63	49.49	49.93	49.96	1 546.9	7 295.5	-19.7	-18.9	0.1
Bangladesh	34.57	40.28	52.14	64.33	68.93	68.87	16.5	29.5	23.4	32.1	-0.1
Bhutan	17.51	32.43	44.94	44.10	45.31	41.35	85.2	38.6	-1.9	-8.0	-8.7
India	17.50	32.43	44.94	44.10	45.31	41.35	85.3	38.6	-1.9	-8.0	-8.7
Iran (Islamic Rep. of)	68.10	1 747.93	1 764.43	8 963.96	9 170.94	9 281.15	2 466.9	0.9	408.0	426.0	1.2
Maldives	9.55	11.77	11.77	12.80	12.80	12.80	23.2	0.0	8.8	8.8	0.0
Nepal	29.37	51.89	71.09	71.37	72.76	66.42	76.7	37.0	0.4	-6.6	-8.7
Pakistan	21.71	31.64	53.65	59.51	60.27	60.74	45.8	69.5	10.9	13.2	0.8
Sri Lanka	40.06	51.25	77.01	100.50	103.91	110.62	27.9	50.2	30.5	43.7	6.5
Turkey	0.00	0.05	0.63	1.34	1.43	1.30	1 657.4	1 263.8	114.9	108.5	-8.8
<b>North and Central Asia</b>											
Armenia		405.91	539.53	457.69	416.04	342.08		32.9	-15.2	-36.6	-17.8
Azerbaijan		0.88	0.89	0.95	0.89	0.86		1.4	5.7	-4.1	-4.0
Georgia			1.98	1.81	1.78	1.67			-8.3	-15.5	-6.2
Kazakhstan		60.95	142.13	132.88	126.09	122.55		133.2	-6.5	-13.8	-2.8
Kyrgyzstan		10.82	47.70	41.01	40.15	37.32		340.8	-14.0	-21.8	-7.1
Russian Federation		4.56	28.13	28.28	27.19	25.58		517.0	0.6	-9.1	-5.9
Tajikistan		0.12	2.08	3.12	3.30	3.44		1 589.9	50.1	65.8	4.4
Turkmenistan		110.92	5 200.00					4 588.2			
Uzbekistan		29.78	236.61					694.7			
<b>Pacific</b>											
Australia	1.28	1.35	1.72	1.31	1.33	1.20	5.3	27.9	-24.1	-30.7	-10.0
American Samoa											
Cook Islands											
Fiji	1.48	1.41	2.13	1.69	1.73	1.61	-5.0	51.4	-20.6	-24.3	-7.0
French Polynesia											
Guam											
Kiribati	1.28	1.35	1.72	1.31	1.33	1.20	5.3	27.9	-24.1	-30.7	-10.0
Marshall Islands											
Micronesia (F.S.)	1.00	1.00	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0
Nauru											
New Caledonia											
New Zealand	1.68	1.52	2.20	1.42	1.54	1.36	-9.1	44.4	-35.5	-38.2	-11.8
Niue											
Northern Mariana Is.											
Palau											
Papua New Guinea	0.96	1.28	2.78	3.10	3.06	2.97	34.0	117.4	11.5	6.6	-3.0
Samoa	2.31	2.47	3.29	2.71	2.78	2.62	7.1	32.9	-17.5	-20.4	-5.9
Solomon Islands	2.53	3.41	5.09	7.53	7.61	7.65	34.7	49.4	48.0	50.4	0.6
Tonga	1.28	1.27	1.76	1.94	2.03	1.97	-0.7	38.4	10.5	12.1	-2.7
Tuvalu											
Vanuatu	117.06	112.11	137.64	109.25	110.64	102.44	-4.2	22.8	-20.6	-25.6	-7.4
<b>Asia and the Pacific</b>											
LLDC											
LDC											
ASEAN											
ECO											
SAARC											
Central Asia											
Pacific island dev. econ.											
Low-income											
Middle-income											
High-income											
<b>Other world regions</b>											
Africa											
Europe											
Latin America & Carib.											
North America											
Other countries/areas											
<b>World</b>											



# 24 Tourism

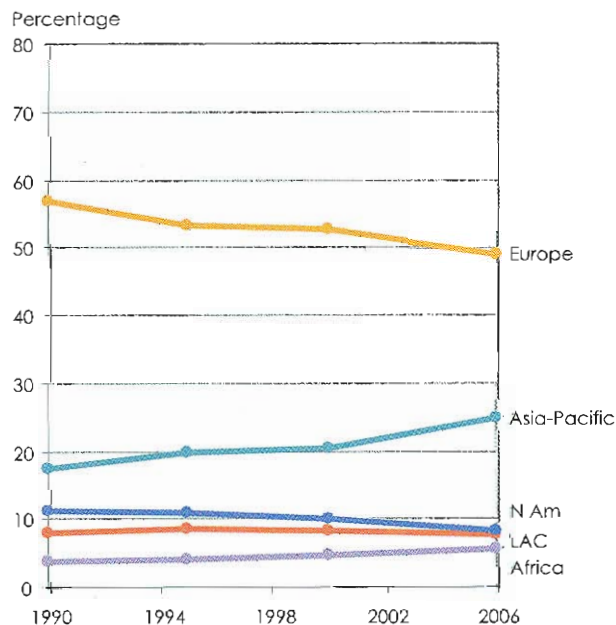
For the period up to 2006, tourism data presented a robust picture. But the situation is likely to become more difficult as a result of the current financial and economic crises.

Over the period 1990-2006, worldwide tourism arrivals grew on average by 3.5 per cent – and between 2005 and 2006 they increased by 4.7 per cent to reach a record high of 845 million. This success can be attributed to a number of factors: improvements in transportation, including the introduction of low-cost air carriers; the emergence of new markets such as China and India; and diversification into new market niches, such as cultural tourism and ecotourism.

For tourism, the Asia-Pacific region has outperformed the rest of the world. Between 1990 and 2006, its share of total arrivals increased from 17.4 to 24.7 per cent – 209.2 million arrivals. Arrivals also increased in Europe and the Americas but less rapidly, leading to declines in their shares of the market.

Figure 24.1

Shares in international tourist arrivals, global regions, 1990 to 2006



Within Asia and the Pacific, some of the strongest growth in 2006 was in South-East Asia, where total international arrivals increased by 9.2 per cent. Several destinations enjoyed growth of over 20 per cent, albeit in some cases from a low base – as in Cambodia, Lao People's Democratic Republic and Thailand.

In South and South-West Asia in 2006, total arrivals declined by 1.8 per cent. However, some countries in the region continued to thrive. India, for example, saw an increase of 16.4 per cent as a result of enhanced promotion and product development. The Maldives too has done well: the tourism sector rebounded strongly after a downturn following the 2004 tsunami, with growth in 2006 of 52.4 per cent, thanks also to increased air access and successful marketing campaigns.

Growth was strong in East and North-East Asia. Macao, China, for example, saw international tourist arrivals grow by 18.5 per cent, mainly due to the availability of new hotels and casinos as well as increased access to low-cost air carriers. Arrivals to China (+6.6 per cent) and Hong Kong, China (+7.1 per cent) also grew steadily in 2006, although at a slower pace than in the previous year. The Republic of Korea, also enjoyed growth, but only by 2.2 per cent – a result of its strong currency which made the destination less competitive. The Pacific developing economies averaged some 4.5 per cent annually during 1990-2006, but recently their performance has been mixed.

As a result of an ever-increasing number of arrivals many destinations have seen their tourism receipts growing substantially. Globally in 2006, international tourists spent \$670 billion, or \$408.5 billion more in absolute terms than in 1990, averaging a 6.0 per cent annual increase over the period. Almost half this revenue, \$326 billion, went to Europe, and almost one quarter, \$157 billion, to Asia and the Pacific. Between 1990 and 2006, the region increased its share of global tourism receipts from 16.3 to 23.5 per cent. As was the case for tourist arrivals, Europe and the Americas have been receiving lower shares.



Figure 24.2

International tourist arrivals, Asia and the Pacific, by region and by income group, 1990 and 2006

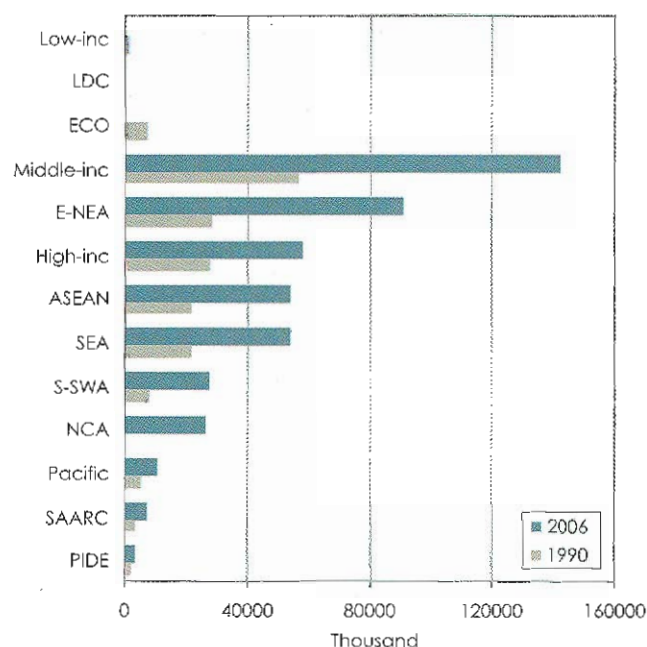
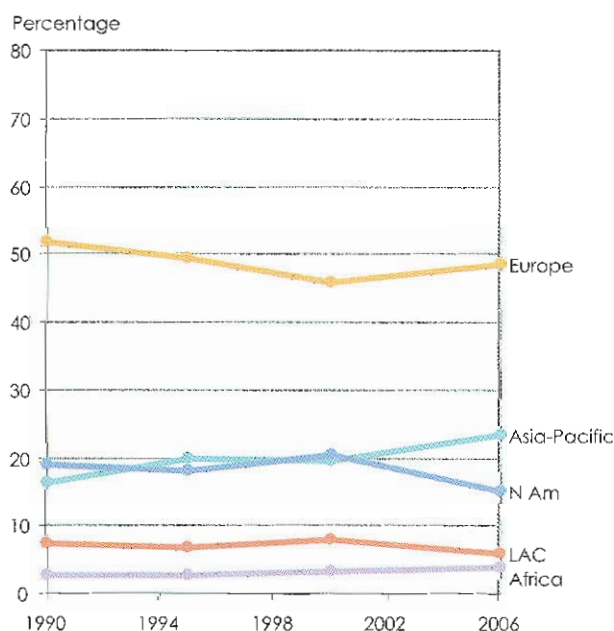


Figure 24.3

Market shares in international tourism receipts, by global region, 1990 to 2006



#### International tourist arrivals (thousands)

The number of inbound non-resident travellers received by any destination in a country. Only visitors who stay at least one night in a collective or private accommodation are included; in the country visited. Same-day visitors are not included. A person who makes several trips to a given country during a given period will be counted as a new arrival each time, as well as a person who travels through several countries on one trip is counted as a new arrival each time. **Aggregates:** Sum of individual country values.

In several Asia-Pacific destinations, tourism accounts for a substantial percentage of GDP. In Macao, China, for example, revenues from tourism in 2005 provided two thirds of GDP. Dependence on tourism is also high in many island States. The share of tourism in their GDP varied from 15 per cent (Fiji) to two thirds (Palau). Countries in the Greater Mekong Subregion are now reaping increasing benefits from tourism due to their natural and cultural resources and improving infrastructure. In 2005, tourism accounted for 13.3 per cent of GDP in Cambodia and 5.1 per cent in the Lao People's Democratic Republic.

In other countries, the share of tourism in GDP varied widely depending on the diversity of the economy. For example, over the last four years tourism contributed on average 3.5 per cent of GDP in South-East Asia, but only 1.7 per cent in South and South-West Asia.

As well as adding to foreign exchange earnings, the tourism industry also creates employment. The World Travel and Tourism Council estimated that in 2006 the tourism sector in the Asia-Pacific region contributed 8.9 per cent of total employment – about 140 million jobs. A large proportion of this was in China, where one person in ten works in a tourism-related industry.

In the Pacific, where tourism is often the leading industry, in 2006 the sector provided jobs for 1.9 million people, representing 14.5 per cent of total employment. In some Pacific islands the proportion is very high – 31.0 per cent of total employment in Fiji and 42.4 per cent in Vanuatu. Similarly, in the Maldives, where tourism is the economic mainstay, it accounted for 57.6 per cent of total employment. Other countries also have a significant share of their workforces in the tourism sector: 5.4 per cent in India; 10 per cent in both the Philippines and Thailand; and a significant 15.4 per cent in Cambodia.

Missing data have been imputed. **Source:** World Tourism Organization, Tourism statistics (online database, accessed in September 2007).

#### International tourism receipt (% of GDP)

The receipts earned by a destination country from inbound tourism resulting from expenditure made by visitors from abroad, on lodging, food and drinks, fuel, transport in the country, entertainment, shopping, etc. **Aggregates:** Averages are calculated using GDP in US dollars as weight. **Source:** World Tourism Organization, UNWTO World Tourism Barometer (online database, accessed on 15 October 2008).



## 24.1 Tourism

	International tourist arrivals					International tourism receipt				
	Thousands					% of GDP				
	1990	1995	2000	2005	2006	1990	1995	2000	2005	2006
<b>East and North-East Asia</b>	<b>28 268</b>	<b>40 481</b>	<b>55 790</b>	<b>84 048</b>	<b>90 608</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	<b>0.8</b>	<b>0.8</b>
China	10 484	20 034	31 229	46 809	49 913	0.5	1.2	1.4	1.3	1.2
DPR Korea	115					0.2				
Hong Kong, China			8 814	14 773	15 822	6.1	5.4	3.5	5.8	6.1
Japan	3 236	3 345	4 757	6 728	7 334	0.1	0.1	0.1	0.1	0.2
Macao, China	2 513	4 202	5 197	9 014	10 683	49.3	44.7	52.6	66.9	
Mongolia	147	108	137			0.3	1.5	3.3	7.7	
Republic of Korea	2 959	3 753	5 322	6 023	6 155	1.3	1.0	1.3	0.7	0.7
<b>South-East Asia</b>	<b>21 469</b>	<b>29 173</b>	<b>37 763</b>	<b>49 481</b>	<b>54 127</b>	<b>4.1</b>	<b>3.9</b>	<b>4.2</b>	<b>3.5</b>	<b>3.7</b>
Brunei Darussalam	377	498	984							
Cambodia	17	220	466	1 422	1 700		1.6	8.3	13.3	
Indonesia	2 178	4 324	5 064	5 002	4 871	1.7	2.4	3.0	1.6	1.2
Lao PDR	14	60	191	672	842	0.3	2.9	6.6	5.1	
Malaysia	7 446	7 469	10 222	16 431	17 547	3.6	4.3	5.3	6.2	6.7
Myanmar	21	117	208	232	264	0.2	1.9	2.2		
Philippines	1 025	1 760	1 992	2 623	2 843	2.9	1.5	2.8	2.3	3.0
Singapore	4 842	6 422	6 917	7 080	7 588	13.4	9.1	5.5	4.9	5.2
Thailand	5 299	6 952	9 579	11 567	13 882	5.1	4.8	6.1	5.4	6.5
Timor-Leste										
Viet Nam	250	1 351	2 140	3 468	3 606	1.3				
<b>South and South-West Asia</b>	<b>7 949</b>	<b>11 316</b>	<b>15 672</b>	<b>28 228</b>	<b>27 745</b>	<b>0.8</b>	<b>1.1</b>	<b>1.4</b>	<b>1.8</b>	<b>1.6</b>
Afghanistan										
Bangladesh	115	156	199			0.0	0.1	0.1	0.1	
Bhutan	2	5	8	14	17	0.7	1.7	2.2	2.3	2.6
India	1 707	2 124	2 649	3 919	4 447	0.5	0.7	0.7	0.9	1.0
Iran (Islamic Rep. of)	154	489	1 342			0.1	0.1	0.5		0.5
Maldives	195	315	467	395	602	41.4	52.9	51.4	38.2	
Nepal	255	363	464	375		1.6	3.6	2.5	1.5	1.3
Pakistan	424	378	557		898	0.3	0.1	0.1	0.1	0.2
Sri Lanka	298	403	400	549	560	1.6	1.7	1.5	1.8	1.5
Turkey	4 799	7 083	9 586	20 273	18 916	2.1	2.9	3.8	5.0	4.2
<b>North and Central Asia</b>				<b>25 856</b>	<b>26 177</b>		<b>1.0</b>	<b>1.3</b>	<b>0.8</b>	<b>0.8</b>
Armenia		12	45	319	381		0.1	2.0	2.8	
Azerbaijan		93	681	1 177		3.5	2.3	1.2	0.5	
Georgia		85	387	548				3.2	3.8	4.0
Kazakhstan			1 471				0.6	1.9	1.2	
Kyrgyzstan		36	59	315			0.3	1.1		
Russian Federation				19 940	20 199		1.1	1.3	0.7	0.8
Tajikistan			4							
Turkmenistan		218								
Uzbekistan		92	302					0.2		
<b>Pacific</b>	<b>5 173</b>	<b>8 106</b>	<b>9 237</b>	<b>10 509</b>	<b>10 557</b>	<b>2.0</b>	<b>2.8</b>	<b>3.0</b>	<b>2.9</b>	<b>2.8</b>
Australia	2 215	3 726	4 530	5 020	5 064	1.3	2.1	2.3	2.3	2.3
American Samoa	26	34	44							
Cook Islands	34	48	73	88	92	27.3	30.0	44.6	50.1	
Fiji	279	318	294	550	545	15.3	14.8	10.8	14.6	13.9
French Polynesia	132	172	252	208	222	5.8				
Guam	780	1 362	1 287	1 228	1 212					
Kiribati	3	4	5	3	3	3.9	5.2	6.4		
Marshall Islands	5	6	5		6		2.9	3.7		
Micronesia (F.S.)			21					6.9	7.2	
Nauru										
New Caledonia	87	86	110	101	100	3.7	3.0	3.3		
New Zealand	976	1 409	1 787	2 366	2 409	2.3	3.8	4.3	4.4	4.4
Niue	1	2	2		3					
Northern Mariana Is.	426	669	517	498	435					
Palau	33	53	58	86	86			44.2	67.1	
Papua New Guinea	41	42	58	69	78	1.2	0.5	0.6		
Samoa	48	68	88	102	116	17.9	17.5	17.7	18.1	
Solomon Islands	9	12			13	3.4	4.4	1.2	0.8	0.9
Tonga	21	29	35			6.7	5.9	4.5	5.1	
Tuvalu	1	1	1							
Vanuatu	35	44	58	62	68	25.5	18.5	22.9		
<b>Asia and the Pacific</b>	<b>85 313</b>	<b>111 530</b>	<b>142 073</b>	<b>198 122</b>	<b>209 214</b>	<b>0.8</b>	<b>0.9</b>	<b>1.0</b>	<b>1.3</b>	<b>1.3</b>
LLDC			3 580			0.7	0.9	1.4	1.2	0.9
LDC	715	1 365	2 167			0.6	1.3	1.8	1.8	1.6
ASEAN	21 469	29 173	37 763	49 481	54 127	4.1	3.9	4.2	3.5	3.7
ECO	7 291	9 864	14 220			1.1	1.3	2.0	2.6	2.1
SAARC	2 996	3 744	4 744	6 296	7 170	0.5	0.7	0.7	0.8	0.9
Central Asia		2 011	3 167			0.7	0.7	1.2	1.2	0.9
Pacific island dev. econ.	1 982	2 971	2 920	3 123	3 084	18.7	16.0	19.0	15.1	13.9
Low-income	1 393	3 056	4 995			0.3	0.4	0.5	0.5	0.5
Middle-income	56 527	73 965	96 528	135 732	142 082	1.1	1.7	1.9	1.7	1.6
High-income	27 357	34 458	40 474	54 023	58 008	0.7	0.6	0.6	0.9	1.0
<b>Other world regions</b>										
Africa	18 873	23 592	33 416			1.6	6.1	2.5	2.8	2.8
Europe		297 192	366 605	393 738	415 063	1.8	2.1	2.4	2.2	2.2
Latin America & Carib.	38 773	48 285	56 960	65 282		1.6	2.1	1.7	1.8	1.7
North America	55 007	60 809	71 197	68 300	69 627	0.8	1.5	0.9	0.7	0.7
Other countries/areas	12 508	17 115	25 865	36 754	37 745	6.0	0.9	4.7	3.4	3.0
<b>World</b>	<b>489 239</b>	<b>558 523</b>	<b>696 116</b>	<b>806 829</b>	<b>844 706</b>	<b>1.3</b>	<b>1.4</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>



# 25 Forests and protected areas

New methodologies for verifying carbon credits could promote multi-million dollar investments in reducing carbon emissions through sustainable forest management.

For the period 1990-2005, more than half of the countries in Asia and the Pacific for which data are available reported net losses in forest cover. However, for the region as a whole coverage declined by one tenth of a percentage point. Currently, only 30 per cent of the land area is covered by forest – one of the lowest proportions among the global regions.

The losses were greatest in Afghanistan, Indonesia, Nepal, Pakistan, the Philippines, and the Solomon Islands where, compared with 1990, forest cover was reduced by more than 20 per cent. Despite investments in forest management, for a majority of countries the loss continued in the 1990s, with the most significant acceleration in Cambodia and Malaysia.

Forests include both natural – primary, modified and semi-natural – forests and plantations. All types of forests provide important ecosystem services, but not all forests are equal.

A key indicator is the health of primary forests. Primary forests are being lost as a result of deforestation and conversion to other uses, as well as the opening up of some areas to low impact logging, or other logging practices and human activities. Natural events also play a part, including disasters and non-anthropogenic forest fires.

In 2005 of the world's 13.4 million square-kilometres of primary forests 6.9 per cent were in Asia and the Pacific. The most important regional stocks are in Indonesia, Papua New Guinea, China and Thailand. In each of these countries except China primary forests make up over 40 per cent of total forest area.

Over the period 1990 to 2005, as a result of many decades of effective forest protection, some countries, were able to report increases in their cover of primary forest – notably Japan, Turkey and

Figure 25.1

Annual change in forest area, Asia and the Pacific, 1990-2000 and 2000-2005

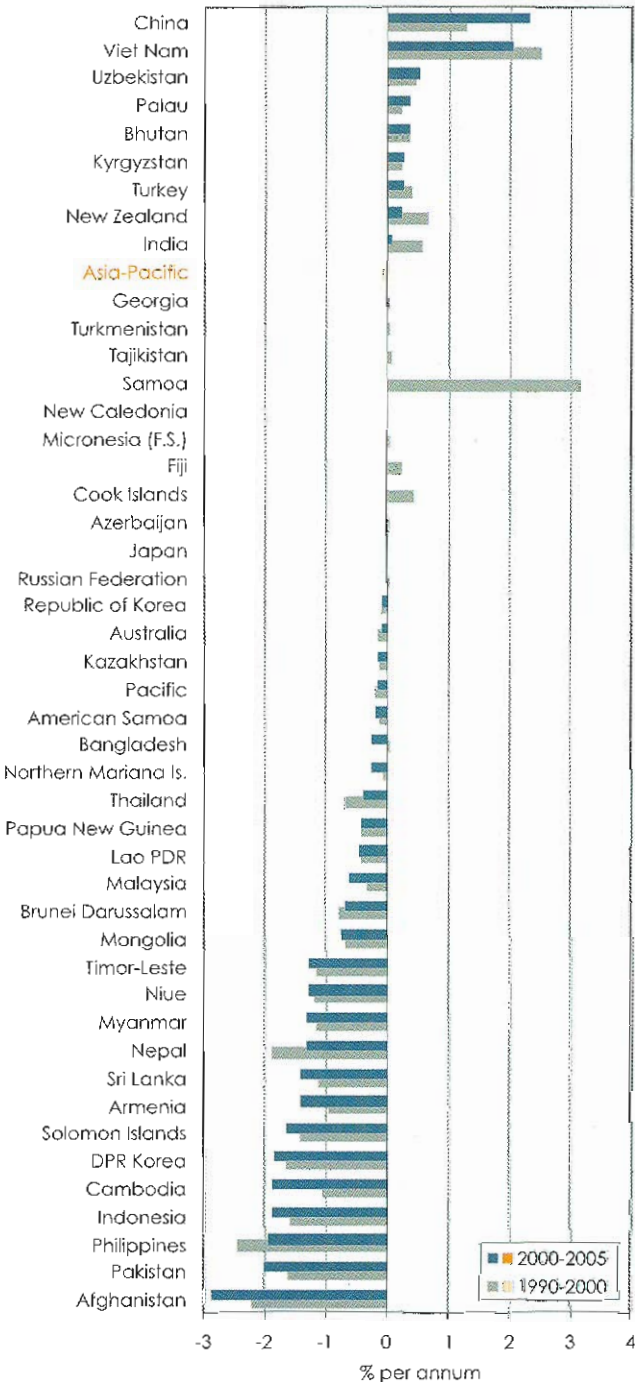
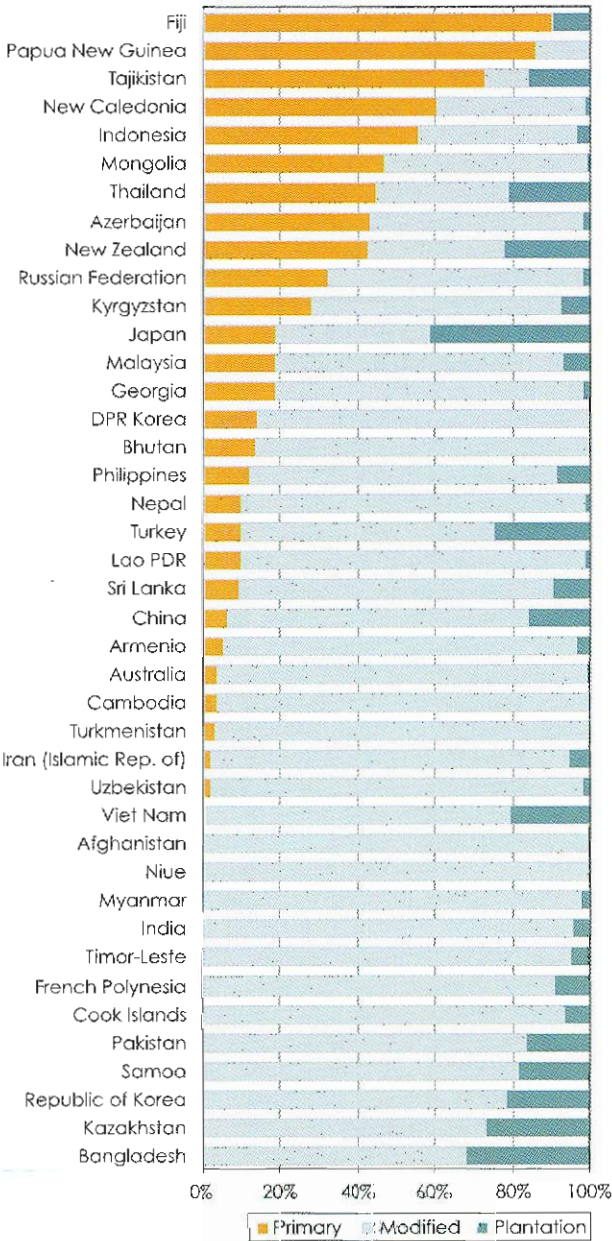




Figure 25.2

Proportion of primary, modified and plantation forest, Asia and the Pacific, 2005

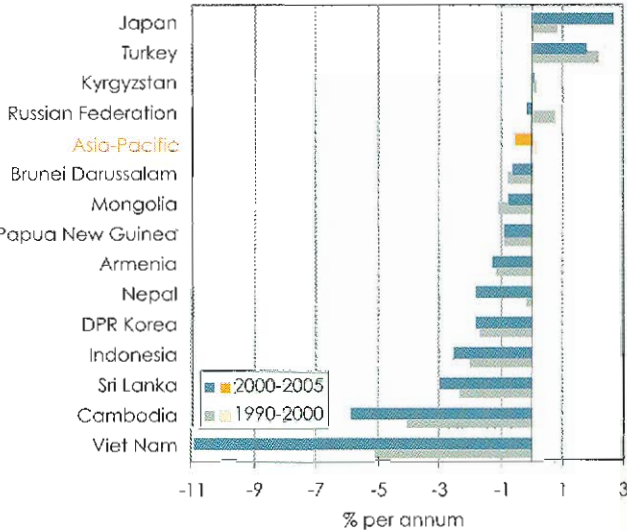


Kyrgyzstan. Of the Asia-Pacific countries or areas for which data are available just over half maintained their coverage unchanged. Others, including those with the fastest rates of reduction in the past, slowed or stabilized their rates of loss. But two countries accelerated their loss of cover between 1990-2000 and 2000-2005 – Viet Nam and Nepal. Viet Nam also has one of the region's lowest coverages – below 1 per cent.

For 2000-2005, the rates of loss of primary forests were fastest in Indonesia, Papua New Guinea, Mongolia, Cambodia, Viet Nam and the Democratic People's Republic of Korea. These countries accounted for 25 per cent of the world's total losses since 2000, and 46 per cent of the area lost since 1990.

Figure 25.3

Largest changes in primary forest cover, 1990-2000 and 2000-2005

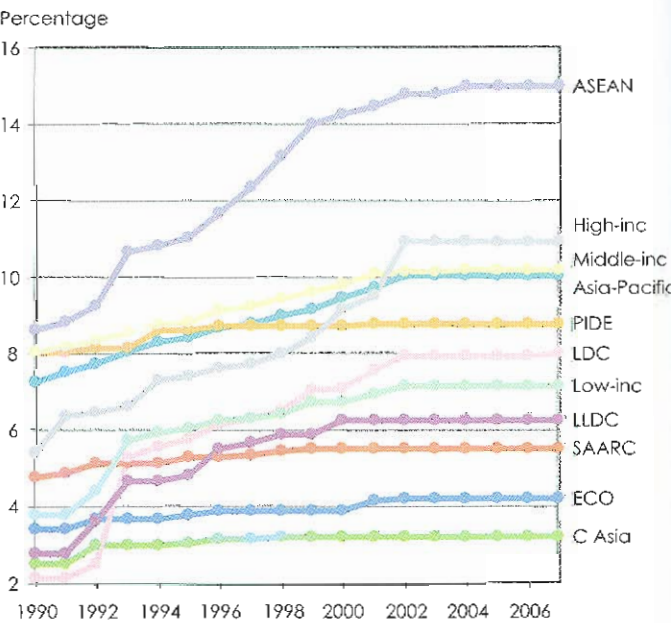


Protected areas

One of the best ways to maintain forests and other important ecological resources is to designate them as protected areas. In 2007, in Asia and the Pacific the terrestrial area designated as legally protected in law was around 10 per cent of total surface area, slightly lower than the global proportion. Nevertheless this represents an improvement. Between 1990 and 2007 the increase in terrestrial areas protected was some 3 per cent of the region's total surface area. Over this period, Asia and the Pacific accounted for 27 per cent of the

Figure 25.4

Ratio of protected terrestrial areas to surface area, 1990-2007



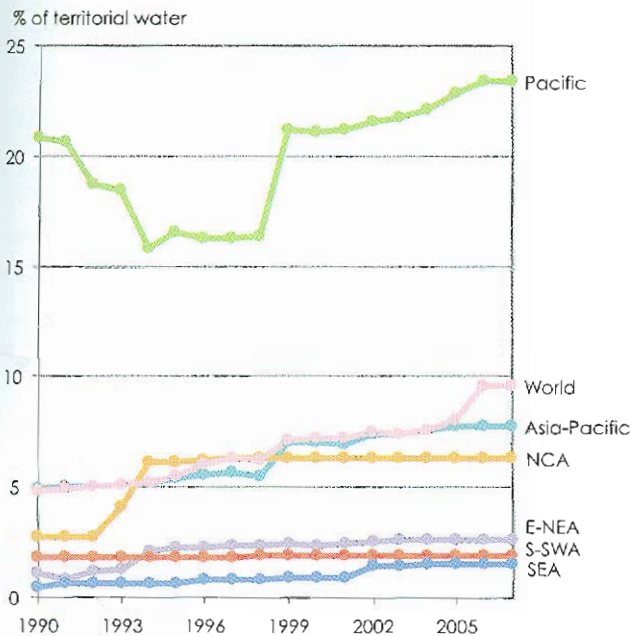


global expansion. Of the subregional groupings, protection is lowest in Central Asia and highest in the ASEAN countries. Of the countries and areas, Brunei Darussalam; Kiribati; Hong Kong, China; New Zealand; Bhutan; and Tonga led the way with 25 per cent or more of their total surface area protected.

Protection is also extended to the seas. In 1990, globally and also in the Asia-Pacific region just under five per cent of the marine surface area was legally protected. Since then, however, other regions have made more rapid progress. In 2007, while the proportion globally was 9.6 per cent, in the Asia-Pacific region it was only 7.8 per cent.

**Figure 25.5**

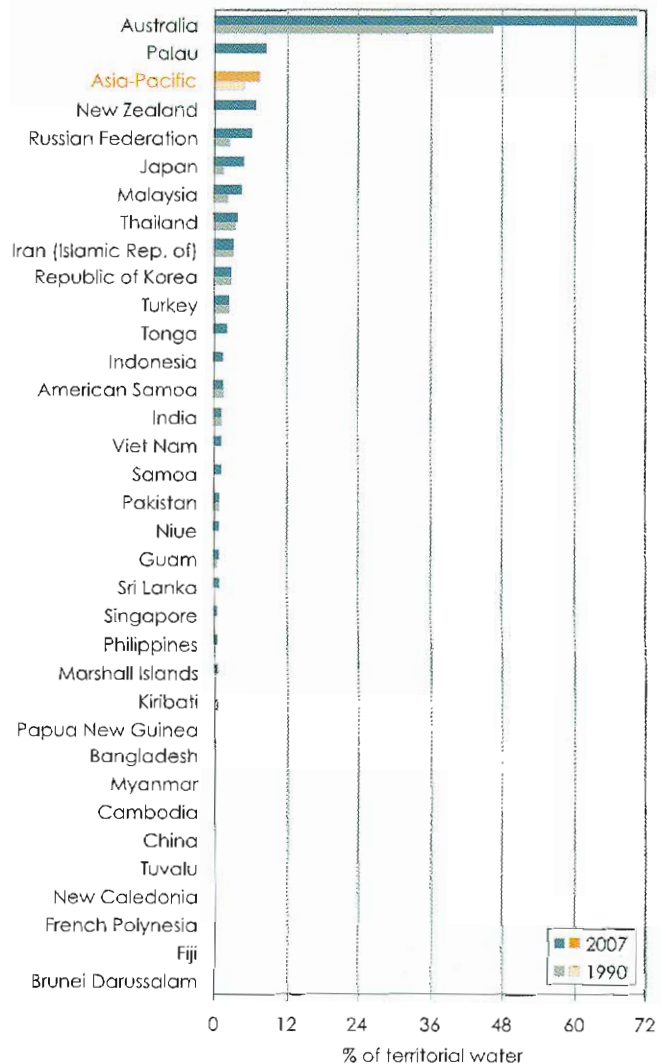
**Proportion of protected marine areas, 1990-2007**



In 2007, of the Asian-Pacific subregions, the Pacific led the way at 23 per cent, followed by South and South-East Asia. By contrast, only 0.1 per cent of waters in South and South-West Asia were protected. The leading countries were Australia, Kiribati, the Russian Federation and Indonesia. The greatest progress in expanding marine protected areas has been in the small island developing States, particularly Kiribati, and Australia.

**Figure 25.6**

**Proportion of protected marine areas, 1990 and 2007**





**Marine areas protected (square kilometres; % of territorial water)**

The overall surface area of protected marine areas as adopted by the International Union for Conservation of Nature. Covers any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment. Only protected areas that are nationally designated are included in this indicator. **Aggregates:** For marine areas protected (square kilometres): Sum of individual country values; for share in territorial waters (% of territorial waters): Averages are calculated using territorial waters as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed in August 2008).

**Terrestrial areas protected (square kilometres; % of surface area)**

The total surface (land and sea) area dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. Only protected areas that are nationally designated are included in this indicator. **Aggregates:** For terrestrial areas protected (square kilometres): Sum of individual country values; for share in surface area (% of surface area): Averages are calculated using total surface area as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed in August 2008), and Food and Agriculture Organization of the United Nations, Global Forest Resources Assessment (online database, accessed in July 2008).

**Forest area (square kilometres)**

The total area covered by forest. Forest land spans more than a half a hectare with trees higher than five metres and a canopy cover of more than ten per cent, or trees able to reach these thresholds in situ. **Aggregates:** Sum of individual country values. **Source:** Food and Agriculture Organization of the United Nations, Global Forest Resources Assessment (online database, accessed in July 2008).

**Forest area (% of land area)**

The proportion of land area covered by forest. See forest area. **Aggregates:** Averages are calculated using total land area as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed in August 2008), and Food and Agriculture Organization of the United Nations, Global Forest Resources Assessment (online database, accessed in July 2008).

**Growth rate of forest area (% per annum)**

The average rate of change in forest area, calculated as an arithmetic mean for the period indicated. **Aggregates:** Averages are calculated using sum of individual country values within each group of forest area. **Source:** Calculated by ESCAP using data from forest area (square kilometres).

**Forest, primary (square kilometres; % of total forest; change rate per annum)**

The total area covered by forest and other wooded land of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed. Includes areas where collection of non-wood forest products occurs, provided the human impact is small. Some trees may have been removed. **Aggregates:** For forest, primary (square kilometres): Sum of individual country values; for share in total forest area (% of total forest): Averages are calculated using total forest area as weight; for change rate (per cent per annum): Averages are calculated using sum of individual country values within each group of primary forest. **Source:** Food and Agriculture Organization of the United Nations, Global Forest Resources Assessment (online database, accessed in November 2008) for primary forest values in square kilometres, and calculated by ESCAP for share in total forest area and change rate per annum.

**Forest, modified and semi-natural (square kilometres)**

The total area covered by modified natural forests and semi-natural forests. Modified natural forests cover forests and other wooded lands of naturally regenerated native species where there are clearly visible indications of human activities. **Aggregates:** Sum of individual country values. **Source:** Food and Agriculture Organization of the United Nations, Global Forest Resources Assessment (online database, accessed in November 2008).

**Forest, productive and protection plantation (square kilometres)**

The total area covered by productive plantations and protection plantations. Productive plantation covers forest and other wooded land of introduced species and in some cases native species, established through planting or seeding mainly for production of wood or non-wood goods. Protection plantation covers forest and other wooded land of native or introduced species, established through planting or seeding mainly for provision of services, such as environmental protection, pest control and conservation of habitats to biological diversity. **Aggregates:** Sum of individual country values. **Source:** Food and Agriculture Organization of the United Nations, Global Forest Resources Assessment (online database, accessed in November 2008).



## 25.1 Protected areas

	Protected marine areas						Protected land areas					
	Square kilometres			% of territorial water			Square kilometres			% of surface area		
	1990	2000	2007	1990	2000	2007	1990	2000	2007	1990	2000	2007
<b>East and North-East Asia</b>	<b>10 657</b>	<b>23 896</b>	<b>26 021</b>	<b>1.1</b>	<b>2.4</b>	<b>2.6</b>	<b>1 247 293</b>	<b>1 614 266</b>	<b>1 731 830</b>	<b>10.6</b>	<b>13.7</b>	<b>14.7</b>
China	456	1 449	1 453	0.1	0.3	0.3	1 135 190	1 337 780	1 452 693	11.8	13.9	15.1
DPR Korea							3 159	3 159	3 159	2.6	2.6	2.6
Hong Kong, China	42	63	66				474	485	485	43.1	44.1	44.1
Japan	7 448	19 673	21 791	1.8	4.7	5.2	40 375	50 699	53 350	10.7	13.4	14.1
Macao, China												
Mongolia							63 899	217 912	217 912	4.1	13.9	13.9
Republic of Korea	2 711	2 711	2 711	3.2	3.2	3.2	4 196	4 231	4 231	4.2	4.3	4.3
<b>South-East Asia</b>	<b>28 528</b>	<b>50 250</b>	<b>87 778</b>	<b>0.5</b>	<b>0.9</b>	<b>1.5</b>	<b>385 558</b>	<b>638 799</b>	<b>673 026</b>	<b>8.6</b>	<b>14.2</b>	<b>15.0</b>
Brunei Darussalam	3	3	3	0.1	0.1	0.1	2 931	3 420	3 420	50.8	59.3	59.3
Cambodia		66	66	0.4	0.4			43 399	43 399	0.1	24.0	24.0
Indonesia	18 283	25 481	60 005	0.5	0.8	1.8	184 776	287 986	299 925	9.7	15.1	15.7
Lao PDR							1 783	37 545	37 545	0.8	15.9	15.9
Malaysia	3 605	6 741	6 741	2.5	4.6	4.6	61 925	66 874	66 971	18.8	20.3	20.3
Myanmar	380	766	766	0.2	0.5	0.5	19 926	28 329	45 024	2.9	4.2	6.7
Philippines	1 433	11 643	11 945	0.1	0.7	0.7	38 417	51 110	51 460	12.8	17.0	17.2
Singapore		5	5		0.8	0.8	29	34	35	4.3	5.0	5.2
Thailand	4 047	4 317	4 317	3.6	3.9	3.9	70 182	103 605	104 452	13.7	20.2	20.4
Timor-Leste								938	2 174		6.3	14.6
Viet Nam	777	1 228	3 930	0.3	0.4	1.4	5 589	15 559	18 621	1.7	4.7	5.6
<b>South and South-West Asia</b>	<b>8 220</b>	<b>8 706</b>	<b>8 861</b>	<b>1.8</b>	<b>1.9</b>	<b>1.9</b>	<b>335 427</b>	<b>391 561</b>	<b>413 272</b>	<b>4.6</b>	<b>5.2</b>	<b>5.5</b>
Afghanistan							1 079	1 079	1 079	0.2	0.2	0.2
Bangladesh	214	214	214	0.5	0.5	0.5	2 563	2 976	3 140	1.8	2.1	2.2
Bhutan								12 408	12 408		26.4	26.4
India	2 691	2 892	2 892	1.4	1.5	1.5	141 662	156 291	156 916	4.3	4.8	4.8
Iran (Islamic Rep. of)	2 676	2 676	2 831	3.3	3.3	3.5	83 583	94 483	115 261	5.1	5.7	7.0
Maldives												
Nepal							9 980	24 333	24 477	6.8	16.5	16.6
Pakistan	339	339	339	1.1	1.1	1.1	70 465	71 309	71 309	8.9	9.0	9.0
Sri Lanka	30	315	315	0.1	1.0	1.0	12 526	13 518	13 518	19.1	20.6	20.6
Turkey	2 270	2 270	2 270	2.8	2.8	2.8	13 569	15 164	15 164	1.7	1.9	1.9
<b>North and Central Asia</b>	<b>36 374</b>	<b>85 087</b>	<b>85 087</b>	<b>2.7</b>	<b>6.3</b>		<b>1 482 904</b>	<b>1 677 714</b>	<b>1 678 627</b>	<b>6.9</b>	<b>7.9</b>	<b>7.9</b>
Armenia							2 160	2 160	2 440	7.2	7.2	8.2
Azerbaijan							5 276	5 695	6 328	6.1	6.6	7.3
Georgia							1 982	2 720	2 720	2.8	3.9	3.9
Kazakhstan							69 425	76 227	76 227	2.5	2.8	2.8
Kyrgyzstan							4 888	6 210	6 210	2.4	3.1	3.1
Russian Federation	36 374	85 087	85 087	2.7	6.3	6.3	1 374 902	1 543 566	1 543 566	8.0	9.0	9.0
Tajikistan							3 281	19 581	19 581	2.3	13.7	13.7
Turkmenistan							12 866	12 866	12 866	2.6	2.6	2.6
Uzbekistan							8 124	8 689	8 689	1.8	1.9	1.9
<b>Pacific</b>	<b>440 802</b>	<b>626 093</b>	<b>874 318</b>	<b>20.8</b>	<b>21.1</b>	<b>23.4</b>	<b>455 550</b>	<b>771 215</b>	<b>918 360</b>	<b>5.3</b>	<b>9.0</b>	<b>10.7</b>
Australia	436 342	609 987	659 687	46.7	65.3	70.6	339 112	643 802	790 135	4.4	8.3	10.2
American Samoa	170	171	171	1.7	1.7	1.7	33	34	34	16.7	16.8	16.8
Cook Islands	1	13	13				2	6	6	0.8	2.6	2.6
Fiji	22	189	209		0.1	0.1	359	394	394	2.0	2.2	2.2
French Polynesia	78	192	192		0.1	0.1	34	43	43	0.8	1.1	1.1
Guam	32	47	47	0.7	1.0	1.0	54	115	115	9.8	20.9	20.9
Kiribati	454	460	186 182	0.6	0.6		338	344	399	46.5	47.4	55.0
Marshall Islands		718	718		0.6	0.6		39	39	0.1	21.8	21.8
Micronesia (F.S.)	5	24	32				56	71	71	8.0	10.1	10.1
Nauru												
New Caledonia	197	257	257	0.2	0.2	0.2	1 346	1 374	1 374	7.2	7.4	7.4
New Zealand	175	303	12 861	0.1	0.2	7.1	72 019	79 098	79 755	26.6	29.2	29.5
Niue		30	30		1.0	1.0		30	30		11.6	11.6
Northern Mariana Is.	2	6	6				20	20	20	4.4	4.4	4.4
Palau	15	90	261	0.5	3.0	8.7	1	6	6	0.2	1.3	1.3
Papua New Guinea	3 220	3 406	3 406	0.4	0.5	0.5	41 616	44 882	44 882	9.0	9.7	9.7
Samoa	36	136	136	0.4	1.3	1.3	67	77	103	2.4	2.7	3.6
Solomon Islands		83	99				16	209	220	0.1	0.7	0.8
Tonga	35	9 916	9 916		2.2	2.2	5	128	191	0.7	17.2	25.5
Tuvalu		36	36		0.2	0.2					0.2	0.2
Vanuatu	18	29	59				472	543	543	3.9	4.5	4.5
<b>Asia and the Pacific</b>	<b>524 581</b>	<b>794 032</b>	<b>1 082 065</b>	<b>4.9</b>	<b>7.0</b>	<b>7.8</b>	<b>3 906 732</b>	<b>5 093 555</b>	<b>5 415 115</b>	<b>7.3</b>	<b>9.5</b>	<b>10.1</b>
LLDC							182 761	424 705	425 762	2.8	6.3	6.3
LDC	1 102	1 790	187 558	0.3	0.5	0.5	36 224	152 180	170 511	2.1	7.1	8.0
ASEAN	28 528	50 250	87 778	0.5	0.9	1.5	385 558	637 861	670 852	8.6	14.2	15.0
ECO	5 285	5 285	5 440	2.7	2.7	2.8	272 556	311 303	332 714	3.4	3.9	4.2
SAARC	3 274	3 760	3 760	1.1	1.3	1.3	238 275	281 914	282 847	4.8	5.5	5.5
Central Asia							108 002	134 148	135 061	2.5	3.2	3.2
Pacific island dev. econ.	8 570	15 803	201 770	0.4	0.8	0.8	97 410	48 315	48 470	8.1	8.8	8.8
Low-income	4 930	6 102	8 820	0.4	0.5	0.7	172 469	307 259	327 335	3.8	6.7	7.2
Middle-income	72 620	154 604	375 540	1.0	1.9	2.3	3 273 671	4 002 939	4 154 781	8.1	9.8	10.2
High-income	447 030	633 247	697 626	26.1	33.0	35.8	460 590	783 321	932 963	5.4	9.2	10.9
<b>Other world regions</b>												
Africa	15 993	38 310	47 679				2 914 073	3 086 525	3 236 934	9.2	10.2	10.7
Europe	28 180	45 293	48 522	2.5	3.5	3.8	571 848	757 985	799 639	9.6	12.8	13.5
Latin America & Carib.	65 944	254 168	341 535	2.4	7.9	9.9	2 182 201	3 690 341	4 681 900	10.6	17.9	22.7
North America	297 937	424 669	772 851	7.7	11.0	20.1	4 031 911	4 268 645	4 292 306	16.6	17.8	17.9
Other countries/areas	207	4 413	4 423		1.4	1.4	174 109	874 687	875 288	5.2	22.7	22.7
<b>World</b>	<b>932 842</b>	<b>1 560 885</b>	<b>2 297 075</b>	<b>4.8</b>	<b>7.2</b>	<b>9.6</b>	<b>13 780 874</b>	<b>17 771 738</b>	<b>19 281 182</b>	<b>9.6</b>	<b>12.7</b>	<b>13.8</b>



## 25. Forests and protected areas

### 25.2 Forest areas

	Square kilometres				% of land area				Change rate	
									% per annum	
	1990	1995	2000	2005	1990	1995	2000	2005	90-00	00-05
<b>East and North-East Asia</b>	<b>2 081 550</b>	<b>2 169 090</b>	<b>2 256 630</b>	<b>2 448 620</b>	<b>18.1</b>	<b>18.9</b>	<b>19.7</b>	<b>21.4</b>	<b>0.8</b>	<b>1.7</b>
China	1 571 410	1 670 710	1 770 010	1 972 900	16.8	17.9	19.0	21.2	1.3	2.3
DPR Korea	82 010	75 110	68 210	61 870	68.1	62.4	56.6	51.4	-1.7	-1.9
Hong Kong, China										
Japan	249 500	249 130	248 760	248 680	68.4	68.3	68.2	<v.2	0.0	0.0
Macao, China										
Mongolia	114 920	110 785	106 650	102 520	7.3	7.1	6.8	6.5	-0.7	-0.8
Republic of Korea	63 710	63 355	63 000	62 650	64.5	64.2	63.8	63.5	-0.1	-0.1
<b>South-East Asia</b>	<b>2 456 053</b>	<b>2 316 538</b>	<b>2 177 023</b>	<b>2 038 873</b>	<b>56.3</b>	<b>53.1</b>	<b>50.0</b>	<b>46.8</b>	<b>-1.1</b>	<b>-1.3</b>
Brunei Darussalam	3 130	3 005	2 880	2 780	59.4	57.0	54.6	52.8	-0.8	-0.7
Cambodia	129 460	122 435	115 410	104 470	73.3	69.4	65.4	59.2	-1.1	-1.9
Indonesia	1 165 670	1 072 095	978 520	884 950	64.3	59.2	54.0	48.8	-1.6	-1.9
Lao PDR	173 140	169 230	165 320	161 420	75.0	73.3	71.6	69.9	-0.5	-0.5
Malaysia	223 760	219 835	215 910	208 900	68.1	66.9	65.7	63.6	-0.4	-0.6
Myanmar	392 190	368 865	345 540	322 220	59.6	56.1	52.5	49.0	-1.2	-1.3
Philippines	105 740	92 615	79 490	71 620	35.5	31.1	26.7	24.0	-2.5	-2.0
Singapore	23	23	23	23	3.4	3.4	3.4	3.4	0.0	0.0
Thailand	159 650	153 895	148 140	145 200	31.2	30.1	29.0	28.4	-0.7	-0.4
Timor-Leste	9 660	9 100	8 540	7 980	65.0	61.2	57.4	53.7	-1.2	-1.3
Viet Nam	93 630	105 440	117 250	129 310	28.8	32.4	36.0	39.7	2.5	2.1
<b>South and South-West Asia</b>	<b>996 149</b>	<b>1 007 173</b>	<b>1 018 196</b>	<b>1 013 563</b>	<b>13.9</b>	<b>14.0</b>	<b>14.2</b>	<b>14.1</b>	<b>0.2</b>	<b>-0.1</b>
Afghanistan	13 090	11 620	10 150	8 670	2.0	1.8	1.6	1.3	-2.2	-2.9
Bangladesh	8 820	8 829	8 837	8 714	6.8	6.8	6.8	6.7	0.0	-0.3
Bhutan	30 350	30 880	31 410	31 950	64.6	65.7	66.8	68.0	0.3	0.3
India	639 390	657 465	675 540	677 010	21.5	22.1	22.7	22.8	0.6	0.0
Iran (Islamic Rep. of)	110 750	110 750	110 750	110 750	6.8	6.8	6.8	6.8	0.0	0.0
Maldives	9	9	9	9	3.0	3.0	3.0	3.0	0.0	0.0
Nepal	48 170	43 585	39 000	36 360	33.7	30.5	27.3	25.4	-1.9	-1.4
Pakistan	25 270	23 215	21 160	19 020	3.3	3.0	2.7	2.5	-1.6	-2.0
Sri Lanka	23 500	22 160	20 820	19 330	36.4	34.3	32.2	29.9	-1.1	-1.4
Turkey	96 800	98 660	100 520	101 750	12.6	12.8	13.1	13.2	0.4	0.2
<b>North and Central Asia</b>	<b>8 246 420</b>	<b>8 250 360</b>	<b>8 252 418</b>	<b>8 248 074</b>	<b>39.1</b>	<b>40.3</b>	<b>39.1</b>	<b>39.1</b>	<b>0.0</b>	<b>0.0</b>
Armenia	3 377	3 255	3 050	2 830	12.3	11.5	10.8	10.0	-1.0	-1.4
Azerbaijan	9 357	9 360	9 360	9 360	11.3	11.2	11.3	11.3	0.0	0.0
Georgia	27 589	27 599	27 600	27 601	39.7	39.7	39.7	39.7	0.0	0.0
Kazakhstan	34 095	33 935	33 650	33 370	1.3	1.3	1.2	1.2	-0.1	-0.2
Kyrgyzstan	8 405	8 474	8 583	8 693	4.4	4.4	4.5	4.5	0.2	0.3
Russian Federation	8 087 484	8 091 092	8 092 685	8 087 900	47.9	49.4	47.9	47.9	0.0	0.0
Tajikistan	4 083	4 090	4 100	4 100	2.9	2.9	2.9	2.9	0.0	0.0
Turkmenistan	41 256	41 270	41 270	41 270	8.8	8.8	8.8	8.8	0.0	0.0
Uzbekistan	30 774	31 285	32 120	32 950	7.4	7.4	7.8	8.0	0.4	0.5
<b>Pacific</b>	<b>2 125 049</b>	<b>2 102 651</b>	<b>2 080 252</b>	<b>2 062 457</b>	<b>25.1</b>	<b>24.8</b>	<b>24.5</b>	<b>24.3</b>	<b>-0.2</b>	<b>-0.2</b>
Australia	1 679 040	1 662 745	1 646 450	1 636 780	21.9	21.6	21.4	21.3	-0.2	-0.1
American Samoa	184	182	181	179	91.9	91.0	90.3	89.4	-0.2	-0.2
Cook Islands	149	152	155	155	63.9	63.3	66.5	66.5	0.4	0.0
Fiji	9 790	9 895	10 000	10 000	53.6	54.2	54.7	54.7	0.2	0.0
French Polynesia	1 050	1 050	1 050	1 050	28.7	28.7	28.7	28.7	0.0	0.0
Guam	259	259	259	259	47.1	48.0	47.1	47.1	0.0	0.0
Kiribati	22	22	22	22	3.0	2.7	3.0	3.0	0.0	0.0
Marshall Islands										
Micronesia (F.S.)	633	634	634	634	90.6	90.6	90.6	90.6	0.0	0.0
Nauru										
New Caledonia	7 170	7 170	7 170	7 170	39.2	39.2	39.2	39.2	0.0	0.0
New Zealand	77 200	79 730	82 260	83 090	28.8	29.8	30.7	31.0	0.7	0.2
Niue	172	162	151	141	66.2	62.3	58.1	54.2	-1.2	-1.3
Northern Mariana Is.	341	342	338	333	75.3	74.3	73.4	72.4	-0.1	-0.3
Palau	388	389	396	403	82.9	84.6	86.1	87.6	0.2	0.4
Papua New Guinea	315 230	308 278	301 325	294 370	69.6	68.1	66.5	65.0	-0.4	-0.5
Samoa	1 300	1 505	1 710	1 710	45.9	53.2	60.4	60.4	3.2	0.0
Solomon Islands	27 680	25 695	23 710	21 720	98.9	91.8	84.7	77.6	-1.4	-1.7
Tonga	36	36	36	36	5.0	5.0	5.0	5.0	0.0	0.0
Tuvalu	10	10	10	10	33.3	33.3	33.3	33.3	0.0	0.0
Vanuatu	4 395	4 395	4 395	4 395	36.1	36.1	36.1	36.1	0.0	0.0
<b>Asia and the Pacific</b>	<b>15 905 221</b>	<b>15 845 812</b>	<b>15 784 519</b>	<b>15 811 587</b>	<b>30.2</b>	<b>30.5</b>	<b>29.9</b>	<b>29.9</b>	<b>-0.1</b>	<b>0.0</b>
LLDC	511 017	497 769	484 663	473 493	7.6	7.5	7.3	7.1	-0.5	-0.5
LDC	838 296	796 180	754 063	709 650	40.0	38.0	36.0	33.8	-1.0	-1.2
ASEAN	2 446 393	2 307 438	2 168 483	2 030 893	56.3	53.1	49.9	46.7	-1.1	-1.3
ECO	373 880	372 659	371 663	369 933	4.8	4.8	4.7	4.7	-0.1	-0.1
SAARC	788 599	797 763	806 926	801 063	16.5	16.7	16.9	16.8	0.2	-0.1
Central Asia	158 936	159 268	159 733	160 174	3.9	3.9	3.9	3.9	0.1	0.1
Pacific island dev. econ.	368 809	360 176	351 542	342 587	68.2	66.6	65.0	63.4	-0.5	-0.5
Low-income	1 351 952	1 306 151	1 260 715	1 213 887	30.3	29.4	28.3	27.3	-0.7	-0.7
Middle-income	12 471 515	12 472 528	12 471 298	12 554 579	31.4	31.9	31.3	31.5	0.0	0.1
High-income	2 081 423	2 066 809	2 052 190	2 042 815	24.7	24.5	24.3	24.2	-0.1	-0.1
<b>Other world regions</b>										
Africa	6 993 581	6 774 844	6 556 105	6 354 090	23.6	22.9	22.1	21.4	-0.6	-0.6
Europe	1 805 587	1 845 966	1 888 226	1 926 039	31.6	32.3	33.1	33.7	0.5	0.4
Latin America & Carib.	9 928 221	9 703 500	9 478 776	9 241 619	49.5	47.9	47.3	46.2	-0.5	-0.5
North America	6 087 862	6 106 092	6 124 322	6 132 272	32.5	32.8	32.6	32.6	0.1	0.0
Other countries/areas	52 438	53 297	54 157	54 650	1.4	1.4	1.4	1.4	0.3	0.2
<b>World</b>	<b>40 772 909</b>	<b>40 329 511</b>	<b>39 886 105</b>	<b>39 520 257</b>	<b>31.2</b>	<b>31.0</b>	<b>30.5</b>	<b>30.2</b>	<b>-0.2</b>	<b>-0.2</b>



## 26 Air and water pollution

Climate change is now on the top of the global agenda, so one of the most scrutinized indicators in the coming years will be greenhouse gas emissions. Most of these emissions – over 80 per cent – come from CO<sub>2</sub>, largely a result of fuel combustion.

Asia and the Pacific is a huge and populous region, and by far the largest overall emitter of CO<sub>2</sub>, some 12 billion tons annually. And, as a result of rapid economic growth, emissions have increased over the past decade. Most of these have been from the middle-income economies, such as China, The Russian Federation, Indonesia, Thailand, and Malaysia – which are important centres of world production.

According to the IAE 2006 *World Energy Outlook*, Asia and the Pacific is likely to sustain faster than average economic growth. As a result, between 2005 and 2030, the region's share of energy-related CO<sub>2</sub> emissions is likely to increase from 45 to 55 per cent. This will contribute to climate and ecological changes that will increase the

Figure 26.1

CO<sub>2</sub> emissions in Asia and the Pacific, by income grouping, 1990-2004

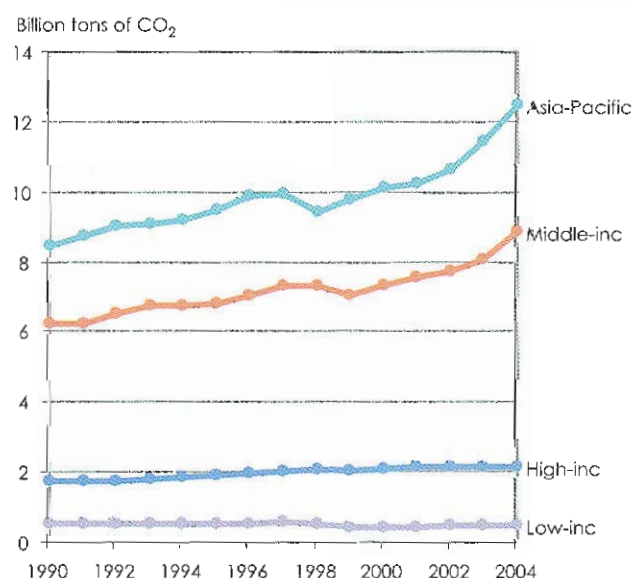
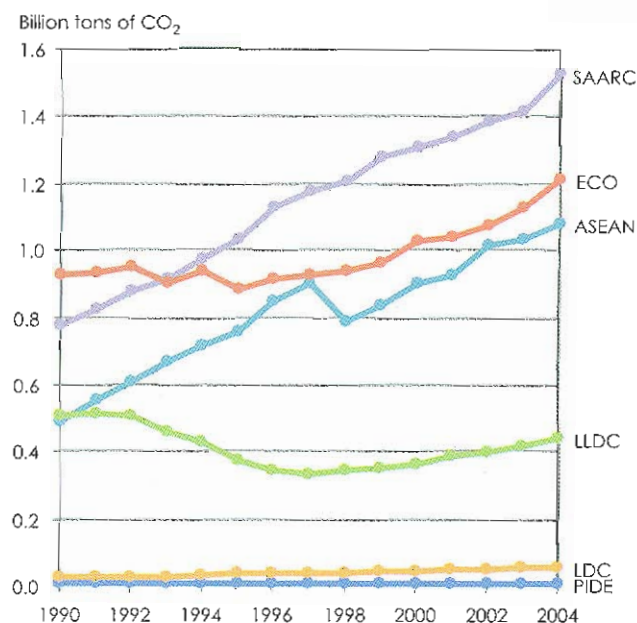


Figure 26.2

CO<sub>2</sub> emissions, Asia and the Pacific groupings, 1990-2004



incidence of natural disasters and make many people more vulnerable. Chapter 19 has considered the contribution of transport to these emissions, and chapter 28 will look more closely at the contribution of energy.

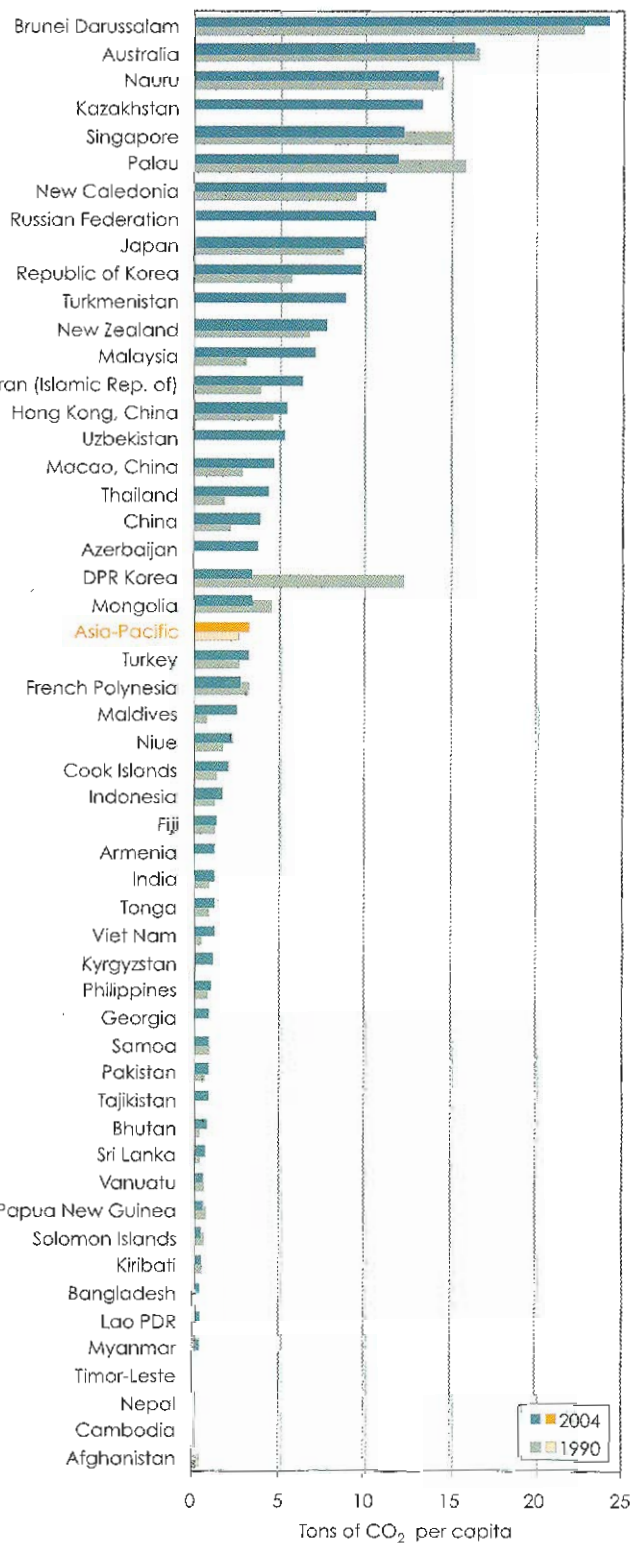
Since 1990, emissions have, with a few exceptions, been increasing throughout the region. Nevertheless, and despite the high total, in most Asia-Pacific countries emissions per capita remain low – 3.2 tons per person per annum in 2004 – compared with 20.3 in North America and 7.8 in Europe, indicating that in many countries in the region millions of people lack access to modern energy.

Countries in the region are now more aware of the need to develop low-carbon societies, but they are not yet on the path towards green economies. This is clear from data on carbon intensities – CO<sub>2</sub> emissions per unit of GDP. After a decline from 1990, intensities started rising in 2002 – mainly in middle- and low-income economies. Europe and the Americas do not show similar rises. Because they use



Figure 26.3

CO<sub>2</sub> emissions per capita, selected Asia-Pacific countries, 1990 and 2004

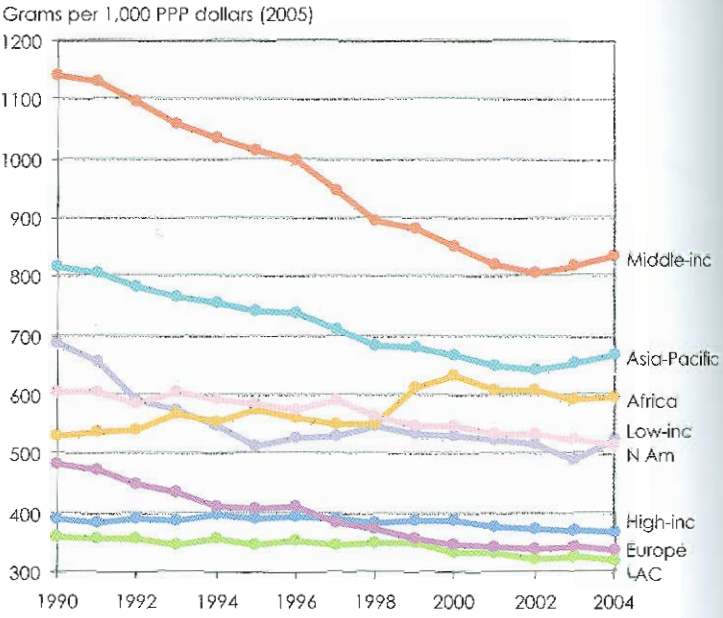


energy and other resources fairly inefficiently, developing countries do, however, have considerable potential to slow their escalation of greenhouse gas emissions.

The region is also a major producer of another greenhouse gas, nitrous oxide (N<sub>2</sub>O) – which is the result of both natural processes (aerobic decomposition of organic matter in soils and oceans) and

Figure 26.4

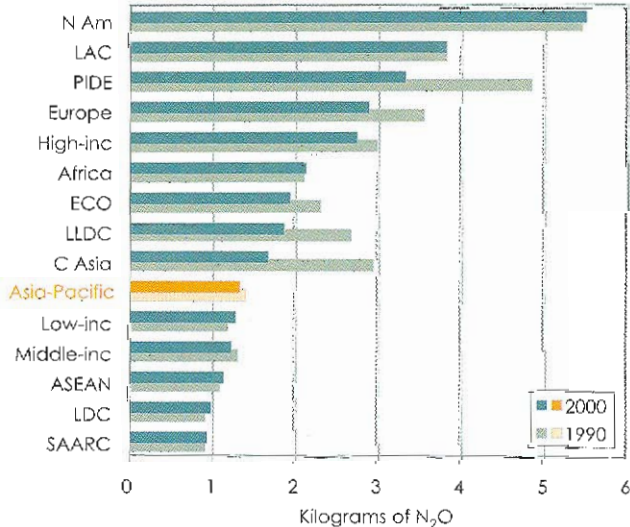
CO<sub>2</sub> emissions, per unit of GDP, global regions, 1990-2004



human activities (using motor vehicles, industrial activities, using nitrogenous fertilizers, and burning fuels and biomass). N<sub>2</sub>O emissions increased worldwide during 1990-2000 except in Europe and the Asia-Pacific high-income economies. In 2000 the Asia-Pacific economies emitted 41 per cent of the world's N<sub>2</sub>O.

Figure 26.5

Nitrous oxide emissions per capita, 1990 and 2000

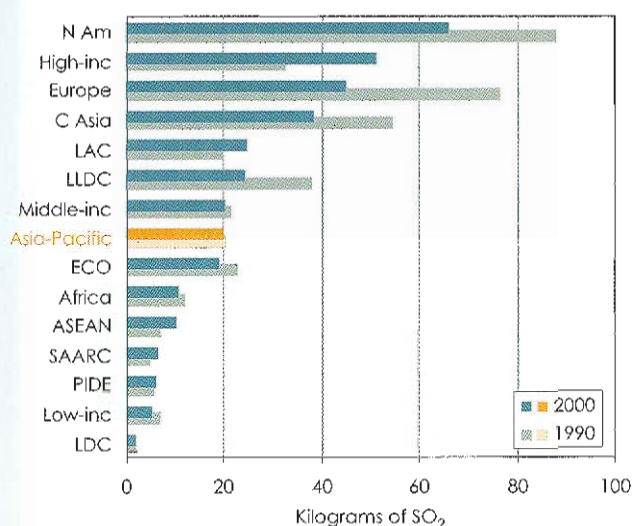


Another air pollutant is sulphur dioxide, which contributes to acid rain and can damage human health. The region contributes 50 per cent of global emissions, which is less than the 60 per cent share of global population. Sulphur dioxide comes mainly



Figure 26.6

Sulphur dioxide emissions per capita,  
1990 and 2000

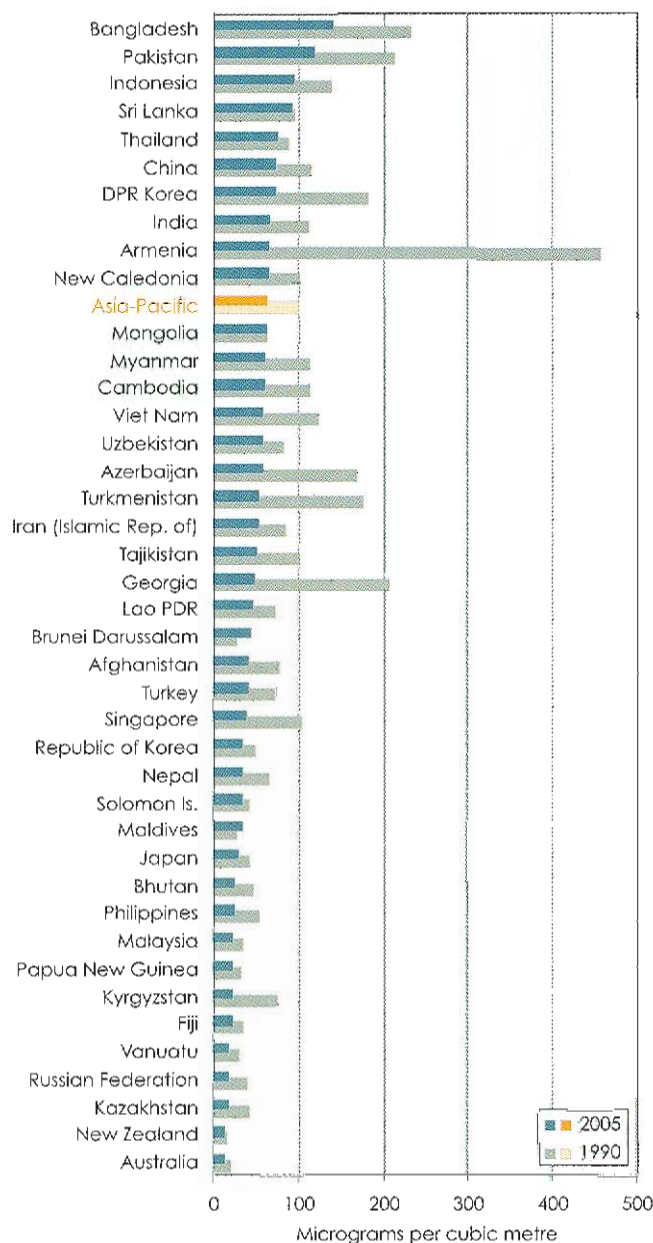


from burning fossil fuel, especially coal. In Asia and the Pacific most of this is produced in middle-income economies, and to a lesser extent in the low-, and high-income economies.

Another public health hazard is the dispersal of particulate matter, or PM10, which refers to fine suspended particulates less than 10 microns in diameter. These can penetrate deep into the respiratory tract and cause significant health damage, including respiratory diseases, lung cancer and heart disease. Alone, or with sulphur dioxide, particulate pollution has implications for both public health and economic well being. This is a growing problem across the region as urban populations expand. Most comes from traffic and industry, so the extent of emissions depends on levels of technology and the effectiveness of pollution control. However, a substantial proportion also results from natural processes.

Figure 26.7

Concentration of particulate matter in urban  
areas, selected Asia-Pacific countries,  
1990 and 2005





**Carbon dioxide emissions per capita (tons of CO<sub>2</sub>)**

The quantity of estimated carbon dioxide emissions (tons of carbon dioxide) divided by total population. **Aggregates:** Averages are calculated using total population as weight.

**Source:** United Nations Millennium Development Goals Indicators (online database, accessed in July 2008), and World Population Prospects: The 2006 Revision Population Database (online database accessed in July 2008).

**Carbon dioxide emissions per unit of GDP (grams per 1,000 (2005 PPP dollars))**

The quantity of estimated carbon dioxide emissions divided by 1,000 units of GDP (2005 PPP dollars). **Aggregates:** Averages are calculated using GDP, PPP (constant 2005) as weight. **Source:** Calculated by ESCAP using data from United Nations Millennium Development Goals Indicators and World Bank, World Development Indicators (online database, accessed in June 2008).

**Consumption of ozone-depleting substances per capita (ODP kilograms per 1,000 population)**

The sum of the national annual consumption in weighted tons of the individual substances in the group of ozone-depleting substances multiplied by their ozone-depleting potential. Ozone-depleting substances are any substance containing chlorine or bromine that destroys the stratospheric ozone layer. Expressed as ODP kilograms per 1,000 population. **Aggregates:** Averages are calculated using total population as weight. **Source:** United Nations Millennium Development Goals Indicators (online database, accessed in July 2008), and World Population Prospects: The 2006 Revision Population Database (online database accessed in July 2008).

**Consumption of ozone-depleting substances per unit of GDP (ODP kilograms per 1,000,000 (2005 PPP dollars))**

The sum of the national annual consumption in weighted tons of the individual substances in the group of ozone-depleting substances multiplied by their ozone-depleting potential. Ozone-depleting substances are any substance

containing chlorine or bromine that destroys the stratospheric ozone layer. Expressed as ODP kilograms per 1,000,000 units of GDP measured in 2005 PPP dollars.

**Aggregates:** Averages are calculated using GDP, PPP (constant 2005) as weight. **Source:** Calculated by ESCAP using data from United Nations Millennium Development Goals Indicators, and World Bank, World Development Indicators (online database, accessed in July 2008).

**Nitrous oxide emissions (gigagrams of N<sub>2</sub>O)**

Total emissions of nitrous oxide estimated through a model (RIVM). **Aggregates:** Sum of individual country values.

**Source:** United Nations Environment Programme, Emission Database for Global Atmospheric Research (EDGAR 3.2) (online database, accessed in September 2007).

**Sulphur dioxide emissions (gigagrams of SO<sub>2</sub>)**

Total emissions of sulphur dioxide estimated through a model (RIVM). **Aggregates:** Sum of individual country values. **Source:** United Nations Environment Programme, Emission Database for Global Atmospheric Research (EDGAR 3.2) (online database, accessed in 27 September 2007).

**PM10 concentration in urban area (micrograms per cubic metre)**

Atmospheric particles of 10 micrometres or smaller from natural and human sources. **Aggregates:** Average calculated using urban population as weight. **Source:** World Bank, World Development Indicators (online database, accessed in July 2008).

**Industrial organic water pollutant (BOD) emissions (kilograms per day)**

Biochemical oxygen demand, which refers to the amount of oxygen that bacteria in water will consume in breaking down waste. **Aggregates:** None. **Source:** United Nations Environment Programme, Emission Database for Global Atmospheric Research (EDGAR 3.2) (online database, accessed on 24 August 2007).



## 26.1 Carbon dioxide emissions

	Carbon dioxide emissions per capita					Carbon dioxide emissions per unit of GDP				
	Tons of carbon dioxide					Grams per 1,000 (2005 PPP dollars)				
	1990	1995	2000	2003	2004	1990	1995	2000	2003	2004
<b>East and North-East Asia</b>	<b>3.0</b>	<b>3.5</b>	<b>3.5</b>	<b>4.0</b>	<b>4.5</b>	<b>742</b>	<b>727</b>	<b>626</b>	<b>647</b>	<b>688</b>
China	2.1	2.6	2.6	3.3	3.8	1 917	1 433	989	969	1 037
DPR Korea	12.2	11.9	3.4	3.3	3.4					
Hong Kong, China	4.6	4.8	5.8	5.6	5.4	205	179	194	184	185
Japan	8.7	9.1	9.5	9.6	9.8	334	329	334	333	331
Macao, China	2.8	3.0	3.7	4.0	4.7	137	123	166	147	135
Mongolia	4.5	3.3	3.0	3.2	3.3	2 033	1 861	1 541	1 431	1 377
Republic of Korea	5.6	8.3	9.2	9.6	9.8	530	563	524	482	472
<b>South-East Asia</b>	<b>1.1</b>	<b>1.6</b>	<b>1.7</b>	<b>1.9</b>	<b>2.0</b>	<b>472</b>	<b>509</b>	<b>534</b>	<b>538</b>	<b>528</b>
Brunei Darussalam	22.7	17.7	25.6	22.5	24.1	458	351	538	463	503
Cambodia	0.0	0.0	0.0	0.0	0.0		61	41	33	30
Indonesia	1.2	1.5	1.7	1.9	1.7	576	558	651	640	565
Lao PDR	0.1	0.1	0.2	0.2	0.2	56	56	133	139	133
Malaysia	3.1	5.8	5.4	6.3	7.0	454	624	523	586	622
Myanmar	0.1	0.2	0.2	0.2	0.2	314	383	348	254	255
Philippines	0.7	0.9	1.0	0.9	1.0	295	379	368	342	338
Singapore	15.0	13.5	14.1	11.3	12.2	632	430	382	308	309
Thailand	1.8	3.2	3.3	4.0	4.3	426	534	580	614	630
Timor-Leste				0.2	0.2				76	83
Viet Nam	0.3	0.4	0.7	0.9	1.2	358	337	434	506	601
<b>South and South-West Asia</b>	<b>0.9</b>	<b>1.1</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>	<b>570</b>	<b>595</b>	<b>595</b>	<b>556</b>	<b>553</b>
Afghanistan	0.2	0.1	0.0	0.0	0.0				22	36
Bangladesh	0.1	0.2	0.2	0.2	0.2	195	232	223	245	241
Bhutan	0.2	0.5	0.7	0.6	0.7	130	215	247	189	191
India	0.8	1.0	1.1	1.1	1.2	668	700	665	815	603
Iran (Islamic Rep. of)	3.9	4.3	5.3	5.9	6.3	640	666	713	688	703
Maldives	0.7	1.1	1.8	2.1	2.5		440	535	526	584
Nepal	0.0	0.1	0.1	0.1	0.1	47	118	147	122	121
Pakistan	0.6	0.7	0.7	0.7	0.8	376	372	398	345	398
Sri Lanka	0.2	0.3	0.5	0.5	0.6	113	134	184	171	182
Turkey	2.6	2.7	3.3	3.1	3.1	458	457	489	460	433
<b>North and Central Asia</b>	<b>11.5</b>	<b>8.5</b>	<b>8.3</b>	<b>8.8</b>	<b>9.0</b>		<b>1 402</b>	<b>1 247</b>	<b>1 100</b>	<b>1 040</b>
Armenia		1.1	1.1	1.1	1.2		620	491	344	331
Azerbaijan		4.3	3.7	3.6	3.8		2 296	1 481	1 072	1 031
Georgia		0.5	1.0	0.8	0.9		274	410	276	272
Kazakhstan		10.9	9.3	11.9	13.3		2 439	1 738	1 630	1 667
Kyrgyzstan		1.0	0.9	1.1	1.1		824	629	647	643
Russian Federation		10.1	10.0	10.5	10.5		1 294	1 167	1 023	956
Tajikistan		0.9	0.6	0.7	0.8		836	645	571	552
Turkmenistan		8.4	8.3	9.7	8.8					
Uzbekistan		4.6	5.2	5.2	5.3		3 177	3 196	2 932	2 809
<b>Pacific</b>	<b>11.7</b>	<b>12.0</b>	<b>12.3</b>	<b>11.1</b>	<b>11.3</b>	<b>622</b>	<b>589</b>	<b>539</b>	<b>456</b>	<b>457</b>
Australia	16.5	17.3	17.6	15.9	16.3	670	639	571	479	483
American Samoa										
Cook Islands	1.2	1.2	1.8	2.0	2.0					
Fiji	1.1	1.2	1.1	1.4	1.3		315	273	332	304
French Polynesia	3.1	2.6	2.7	2.8	2.7					
Guam										
Kiribati	0.3	0.3	0.4	0.3	0.3	111	91	103	84	86
Marshall Islands										
Micronesia (F.S.)										
Nauru	14.4	14.0	13.5	14.2	14.2					
New Caledonia	9.4	8.9	10.5	12.2	11.2					
New Zealand	6.6	6.8	8.4	8.1	7.8	350	332	377	337	317
Niue	1.6	1.6	2.0	2.1	2.2					
Northern Mariana Is.										
Palau	15.7	14.0	12.4	12.0	11.9		1 057	967	1 002	955
Papua New Guinea	0.6	0.5	0.5	0.4	0.4	395	259	260	249	238
Samoa	0.8	0.8	0.8	0.8	0.8	218	219	190	181	175
Solomon Islands	0.5	0.4	0.4	0.4	0.4	247	190	214	246	227
Tonga	0.8	1.1	1.2	1.2	1.2	221	261	265	229	233
Tuvalu										
Vanuatu	0.4	0.4	0.4	0.4	0.4	136	99	112	131	125
<b>Asia and the Pacific</b>	<b>2.6</b>	<b>2.7</b>	<b>2.7</b>	<b>2.9</b>	<b>3.2</b>	<b>815</b>	<b>739</b>	<b>664</b>	<b>652</b>	<b>666</b>
LLDC	5.0	3.3	3.0	3.3	3.4		2 044	1 634	1 375	1 367
LDC	0.1	0.2	0.2	0.2	0.2	186	220	215	201	199
ASEAN	1.1	1.6	1.7	1.9	2.0	472	509	534	538	528
ECO	3.1	2.7	2.8	3.0	3.1	928	746	721	683	689
SAARC	0.7	0.8	0.9	1.0	1.0	580	608	590	544	542
Central Asia	7.5	5.2	5.0	5.6	5.8		2 270	1 826	1 612	1 596
Pacific island dev. econ.	1.0	1.0	1.0	1.0	0.9					
Low-income	1.2	1.1	0.8	0.8	0.9	684	511	527	488	520
Middle-income	2.3	2.5	2.5	2.8	3.1	1 140	1 011	847	816	832
High-income	8.6	9.5	10.2	10.1	10.3	388	388	385	368	364
<b>Other world regions</b>										
Africa	1.1	1.1	1.3	1.2	1.3	529	573	629	589	593
Europe	8.9	7.8	7.5	7.8	7.8	481	406	343	341	334
Latin America & Carib.	2.5	2.6	2.6	2.5	2.6	359	345	331	322	318
North America	18.5	19.1	20.7	20.2	20.3	602	583	545	521	510
Other countries/areas	6.9	7.1	7.7	8.0	7.8	741	669	753	780	734
<b>World</b>	<b>4.0</b>	<b>3.9</b>	<b>4.0</b>	<b>4.1</b>	<b>4.2</b>	<b>610</b>	<b>563</b>	<b>517</b>	<b>510</b>	<b>511</b>



## 26.2 Ozone-depleting substances

	Consumption of ozone-depleting substances per capita						Consumption of ozone-depleting substances per unit of GDP					
	ODP kilograms per 1,000 population						ODP kilograms per 1,000,000 (2005 PPP dollars)					
	1990	1995	2000	2004	2005	2006	1990	1995	2000	2004	2005	2006
<b>East and North-East Asia</b>	<b>165.6</b>	<b>115.7</b>	<b>76.1</b>	<b>31.3</b>	<b>25.2</b>	<b>25.7</b>	<b>44.0</b>	<b>25.4</b>	<b>14.1</b>	<b>4.7</b>	<b>3.7</b>	<b>3.6</b>
China	51.9	91.0	71.6	27.2	23.9	23.9	47.6	49.5	26.9	7.3	5.9	5.3
DPR Korea		61.2	49.1	93.8	12.0	1.0						
Hong Kong, China												
Japan	972.0	287.7	47.1	15.3	8.3	8.3	37.5	10.4	1.7	0.5	0.3	0.3
Macao, China												
Mongolia		3.1	4.6	1.8	1.7	1.0		1.8	2.3	0.7	0.6	0.4
Republic of Korea		333.3	293.8	156.7	111.5	134.5		22.6	16.7	7.6	5.2	6.0
<b>South-East Asia</b>	<b>58.5</b>	<b>32.4</b>	<b>19.4</b>	<b>13.8</b>	<b>8.2</b>	<b>8.2</b>	<b>18.9</b>	<b>10.0</b>	<b>5.2</b>	<b>3.6</b>	<b>2.1</b>	<b>2.1</b>
Brunei Darussalam		228.2	143.3	173.1	111.3	74.9		4.5	3.0	3.6	2.4	1.5
Cambodia		8.5	7.6	5.4	3.6	2.4		10.7	7.5	4.2	2.5	1.6
Indonesia		46.6	25.8	19.1	12.1	2.4		16.9	9.7	6.4	3.9	0.7
Lao PDR		9.2	8.7	4.1	3.8	3.4		7.7	6.0	2.4	2.1	1.8
Malaysia	231.7	191.5	104.6	58.9	26.6	37.0	34.4	20.6	10.1	5.2	2.3	3.0
Myanmar		1.2	0.6	0.7	0.3	0.0		2.8	1.0	0.9	0.4	
Philippines	56.8	54.0	40.2	19.0	14.6	9.4	23.4	22.4	15.3	6.6	4.9	3.1
Singapore	1 609.6	285.2	41.8	50.5	34.8	75.6	68.1	9.1	1.1	1.3	0.8	1.7
Thailand	128.6	161.9	84.1	40.4	36.8	23.1	31.1	27.4	14.7	5.9	5.2	3.1
Timor-Leste												
Viet Nam		9.5	4.7	5.0	5.4	4.7		7.9	3.0	2.6	2.6	2.1
<b>South and South-West Asia</b>	<b>17.0</b>	<b>19.5</b>	<b>11.9</b>	<b>5.3</b>	<b>5.0</b>	<b>5.0</b>	<b>9.4</b>	<b>9.4</b>	<b>4.9</b>	<b>2.1</b>	<b>1.9</b>	<b>1.9</b>
Afghanistan		20.9	0.0	7.5	5.8	3.8				9.4	6.6	4.3
Bangladesh	1.8	2.3	5.9	2.1	1.8	1.4	2.6	3.0	6.5	2.0	1.7	1.2
Bhutan		0.2		0.2	0.2	0.2		0.1		0.0	0.0	0.0
India		10.8	17.9	9.1	3.8	4.6		7.9	10.8	4.6	1.8	2.0
Iran (Islamic Rep. of)	24.6	75.4	86.1	90.1	35.3	16.3	4.1	11.6	11.6	10.0	3.8	1.7
Maldives	20.9	23.8	16.9	7.6	9.1	14.7		9.4	4.9	1.8	2.3	3.0
Nepal		1.4	4.1	0.0	0.0	0.0		1.7	4.5	0.0	0.0	0.0
Pakistan	12.9	21.7	18.0	10.2	3.8	4.6	8.0	12.2	9.7	5.0	1.8	2.0
Sri Lanka	12.7	30.5	13.5	10.4	8.6	6.1	6.5	12.7	4.5	3.1	2.4	1.6
Turkey	76.0	73.4	23.4	12.3	10.9	12.2	13.7	12.3	3.5	1.7	1.4	1.5
<b>North and Central Asia</b>	<b>620.8</b>	<b>125.4</b>	<b>122.0</b>	<b>6.6</b>	<b>4.6</b>	<b>6.4</b>	<b>62.7</b>	<b>20.8</b>	<b>18.6</b>	<b>0.7</b>	<b>0.5</b>	<b>0.6</b>
Armenia		62.5	8.3	37.9	28.8	20.9		36.7	3.6	10.4	6.9	4.4
Azerbaijan			10.8	1.8	2.6	0.1			4.3	0.5	0.6	0.0
Georgia		15.5	14.0	12.4	7.7	3.3		9.3	6.0	3.9	2.2	0.8
Kazakhstan	142.5		40.0	3.0	2.6	5.2	20.3		7.4	0.4	0.3	0.5
Kyrgyzstan		21.2	10.9	7.1	3.2	1.7		17.3	7.3	4.1	1.8	1.0
Russian Federation	878.6	158.5	174.6	7.6	5.4	8.3	69.7	20.3	20.4	0.7	0.5	0.7
Tajikistan		5.7	4.6	0.5	0.5	0.5		5.3	4.6	0.3	0.4	0.3
Turkmenistan	39.6	13.5	5.2	12.4	5.6	4.6						
Uzbekistan		13.3	1.8	0.1	0.1			9.1	1.1	0.0	0.1	
<b>Pacific</b>	<b>333.5</b>	<b>124.9</b>	<b>20.9</b>	<b>7.9</b>	<b>7.4</b>	<b>3.8</b>	<b>17.7</b>	<b>6.1</b>	<b>0.9</b>	<b>0.3</b>	<b>0.3</b>	<b>0.1</b>
Australia	440.6	172.7	25.3	9.4	8.3	3.4	17.9	6.4	0.8	0.3	0.2	0.1
American Samoa												
Cook Islands		138.3										
Fiji	57.8	81.5	3.1	6.7	7.2	6.5		22.1	0.8	1.6	1.7	1.5
French Polynesia												
Guam												
Kiribati		11.6						3.3				
Marshall Islands	25.4	25.5	11.5	1.8		1.7	3.1	3.0	1.8	0.3		0.2
Micronesia (F.S.)		12.1	9.3	17.4	4.5	0.9		2.0	1.7	3.2	0.8	0.2
Nauru		60.2	39.8									
New Caledonia												
New Zealand	350.5	87.9	5.0	8.0	10.3	9.2	18.4	4.3	0.2	0.3	0.4	0.4
Niue		44.5										
Northern Mariana Is.												
Palau		99.7	3667.6	49.9	9.9	34.6		7.5	286.9	4.0	0.8	2.5
Papua New Guinea		2.7	9.7	3.5	3.1	1.1		1.4	5.3	2.0	1.8	0.7
Samoa		26.2	3.9	2.2	1.1	1.1		7.3	1.0	0.5	0.2	0.2
Solomon Islands	6.7	6.6	1.9	3.3	2.3		3.2	2.8	1.1	1.9	1.4	
Tonga		22.6	5.1	1.0				5.2	1.1	0.2		
Tuvalu		30.6										
Vanuatu		2.9						0.8				
<b>Asia and the Pacific</b>	<b>69.6</b>	<b>49.3</b>	<b>20.0</b>	<b>14.0</b>	<b>13.3</b>	<b>13.3</b>	<b>37.6</b>	<b>20.0</b>	<b>12.5</b>	<b>4.2</b>	<b>2.9</b>	<b>2.6</b>
LLDC		37.2	8.5	3.8	2.8	2.3			5.0	1.5	1.1	0.8
LDC		4.0	4.4	2.3	1.9	1.4	2.2	3.5	5.5	2.3	1.8	1.4
ASEAN		58.5	32.4	19.4	13.8	8.2		18.9	10.0	5.2	3.6	2.1
ECO	34.3	48.0	29.6	23.3	10.5	7.5	9.3	13.5	7.8	5.3	2.3	1.5
SAARC		11.3	16.1	8.3	3.6	4.2		8.2	10.2	4.4	1.8	1.9
Central Asia			13.0	4.5	3.2				5.2	1.1	0.8	0.6
Pacific island dev. econ.		14.2	17.8	4.2	3.6	2.0						
Low-income	7.3	12.6	10.0	8.5	3.3	2.6		8.5	6.5	3.3	1.8	1.7
Middle-income		64.6	52.8	20.3	14.8	13.7	38.0	26.7	18.0	5.5	3.7	3.2
High-income	922.3	283.7	101.7	48.6	33.2	38.9	40.3	11.6	3.9	1.7	1.2	1.3
<b>Other world regions</b>												
Africa		28.0	21.6	12.4	8.0	5.4		13.6	10.5	5.6	3.5	2.2
Europe												
Latin America & Carib.	174.5	93.5	60.0	36.4	26.2	20.6	25.8	12.7	7.6	4.4	3.1	2.3
North America	855.5	177.8	15.6	43.8	34.5	29.8	27.9	5.4	0.4	1.1	0.8	0.7
Other countries/areas		217.2	128.2	74.3	60.1							
<b>World</b>	<b>73.3</b>	<b>44.4</b>	<b>22.3</b>	<b>16.0</b>	<b>14.2</b>	<b>14.2</b>	<b>12.9</b>	<b>7.0</b>	<b>3.2</b>	<b>2.2</b>	<b>1.9</b>	<b>1.9</b>



## 26.3 Other pollutants

	Nitrous oxide emissions		Sulphur dioxide emissions		Concentration of PM10 in urban area				Industrial, organic water pollutant (BOD) emissions			
	Gigagrams of N <sub>2</sub> O		Gigagrams of SO <sub>2</sub>		Micrograms per m <sup>3</sup>				Kilograms per day			
	1990	2000	1990	2000	1990	1995	2000	2005	1990	1995	2000	2002
<b>East and North-East Asia</b>	<b>1 645.3</b>	<b>1 997.0</b>	<b>31 462.4</b>	<b>42 219.9</b>	<b>98.5</b>	<b>80.6</b>	<b>75.6</b>	<b>67.2</b>				
China	1 454.3	1 765.3	25 565.9	34 454.3	114.0	92.0	85.0	75.0	7 124.3	7 610.0	6 268.9	
DPR Korea	29.7	44.9	1 363.8	867.4	181.0	100.0	93.0	73.0				
Hong Kong, China												
Japan	99.6	93.7	2 084.9	2 596.7	43.0	37.0	34.0	31.0	1 556.6	1 456.1	1 332.3	
Macao, China	0.0	0.0	3.0	4.3					7.1	5.0	5.4	5.1
Mongolia	32.3	54.5	14.9	12.2	65.0	66.0	74.0	64.0	10.2	7.9		
Republic of Korea	29.4	38.6	2 429.9	4 285.0	51.0	51.0	47.0	37.0	369.2	353.6	310.9	
<b>South-East Asia</b>	<b>476.1</b>	<b>583.0</b>	<b>3 049.6</b>	<b>5 327.6</b>	<b>103.7</b>	<b>86.6</b>	<b>84.4</b>	<b>67.4</b>				
Brunei Darussalam	0.2	1.2	2.7	8.6	28.0	42.0	54.0	46.0				
Cambodia	12.0	11.2	16.5	29.3	116.0	66.0	70.0	62.0	11.8			
Indonesia	194.6	222.8	712.0	1 347.6	138.0	115.0	120.0	96.0	495.6	749.9	752.9	720.3
Lao PDR	10.0	14.4	11.8	52.6	73.0	48.0	51.0	47.0				
Malaysia	37.5	28.6	369.6	418.4	37.0	32.0	27.0	25.0	104.7	158.5	186.1	
Myanmar	46.5	71.1	56.9	127.8	116.0	91.0	76.0	63.0	7.7	4.4	5.7	6.2
Philippines	60.8	59.5	619.0	688.1	55.0	58.0	48.0	26.0	228.3	164.2		
Singapore	0.6	3.3	334.8	1 093.7	106.0	53.0	44.0	40.0	32.4	33.9	32.2	33.6
Thailand	68.9	83.4	760.9	1 305.5	88.0	85.0	79.0	77.0	291.6			
Timor-Leste												
Viet Nam	45.0	87.5	165.6	255.9	124.0	78.0	70.0	61.0				
<b>South and South-West Asia</b>	<b>1 329.5</b>	<b>1 623.3</b>	<b>8 584.8</b>	<b>12 559.1</b>	<b>122.9</b>	<b>115.8</b>	<b>101.6</b>	<b>74.8</b>				
Afghanistan	18.1	19.3	115.7	32.7	79.0	64.0	50.0	44.0				0.2
Bangladesh	72.5	108.2	186.2	221.7	231.0	195.0	162.0	140.0	171.1	251.0		
Bhutan	0.9	0.5	3.7	3.8	48.0	45.0	36.0	27.0				
India	731.1	900.7	5 019.5	7 919.6	112.0	109.0	93.0	68.0	1 410.6	1 686.9	1 616.9	
Iran (Islamic Rep. of)	156.8	189.4	1 155.0	1 401.4	86.0	89.0	81.0	55.0	102.7	125.8	140.8	
Maldives	0.0	0.0	0.6	1.0	28.0	29.0	33.0	35.0				
Nepal	18.4	21.0	56.0	83.3	67.0	57.0	49.0	36.0	20.9			26.9
Pakistan	181.2	238.7	415.3	713.2	212.0	190.0	182.0	120.0	104.1			
Sri Lanka	7.8	9.1	38.4	107.7	95.0	88.0	97.0	94.0	53.0	83.9	88.9	
Turkey	142.7	136.4	1 594.3	2 074.7	75.0	64.0	56.0	43.0	177.3	170.9	188.2	
<b>North and Central Asia</b>	<b>610.5</b>	<b>284.4</b>	<b>21 184.1</b>	<b>12 518.3</b>	<b>60.5</b>	<b>38.2</b>	<b>36.1</b>	<b>25.5</b>				
Armenia	2.9	1.6	86.3	13.9	456.0	123.0	91.0	68.0	37.9	14.8	8.0	
Azerbaijan	13.1	11.4	174.0	164.7	169.0	102.0	98.0	59.0	53.3	41.3	20.0	17.5
Georgia	8.7	5.2	42.8	10.7	208.0	139.0	66.0	51.0				
Kazakhstan	76.3	32.4	2 604.2	2 040.6	43.0	34.0	27.0	19.0				
Kyrgyzstan	13.7	10.2	71.7	32.9	76.0	33.0	29.0	24.0	30.9	16.4	14.1	20.8
Russian Federation	415.5	165.8	17 551.2	9 792.9	41.0	27.0	28.0	19.0	1 695.1	1 479.2	1 518.7	
Tajikistan	10.1	6.2	11.4	6.3	104.0	69.0	51.0	52.0				
Turkmenistan	23.7	11.7	166.1	71.3	177.0	86.0	81.0	56.0				
Uzbekistan	46.5	39.9	476.3	385.2	84.0	85.0	81.0	61.0				
<b>Pacific</b>	<b>483.4</b>	<b>458.5</b>	<b>1 597.7</b>	<b>2 728.6</b>	<b>22.2</b>	<b>20.7</b>	<b>20.1</b>	<b>15.9</b>				
Australia	342.8	336.2	1 484.6	2 583.0	22.0	20.0	19.0	15.0	186.1	103.6	105.2	
American Samoa	19.0	12.6	0.8	1.0								
Cook Islands	0.0	0.0	0.1	0.1								
Fiji	3.0	3.0	3.2	2.8	37.0	38.0	34.0	23.0	4.8			
French Polynesia	0.1	0.1	1.8	1.9								
Guam	0.0	0.0	0.4	0.4								
Kiribati	0.0	0.0	0.1	0.1								
Marshall Islands	0.0	0.0	0.0	0.0								
Micronesia (F.S.)	0.0	0.0	0.7	0.8								
Nauru	0.0	0.0	0.4	0.5								
New Caledonia	0.6	0.5	6.4	7.3	104.0	71.0	93.0	66.0				
New Zealand	109.5	95.5	76.5	96.7	16.0	17.0	18.0	15.0	50.2	50.0	46.1	
Niue	0.0	0.0	0.0	0.0								
Northern Mariana Is.	0.0	0.0	0.1	0.1								
Palau	0.0	0.0	0.0	0.0								
Papua New Guinea	6.4	9.1	20.2	32.0	34.0	35.0	33.0	24.0				
Samoa	0.4	0.3	0.5	0.5								
Solomon Islands	0.3	0.2	0.9	0.7	44.0	30.0	34.0	35.0				
Tonga	0.1	0.1	0.3	0.4					0.2			
Tuvalu	0.0	0.0	0.0	0.0								
Vanuatu	1.0	0.7	0.9	0.3	31.0	34.0	27.0	20.0				
<b>Asia and the Pacific</b>	<b>4 544.8</b>	<b>4 946.2</b>	<b>65 878.7</b>	<b>75 353.5</b>	<b>100.8</b>	<b>87.1</b>	<b>80.7</b>	<b>65.4</b>				
LLDC	266.0	223.0	3 792.2	2 899.4	111.0	68.5	61.0	45.4				
LDC	180.0	247.1	449.8	553.9	177.6	145.5	121.0	103.2				
ASEAN	476.1	583.0	3 049.6	5 327.6	103.7	86.6	84.4	67.4				
ECO	682.1	695.5	6 784.0	6 922.9	117.2	105.5	99.5	69.2				
SAARC	1 030.0	1 297.5	5 835.5	9 083.0	132.8	124.9	109.2	80.6				
Central Asia	195.0	118.6	3 632.8	2 725.5	127.6	76.6	63.9	46.4				
Pacific island dev. econ.	31.0	26.8	36.7	48.9	42.2	39.2	39.1	28.3				
Low-income	510.4	681.9	2 968.4	2 840.9	172.0	139.5	126.7	96.5				
Middle-income	3 451.4	3 695.1	56 484.9	61 834.4	100.3	87.1	80.3	65.3				
High-income	582.9	569.2	6 424.9	10 677.7	43.5	38.6	35.6	30.6				
<b>Other world regions</b>												
Africa	1 342.5	1 748.4	7 682.2	8 818.1	120.8	101.1	78.9	64.8				
Europe	2 023.5	1 671.7	43 849.4	26 156.8	39.3	31.1	27.2	23.0				
Latin America & Carib.	1 690.9	1 986.6	8 803.4	12 862.8	58.9	47.9	43.0	37.2				
North America	1 546.1	1 731.8	24 983.5	20 821.4	29.5	26.6	23.7	21.7				
Other countries/areas	120.7	123.6	3 082.9	6 325.8	136.8	148.0	122.5	99.2				
<b>World</b>	<b>11 268.6</b>	<b>12 208.3</b>	<b>154 280.1</b>	<b>150 338.3</b>	<b>80.0</b>	<b>69.9</b>	<b>63.5</b>	<b>52.9</b>				



## 27 Water use

**In Bangladesh and many other parts of Asia, water is everywhere – in lakes, in ponds, in rice fields and in rivers. Yet, across the region, even countries that might be considered water rich are becoming increasingly concerned about water security.**

Being water secure means having access to sufficient water of the right quality to meet basic needs – as well as having enough for productive purposes, including agriculture and industry. However, it is not always easy to define how much water is required for these purposes; this is not an exact science and the amount varies from place to place, depending on the nature of the economy and local livelihood needs. On average, however, when annual per capita renewable freshwater availability is less than 1,700 cubic metres countries are said to begin experiencing periodic or regular water stress. Below 1,000 cubic metres, water scarcity begins to hamper economic development and human health and well-being. Two countries in Asia and the Pacific are already facing severe water stress: Singapore, with 135 cubic metres per person per year, and Maldives with only 98 cubic metres. Other countries already experiencing periodic water stress include India, the Republic of Korea and Pakistan.

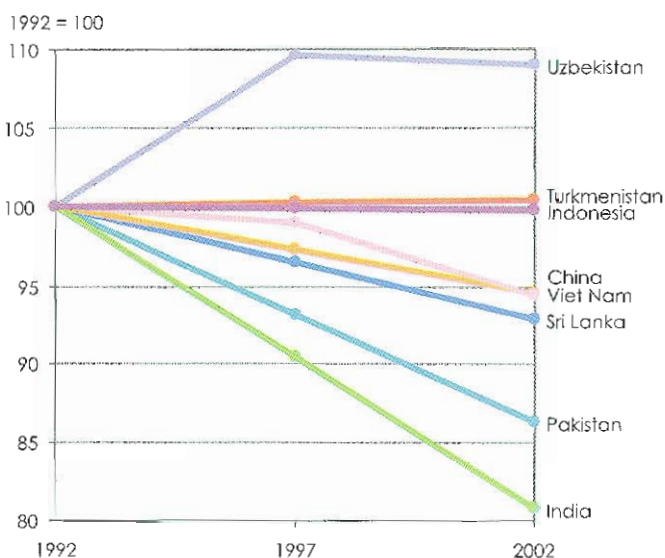
In many cases, water shortages appear to be quite localized. But it is also possible to discern wider trends. ESCAP recently led a study to establish an Index of Water Available for Development (IWAD) – defined as internal renewable water resources minus total water withdrawals for agriculture, domestic supply and industry. The conclusion is that across the region overall water available for development is declining steeply. It should be noted that this reflects only average national conditions. The situation is likely to be even more serious when considering spatial distributions of water resources within countries.

Many countries have been extracting water in an unsustainable manner. The situation is particularly serious in North and Central Asia – in

Turkmenistan, Uzbekistan and Azerbaijan. These countries are already withdrawing more water per year than is available from renewable sources. In South and South-West Asia, India, Pakistan and Sri Lanka have also seen a large surge in extraction. In North and North-East Asia high withdrawals compared with the 1988-1992 base period indicate that China in particular has also been extracting water rapidly and may reach the tipping point faster than previously anticipated. In South-East Asia and the Pacific islands, it is difficult to calculate the IWAD as there are insufficient data.

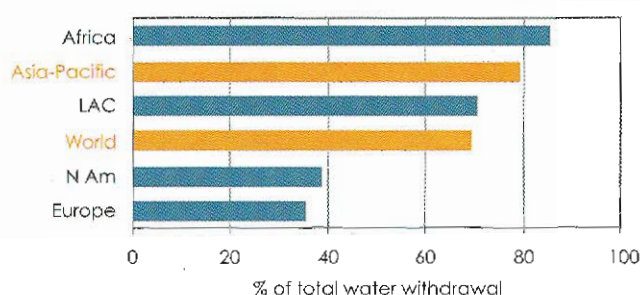
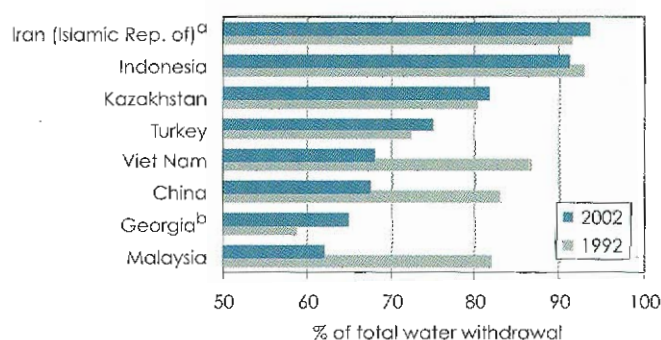
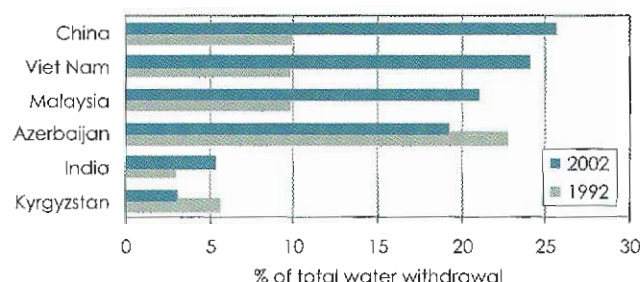
**Figure 27.1**

**Index of water available for development, selected countries, 1992-2002**



In Asia and the Pacific, most of the water is extracted for agriculture which in 2002 accounted for 79 per cent of total withdrawals. Agriculture's share has, nevertheless, fallen since 1990 in all subregions, though there has been an increase in some countries, such as the Islamic Republic of Iran, Turkey and Kazakhstan. As might be expected, it is the poorest countries that are using more water for agriculture. In 2002, in the low-income economies 90.9 per cent was extracted for this purpose,



**Figure 27.2****Proportion of water withdrawn for agriculture, global regions, 2002****Figure 27.3****Proportion of water withdrawn for agriculture, selected Asia-Pacific countries, 1992 and 2002**<sup>a</sup> Earliest figure is for 1997.<sup>b</sup> Latest figure is for 2007.**Figure 27.4****Proportion of water withdrawn for industry, selected Asia-Pacific countries, 1992 and 2002**

compared with 77.3 per cent in middle-income economies and only 62.4 per cent in high-income economies.

Across the region many economies are using more water for industry. China and Viet Nam, for example, between 1992 and 2002 more than tripled their industrial water use. In 2002, the average share of water withdrawal for industry reached 13.1 per cent. This proportion is rising in all subregions,

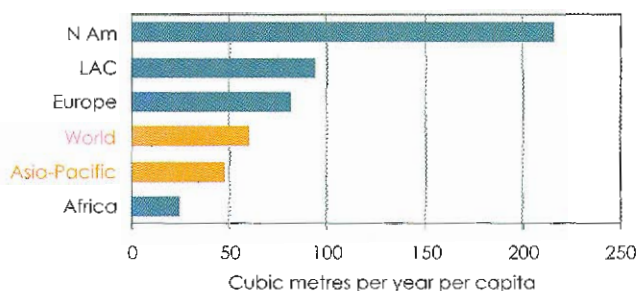
except for some countries of North and Central Asia where the share actually fell by a couple of percentage points. In the Pacific island economies data are unavailable. Recent data from the Caucasus region indicate however an increased in the proportion of water used for agriculture – by seven percentage points in Georgia, four in Azerbaijan and one in Turkey and the Islamic Republic of Iran.

The ESCAP theme study on food security, prepared for the sixty-fifth session of the Commission in April 2009 examines the links between water and food security in a greater detail.

Asia and the Pacific, as the most populated global region, might be expected to have the highest domestic demand. Surprisingly, however, the region uses only 7.7 per cent of withdrawals for this purpose, compared with 10 per cent in Africa and 19 per cent in Latin America. Even in per capita terms domestic water withdrawal, at 47.5 cubic metres per year, is the second lowest in the world, after Africa. Many countries, however, have seen a rapid increase in domestic water use: in Viet Nam the volume has nearly tripled, and in Turkmenistan, India and Malaysia it has roughly doubled.

By far the highest annual per capita domestic withdrawals are in Armenia, with 288.5 cubic metres and New Zealand with 258.4 cubic metres. At the other end of the scale, the volume was only 8.8 cubic metres in Myanmar, 7.1 cubic metres in Papua New Guinea, and 4.5 cubic metres per year in Cambodia.

It is also noticeable that withdrawals for domestic use are lower in the poorest countries. Thus while the regional average was 47.5 cubic metres, in the least developed countries it was only 14.8 cubic metres – far lower than in Africa at 24.7 cubic metres. The extremely low level in these countries is a serious threat to human well-being.

**Figure 27.5****Domestic water withdrawal per capita, global regions, 2002**



**Total renewable water (billion cubic metres per year, cubic metres per capita)**

The sum of internal renewable water resources and natural incoming flow originating from outside the country, taking into consideration the quantity of flows reserved to upstream and downstream countries through formal or informal agreements or treaties. This gives the maximum theoretical amount of water actually available for a country.

**Aggregates:** For total renewable water (billion cubic metres per year): Sum of individual country values. For total renewable per capita (cubic metres per year): Averages are calculated using total population as weight. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database, accessed in November 2008), and World Population Prospects: The 2006 Revision Population Database (online database, accessed in July 2008).

**Total internal renewable water (billion cubic metres per year)**

Average annual flow of rivers and recharge of groundwater generated from endogenous precipitation. **Aggregates:** Sum of individual country values. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database accessed in November 2008).

**Domestic water withdrawal per capita (cubic metres per year)**

Drinking water plus water withdrawn for homes, municipalities, commercial establishments, and public services, divided by population. **Aggregates:** Averages are calculated using total population as weight. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database, accessed in November 2008), and World Population Prospects: The 2006 Revision Population Database (online database, accessed in July 2008).

**Annual withdrawals of ground and surface water (% of total renewable water)**

The gross amount of water extracted in a day from any source either permanently or temporarily. Water sources can be either withdrawn from surface water, groundwater or produced (non-conventional water sources), such as reused treated wastewater and desalinated water. **Aggregates:** Averages are calculated using total

renewable water as weight. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database, accessed in November 2008).

**Total water withdrawal (billion cubic metres per year)**

The gross quantity of water withdrawn for agricultural, industrial and domestic purposes in a given country. Does not include other categories of water use, such as for cooling of power plants, mining, recreation, navigation, or fisheries. **Aggregates:** Sum of individual country values. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database, accessed in November 2008).

**Domestic water withdrawal (% of total water withdrawal)**

The total water withdrawn by the public distribution network. It can include industries which are connected to the network. **Aggregates:** Averages are calculated as the sum of individual country values within each group divided by total water withdrawal of each group. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database, accessed in November 2008).

**Water withdrawal for agriculture (% of total water withdrawal)**

Quantity of water used for agricultural purposes, including irrigation and for livestock. Methods for computing agricultural water withdrawal vary from country to country. **Aggregates:** Averages are calculated as the sum of individual country values within each group divided by total water withdrawal of each group. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database, accessed in November 2008).

**Water withdrawal for industry (% of total water withdrawal)**

Quantity of water used for industrial purposes. Usually, this sector refers to self-supplied industries not connected to any distribution network divided by the total water withdrawal. **Aggregates:** Averages are calculated as the sum of individual country values within each group divided by total water withdrawal of each group. **Source:** Food and Agriculture Organization of the United Nations, FAO Information system on Water and Agriculture (online database, accessed in November 2008).



## 27.1 Water resources and domestic use

	Renewable water						Domestic water withdrawal per capita			Annual withdrawals of ground and surface water		
	Total	Internal	Per capita									
	Billion cubic metres per year		Cubic metres per year				Cubic metres per year			% of total renewable water		
	2007	2007	1992	1997	2002	2007	1992	1997	2002	1992	1997	2002
<b>East and North-East Asia</b>	<b>3 441</b>	<b>3 409</b>	<b>2 503</b>	<b>2 388</b>	<b>2 300</b>	<b>2 236</b>			<b>45.0</b>			<b>21.7</b>
China	2 829	2 812	2 404	2 286	2 196	2 129	29.7	20.3	32.2	17.7	18.6	22.3
DPR Korea	77	67	3 713	3 464	3 315	3 242			76.9			11.7
Hong Kong, China												
Japan	430	430	3 457	3 409	3 373	3 360	136.7		136.5	21.3		20.6
Macao, China												
Mongolia	35	35	15 110	14 347	13 868	13 238		35.0	35.9		1.2	1.3
Republic of Korea	70	65	1 594	1 522	1 474	1 445		135.6	140.0			26.7
<b>South-East Asia</b>	<b>7 063</b>	<b>5 674</b>	<b>15 453</b>	<b>14 211</b>	<b>13 197</b>	<b>12 336</b>			<b>39.6</b>			<b>4.5</b>
Brunei Darussalam	9	9	31 261	27 395	24 324	21 792				0.9	1.1	
Cambodia	476	121	45 834	39 712	35 909	32 963			4.5			0.9
Indonesia	2 838	2 838	15 035	13 972	13 050	12 252	25.1		30.4	2.6		2.9
Lao PDR	334	190	77 126	67 812	61 741	56 926			24.1			0.9
Malaysia	580	580	30 387	26 768	23 909	21 828	42.9	61.9	62.7	1.7		1.6
Myanmar	1 046	881	25 269	23 609	22 357	21 427			8.8			3.2
Philippines	479	479	7 469	6 692	6 026	5 446		59.6	59.5		5.8	6.0
Singapore	1	1	189	162	144	135						
Thailand	410	210	7 374	6 968	6 647	6 417	26.9		35.2			21.2
Timor-Leste												
Viet Nam	891	367	12 893	11 767	10 943	10 200	28.9		68.0	6.1		8.0
<b>South and South-West Asia</b>	<b>4 104</b>	<b>2 174</b>	<b>3 141</b>	<b>2 835</b>	<b>2 594</b>	<b>2 395</b>			<b>44.2</b>			<b>26.1</b>
Afghanistan	65	55	4 425	3 337	2 926	2 395			18.9			35.8
Bangladesh	1 211	105	10 233	9 205	8 353	7 630	14.4	30.5	17.5			6.6
Bhutan	95	95	177 580	183 859	160 776	144 271			33.8			0.4
India	1 897	1 261	2 113	1 913	1 753	1 622	27.9		48.3	26.4		34.1
Iran (Islamic Rep. of)	138	129	2 323	2 151	2 041	1 931		93.9	66.8		60.4	64.4
Maldives	0	0	131	116	106	98						
Nepal	210	198	10 462	9 233	8 246	7 455		10.8	11.8			4.8
Pakistan	225	55	1 892	1 676	1 501	1 374	21.0		21.8	69.1		75.2
Sri Lanka	50	50	2 852	2 721	2 647	2 591	11.1		15.9	19.5		25.2
Turkey	214	227	3 591	3 288	3 045	2 852	87.4		91.3	14.8		19.7
<b>North and Central Asia</b>	<b>4 833</b>	<b>4 594</b>	<b>22 232</b>	<b>22 086</b>	<b>22 123</b>	<b>22 150</b>			<b>92.9</b>			<b>4.8</b>
Armenia	11	9	3 051	3 350	3 452	3 507	280.5	275.2	288.5	33.3	27.8	28.0
Azerbaijan	30	8	4 062	3 803	3 679	3 576	98.9	27.9	61.1	51.4	41.3	33.3
Georgia	63	58	11 878	12 960	13 727	14 408	136.5			5.5		
Kazakhstan	110	75	6 672	7 084	7 340	7 107	38.5	37.7	39.5	33.4	30.7	31.9
Kyrgyzstan	21	46	4 596	4 356	4 069	3 871	61.4	63.7	63.3	53.4	49.0	49.0
Russian Federation	4 507	4 313	30 185	30 318	30 838	31 630	98.1	96.2	98.4	1.8	1.7	1.7
Tajikistan	16	66	2 896	2 692	2 529	2 372	87.9	69.4	69.6	75.2	74.3	74.8
Turkmenistan	25	1	6 363	5 703	5 339	4 979	49.2	80.5	90.7	100.1	96.2	99.7
Uzbekistan	50	16	2 344	2 128	1 981	1 842	95.4	109.0	108.8	124.0	115.2	115.7
<b>Pacific</b>	<b>1 693</b>	<b>1 703</b>	<b>61 309</b>	<b>56 773</b>	<b>52 904</b>	<b>49 437</b>			<b>143.4</b>			<b>1.5</b>
Australia	492	492	28 334	26 592	25 097	23 719			179.6			4.9
American Samoa												
Cook Islands												
Fiji	29	29	38 653	36 455	35 132	34 041			12.3			0.2
French Polynesia		10										
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	327	327	93 070	87 209	82 824	78 257			258.4			0.6
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea	801	801	184 122	161 183	141 535	126 520			7.1			0.0
Samoa												
Solomon Islands	45	45	134 620	116 799	102 068	90 183						
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific</b>	<b>21 133</b>	<b>17 555</b>	<b>6 247</b>	<b>5 815</b>	<b>5 470</b>	<b>5 183</b>			<b>47.5</b>			<b>11.3</b>
LLDC	1 001	796	9 560	8 674	8 078	7 370			55.6			19.0
LDC	3 481	1 690	16 459	14 663	13 349	12 161			14.8			4.4
ASEAN	7 063	5 674	15 480	14 235	13 219	12 361			39.6			4.5
ECO	893	679	2 865	2 589	2 385	2 202			52.4			53.0
SAARC	3 753	1 819	3 159	2 846	2 598	2 395			40.9			25.1
Central Asia	325	281	4 782	4 639	4 502	4 300			81.9			47.0
Pacific island dev. econ.	874	884	129 705	115 440	103 413	93 716			5.9			0.0
Low-income	5 467	3 013	12 034	10 782	9 838	9 046			32.4			8.8
Middle-income	14 338	13 209	5 253	4 908	4 629	4 400			44.2			12.4
High-income	1 328	1 333	6 663	6 456	6 299	6 193			135.5			10.0
<b>Other world regions</b>												
Africa	5 641	3 936	8 200	7 389	6 556	5 846			24.7			3.8
Europe	3 285	2 291	5 594	5 663	5 633	5 580			81.7			10.1
Latin America & Carib.	18 525	13 570	40 263	37 063	34 478	32 375			94.0			1.4
North America	6 556	6 253	22 595	21 423	20 343	19 349			216.7			8.0
Other countries/areas	115	55	1 349	1 159	1 010	893			68.7			59.6
<b>World</b>	<b>55 256</b>	<b>43 659</b>	<b>10 072</b>	<b>9 392</b>	<b>8 797</b>	<b>8 283</b>			<b>60.6</b>			<b>6.9</b>



## 27.2 Water use by sector

	Total water withdrawal			Domestic use			Use for agriculture			Use for industry		
	Billion cubic metres per year						% of total water withdrawal					
	1992	1997	2002	1992	1997	2002	1992	1997	2002	1992	1997	2002
<b>East and North-East Asia</b>			746.8			9.0			66.4			24.5
China	500.0	525.5	630.3	7.0	4.8	6.6	83.0	77.6	67.7	10.0	17.6	25.7
DPR Korea			9.0			19.8			55.0			25.2
Hong Kong, zChina												
Japan	91.4		88.4	18.6		19.7	64.1		62.5	17.3		17.9
Macao, China												
Mongolia		0.4	0.4		19.9	20.5		53.0	52.3		27.1	27.3
Republic of Korea			18.6			35.6			48.0			16.4
<b>South-East Asia</b>			319.1			6.6			85.6			7.8
Brunei Darussalam	0.1	0.1										
Cambodia			4.1			1.5			98.0			0.5
Indonesia	74.3		82.8	6.4		8.0	93.1		91.3	0.5		0.7
Lao PDR			3.0			4.3			90.0			5.7
Malaysia	10.1		9.0	8.1		16.9	82.0		62.1	9.9		21.1
Myanmar			33.2			1.2			98.2			0.5
Philippines		27.7	28.5		15.4	16.6		76.3	74.0		8.3	9.4
Singapore												
Thailand			87.1			2.5			95.0			2.5
Timor-Leste												
Viet Nam	54.3		71.4	3.7		7.8	86.5		68.1	9.8		24.1
<b>South and South-West Asia</b>			1 071.6			6.5			89.3			4.2
Afghanistan			23.3			1.8			98.2			
Bangladesh			79.4			3.2			96.2			0.7
Bhutan			0.4			4.7			94.1			1.2
India	500.0		645.8	5.0		8.1	92.0		86.5	3.0		5.5
Iran (Islamic Rep. of)		83.0	93.3 <sup>1</sup>		7.2	6.6 <sup>1</sup>		91.6	92.2 <sup>1</sup>		1.2	1.2 <sup>1</sup>
Maldives												
Nepal			10.2			2.9			96.5			0.6
Pakistan	155.6		169.4	1.6		1.9	96.8		96.0	1.6		2.0
Sri Lanka	9.8		12.6	2.0		2.4	96.0		95.2	2.0		2.5
Turkey	31.6		40.1 <sup>2</sup>	16.5		15.5 <sup>2</sup>	72.5		73.8 <sup>2</sup>	11.1		10.7 <sup>2</sup>
<b>North and Central Asia</b>			229.7			8.8			65.6			25.6
Armenia	3.5	2.9	3.0	27.6	29.6	29.8	67.4	66.3	65.8	5.0	4.1	4.4
Azerbaijan	15.6	12.5	12.2 <sup>3</sup>	4.7	1.8	4.3 <sup>3</sup>	72.5	81.2	76.4 <sup>3</sup>	22.8	17.0	19.3 <sup>3</sup>
Georgia	3.5		1.6 <sup>4</sup>	21.0		22.1 <sup>4</sup>	58.9		65.1 <sup>4</sup>	20.1		12.8 <sup>4</sup>
Kazakhstan	36.6	33.7	35.0	1.7	1.7	1.7	80.3	81.4	81.8	18.0	16.9	16.5
Kyrgyzstan	11.0	10.1	10.1	2.5	3.0	3.2	91.9	94.2	93.8	5.6	2.9	3.1
Russian Federation	82.6	77.1	76.7	17.7	18.5	18.8	23.5	19.8	17.8	58.7	61.6	63.5
Tajikistan	12.0	11.9	12.0	4.0	3.5	3.7	91.0	92.3	91.6	4.9	4.2	4.7
Turkmenistan	24.7	23.8	24.7	0.8	1.5	1.7	98.7	97.9	97.5	0.5	0.6	0.8
Uzbekistan	62.5	58.1	58.3	3.3	4.4	4.7	94.7	93.7	93.2	2.0	1.9	2.1
<b>Pacific</b>			26.2			17.5			72.4			10.1
Australia			23.9			14.7			75.3			10.0
American Samoa												
Cook Islands												
Fiji			0.1			14.3			71.4			14.3
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand			2.1			48.3			42.2			9.5
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea			0.1			56.3			1.4			42.3
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific</b>			2 393.4			7.7			79.2			13.1
LLDC			190.4			3.6			90.9			5.5
LDC			153.6			2.5			96.9			0.6
ASEAN			319.1			6.6			85.6			7.8
ECO			473.3			4.1			91.9			3.9
SAARC			941.1			6.3			89.5			4.2
Central Asia			153.1			3.9			89.5			6.6
Pacific island dev. econ.			0.1			35.5			36.2			28.4
Low-income			483.4			3.7			90.9			5.4
Middle-income			1 776.9			7.7			77.3			15.0
High-income			133.1			21.5			62.4			16.1
<b>Other world regions</b>												
Africa			213.3			10.0			85.5			4.2
Europe			332.6			14.3			35.6			50.1
Latin America & Carib.			265.3			19.0			70.6			10.3
North America			525.3			13.3			38.7			48.0
Other countries/areas			92.1			8.5			80.0			11.5
<b>World</b>			3 821.9			10.0			69.6			20.4

<sup>1</sup> Date refers to the period 2003-2007. For the period 1998-2002: total water withdrawal = 68.5 billion cubic metres per year, and with % share in domestic, agriculture and industry = 5.1, 93.8, and 1.1, respectively. <sup>2</sup> Date refers to the period 2003-2007. For the period 1998-2002: total water withdrawal = 42.0 billion cubic metres per year, and with % share in domestic, agriculture and industry = 15.2, 75.0, and 9.8, respectively. <sup>3</sup> Date refers to the period 2003-2007. For the period 1998-2002: total water withdrawal = 10.1 billion cubic metres per year, and with % share in domestic, agriculture and industry = 5.0, 75.4, and 19.6, respectively. <sup>4</sup> Date refers to the period 2003-2007.



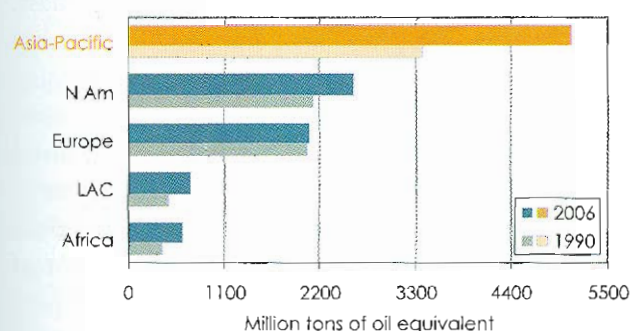
## 28 Energy supply and use

Despite volatile oil prices, most countries continue to increase their total consumption of primary energy. Only the small island countries and the least developed countries have managed to hold their energy use steady.

Comparable energy statistics are available only for periods up to 2006 – prior to the recent peak in energy prices. At that point, over 80 per cent of the region's total primary energy supply came from fossil fuels – the remainder coming predominantly from nuclear power, hydropower, and traditional fuels, such as wood and animal dung. Less than one-quarter of one per cent came from geothermal or other new and renewable energy sources. The countries that consumed fossil fuels the least generally had low access to electricity and made more use of traditional fuels.

**Figure 28.1**

**Total primary energy supply, world regions, 1990 and 2006**

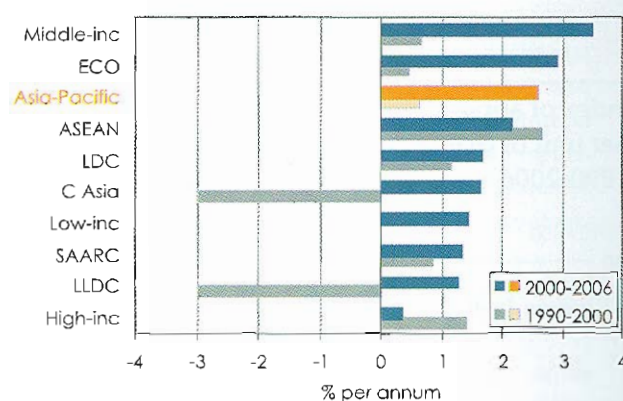


Since 1990, the region's total energy consumption has increased significantly, especially in China, India and other middle-income economies. This reflects rapid economic development that has been supported by a considerable expansion of electricity capacity.

For poorer countries, in particular LDCs, most energy is consumed in the residential sector. Of this some is supplied commercially, but a considerable amount comes from traditional

**Figure 28.2**

**Average annual growth in per capita energy consumption, Asia and the Pacific, 1990-2000 and 2000-2006**



biomass such as wood and animal waste. Other large energy consumers are industry, road transport and commercial and public services.

One of the most important considerations in energy use is the intensity of energy consumption – the amount of energy used to produce one unit of GDP – an important indicator of energy efficiency. Overall the Asia-Pacific region has been becoming more energy-efficient. During 1990-2006, average energy intensity decreased 1.6 per cent per annum. For some countries, particularly in Central Asia, this is probably because after independence they restructured their manufacturing base. In others, these figures cover a period of significant increase in economic output and do not necessarily reflect similar level of improvement in terms of energy efficiency. High-income economies did not improve to the same extent since they were more efficient to begin with.

At the global level, industry has generally become more energy efficient, particularly since 2001. The Asia-Pacific economies followed this trend, pushed by middle-income economies such as China and India. In other subregions and economies industrial energy consumption remained steady.



Figure 28.3

Apparent energy consumption (supply) per unit of GDP, global regions, 1990 and 2006

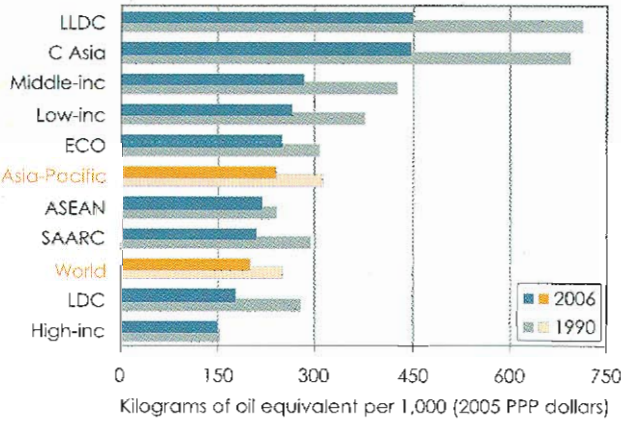
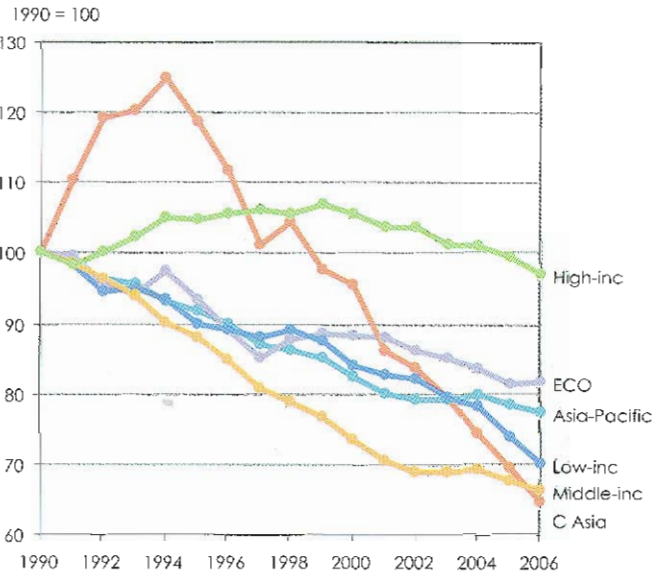


Figure 28.4

Index of apparent energy consumption (supply) per unit of GDP, Asia and the Pacific, 1990-2006

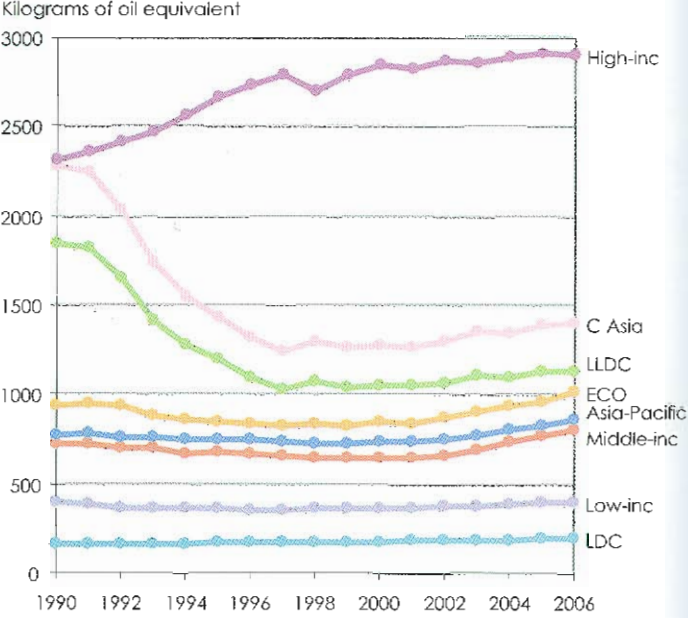


As well as increasing energy efficiency, countries also need to be concerned about per capita consumption. In recent years, the high-income economies actually increased their per capita consumption significantly. Middle-income and low-income economies also increased per capita consumption, though only slightly, and from a much lower base.

The high per capita energy consumption in high-income economies is an indication of generally wasteful lifestyles. Most of these countries have

Figure 28.5

Energy consumption per capita, Asia and the Pacific, 1990-2006



shifted their economic base to less energy-intensive industries but they have still increased overall consumption as a result of urban sprawl and generally inefficient usage. This has also increased emissions of greenhouse gases – an issue discussed further in chapter 26.

Consumption is lower in the developing countries and in the least developed countries because a high proportion of their populations lack access to modern energy services. More than 1.7 billion people in Asia and the Pacific rely for their basic energy needs on traditional biomass. Generally, this is less efficient than other energy sources, though efficiency can be increased using modern technologies, such as better cooking stoves.

The Asia-Pacific region has thus improved energy efficiency over the past 16 years, but some economies need to make greater efforts to reduce consumption of energy and the production of greenhouse gases. Other countries are developing rapidly and have the opportunity to do so in a manner that reduces their long-term dependence on imported fossil fuels. They are now in a position to choose types of infrastructure that will shape energy consumption patterns for decades to come. If they follow a sustainable energy path and consume energy wisely they will save millions of dollars that can be used for other development purposes.



**Energy consumption per capita (kilograms of oil equivalent)**

The amount of energy used per person. Energy use refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport. **Aggregates:** Averages are calculated using total population as weight. **Source:** International Energy Agency (online database, accessed in October 2008), and World Population Prospects: The 2006 Revision Population Database (online database, accessed in July 2008).

**Growth rate of energy consumption per capita (% per annum)**

The average annual growth rate in per capita energy consumption. **Aggregates:** Averages are calculated using aggregated data within each group of energy consumption per capita. **Source:** Calculated by ESCAP using data from energy consumption per capita.

**Energy supply, apparent consumption per unit of GDP (2005 PPP) (kilograms of oil equivalent per 1,000 (2005 PPP dollars))**

The use of energy per 1,000 units of GDP in 2005 constant international PPP dollars. Energy use refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport. **Aggregates:** Averages are calculated using GDP, PPP (constant 2005) as weight. **Source:** International Energy Agency (online database, accessed in November 2008), and World Bank, World Development Indicators (online database, accessed in July 2008).

**Growth rate of energy supply, apparent consumption per unit of GDP (2005 PPP) (% per annum)**

The average annual rate of change in apparent energy consumption per unit of GDP (2005 PPP), calculated as an arithmetic mean for a range-year period. **Aggregates:** Averages are calculated using aggregated data within each group of energy supply, apparent consumption per unit of GDP (2005 PPP). **Source:** Calculated by ESCAP using data from energy supply, apparent consumption per unit of GDP (2005 PPP).

**Energy consumption, total (thousand tons of oil equivalent)**

The sum of the consumption in the end-use sectors. Energy used for transformation and for own use of the energy-producing industries is excluded. Final consumption reflects for the most part deliveries to consumers. **Aggregates:** Sum of individual country values. **Source:** International Energy Agency (online database, accessed in November 2008).

**Energy consumption by industry (% of total energy final consumption)**

Consumption of energy in the following industry sectors: iron and steel (ISIC group 271 and class 2731); chemical and petrochemical (ISIC division 24); non-ferrous industry (ISIC group 272 and class 2732); non-metallic minerals (ISIC division 26); transport equipment (ISIC divisions 34 and 35); machinery (ISIC division 28, 29, 30, 31, and 32); mining and quarrying (ISIC divisions 13 and 14); food and tobacco (ISIC divisions 15 and 16); paper, pulp and print (ISIC divisions 21 and 22); wood and wood products (ISIC); construction (ISIC division 45); textile and leather (ISIC divisions 17, 18 and 19); any manufacturing industry not included above (ISIC divisions 25, 33, 36 and 37). Energy used for transport by industry is reported under transport. **Aggregates:** Averages are calculated as the sum of individual country values in each group divided by total energy final consumption of each group. **Source:** Calculated by ESCAP using data of energy consumption by industry sector values in thousand tons of oil equivalent from International Energy Agency (online database, accessed in September 2008).

**Energy consumption by transport (% of total energy final consumption)**

Consumption of energy in the transport sector, which covers all transport activity (in mobile engines) regardless of the economic sector to which it is contributing (ISIC divisions 60, 61 and 62). **Aggregates:** Averages are calculated as the sum of individual country values in each group divided by total energy final consumption of each group. **Source:** Calculated by ESCAP using data of energy consumption by transport values in thousand tons of oil equivalent (see chapter 19).

**Energy consumption by households (% of total energy final consumption)**

Consumption of energy by households, excluding fuels used for transport. **Aggregates:** Averages are calculated as the sum of individual country values in each group divided by total energy final consumption of each group. **Source:** Calculated by ESCAP using data of energy consumption by household values in thousand tons of oil equivalent from International Energy Agency (online database, accessed in October 2008).

**Energy balance: primary production (million tons of oil equivalent)**

Production of primary energy, including hard coal, lignite/brown coal, peat, crude oil, NGLs, natural gas, combustible renewables and waste, nuclear, hydro, geothermal, solar and the heat from heat pumps that is extracted from the ambient environment. **Aggregates:** Sum of individual country values. **Source:** International Energy Agency (online database, accessed in October 2008).



### **Energy balance: imports and exports (million tons of oil equivalent)**

The amount of primary energy crossing the national territorial boundaries of the country, whether or not customs clearance has taken place. **Aggregates:** Sum of individual country values. **Source:** International Energy Agency (online database, accessed in October 2008).

### **Energy supply, total primary (million tons of oil equivalent)**

Total primary energy supply, as per formula: (Production + imports - exports - international marine bunkers ± stock changes). **Aggregates:** Sum of individual country values. **Source:** International Energy Agency (online database, accessed on October 2008).

### **Gross electricity production (million kilowatt-hours)**

Gross production of electricity, including the consumption by station auxiliaries and any losses in the transformers that are considered integral parts of the station. Included also is total electric energy produced by pumping installations without deduction of electric energy absorbed by pumping. Where reported, includes production from solar, tide, wave, wind, waste, wood and fuel cells. **Aggregates:** Sum of individual country values. **Source:** UNDATA Database, Energy Statistics (online database, accessed in June 2008).

### **Growth rate of gross electricity production (% per annum)**

The average rate of change in electricity production, calculated as an arithmetic mean for a range-year period. **Aggregates:** Averages are calculated using sum of individual country values within each group of gross electricity production. **Source:** Calculated by ESCAP using data from gross electricity production.

### **Household electricity consumption per capita (kilowatt-hours)**

The annual electricity consumption by households per capita. **Aggregates:** Averages are calculated using total population as weight. **Source:** UNDATA Database, Energy Statistics (online database, accessed in July 2008), and World Population Prospects: The 2006 Revision Population Database (online database, accessed in July 2008).

### **Growth rate of household electricity consumption per capita (% per annum)**

The average rate of change in household electricity consumption, calculated as an arithmetic mean for a range-year period. **Aggregates:** Averages are calculated using aggregated data within each group of household electricity consumption per capita. **Source:** Calculated by ESCAP using data from household electricity consumption per capita.



## 28.1 Energy use

	Energy consumption per capita				Growth rate		Energy supply, apparent consumption per unit of GDP				Growth rate	
	Kilograms of oil equivalent				% per annum		Kilograms of oil equivalent per 1,000 (2005 PPP dollars)				% per annum	
	1990	1995	2000	2006	90-06	00-06	1990	1995	2000	2006	90-06	00-06
<b>East and North-East Asia</b>	<b>797</b>	<b>892</b>	<b>876</b>	<b>1 131</b>	<b>2.2</b>	<b>4.4</b>	<b>280</b>	<b>262</b>	<b>229</b>	<b>236</b>	<b>-1.1</b>	<b>0.5</b>
China	577	648	614	910	2.9	6.8	689	469	328	318	-4.7	-0.5
DPR Korea	1 357	864	745	792	-3.3	1.0						
Hong Kong, China	1 259	1 604	1 798	1 620	1.6	-1.7	84	82	80	70	-1.1	-2.2
Japan	2 471	2 688	2 764	2 749	0.7	-0.1	139	145	145	133	-0.2	-1.4
Macao, China												
Mongolia	1 343	808	618	794	-3.2	4.3	696	640	490	386	-3.6	-3.9
Republic of Korea	1 521	2 384	2 782	3 019	4.4	1.4	205	222	230	201	-0.1	-2.3
<b>South-East Asia</b>	<b>417</b>	<b>498</b>	<b>557</b>	<b>633</b>	<b>2.6</b>	<b>2.2</b>	<b>241</b>	<b>230</b>	<b>237</b>	<b>218</b>	<b>-0.6</b>	<b>-1.4</b>
Brunei Darussalam	1 654	2 268	2 139	2 076	1.4	-0.5	142	161	159	152	0.4	-0.8
Cambodia		278	288	319	0.9	1.7		374	310	224	-3.2	-5.3
Indonesia	433	479	560	587	1.9	0.8	277	243	269	240	-0.9	-1.9
Lao PDR												
Malaysia	803	1 130	1 325	1 582	4.3	3.0	192	206	212	215	0.7	0.3
Myanmar	234	245	244	268	0.8	1.5	786	654	479		-4.8	-4.9
Philippines	249	318	330	304	1.3	-1.3	176	205	211	163	-0.5	-4.2
Singapore	2 273	2 465	2 581	3 736	3.2	6.4	187	197	150	158	-1.1	0.8
Thailand	567	804	858	1 117	4.3	4.5	195	191	216	221	0.8	0.4
Timor-Leste												
Viet Nam	340	384	424	535	2.9	4.0	407	340	300	271	-2.5	-1.6
<b>South and South-West Asia</b>	<b>328</b>	<b>353</b>	<b>368</b>	<b>417</b>	<b>1.5</b>	<b>2.1</b>	<b>256</b>	<b>254</b>	<b>239</b>	<b>209</b>	<b>-1.3</b>	<b>-2.2</b>
Afghanistan												
Bangladesh	98	108	110	129	1.7	2.6	163	164	149	143	-0.8	-0.6
Bhutan												
India	294	301	306	329	0.7	1.2	313	296	265	213	-2.4	-3.5
Iran (Islamic Rep. of)	950	1 247	1 410	1 945	4.6	5.5	202	235	242	254	1.4	0.8
Maldives												
Nepal	302	309	332	337	0.7	0.3	433	390	372	352	-1.3	-1.0
Pakistan	326	354	359	407	1.4	2.1	240	239	240	218	-0.6	-1.6
Sri Lanka	310	315	391	451	2.4	2.4	165	137	146	130	-1.5	-1.9
Turkey	702	763	856	994	2.2	2.5	166	165	169	158	-0.3	-1.2
<b>North and Central Asia</b>	<b>3 649</b>	<b>2 590</b>	<b>2 357</b>	<b>2 460</b>	<b>-2.4</b>	<b>0.7</b>	<b>497</b>	<b>572</b>	<b>509</b>	<b>384</b>	<b>-1.6</b>	<b>-4.6</b>
Armenia	1 880	363	376	601	-6.9	8.1	759	303	293	182	-8.5	-7.6
Azerbaijan	2 199	1 185	848	947	-5.1	1.9	752	907	566	273	-6.1	-11.5
Georgia	1 637	446	490	566	-6.4	2.4	418	448	261	194	-4.7	-4.8
Kazakhstan	3 661	2 550	1 931	2 628	-2.1	5.3	635	734	525	421	-2.5	-3.6
Kyrgyzstan	1 591	402	373	430	-7.8	2.4	684	436	331	308	-4.9	-1.2
Russian Federation	4 266	3 128	2 883	3 014	-2.1	0.7	469	541	488	373	-1.4	-4.4
Tajikistan	933	505	402	497	-3.9	3.6	343	529	460	351	0.1	-4.4
Turkmenistan	3 441	2 133	2 073	2 117	-3.0	0.3						
Uzbekistan	1 704	1 428	1 519	1 351	-1.4	-1.9	1 125	1 274	1 248	860	-1.7	-6.0
<b>Pacific</b>	<b>3 328</b>	<b>3 467</b>	<b>3 703</b>	<b>3 683</b>	<b>0.6</b>	<b>-0.1</b>	<b>211</b>	<b>195</b>	<b>190</b>	<b>171</b>	<b>-1.3</b>	<b>-1.7</b>
Australia	3 437	3 546	3 761	3 786	0.6	0.1	211	193	187	172	-1.3	-1.4
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	2 786	3 076	3 419	3 173	0.8	-1.2	212	209	211	170	-1.4	-3.6
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
<b>Asia and the Pacific</b>	<b>773</b>	<b>749</b>	<b>731</b>	<b>853</b>	<b>0.6</b>	<b>2.6</b>	<b>312</b>	<b>287</b>	<b>257</b>	<b>241</b>	<b>-1.6</b>	<b>-1.1</b>
LLDC	1 834	1 199	1 047	1 129	-3.0	1.3	712	790	647	451	-2.8	-5.8
LDC	159	168	172	191	1.1	1.7	277	267	233	176	-2.8	-4.5
ASEAN	417	498	557	633	2.6	2.2	241	230	237	218	-0.6	-1.4
ECO	937	850	849	1 010	0.5	2.9	306	286	270	249	-1.3	-1.3
SAARC	278	287	294	318	0.8	1.4	292	278	253	209	-2.1	-3.1
Central Asia	2 274	1 435	1 270	1 400	-3.0	1.6	693	823	661	447	-2.7	-6.3
Pacific island dev. econ.												
Low-income	395	357	362	395	0.0	1.4	377	339	317	264	-2.2	-3.0
Middle-income	717	676	648	797	0.7	3.5	425	374	312	282	-2.5	-1.7
High-income	2 312	2 667	2 837	2 900	1.4	0.4	153	160	161	148	-0.2	-1.4
<b>Other world regions</b>												
Africa	487	470	481	505	0.2	0.8	298	314	296	272	-0.6	-1.4
Europe	2 459	2 281	2 342	2 488	0.1	-1.0	192	175	155	144	-1.8	-1.3
Latin America & Carib.	792	835	873	930	1.0	1.1	152	148	148	143	-0.4	-0.5
North America	5 163	5 231	5 561	5 288	0.1	-0.8	245	237	213	186	-1.7	-2.2
Other countries/areas	1 446	1 549	1 583	1 751	1.2	1.7	218	240	249		0.5	-1.0
<b>World</b>	<b>1 187</b>	<b>1 146</b>	<b>1 151</b>	<b>1 226</b>	<b>0.2</b>	<b>1.1</b>	<b>248</b>	<b>234</b>	<b>213</b>	<b>200</b>	<b>-1.3</b>	<b>-1.0</b>



## 28. Energy supply and use

### 28.2 Energy use by sector

	Total final consumption			Industry			Transport			Residential use		
	Thousand tons of oil equivalent			% of total energy final consumption								
	1990	2000	2006	1990	2000	2006	1990	2000	2006	1990	2000	2006
East and North-East Asia	1 071 034	1 292 214	1 731 129	36.1	34.6	39.5	12.5	15.9	14.8	32.3	27.7	23.7
China	663 060	780 279	1 201 846	36.3	37.5	43.8	5.6	9.5	10.5	44.2	37.6	28.3
DPR Korea	27 330	17 095	18 788	71.3	66.9	68.9	5.7	3.3	1.8	0.7	0.2	0.1
Hong Kong, China	7 180	11 976	11 554	21.7	15.0	8.3	46.9	54.5	53.6	10.3	9.6	10.7
Japan	305 299	351 183	351 787	34.4	29.4	29.0	25.0	26.9	25.9	12.4	13.8	13.8
Macao, China												
Mongolia	2 975	1 526	2 069	38.7	30.9	30.8	17.7	22.7	23.3	20.5	26.9	26.9
Republic of Korea	65 190	130 154	145 085	29.5	29.0	28.0	22.8	23.1	22.2	19.9	11.6	12.9
South-East Asia	178 911	286 106	353 442	20.9	25.3	27.1	19.8	24.5	24.1	46.6	36.8	33.3
Brunei Darussalam	425	713	793	22.7	19.6	13.5	53.3	48.1	53.6	10.6	9.4	8.1
Cambodia		3 684	4 525		0.8	1.4		8.3	9.3		90.7	86.2
Indonesia	79 164	118 624	134 267	21.1	25.6	25.8	13.9	18.4	18.8	52.5	43.9	42.0
Lao PDR												
Malaysia	14 531	30 848	41 303	36.5	36.1	40.8	37.8	39.1	36.8	13.6	10.0	9.5
Myanmar	9 407	11 201	12 947	4.2	7.8	8.3	4.8	10.5	10.1	89.8	80.0	76.4
Philippines	15 238	25 113	26 266	25.7	29.2	33.6	17.4	33.4	31.7	29.1	21.4	22.4
Singapore	6 856	10 367	16 369	9.0	10.0	7.5	47.5	47.2	35.8	4.1	5.1	3.8
Thailand	30 775	52 026	70 863	28.1	32.4	32.9	35.5	33.4	30.3	25.7	16.1	14.1
Timor-Leste												
Viet Nam	22 515	33 529	46 108	7.6	13.9	20.9	6.3	11.2	15.0	83.4	70.0	58.7
South and South-West Asia	405 986	554 627	692 308	26.1	25.7	26.7	14.2	15.0	15.3	46.0	43.0	40.3
Afghanistan												
Bangladesh	11 064	15 363	20 104	8.8	12.3	15.0	5.7	7.3	9.0	69.6	60.5	58.6
Bhutan												
India	252 945	320 373	378 488	27.8	27.2	28.8	11.2	10.5	10.3	48.6	45.1	42.1
Iran (Islamic Rep. of)	53 842	93 232	136 700	27.4	22.2	21.5	25.1	27.0	27.4	23.2	31.9	32.1
Maldives												
Nepal	5 778	8 097	9 327	1.8	4.7	4.5	2.2	4.0	3.7	94.6	88.9	89.1
Pakistan	36 802	51 870	65 582	21.9	21.8	27.1	13.5	17.3	15.3	54.5	51.6	48.3
Sri Lanka	5 303	7 325	8 654	14.8	19.5	20.9	15.4	25.3	22.3	63.3	46.5	48.0
Turkey	40 252	58 366	73 453	27.1	33.8	31.9	23.4	21.0	20.4	36.1	30.1	27.1
North and Central Asia	785 514	515 497	536 631	32.4	30.3	29.6	17.8	17.3	20.5	11.4	31.2	25.8
Armenia	6 663	1 158	1 808	27.4	34.4	39.8	18.7	23.3	12.8	24.8	13.8	9.0
Azerbaijan	15 859	6 902	7 958	42.9	21.7	20.5	9.9	12.4	27.5	12.3	34.5	45.5
Georgia	8 938	2 313	2 509	41.6	16.2	10.1	17.2	16.2	23.8	24.2	52.3	45.0
Kazakhstan	60 522	28 881	40 254	44.4	47.3	39.8	10.5	11.9	9.9		6.9	6.9
Kyrgyzstan	6 993	1 845	2 263	36.0	25.0	29.8	16.3	11.7	17.0	1.2	11.0	12.4
Russian Federation	634 015	425 031	431 733	33.1	30.8	30.3	19.7	18.6	22.5	13.1	32.9	26.6
Tajikistan	4 947	2 482	3 300	20.0	18.6	17.3	11.3	28.8	40.9	2.3	11.3	8.3
Turkmenistan	12 622	9 333	10 370	2.7	1.9	2.4	7.4	7.4	9.3	0.7	1.1	1.4
Uzbekistan	34 955	37 551	36 437	5.4	21.2	21.8	5.9	10.4	9.2	0.9	39.8	41.0
Pacific	67 499	85 153	90 861	32.8	31.5	32.5	38.5	38.6	38.8	12.8	12.3	12.4
Australia	57 997	71 978	77 727	33.1	33.0	33.6	38.9	39.0	37.9	12.9	12.6	12.6
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand	9 502	13 176	13 133	30.8	22.8	26.0	36.0	36.3	43.8	11.8	10.5	11.3
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
Asia and the Pacific	2 508 944	2 733 598	3 404 370	32.2	30.9	33.9	15.7	17.6	17.4	28.5	32.0	28.1
LLDC	151 314	97 776	113 786	28.1	26.1	25.4	9.6	11.0	11.7	6.8	28.3	27.3
LDC	26 249	38 346	46 903	5.6	8.3	9.8	4.6	7.6	8.3	82.3	75.1	72.3
ASEAN	178 911	286 106	353 442	20.9	25.3	27.1	19.8	24.5	24.1	46.6	36.8	33.3
ECO	266 794	290 462	376 316	27.4	26.2	25.9	15.2	19.4	19.9	18.6	32.4	31.2
SAARC	311 892	403 029	482 155	25.7	25.3	27.4	11.2	11.4	11.0	51.2	47.5	44.6
Central Asia	151 499	90 466	104 899	29.7	27.6	26.7	10.2	11.5	12.4	4.2	23.5	22.3
Pacific island dev. econ.												
Low-income	159 791	182 719	219 380	22.6	21.6	24.7	8.1	11.5	12.0	38.2	51.7	49.3
Middle-income	1 896 704	1 961 332	2 568 541	32.8	32.4	36.0	13.5	14.9	15.4	31.2	35.9	29.9
High-income	452 449	589 548	616 449	32.8	29.0	28.3	27.4	28.7	27.8	13.4	12.9	13.1
Other world regions												
Africa	292 829	375 851	451 030	20.6	18.0	17.8	13.5	15.0	15.2	53.0	53.7	53.9
Europe	1 405 827	1 358 519	1 460 709	32.2	26.6	25.1	22.9	27.1	27.7	23.2	24.7	23.9
Latin America & Carib.	349 987	454 984	524 398	33.2	32.6	32.5	30.9	32.8	34.0	19.8	17.8	17.0
North America	1 465 299	1 754 906	1 773 671	22.5	22.0	19.0	37.2	37.6	39.8	2.0	1.8	1.7
Other countries/areas	149 967	223 539	287 305	29.6	31.3	25.6	36.8	32.6	32.8	10.4	11.6	11.8
World	6 172 853	6 901 397	7 901 482	29.3	27.2	27.6	23.7	25.9	25.9	21.2	22.4	21.5



## 28.3 Energy balances

	Primary production			Imports			Exports			Energy supply		
	Million tons of oil equivalent											
	1990	2000	2006	1990	2000	2006	1990	2000	2006	1990	2000	2006
East and North-East Asia	918.0	1 094.8	1 774.6	27.2	119.8	241.3	-45.3	-71.1	-81.0	1 447.9	1 860.0	2 665.4
China	886.3	1 074.0	1 749.3	7.7	96.9	212.1	-42.7	-69.0	-76.2	863.2	1 105.9	1 878.7
DPR Korea	28.9	18.8	22.2	4.6	1.3	1.0	-0.3	-0.2	-1.6	33.2	19.8	21.7
Hong Kong, China	0.0	0.0	0.0	14.1	21.2	27.6	-2.1	-1.9	-2.3	10.7	15.9	18.2
Japan										443.9	526.6	527.6
Macao, China												
Mongolia	2.7	1.9	3.0	0.9	0.5	0.7	-0.2	0.0	-0.9	3.4	2.4	2.8
Republic of Korea										93.4	189.4	216.5
South-East Asia	311.5	467.1	606.0	115.6	196.3	266.1	-168.0	-243.6	-348.7	246.4	398.6	498.8
Brunei Darussalam	15.6	19.7	21.8	0.0	0.0	0.0	-13.8	-17.3	-19.1	1.8	2.5	2.8
Cambodia		3.2	3.6		0.8	1.4					4.0	5.0
Indonesia	170.0	235.6	307.7	9.7	24.0	33.4	-76.3	-108.0	-161.2	102.8	151.4	179.1
Lao PDR												
Malaysia	50.3	80.4	97.9	9.5	16.2	23.7	-36.4	-44.9	-52.8	23.3	51.3	68.3
Myanmar	10.7	15.4	22.1	0.0	1.4	0.9	0.0	-4.4	-8.7	10.7	12.6	14.3
Philippines	13.7	20.9	24.7	13.3	23.5	20.4	-0.7	-1.9	-1.9	26.2	42.4	43.0
Singapore										13.4	22.2	30.7
Thailand	26.5	43.9	56.2	18.8	38.9	57.2	-0.8	-6.9	-10.3	43.9	75.0	103.4
Timor-Leste												
Viet Nam	24.7	48.1	71.9	3.0	8.9	12.2	-3.1	-18.6	-31.1	24.3	37.2	52.3
South and South-West Asia	525.7	679.2	840.5	55.9	131.5	213.7	-121.4	-136.1	-189.0	509.3	754.4	953.8
Afghanistan												
Bangladesh	10.8	15.2	20.3	2.3	3.5	4.8	-0.1	-0.1	-0.1	12.8	18.7	25.0
Bhutan												
India	291.1	364.3	435.6	34.5	100.3	168.6	-2.8	-8.8	-33.8	319.9	459.8	565.8
Iran (Islamic Rep. of)	179.8	240.9	309.3	7.4	4.8	15.6	-117.9	-126.3	-153.6	68.8	118.8	170.9
Maldives												
Nepal	5.5	7.1	8.3	0.3	1.0	1.1	0.0	0.0	0.0	5.8	8.2	9.4
Pakistan	34.4	47.1	61.3	9.5	18.0	19.5	-0.3	-0.8	-1.4	43.4	64.0	79.3
Sri Lanka	4.2	4.5	5.5	1.9	3.9	4.2	-0.2	-0.1	0.0	5.5	8.1	9.4
Turkey										52.9	76.9	94.0
North and Central Asia	1 512.1	1 171.0	1 513.9	214.0	49.1	55.5	-655.6	-472.3	-726.8	1 078.0	743.5	829.8
Armenia	0.1	0.6	0.8	7.8	1.5	1.8	-0.1	-0.1	-0.1	7.9	2.1	2.6
Azerbaijan	21.3	19.0	38.1	17.1	0.4	4.0	-12.4	-7.8	-28.2	26.1	11.6	14.1
Georgia	1.8	1.3	1.2	11.8	1.7	2.2	-1.3	-0.1	-0.1	12.3	2.9	3.3
Kazakhstan	90.5	80.0	131.0	32.2	8.2	18.5	-49.0	-46.3	-87.7	73.6	42.2	61.4
Kyrgyzstan	2.5	1.4	1.5	6.6	1.2	1.6	-1.5	-0.3	-0.3	7.6	2.4	2.8
Russian Federation	1 280.3	966.5	1 220.0	118.8	31.5	22.8	-527.7	-378.7	-554.0	878.9	614.6	676.2
Tajikistan	2.0	1.3	1.5	4.3	1.9	2.5	-0.7	-0.4	-0.4	5.6	2.8	3.6
Turkmenistan	74.9	46.0	61.6	3.0	0.1	0.1	-58.2	-31.5	-44.4	19.6	14.5	17.3
Uzbekistan	38.6	54.9	58.2	12.5	2.5	1.9	-4.7	-7.1	-11.6	46.4	50.4	48.5
Pacific										101.4	128.6	140.0
Australia										87.7	110.6	122.5
American Samoa												
Cook Islands												
Fiji												
French Polynesia												
Guam												
Kiribati												
Marshall Islands												
Micronesia (F.S.)												
Nauru												
New Caledonia												
New Zealand										13.8	18.1	17.5
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa												
Solomon Islands												
Tonga												
Tuvalu												
Vanuatu												
Asia and the Pacific	3 267.3	3 412.0	4 734.9	412.8	496.8	776.7	-990.4	-923.1	-1 345.5	3 382.9	3 885.1	5 087.9
LLDC	238.2	212.2	304.0	84.6	17.4	32.2	-126.8	-93.5	-173.7	196.0	136.5	162.5
LDC										29.3	43.4	53.7
ASEAN	311.5	467.1	606.0	115.6	196.3	266.1	-168.0	-243.6	-348.7	246.4	398.6	498.8
ECO	444.0	490.6	662.5	92.6	37.2	63.8	-244.8	-220.5	-327.7	344.1	383.6	491.9
SAARC	345.9	438.3	531.2	48.5	126.8	198.1	-3.5	-9.8	-35.4	387.5	558.7	689.0
Central Asia	231.8	204.5	293.9	95.2	17.6	32.7	-128.0	-93.6	-172.8	199.1	128.9	153.6
Pacific island dev. econ.												
Low-income	158.1	212.6	271.1	43.1	40.6	46.9	-11.0	-31.8	-55.2	189.8	220.0	261.9
Middle-income	3 093.5	3 179.7	4 442.0	294.3	352.3	585.3	-926.6	-830.4	-1 205.2	2 528.5	2 779.7	3 890.3
High-income	15.7	19.7	21.8	75.5	103.9	144.5	-52.8	-60.9	-85.1	664.6	885.4	935.7
Other world regions												
Africa	688.4	890.8	1 110.5	47.0	81.1	102.6	-341.4	-461.7	-591.3	392.7	507.4	614.3
Europe	230.7	149.6	159.4	336.5	148.8	185.2	-85.3	-27.8	-48.7	2 049.8	1 968.5	2 084.5
Latin America & Carib.	427.5	621.0	704.3	103.4	151.8	163.8	-172.9	-305.3	-333.0	469.3	610.3	708.0
North America										2 135.8	2 554.6	2 590.4
Other countries/areas	765.5	1 090.6	1 244.3	84.2	138.5	190.2	-622.1	-848.4	-942.6	215.6	362.4	471.8
World	5 379.4	6 164.0	7 953.4	983.9	1 017.0	1 418.5	-2 212.0	-2 566.3	-3 261.0	8 646.0	9 888.3	11 557.0



## 28.4 Electricity production and household consumption

	Gross electricity production						Household electricity consumption per capita					
	Total				Growth rate		Total				Growth rate	
	Million kilowatt-hours				% per annum		Kilowatt-hours				% per annum	
	1990	1995	2000	2005	90-05	00-05	1990	1995	2000	2005	90-05	00-05
<b>East and North-East Asia</b>	<b>1 683 809</b>	<b>2 270 525</b>	<b>2 736 662</b>	<b>4 055 971</b>	<b>6.0</b>	<b>8.2</b>	<b>194</b>	<b>268</b>	<b>321</b>	<b>453</b>	<b>5.8</b>	<b>7.1</b>
China	621 200	1 007 726	1 355 600	2 497 441	9.7	13.0	42	83	132	215	11.5	10.3
DPR Korea	53 500	36 000	19 400	22 913	-5.5	3.4						
Hong Kong, China	28 960	27 916	31 329	38 451	1.9	4.2	927	1 211	1 344	1 410	2.8	1.0
Japan	857 273	989 880	1 060 846	1 102 330	1.7	0.8	1 496	1 886	2 030	2 612	3.8	5.2
Macao, China	790	1 272	1 571	2 027	6.5	5.2	1 534	986	1 186	1 051	-2.5	-2.4
Mongolia	3 348	2 629	2 930	3 419	0.1	3.1	166	138	124	236	2.4	13.8
Republic of Korea	118 738	205 102	264 986	389 390	8.2	8.0	414	629	665	1 063	6.5	9.8
<b>South-East Asia</b>	<b>174 082</b>	<b>273 655</b>	<b>386 181</b>	<b>508 940</b>	<b>7.4</b>	<b>5.7</b>	<b>72</b>	<b>119</b>	<b>180</b>	<b>231</b>	<b>8.1</b>	<b>5.1</b>
Brunei Darussalam	1 237	1 966	2 842	3 264	6.7	2.8	1 720	2 051	2 420	2 996	3.8	4.4
Cambodia	164	277	466	764	10.8	10.4			7	8	0.8	2.3
Indonesia	48 897	68 399	99 511	127 362	6.6	5.1	49	86	144	182	9.2	4.8
Lao PDR	870	1 044	3 871	3 513	9.8	-1.9			62	88	4.4	7.2
Malaysia	25 263	46 656	69 210	87 300	8.6	4.8	225	340	487	632	7.1	5.4
Myanmar	2 478	4 056	5 118	6 015	6.1	3.3	16	24	28	30	4.6	1.5
Philippines	24 658	30 875	45 327	56 549	5.7	4.5	97	119	169	190	4.6	2.3
Singapore	15 618	22 057	31 665	38 213	6.1	3.8	778	969	1 425	1 560	4.7	1.8
Thailand	46 175	83 660	101 577	132 197	7.3	5.4	149	254	321	407	6.9	4.8
Timor-Leste	300	300	300	300	0.0	0.0						
Viet Nam	8 722	14 665	26 594	53 463	12.8	15.0	14	67	139	229	20.6	10.5
<b>South and South-West Asia</b>	<b>458 401</b>	<b>662 623</b>	<b>899 504</b>	<b>1 170 392</b>	<b>6.4</b>	<b>5.4</b>	<b>59</b>	<b>79</b>	<b>105</b>	<b>133</b>	<b>5.6</b>	<b>5.0</b>
Afghanistan	1 128	625	480	960	-1.1	14.9	22	10	5	6	-8.4	4.4
Bangladesh	8 057	11 689	15 771	22 643	7.1	7.5	12	21	39	58	11.3	8.1
Bhutan	1 564	1 630	1 810	2 050	1.8	2.5	44	24	54	69	3.1	5.2
India	289 439	418 043	560 842	697 351	6.0	4.5	37	54	72	91	6.2	4.7
Iran (Islamic Rep. of)	59 102	84 969	121 314	180 390	7.7	8.3		376	473	637	3.6	6.1
Maldives	24	57	104	160	13.5	9.0	70	105	161	220	8.0	6.4
Nepal	731	1 000	1 659	2 415	8.3	7.8	12	14	22	27	5.3	4.0
Pakistan	37 660	53 555	65 760	93 699	6.3	7.3	83	122	149	194	5.8	5.5
Sri Lanka	3 150	4 800	6 844	8 769	7.1	5.1	30	57	93	128	10.1	6.7
Turkey	57 546	86 255	124 920	161 955	7.1	5.3	158	231	350	424	6.8	3.9
<b>North and Central Asia</b>		<b>1 041 816</b>	<b>1 048 373</b>	<b>1 151 515</b>	<b>-0.4</b>	<b>1.9</b>		<b>699</b>	<b>799</b>	<b>666</b>	<b>1.4</b>	<b>-3.6</b>
Armenia		5 561	5 958	6 317	-2.3	1.2		199	506	571	13.8	2.5
Azerbaijan		17 045	18 699	22 872	1.0	4.1		367	1 216	1 467	13.0	3.8
Georgia		8 154	7 424	7 267	-2.8	-0.4		916	564	662	1.8	3.2
Kazakhstan		66 659	51 635	67 916	-1.3	5.6		426	395	322	-2.5	-4.0
Kyrgyzstan		12 349	15 959	16 415	-2.1	0.6		416	475	567	2.8	3.6
Russian Federation		860 027	877 766	953 115	-0.4	1.7		845	955	757	1.1	-4.5
Tajikistan		14 768	14 247	17 086	-0.1	3.7		349	527	478	5.5	-1.9
Turkmenistan		9 800	9 845	12 820	-0.2	5.4		251	272	277	0.1	0.4
Uzbekistan		47 453	46 840	47 707	-0.4	0.4		295	292	269	-0.5	-1.7
<b>Pacific</b>	<b>192 748</b>	<b>214 617</b>	<b>254 443</b>	<b>303 241</b>	<b>3.1</b>	<b>3.6</b>	<b>1 882</b>	<b>1 899</b>	<b>2 028</b>	<b>2 319</b>	<b>1.4</b>	<b>2.7</b>
Australia	155 077	173 384	207 757	251 120	3.3	3.9	2 284	2 333	2 548	3 000	1.8	3.3
American Samoa	100	137	169	189	4.3	2.3	509	646	701	749	2.6	1.3
Cook Islands	16	16	25	30	4.3	3.7						
Fiji	467	544	688	823	3.8	3.6	98	124	173	226	5.7	5.4
French Polynesia	291	349	407	493	3.6	3.9			1 647	1 850	0.8	2.3
Guam	1 370	1 694	1 941	1 897	2.2	-0.5	2 614	3 187	3 478	2 996	0.9	-2.9
Kiribati	7	7	10	10	2.4	0.0				109	-0.5	-1.4
Marshall Islands	55	78	88	101	4.1	2.8						
Micronesia (F.S.)												
Nauru	29	32	33	32	0.7	-0.6						
New Caledonia	1 147	1 415	1 645	1 700	2.7	0.7						
New Zealand	32 266	35 387	39 223	42 956	1.9	1.8	2 880	2 900	2 941	3 078	0.4	0.9
Niue	3	3	3	3	0.0	0.0			1 598	1 838	1.2	2.8
Northern Mariana Is.	1				9.7	1.4						
Palau		120	125	128	0.4	0.5				1 491	0.3	0.8
Papua New Guinea	1 790	1 287	2 100	3 500	4.6	10.8	30	23	98	185	12.8	13.4
Samoa	50	65	91	111	5.5	4.1			225	256	0.8	2.6
Solomon Islands	30	35	62	67	5.5	1.6	22				-0.2	0.0
Tonga	24	30	35	36	2.7	0.6						
Tuvalu												
Vanuatu	25	34	41	45	4.0	1.9				209	-0.4	-1.2
<b>Asia and the Pacific</b>	<b>2 509 040</b>	<b>4 463 236</b>	<b>5 325 163</b>	<b>7 190 059</b>	<b>7.3</b>	<b>6.2</b>	<b>163</b>	<b>213</b>	<b>255</b>	<b>315</b>	<b>4.5</b>	<b>4.3</b>
LLDC	7 641	180 563	173 933	203 490	24.5	3.2		206	273	271	1.8	-0.1
ILDC	15 128	20 519	29 483	39 053	6.5	5.8	14	20	32	44	7.8	6.5
ASEAN	174 082	273 655	386 181	508 640	7.4	5.7	72	119	180	231	8.1	5.1
ECO	155 436	393 478	469 699	621 820	9.7	5.8		226	294	351	3.8	3.6
SAARC	341 753	491 399	653 270	828 047	6.1	4.9	39	56	75	96	6.3	5.1
Central Asia		181 789	170 607	198 400	-0.6	3.1		383	478	490	2.6	0.5
Pacific island dev. econ.	5 405	5 848	7 463	9 165	3.6	4.2	169	176	235	296	3.8	4.7
Low-income	115 130	198 803	218 327	291 160	2.7	5.9	53	77	104	136	6.5	5.5
Middle-income	1 181 394	2 804 260	3 462 863	5 026 993	5.3	7.7	93	134	177	218	5.8	4.2
High-income	1 212 768	1 460 422	1 644 212	1 871 841	2.9	2.6	1 325	1 628	1 754	2 245	3.6	5.1
<b>Other world regions</b>												
Africa	318 966	369 260	435 317	557 659	3.8	5.1	91	105	122	147	3.2	3.7
Europe	4 847 032	3 225 488	3 501 349	3 808 060	-1.6	1.7		1 326	1 430	1 559	1.4	1.7
Latin America & Carib.	629 994	798 203	1 004 234	1 171 307	4.2	3.1	305	371	413	437	2.4	1.1
North America	3 662 180	4 119 056	4 858 989	4 915 542	2.0	1.1	3 714	3 919	4 217	4 547	1.4	1.5
Other countries/areas	284 619	397 813	532 293	692 327	6.1	5.4			1 518	1 804	2.5	3.5
<b>World</b>	<b>12 251 831</b>	<b>13 373 056</b>	<b>15 457 326</b>	<b>18 334 954</b>	<b>2.7</b>	<b>3.5</b>	<b>490</b>	<b>534</b>	<b>585</b>	<b>653</b>	<b>1.9</b>	<b>2.2</b>



## 29 Natural disasters

Many parts of Asia and the Pacific have seen their economic and social development stalled, or even reversed, by natural disasters. Across the region, people have lost their assets, their livelihoods, or their lives in types of disaster that are likely to become more frequent or severe as a result of climate change.

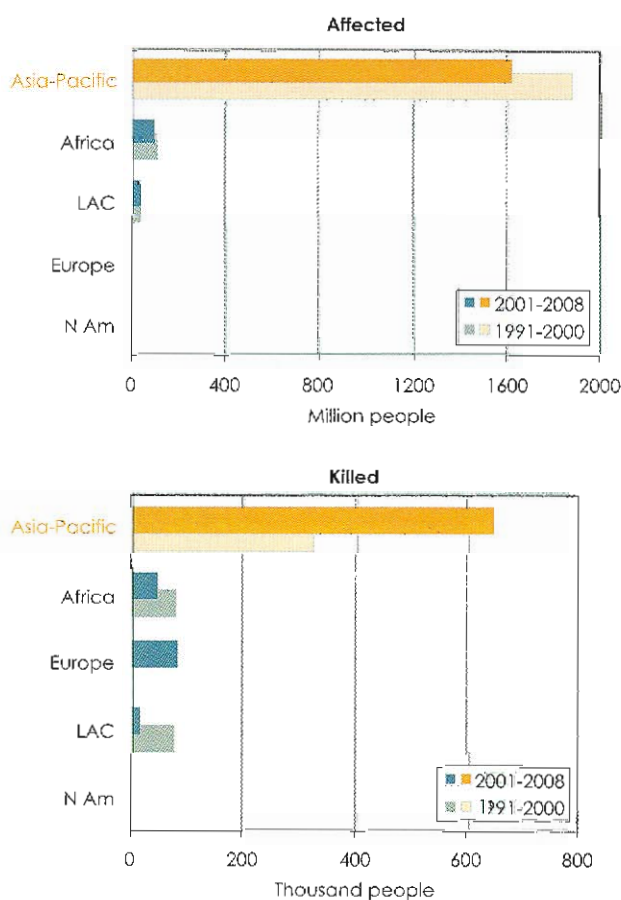
Natural disasters inflict enormous economic and social costs – siphoning off resources that could otherwise be used to ensure social progress and reduce poverty. They have hit with particular force in Asia and the Pacific. In the first nine months of 2008, disasters across the region accounted for 37 per cent of the world's total, accounted for more than 99 per cent of the world's reported victims, more than 94 per cent of people affected, and over 87 per cent of overall economic damage.

Natural disasters threaten aspirations and hamper the achievement of the Millennium Development Goals (MDGs). The 2004 Indian Ocean tsunami, for example, in a single day killed over a quarter of a million people and blighted the lives and prospects of over two million people more. In the Indonesian province of Aceh, poverty rates suddenly rose from 30 to 50 per cent (MDG 1). Powerful earthquakes such as the ones in Gujarat, Pakistan in 2001, or in Sichuan, China in 2008 also devastated basic social infrastructure, effectively locking thousands of children out of school (MDG 2). Likewise, cyclones such as Sidr in Bangladesh or Nargis in Myanmar have disastrous human consequences, often hitting hardest at infants and their mothers (MDGs 3&4). Disasters also compromise access to basic sanitation and safe water sources (MDG 7), impairing advances in maternal health (MDG 5) and often allowing communicable diseases to proliferate (MDG 6).

For Asia and the Pacific, 2008 was a disastrous year. From January to September 2008, a total of 28 disasters caused by natural hazards affected more than 101 million people, killed more than 223,000 and caused more than \$103 billion in economic

**Figure 29.1**

People affected by natural disasters, global regions, 1991-2000 and 2001-2008



damage. The deaths from disasters in 2008 were nearly four times the annual average for the previous decade. This was because the disasters were far more lethal – as expressed by the natural disasters mortality ratio – the number of lives lost to disasters per 100,000 deaths. On this basis, compared with 2007, natural disasters in 2008 were 16 times more likely as a cause of death, deepening impacts on the most vulnerable in the region, increasingly crowding into cities.

The year was not quite as bad for economic damage. Indeed January to September 2008 actually saw less economic damage than in 2007 and less than the yearly average between 1998 and 2007.



Nevertheless, average economic damage in the eight years after 2000 – about \$156 billion per year – was 20 per cent higher than the average for the 1990s.

Among the most serious events were earthquakes, floods and typhoons. One of the worst was the Wenchuan Earthquake in Sichuan Province of China on 12 May which killed 87,000 people, affected more than 45 million others and caused \$20 billion in damage. In June the same area also flooded, affecting 40 million people and inundating 2.2 million hectares of farmland. Direct economic losses were estimated at \$3 billion.

On 21 June 2008, Typhoon Fengshen in the Philippines affected at least 4 million people and left 573 dead in just four hours. Damages were estimated at \$95.2 million. The typhoon caused widespread damage to the agricultural and fishing industries and ruined more than 300 schools at an estimated replacement cost of \$4.7 million. Added to these costs is the long-term damage to human development, as children have been forced to delay schooling or had their education cut short.

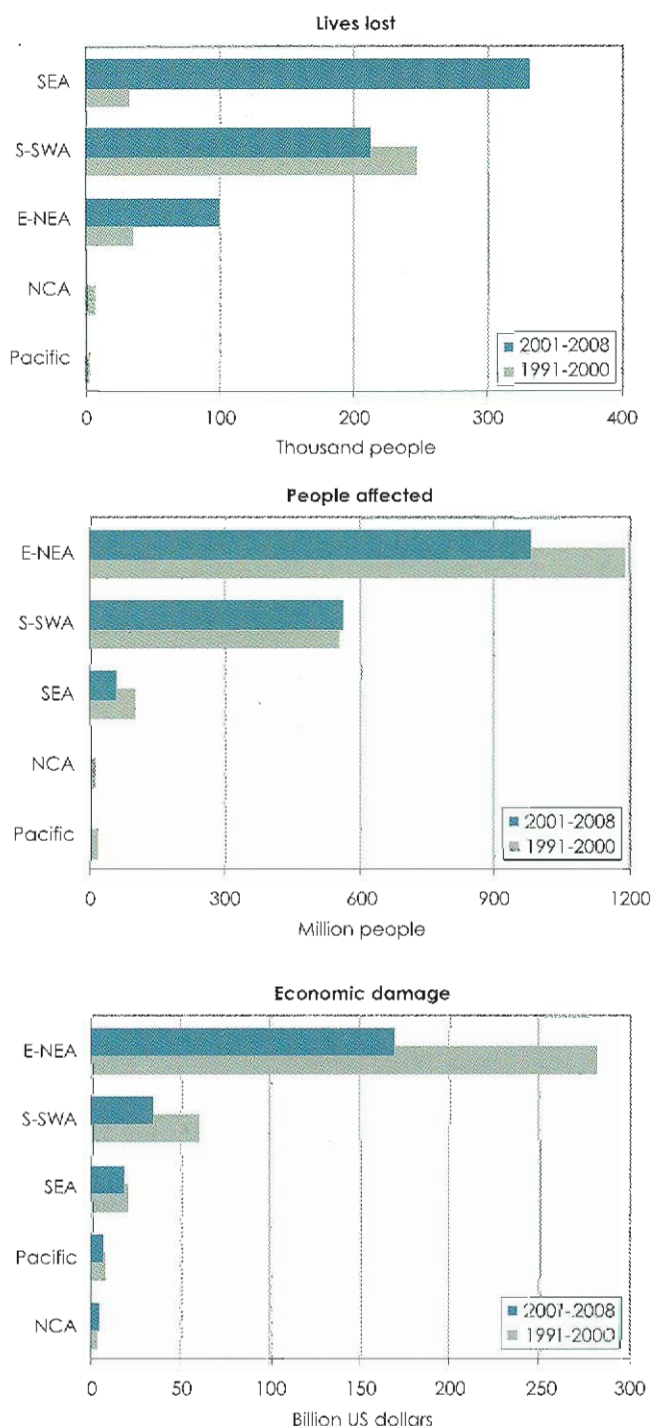
Through August and September floods in Nepal and India displaced hundreds of thousands of people and inundated 100,000 hectares of farmland. They caused immediate crop losses estimated at \$8 million while also destroying the seeds for winter crops.

Since natural disasters, as opposed to regular seasonal flooding, are discrete events, it is often difficult to analyse trends. Some of these events may occur only once every few decades or once a century. Nevertheless it is important to stand back and attempt a broader perspective on disasters – especially as climate change will influence their frequency and severity. Overall it is possible to draw three conclusions. First, the greatest numbers of people affected are in East and North-East Asia and in South and South-West Asia. Specifically, the largest numbers of people affected are in the most populous countries in the region: China, India, Bangladesh and Indonesia. With most of the region's people living in these areas they are likely to continue as disaster hot spots. Second, natural disasters appear to have become more lethal. With current population growth and migration trends, human populations increasingly occupy higher-risk areas in greater numbers, making large disasters potentially affecting more people. In 2008, for instance, Cyclone Nargis and the Sichuan Earthquake killed large numbers of people. Compared with the previous decade, the first decade

of the twenty-first century thus far has proven much worse. Third, in 2008, disasters continue to disproportionately affect the poor, in the poorest countries. The largest share of deaths in Asia and the Pacific were in the least developed countries, with nearly 135,000 deaths. In the 15 years between 1990 and 2005 the region's high-income economies lost just 8,881 lives in disasters. With few financial assets or options to diversify their livelihoods the most vulnerable are the poor.

**Figure 29.2**

**Cumulative impact of natural disasters by subregion, 1991-2000 and 2001-2008**





Natural disasters deprive countries of resources – human, financial and natural – that could otherwise be harnessed for economic and social development. National and regional efforts to reduce the risks from natural disasters should therefore be closely linked with programmes to alleviate poverty and promote economic and social development. While countries will have to take most of these measures themselves they can also benefit considerably from regional cooperation, sharing experiences in disaster management, and developing

the necessary infrastructure. With the increasing occurrence and severity of natural disasters, the need to adopt disaster risk reduction strategies to protect the vulnerable against disasters mounts in urgency.

The Hyogo Framework for Action, endorsed by 168 countries and coordinated by the United Nations International Strategy for Disaster Reduction, provides nations and communities the roadmap to disaster-proof the significant development gains measured across Asia-Pacific over the last generation.

### Cyclone Nargis

Nargis was a category 3 cyclone which made landfall on 2 May 2008 in the Ayeyarwady Division of Myanmar, approximately 250 kilometres south-west of Yangon. Nargis was the worst natural disaster in the history of Myanmar, and the most devastating cyclone to strike Asia since 1991. Heavy rains and winds up to 200 kilometres per hour affected more than 50 townships in Yangon and Ayeyarwady Divisions causing catastrophic destruction and leaving more than 2.4 million people in urgent need of assistance.

The Post Nargis Joint Assessment (PONJA) reported that close to 60 per cent of all households in the area lost their houses. Forty-three per cent lost all their food stocks during the cyclone, and another 33 per cent lost some or most of their stocks. In Kyaiklat and Labutta townships four out of five households lost most or all of their food stocks.

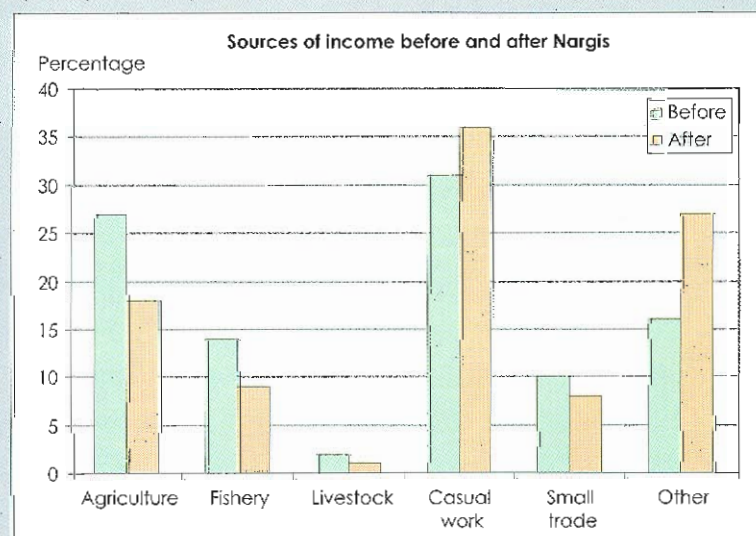
PONJA was a joint ASEAN, United Nations and Myanmar Government effort that rapidly provided the information base for humanitarian and recovery programmes. It assessed the vulnerabilities of the affected population, including the damage to assets, and estimated the losses of income for households and the economy as a whole. The ESCAP Statistics Division led the data analysis of the village

tract assessment. Other technical support was provided by a number of humanitarian and development partners, including the Asian Development Bank, the World Bank, and many NGOs.

A central focus of PONJA was to capture the effect of Nargis on people's livelihoods. The delta area people are primarily farmers, fishermen and labourers. The disaster flooded over 600,000 hectares of agricultural land, killing up to 50 per cent of draught animals, destroying fishing boats and washing away food stocks and agricultural equipment. Total economic damage was more than \$10 billion. One of the most enduring affects, however, was that people lost their livelihoods. Fishermen in coastal areas lost as much as half of their small boats and 70 per cent of their fishing gear. Moreover many small villages along the delta were affected by the damage to small multi-purpose boats on which they relied for provisions.

The cyclone also created serious health hazards – by flooding ponds with seawater, and damaging sanitary and health facilities risking the spread of enteric diseases. Health staff reported a considerable decline in health service provision. This was particularly serious for immunization and communicable diseases with decreases from 83 to 66 per cent and from 43 to 34 per cent, respectively. Another particular concern was the drop in health care services for birth delivery from 81 to 71 per cent.

This experience has shown that responding effectively to disaster depends on high-quality data. It is vital, for example, to have geo-referenced baseline data from administrative sources, censuses and surveys, and also to identify social infrastructure and vulnerable groups at a highly-disaggregated level. It is also important to use common codes, definitions and administrative boundaries so as to be able to link various databases and provide the baseline data for cross-sectoral and in-depth assessments.





### Deaths caused by natural disasters (number)

The number of deaths recorded due to natural disasters, expressed as a cumulative number over five-year periods.

**Aggregates:** Sum of individual country values. **Source:** EM-DAT: Emergency Events Database. (online database, accessed in August 2008.)

### Natural disasters mortality ratio (per 100,000 deaths)

The cumulative number of deaths recorded due to natural disasters in a five-year period divided by the total number of deaths from all causes during the same period, expressed per 100,000 deaths. **Aggregates:** Averages are calculated as the sum of natural-disaster deaths divided by the sum of total deaths. **Source:** EM-DAT: Emergency Events Database. (online database, accessed in August 2008).

### People affected by natural disasters (number)

The total number of people affected by natural disasters over a five-year period. Affected people are people requiring immediate assistance during a period of emergency, such as food, water, shelter, sanitation and immediate medical assistance. Includes cases of an infectious disease introduced in a region or a population that is usually free from that disease. **Aggregates:** Sum of individual country values. **Source:** EM-DAT: Emergency Events Database. (online database, accessed in August 2008).

### People affected ratio (per 100,000 population)

The total number of people affected by natural disasters divided by total population of the respective country or area, calculated for five-year periods and expressed per 100,000 population. Affected people are people requiring immediate assistance during a period of emergency, such as food, water, shelter, sanitation and immediate medical assistance. The definition includes cases of an infectious disease introduced in a region or a population that is usually free from that disease. **Aggregates:** Averages are calculated as the sum of number of people affected by natural disasters divided by total population. **Source:** EM-DAT: Emergency Events Database. (online database, accessed in August 2008).

### Economic damage (million US dollars)

The estimated economic impact of disasters consisting of direct (e.g. damage to infrastructure, crops, housing) and indirect (e.g. loss of revenues, unemployment, market destabilization) consequences on the local economy. For each disaster, the registered figure corresponds to the damage value at the moment of the event (nominal value).

**Aggregates:** Sum of individual country values. **Source:** EM-DAT: Emergency Events Database (online database, accessed on 10 December 2008).



## 29.1 Natural disasters, mortality

	Deaths caused by natural disasters						Natural disasters mortality ratio					
	Cumulative number over the period						Per 100,000 deaths					
	91-95	96-00	01-05	2006	2007	2008	91-95	96-00	01-05	2006	2007	2008
<b>East and North-East Asia</b>	<b>20 353</b>	<b>15 559</b>	<b>7 433</b>	<b>2 499</b>	<b>1 881</b>	<b>87 689</b>	<b>42</b>	<b>32</b>	<b>14</b>	<b>23</b>	<b>17</b>	<b>783</b>
China	14 045	14 151	5 690	2 109	1 161	87 679	34	34	13	23	12	927
DPR Korea	74	254	344	282	610	0	11	28	31	122	260	0
Hong Kong, China	38	83	303	0	0	0	23	49	164	0	0	0
Japan	5 903	223	573	62	87	10	134	5	11	6	8	1
Macao, China	0	0	0	0	0	0	0	0	0	0	0	0
Mongolia	18	97	34	0	0	0	18	109	39	0	0	0
Republic of Korea	275	751	489	46	23	0	22	60	38	17	8	0
<b>South-East Asia</b>	<b>18 054</b>	<b>14 897</b>	<b>183 576</b>	<b>11 345</b>	<b>1 842</b>	<b>134 363</b>	<b>101</b>	<b>84</b>	<b>1018</b>	<b>310</b>	<b>50</b>	<b>3629</b>
Brunei Darussalam	0	0	0	0	0	0	0	0	0	0	0	0
Cambodia	656	987	108	5	184	0	107	155	16	4	140	0
Indonesia	4 144	3 751	169 340	7 432	983	41	54	51	2340	509	67	3
Lao PDR	743	89	2	0	2	0	288	38	1	0	5	0
Malaysia	385	552	143	6	102	0	79	107	26	5	86	0
Myanmar	96	90	396	59	35	133 655	4	4	17	12	7	28312
Philippines	9 857	2 114	3 381	2 984	129	667	485	106	166	713	31	156
Singapore	0	3	33	0	0	0	0	3	32	0	0	0
Thailand	494	523	8 905	280	53	0	23	22	338	52	10	0
Timor-Leste	0	0	26	0	1	0	0	0	53	0	10	0
Viet Nam	1 679	6 788	1 242	579	353	0	70	312	58	132	80	0
<b>South and South-West Asia</b>	<b>179 650</b>	<b>67 881</b>	<b>198 485</b>	<b>2 822</b>	<b>9 454</b>	<b>1 478</b>	<b>278</b>	<b>103</b>	<b>294</b>	<b>21</b>	<b>69</b>	<b>11</b>
Afghanistan	2 807	8 352	5 305	382	296	1 317	157	379	211	71	54	236
Bangladesh	145 422	3 719	3 076	154	5 721	0	2 220	61	51	13	477	0
Bhutan	39	200	0	0	0	0	120	760	0	0	0	0
India	20 761	29 486	49 021	1 431	2 236	130	47	65	103	15	23	1
Iran (Islamic Rep. of)	1 031	3 242	28 393	77	24	0	53	178	1 512	20	6	0
Maldives	0	0	102	0	0	0	0	0	1 120	0	0	0
Nepal	3 609	2 340	1 257	157	214	0	299	206	113	71	97	0
Pakistan	4 510	2 237	75 231	513	911	0	75	38	1 290	44	78	0
Sri Lanka	118	68	35 648	25	33	31	20	11	5 171	18	24	22
Turkey	1 353	18 237	452	83	19	0	63	900	22	19	4	0
<b>North and Central Asia</b>	<b>5 339</b>	<b>1 129</b>	<b>1 707</b>	<b>145</b>	<b>51</b>	<b>1</b>	<b>42</b>	<b>8</b>	<b>12</b>	<b>5</b>	<b>2</b>	<b>0</b>
Armenia	0	4	1	0	0	0	0	3	1	0	0	0
Azerbaijan	5	55	0	0	0	0	2	20	0	0	0	0
Georgia	10	7	7	0	0	0	4	3	3	0	0	0
Kazakhstan	122	7	54	0	0	1	15	1	7	0	0	1
Kyrgyzstan	220	34	90	4	0	0	122	18	44	9	0	0
Russian Federation	3 366	647	1 488	116	2	0	34	6	13	5	0	0
Tajikistan	1 606	300	67	25	49	0	673	130	31	58	113	0
Turkmenistan	0	11	0	0	0	0	0	6	0	0	0	0
Uzbekistan	10	64	0	0	0	0	1	8	0	0	0	0
<b>Pacific</b>	<b>384</b>	<b>2 751</b>	<b>354</b>	<b>24</b>	<b>242</b>	<b>8</b>	<b>36</b>	<b>245</b>	<b>30</b>	<b>10</b>	<b>96</b>	<b>3</b>
Australia	65	71	40	4	11	1	11	11	6	3	8	1
American Samoa	0	0	6	0	0	0	0	0	0	0	0	0
Cook Islands	0	19	0	0	0	0	0	0	0	0	0	0
Fiji	22	41	34	4	7	7	94	167	130	74	127	125
French Polynesia	0	13	0	0	0	0	0	237	0	0	0	0
Guam	1	0	5	0	0	0	31	0	120	0	0	0
Kiribati	0	0	0	0	0	0	0	0	0	0	0	0
Marshall Islands	0	6	0	0	0	0	0	0	0	0	0	0
Micronesia (F.S.)	0	19	48	0	0	0	0	561	1397	0	0	0
Nauru	0	0	0	0	0	0	0	0	0	0	0	0
New Caledonia	0	0	2	0	0	0	0	0	33	0	0	0
New Zealand	0	4	6	0	0	0	0	3	4	0	0	0
Niue	0	1	1	0	0	0	0	0	0	0	0	0
Northern Mariana Is.	0	0	0	0	0	0	0	0	0	0	0	0
Palau	0	0	0	0	0	0	0	0	0	0	0	0
Papua New Guinea	273	2 433	198	16	172	0	115	936	69	27	283	0
Samoa	13	0	10	0	0	0	233	0	195	0	0	0
Solomon Islands	4	0	0	0	52	0	23	0	0	0	1438	0
Tonga	0	0	0	0	0	0	0	0	0	0	0	0
Tuvalu	0	0	0	0	0	0	0	0	0	0	0	0
Vanuatu	6	144	4	0	0	0	105	2403	69	0	0	0
<b>Asia and the Pacific</b>	<b>223 780</b>	<b>102 217</b>	<b>391 555</b>	<b>16 835</b>	<b>13 470</b>	<b>223 539</b>	<b>155</b>	<b>70</b>	<b>257</b>	<b>54</b>	<b>43</b>	<b>701</b>
LLDC	9 179	11 553	6 810	568	561	1 318	154	181	102	41	40	94
LDC	153 395	15 921	10 286	757	6 505	134 972	1 209	126	79	29	247	5 103
ASEAN	18 054	14 897	183 550	11 345	1 841	134 363	101	85	1 021	311	50	3 639
ECO	11 664	32 539	109 592	1 084	1 299	1 318	81	223	738	36	42	42
SAARC	177 266	46 402	169 640	2 662	9 411	1 478	293	75	266	21	73	11
Central Asia	1 973	482	219	29	49	1	70	16	7	5	8	0
Pacific Island dev. econ.	319	2 676	308	20	231	7	103	802	85	26	300	9
Low-income	161 709	27 687	87 316	2 176	8 599	134 972	701	120	371	46	179	2 796
Middle-income	55 789	73 362	302 787	14 547	4 750	88 556	49	63	249	58	19	349
High-income	6 282	1 148	1 451	112	121	11	94	16	19	7	7	1
<b>Other world regions</b>												
Africa	25 898	51 989	29 602	7 852	5 596	987	53	94	48	62	43	8
Europe	1 034	2 196	73 880	4 471	817	17	3	7	239	72	13	0
Latin America & Carib.	18 122	56 520	13 303	339	1 702	286	119	365	82	10	50	8
North America	1 961	1 689	3 070	327	339	103	16	13	23	12	12	4
Other countries/areas	209	3 237	865	66	212	0	7	96	24	9	29	0
<b>World</b>	<b>271 004</b>	<b>217 848</b>	<b>512 275</b>	<b>29 890</b>	<b>22 136</b>	<b>224 932</b>	<b>106</b>	<b>82</b>	<b>184</b>	<b>52</b>	<b>38</b>	<b>386</b>



## 29.2 Natural disasters, affected population

	People affected by natural disasters						People affected by natural disasters, ratio					
	Cumulative number over the period in thousands						Per 100,000 population					
	91-95	96-00	01-05	2006	2007	2008	91-95	96-00	01-05	2006	2007	2008
<b>East and North-East Asia</b>	<b>619 788</b>	<b>570 086</b>	<b>680 531</b>	<b>88 139</b>	<b>121 107</b>	<b>94 222</b>	<b>8 932</b>	<b>7 848</b>	<b>9 044</b>	<b>5 758</b>	<b>7 870</b>	<b>6 091</b>
China	613 487	563 896	678 155	88 101	120 042	94 222	10 318	9 034	10 461	6 670	9 035	7 051
DPR Korea	5 703	3 799	204	10	1 000	0	5 408	3 378	174	43	4 203	0
Hong Kong, China	7	0	5	0	0	0	22	1	14	0	0	0
Japan	465	766	831	23	64	0	75	121	130	18	50	0
Macao, China	1	0	0	0	0	0	60	0	0	0	0	0
Mongolia	100	1 526	846	0	0	0	858	12 512	6 675	0	0	0
Republic of Korea	25	99	490	5	1	0	12	43	207	10	2	0
<b>South-East Asia</b>	<b>38 680</b>	<b>63 679</b>	<b>34 986</b>	<b>17 480</b>	<b>5 354</b>	<b>4 381</b>	<b>1 663</b>	<b>2 524</b>	<b>1 289</b>	<b>3 093</b>	<b>935</b>	<b>756</b>
Brunei Darussalam	0	0	0	0	0	0	0	0	0	0	0	0
Cambodia	6 059	5 399	4 689	42	36	0	11 299	8 813	6 952	298	249	0
Indonesia	4 734	2 632	1 802	3 090	1 212	105	494	256	164	1 350	523	45
Lao PDR	1 429	900	603	0	0	0	6 424	3 584	2 197	0	0	0
Malaysia	24	50	140	107	138	0	24	45	113	408	518	0
Myanmar	449	104	63	70	162	2 400	214	46	27	145	333	4 876
Philippines	14 470	20 227	11 081	8 610	2 023	1 875	4 410	5 533	2 730	9 981	2 300	2 092
Singapore	0	2	0	0	0	0	0	11	1	0	0	0
Thailand	10 163	15 031	10 294	2 557	183	0	3 615	5 057	3 315	4 031	286	0
Timor-Leste	0	0	4	9	1	0	0	0	81	784	82	0
Viet Nam	1 352	19 336	6 310	2 995	1 600	0	383	5 032	1 527	3 474	1 831	0
<b>South and South-West Asia</b>	<b>254 739</b>	<b>300 735</b>	<b>495 358</b>	<b>6 454</b>	<b>64 193</b>	<b>1 240</b>	<b>3 816</b>	<b>4 078</b>	<b>6 161</b>	<b>383</b>	<b>3 747</b>	<b>71</b>
Afghanistan	241	2 814	548	2 226	27	171	303	2 835	473	8 531	99	604
Bangladesh	53 242	28 216	41 014	226	23 160	0	8 802	4 206	5 552	145	14 597	0
Bhutan	66	0	0	0	0	0	2 522	0	0	0	0	0
India	185 791	222 676	436 885	3 234	38 143	311	4 054	4 411	7 948	281	3 263	26
Iran (Islamic Rep. of)	844	37 236	1 890	170	160	0	280	11 519	555	242	225	0
Maldives	0	0	12	0	2	0	0	0	838	0	540	0
Nepal	660	230	1 162	200	641	0	641	198	893	724	2 272	0
Pakistan	12 420	4 862	10 274	2	1 653	0	2 037	706	1 346	1	1 008	0
Sri Lanka	785	1 077	3 056	333	406	758	886	1 165	3 223	1 734	2 104	3 908
Turkey	690	3 624	518	63	3	0	228	1 098	146	86	4	0
<b>North and Central Asia</b>	<b>2 920</b>	<b>7 569</b>	<b>2 360</b>	<b>71</b>	<b>39</b>	<b>2 016</b>	<b>268</b>	<b>692</b>	<b>216</b>	<b>32</b>	<b>18</b>	<b>924</b>
Armenia	0	319	0	0	0	0	0	2 042	0	0	0	0
Azerbaijan	1 503	778	30	0	0	0	3 972	1 941	73	0	0	0
Georgia	2	696	21	1	0	0	10	2 882	94	14	0	0
Kazakhstan	30	611	65	0	0	13	37	800	86	0	0	84
Kyrgyzstan	149	2	1	21	1	3	661	8	2	401	16	56
Russian Federation	1 102	1 305	1 823	20	14	0	148	176	251	14	10	0
Tajikistan	84	3 257	419	29	24	2 000	298	10 827	1 311	439	359	29 245
Turkmenistan	0	0	0	0	0	0	2	0	0	0	0	0
Uzbekistan	50	600	2	0	0	0	45	500	1	0	0	0
<b>Pacific</b>	<b>15 546</b>	<b>1 591</b>	<b>247</b>	<b>9</b>	<b>172</b>	<b>3</b>	<b>11 075</b>	<b>1 052</b>	<b>152</b>	<b>26</b>	<b>501</b>	<b>9</b>
Australia	14 969	664	22	3	6	3	17 009	710	23	15	28	14
American Samoa	0	0	20	0	0	0	0	0	6 543	0	0	0
Cook Islands	0	1	1	0	0	0	0	972	1 824	0	0	0
Fiji	152	267	36	0	1	0	4 060	6 765	871	47	116	0
French Polynesia	0	1	0	0	0	0	0	44	0	0	0	0
Guam	0	1	11	0	0	0	0	185	1 293	0	0	0
Kiribati	0	84	0	0	0	0	0	20 699	0	0	0	0
Marshall Islands	0	0	0	0	0	0	0	84	0	0	0	0
Micronesia (F.S.)	0	32	7	0	0	0	0	5 995	1 344	0	0	0
Nauru	0	0	0	0	0	0	0	0	0	0	0	0
New Caledonia	0	0	0	0	0	0	0	0	39	0	0	0
New Zealand	0	3	6	1	0	0	3	15	29	29	7	0
Niue	0	0	0	0	0	0	0	2 912	2 330	0	0	0
Northern Mariana Is.	0	0	0	0	0	0	0	0	0	0	0	0
Palau	0	0	0	0	0	0	0	0	0	0	0	0
Papua New Guinea	245	519	59	4	162	0	1 096	2 032	203	64	2 561	0
Samoa	85	0	0	0	0	0	10 288	0	0	0	0	0
Solomon Islands	89	0	0	0	2	0	5 176	19	12	0	479	0
Tonga	0	4	17	0	0	0	0	729	3 342	0	0	0
Tuvalu	0	0	0	0	0	0	0	0	0	0	0	0
Vanuatu	6	14	68	0	0	0	754	1 577	6 647	0	0	0
<b>Asia and the Pacific</b>	<b>931 674</b>	<b>943 660</b>	<b>1 213 482</b>	<b>112 152</b>	<b>190 865</b>	<b>101 862</b>	<b>5 426</b>	<b>5 127</b>	<b>6 213</b>	<b>2 780</b>	<b>4 681</b>	<b>2 473</b>
LLDC	4 312	11 038	3 674	2 476	692	2 187	805	1 890	582	1 858	510	1 580
LDC	62 327	37 761	48 163	2 773	24 030	2 571	5 744	3 122	3 623	986	8 395	882
ASEAN	38 680	63 679	34 982	17 471	5 353	4 381	1 666	2 528	1 292	3 098	937	757
ECO	16 011	53 784	13 745	2 511	1 867	2 187	1 005	3 066	723	630	461	530
SAARC	253 206	259 874	492 950	6 221	64 030	1 240	4 170	3 867	6 712	403	4 086	78
Central Asia	1 818	6 264	537	51	25	2 016	531	1 777	147	68	33	2 637
Pacific island dev. econ.	577	924	219	4	165	0	1 670	2 385	508	48	1 774	0
Low-income	82 172	70 037	65 347	5 825	28 467	4 574	3 533	2 710	2 312	980	4 710	744
Middle-income	834 034	872 087	1 146 768	106 295	162 327	97 285	6 026	5 897	7 329	3 295	4 982	2 957
High-income	15 468	1 536	1 366	32	71	3	1 542	149	129	15	33	1
<b>Other world regions</b>												
Africa	48 962	56 065	82 315	2 312	9 080	5 024	1 419	1 433	1 869	245	941	509
Europe	3 285	7 401	2 378	159	1 584	5	114	255	81	27	269	1
Latin America & Carib.	8 862	24 032	24 992	1 459	8 025	1 224	379	947	919	258	1 403	211
North America	750	3 851	6 518	87	667	43	51	249	400	26	197	12
Other countries/areas	129	1 457	703	61	54	0	29	284	120	48	41	0
<b>World</b>	<b>993 663</b>	<b>1 036 467</b>	<b>1 330 388</b>	<b>116 230</b>	<b>210 275</b>	<b>108 158</b>	<b>3 580</b>	<b>3 476</b>	<b>4 184</b>	<b>1 763</b>	<b>3 152</b>	<b>1 602</b>



## 29.3 Natural disasters, economic damage

## Economic damage from natural disasters

	Million US dollars					
	91-95	96-00	01-05	2006	2007	2008
<b>East and North-East Asia</b>	<b>179 189</b>	<b>103 022</b>	<b>103 240</b>	<b>14 964</b>	<b>22 185</b>	<b>29 533</b>
China	48 756	72 736	43 125	12 464	8 005	29 533
DPR Korea	15 110	8 202	30	0	300	0
Hong Kong, China	519	10	0	0	0	0
Japan	113 675	18 183	49 671	2 500	13 810	0
Macao, China	0	0	0	0	0	0
Mongolia	10	1 793	0	0	0	0
Republic of Korea	1 118	2 099	10 414	0	70	0
<b>South-East Asia</b>	<b>6 471</b>	<b>13 933</b>	<b>9 223</b>	<b>4 817</b>	<b>3 639</b>	<b>443</b>
Brunei Darussalam	0	2	0	0	0	0
Cambodia	250	162	53	0	1	0
Indonesia	545	10 277	4 965	3 314	1 671	0
Lao PDR	329	1	0	0	0	0
Malaysia	0	356	510	22	968	0
Myanmar	145	0	501	0	0	0
Philippines	2 090	457	321	347	17	250
Singapore	0	0	0	0	0	0
Thailand	2 553	317	1 928	35	2	3
Timor-Leste	0	0	0	0	0	0
Viet Nam	559	2 361	945	1 099	981	190
<b>South and South-West Asia</b>	<b>20 398</b>	<b>39 755</b>	<b>26 920</b>	<b>3 768</b>	<b>4 762</b>	<b>0</b>
Afghanistan	64	20	5	0	0	0
Bangladesh	3 233	5 039	2 700	0	2 414	0
Bhutan	0	4	0	0	0	0
India	9 014	7 996	15 599	3 390	376	0
Iran (Islamic Rep. of)	5 383	3 779	1 070	58	22	0
Maldives	30	0	470	0	0	0
Nepal	207	35	0	0	2	0
Pakistan	1 102	258	5 477	0	1 947	0
Sri Lanka	283	3	1 346	3	0	0
Turkey	1 080	22 621	255	317	0	0
<b>North and Central Asia</b>	<b>1 368</b>	<b>1 774</b>	<b>1 962</b>	<b>1 209</b>	<b>446</b>	<b>980</b>
Armenia	0	141	0	0	0	0
Azerbaijan	16	140	55	0	0	0
Georgia	2	230	352	0	0	0
Kazakhstan	40	2	8	0	0	130
Kyrgyzstan	197	4	4	0	0	0
Russian Federation	540	1 078	1 416	1 187	446	0
Tajikistan	473	129	127	22	0	850
Turkmenistan	100	0	0	0	0	0
Uzbekistan	0	50	0	0	0	0
<b>Pacific</b>	<b>4 149</b>	<b>4 408</b>	<b>4 120</b>	<b>1 286</b>	<b>1 438</b>	<b>90</b>
Australia	2 813	4 058	3 091	1 282	1 400	90
American Samoa	0	0	200	0	0	0
Cook Islands	0	0	0	0	0	0
Fiji	361	31	34	1	38	0
French Polynesia	0	0	0	0	0	0
Guam	420	200	131	0	0	0
Kiribati	0	0	0	0	0	0
Marshall Islands	0	0	0	0	0	0
Micronesia (F.S.)	0	0	1	0	0	0
Nauru	0	0	0	0	0	0
New Caledonia	0	0	40	0	0	0
New Zealand	152	76	531	3	0	0
Niue	0	0	40	0	0	0
Northern Mariana Is.	0	0	0	0	0	0
Palau	0	0	0	0	0	0
Papua New Guinea	119	43	0	0	0	0
Samoa	278	0	2	0	0	0
Solomon Islands	0	0	0	0	0	0
Tonga	0	0	51	0	0	0
Tuvalu	0	0	0	0	0	0
Vanuatu	6	0	0	0	0	0
<b>Asia and the Pacific</b>	<b>742 746</b>	<b>653 275</b>	<b>998 644</b>	<b>68 210</b>	<b>150 109</b>	<b>102 889</b>
LLDC	1 485 493	1 306 549	1 997 287	136 420	300 217	205 777
LDC	4 542	5 261	3 730	0	2 417	0
ASEAN	6 471	13 933	9 223	4 817	3 639	443
ECO	8 458	27 003	7 000	397	1 969	980
SAARC	13 934	13 355	25 596	3 393	4 740	0
Central Asia	828	696	546	22	0	980
Pacific island dev. econ.	1 184	274	498	1	38	0
Low-income	21 788	16 305	9 842	1 121	5 646	1 040
Middle-income	71 089	121 959	71 706	21 138	11 544	29 916
High-income	118 697	24 627	63 878	3 785	15 280	90
<b>Other world regions</b>						
Africa	2 889	2 305	7 171	229	755	1
Europe	25 522	64 107	59 919	924	20 252	1 998
Latin America & Carib.	14 011	26 207	30 431	368	8 254	209
North America	111 981	53 857	254 494	6 422	9 363	18 175
Other countries/areas	1 648	17 271	1 842	117	3 960	15
<b>World</b>	<b>371 376</b>	<b>326 637</b>	<b>499 322</b>	<b>34 105</b>	<b>75 054</b>	<b>51 444</b>



# Statistical methods

## Country groups and aggregation

The tables in this *Yearbook* contain country group composites for all indicators for which aggregates can be calculated. To facilitate comparison between Asia-Pacific region and the rest of the world, aggregates are also included for Africa, Latin America and the Caribbean, North America, Europe and the World. In addition, aggregates appear for countries within Asia and the Pacific included in several classifications. These classifications comprise countries with special needs, i.e. the least developed countries (LDC), landlocked developing countries (LLDC) and Pacific island developing economies (PIDE); regional associations: Association of Southeast Asian Nations (ASEAN), Economic Cooperation Organization (ECO), South Asian Association for Regional Cooperation (SAARC), and the Central Asian subregion; and the three levels (low, middle and high) of the World Bank income classification of countries.

For a large number of indicators, some values are missing from country time series. Aggregates should therefore be treated as approximations of actual, unknown totals or averages. In the calculation of aggregates, missing values have been dealt with in the following ways.

First, aggregates are not reported for a given year if the population (for social and environmental indicators) or the GDP (for economic indicators) of countries with available values for that year covers less than two-thirds of the total population or GDP of the country group under consideration.

Second, missing country values have been imputed by applying the following methodology. If values are available for both an earlier and a later year than the year for which the aggregate is calculated, the missing value has been imputed using linear interpolation. A missing country value for a year preceding the earliest year for which a value is available has been imputed using the value from the earliest year. Similarly, a missing country value for a year following the latest year for which a value is available has been imputed by using the value of

the latest year. For countries with only one data point for the whole period, this value has been used for all missing years. No information is used from other countries for imputing the missing values. If imputation has been used to derive aggregates, information is given as part of the metadata at the end of each chapter.

Some aggregates have been calculated by agencies responsible for the compilation and production of indicator under their area of expertise. These include some education indicators (aggregates calculated by UIS/UNESCO) and employment indicators (aggregates calculated by ILO). In these cases, the methodology for the imputation of missing data might differ from the methods described above. Interested readers might refer to the respective agencies for more detailed information on aggregation methodology. When aggregates have been calculated by an external agency, this is indicated in footnotes.

There are two types of aggregates. The first type is a straight sum of actual country values and, in some cases, imputed country values where actual values are missing for that particular year. The second type uses weighted averages of actual country values and again, in some cases, imputed country values. The weights are chosen for each indicator separately and are mentioned in the metadata description for each indicator. For ratios, for example, denominators are used as weights. In the case of growth rates, either the weighted average of country growth rates or the growth rate from the time series of group totals is calculated.

## Growth rates

Growth rates are presented as percentages. Rates of change from one period to the next are calculated as proportional changes from the earlier period. Rates of change over several periods are calculated as annual averages using the geometric growth model. The geometric growth rate uses discrete compounding. Although continuous growth, as modelled by the exponential growth rate,



may be more realistic, many economic phenomena are measured only on an annual basis, in which case the annual compound model is appropriate. If the underlying data are measured as indicator levels, the formula for the average annual percentage change in indicator  $P$  over  $n$  periods is

$$r = [(P_n/P_1)^{1/n} - 1] \cdot 100.$$

Note that this does not take into account the intermediate values of the series. However, if the underlying data are measured as annual changes, the formula becomes

$$r = \{[(1 + g_0)(1 + g_1) \dots (1 + g_n)]^{1/n} - 1\} \cdot 100,$$

where  $g_0, g_1, \dots, g_n$  denote the annual changes from the year 1 to  $n$ .

## List of countries and groupings

Asia and the Pacific in this *Yearbook* refers to the 58 regional members and associate members of the Economic and Social Commission for Asia and the Pacific. Time series data are presented according to geographical classification, with the exception of developed economies, which are grouped separately. Throughout the *Yearbook*, countries and territories are referred to by a shortened version of their official name or, for some of the graphs presented, their ISO code.

By geographic subregion the countries and areas of Asia and the Pacific are:

**East and North-East Asia (E-NEA):** China; Democratic People's Republic of Korea (DPR Korea); Hong Kong, China; Japan; Macao, China; Mongolia; Republic of Korea.

**South-East Asia (SEA):** Brunei Darussalam; Cambodia; Indonesia; Lao People's Democratic Republic (Lao PDR); Malaysia; Myanmar; Philippines; Singapore; Thailand; Timor-Leste; Viet Nam.

**South and South-West Asia (S-SWA):** Afghanistan; Bangladesh; Bhutan; India; the Islamic Republic of Iran (Iran (Islamic Rep. of)); Maldives; Nepal; Pakistan; Sri Lanka; Turkey.

**North and Central Asia (NCA):** Armenia; Azerbaijan; Georgia; Kazakhstan; Kyrgyzstan; The Russian Federation; Tajikistan; Turkmenistan; Uzbekistan.

**Pacific:** American Samoa; Australia; Cook Islands; Fiji; French Polynesia; Guam; Kiribati; Marshall Islands; Micronesia (Federated States of) (Micronesia (F.S.)); Nauru; New Caledonia; New

Zealand; Niue; Northern Mariana Islands (Northern Mariana Is.); Palau; Papua New Guinea; Samoa; Solomon Islands; Tonga; Tuvalu; Vanuatu.

Within Asia and the Pacific, also the following groupings are used:

**Landlocked developing countries (LLDC):** Afghanistan; Armenia; Azerbaijan; Bhutan; Kazakhstan; Kyrgyzstan; Lao PDR; Mongolia; Nepal; Tajikistan; Turkmenistan; Uzbekistan.

**Least developed countries (LDC):** Afghanistan; Bangladesh; Bhutan; Cambodia; Kiribati; Lao PDR; Maldives; Myanmar; Nepal; Samoa; Solomon Islands; Timor-Leste; Tuvalu; Vanuatu.

**Pacific island developing economies (PIDE):** American Samoa; Cook Islands; Fiji; French Polynesia; Guam; Kiribati; Marshall Islands; Micronesia (Federated States of); Nauru; New Caledonia; Niue; Northern Mariana Islands; Palau; Papua New Guinea; Samoa; Solomon Islands; Tonga; Tuvalu; Vanuatu.

**Association of Southeast Asian Nations (ASEAN):** Brunei Darussalam; Cambodia; Indonesia; Lao People's Democratic Republic; Malaysia; Myanmar; Philippines; Singapore; Thailand; Viet Nam.

**Economic Cooperation Organization (ECO):** Afghanistan; Azerbaijan; the Islamic Republic of Iran; Kazakhstan; Kyrgyzstan; Pakistan; Tajikistan; Turkey; Turkmenistan; Uzbekistan.

**South Asian Association for Regional Cooperation (SAARC):** Afghanistan; Bangladesh; Bhutan; India; Maldives; Nepal; Pakistan; Sri Lanka.

**Central Asia (C Asia):** Armenia; Azerbaijan; Georgia; Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan.

The classification by income group follows the definition of the World Bank: Economies are divided according to 2007 GNI per capita, calculated using the World Bank Atlas method. The groups are: low-income: \$935 or less; middle-income: \$936 - \$11,455; and high-income: \$11,456 or more. Aggregates are calculated for ESCAP countries for the three income groups. As economies grow, the threshold incomes and group are changing every year. This time, many of the averages for the low- and middle-income economies look significantly different from the previous issue. That is mainly due to the "graduation" of India from the low to the middle-income group.

**Low-income economies (Low-inc):** Afghanistan; Bangladesh; Cambodia; Democratic People's Republic of Korea; Kyrgyzstan; Lao People's Democratic Republic; Myanmar; Nepal; Pakistan;



Papua New Guinea; Solomon Islands; Tajikistan; Uzbekistan; Viet Nam.

**Middle-income economies (Middle-inc):**

American Samoa; Armenia; Azerbaijan; Bhutan; China; Fiji; Georgia; India; Indonesia; the Islamic Republic of Iran; Kazakhstan; Kiribati; Malaysia; Maldives; Marshall Islands; Micronesia (Federated States of); Mongolia; Palau; the Philippines; The Russian Federation; Samoa; Sri Lanka; Thailand; Timor-Leste; Tonga; Turkey; Turkmenistan; Vanuatu.

**High-income economies (High-inc):** Australia; Brunei Darussalam; French Polynesia; Guam; Hong Kong, China; Japan; Macao, China; New Caledonia; New Zealand; Northern Mariana Islands; Republic of Korea; Singapore.

For comparative purposes, aggregates are also presented for the world major regions as follows:

**Africa:** Algeria; Angola; Benin; Botswana; Burkina Faso; Burundi; Cameroon; Cape Verde; Central African Republic; Chad; Comoros; Congo; Côte d'Ivoire; Democratic Republic of the Congo; Djibouti; Egypt; Equatorial Guinea; Eritrea; Ethiopia; Former Ethiopia; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Kenya; Lesotho; Liberia; Libyan Arab Jamahiriya; Madagascar; Malawi; Mali; Mauritania; Mauritius; Mayotte; Morocco; Mozambique; Namibia; Niger; Nigeria; Réunion; Rwanda; Saint Helena; São Tomé and Príncipe; Senegal; Seychelles; Sierra Leone; Somalia; South Africa; Sudan; Swaziland; Tanzania (United Republic of); Togo; Tunisia; Uganda; Western Sahara; Zambia; Zimbabwe.

**Latin America and the Caribbean (LAC):** Anguilla; Antigua and Barbuda; Argentina; Aruba; Bahamas; Barbados; Belize; Bolivia; Brazil; British

Virgin Islands; Cayman Islands; Chile; Colombia; Costa Rica; Cuba; Dominica; Dominican Republic; Ecuador; El Salvador; Falkland Islands (Malvinas); French Guiana; Grenada; Guadeloupe; Guatemala; Guyana; Haiti; Honduras; Jamaica; Martinique; Mexico; Montserrat; Netherlands Antilles; Nicaragua; Panama; Paraguay; Peru; Puerto Rico; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Turks and Caicos Islands; United States Virgin Islands; Uruguay; Venezuela (Bolivarian Republic of).

**North America (N Am):** Bermuda; Canada; Greenland; Saint Pierre and Miquelon; the United States.

**Europe:** Albania; Andorra; Austria; Belarus; Belgium; Bosnia and Herzegovina; Bulgaria; Channel Islands; Croatia; Czech Republic; Denmark; Estonia; Faeroe Islands; Finland; France; Germany; Gibraltar; Greece; Guernsey; Holy See; Hungary; Iceland; Ireland; Isle of Man; Italy; Jersey; Kosovo; Latvia; Liechtenstein; Lithuania; Luxembourg; Malta; Monaco; Montenegro; the Netherlands; Norway; Poland; Portugal; Republic of Moldova; Romania; San Marino; Serbia; Slovakia; Slovenia; Spain; Svalbard and Jan Mayen Islands; Sweden; Switzerland; The former Yugoslav Republic of Macedonia; Ukraine; the United Kingdom of Great Britain and Northern Ireland.

**Other countries/areas:** Bahrain; Cyprus; Iraq; Israel; Jordan; Kuwait; Lebanon; Norfolk Island; Occupied Palestinian Territories; Oman; Pitcairn; Qatar; Saudi Arabia; Syrian Arab Republic; Taiwan Province of China; Tokelau; United Arab Emirates; Wallis and Futuna Islands; Yemen.



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# List of abbreviations and acronyms

3G	Third Generation
APRAD	Asia-Pacific Road Accident Database
ART	Antiretroviral therapy
ASEAN	Association of Southeast Asian Nations
APTA	Asia-Pacific Trade Agreement
BOD	Biochemical oxygen demand
CD-ROM	Compact disk read-only memory
CEDAW	The Convention on the Elimination of All Forms of Discrimination against Women
CRED	Centre for Research on the Epidemiology of Disasters
CO <sub>2</sub>	Carbon dioxide
DEL	Direct Exchange Line
DOTS	Directly Observed Treatment Short-Course
DPT3	Diphtheria toxoid, tetanus toxoid and pertussis vaccine third dose
DSL	Digital Subscriber Line
ECO	Economic Cooperation Organization
ECOSOC	Economic and Social Council
EDGAR	Emission Database for Global Atmospheric Research
EFA	Education for all
EM-DAT	Emergency Events Database
ESCAP	Economic and Social Commission for Asia and the Pacific
FDI	Foreign direct investment
GDI	Gross domestic investment
GER	Gross enrolment ratio
GDP	Gross domestic product
GFCF	Gross fixed capital formation
GNI	Gross national income
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICT	Information and Communication Technology
ICSED	International Conference on Sustainable Economic Development
IEA	International Energy Agency
ILO	International Labour Organization
IMF	International Monetary Fund
IMR	Infant mortality rate
ISIC	International Standard Industrial Classification
IUD	Intra-uterine device
ITU	International Telecommunication Union
KILM	Key Indicators of the Labour Market
KM	Kilometre
KM <sup>2</sup>	Square kilometre
LDC	Least developed countries
LLDC	Landlocked developing countries
M <sup>3</sup>	Cubic metre
MDG	Millennium Development Goals



## List of abbreviations and acronyms

MMR	Maternal mortality ratio
NCHS	National Center for Health Statistics
NER	Net enrolment ratio
NGO	Non-governmental organization
N <sub>2</sub> O	Nitrous oxide
ODA	Official development assistance
ODP	Ozone-depleting potential
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket
PM10	Particulate Matter 10 microns
PONJA	The Post Nargis Joint Assessment
PPP	Purchasing power parity
PSTN	Public Switched Telephone Network
RIVM	The National Institute for Public Health and the Environment
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Area
SARS	Severe Acute Respiratory Syndrome
SIDS	Small Island Developing States
SLE	School life expectancy
SO <sub>2</sub>	Sulphur dioxide
TB	Tuberculosis
TEU	Twenty-foot equivalent unit
TFR	Total fertility rate
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
WHO	World Health Organization



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