

## Costing the MDG gaps

**The Asia-Pacific region has made significant progress towards the MDGs. Many countries have achieved rapid economic growth which has helped lift millions of people out of poverty. And governments have made substantial investments in education and health services and in protecting their most vulnerable people. But some governments still have major tasks ahead – not just to achieve the MDGs but also to ensure sustainable, inclusive development.**

Asia and the Pacific is the world's most populous region, so even though a significant proportion of its population has now achieved better levels of human development, many millions of people are still deprived. Despite commendable progress, in reducing poverty for example, Asia and the Pacific is still home to more than 60% of the world's poor. Similarly, the region still has millions of people lacking safe water and sanitation, and millions of children are undernourished. At the same time, countries across the region have to take urgent steps to address the environmental impact of growth – while also taking into account the disturbing implications of climate change. This chapter attempts to summarize progress to date and also to estimate future investment needs.

### **On and off track**

To assess progress, this report uses the same system of classification as the series of joint regional MDG reports issued by ESCAP, UNDP and ADB. A more detailed analysis is available from the latest report (ESCAP/ADB/UNDP, 2010). For each indicator on which sufficient data are available, each country is placed in one of the following categories:

*Early achiever* – It has already reached the target.

*On track* – It is likely to reach the target by 2015.

*Off track/slow* – It has been making progress, but only slowly, so may not reach the target before 2015.

*Off track/regressing/no progress* – It has made no progress and may even have regressed, moving further away from the target.

This analysis is based on the most recent information, using a set of data comparable across the region. The need for cross-regional comparability means, however, that the country-by-country data used here only cover the period immediately prior to the current economic crisis. However, the analysis estimates the impact of the global financial crisis on MDG attainment (see also Box I.1).

As Table I.1 shows, Asia and the Pacific is currently on-track for all the indicators in only two Goals, MDG 3 and MDG 6. For the others, the prospects are mixed.

**Table I.1 MDG achievement in Asia and the Pacific, selected indicators**

Indicator	Population Affected (Millions)				Progress
	1990	2006/08	1990	2006/08	
<b>MDG 1</b> \$1.25/day poverty - % of population	49	25	1 527	979	On track
Malnutrition - % of under-five children underweight	36	28	140	98	Slow
<b>MDG 2</b> Net primary enrolment ratio - %	89	92	52	35	On track
Reaching last grade - % of children	70	73	..	..	Slow
<b>MDG 3</b> Gender primary – ratio females/males %	92	97	..	..	Early achiever
Gender secondary – ratio females/males %	88	94	..	..	On track
Gender tertiary – ratio females/males %	77	97	..	..	Early achiever
<b>MDG 4</b> Under-5 mortality – per thousand live births	87	54	7	3	Slow
Infant mortality per thousand live births	64	41	5	3	Slow
<b>MDG 5</b> Antenatal care, at least once - %	58	79	35	16	Slow
Births by Skilled Professional - %	56	66	37	26	Slow
<b>MDG 6</b> HIV prevalence - %, ages 15-45	0.29	0.26	5	5	Early achiever
TB incidence – per 100,000 people	157	145	5	6	Early achiever
TB prevalence – per 100,000 people	409	232	12	9	Early achiever
<b>MDG 7</b> Forest cover - %	31	31	..	..	Regressing/No progress
Protected area - %	6.9	9.0	..	..	Early achiever
Access to safe water - %	73	88	858	466	Early achiever
Access to basic sanitation - %	41	54	1 825	1 762	Slow

Source: ESCAP regional aggregates based on data from Millennium Development Goals Indicators Database and reference populations from *World Population Prospects: the 2008 Revision* (United Nations, 2007). Regional aggregates for primary enrolment are provided by UNESCO.

Notes: 1 - Regional aggregates refer to the 55 developing members and associate members of ESCAP. 2 – The initial year is 1990 for all indicators except Net primary enrolment (2000), Reaching last grade (1999), Gender primary and secondary (1999), Gender tertiary (2000), Antenatal care (1991), HIV prevalence (2001). 3- The latest years available for the indicators are the following: 2005 for Forest cover; 2006 for \$1.25/day poverty, Net primary enrolment, Clean water, Basic sanitation; 2007 for Underweight children, Reaching last grade, Gender primary/secondary/tertiary, Under-5 mortality, Infant mortality, Antenatal care, Births by Skilled Professional, HIV prevalence, Tuberculosis incidence and prevalence; and 2008 for Protected area. 4 - Prospects of progress are estimated using methodology described in ESCAP/ADB/UNDP (2010). 5 – For MDGs 1 and 6 “population affected” is obtained by multiplying the value of the indicator by the reference population over 100 or 100,000; for MDG 4 it is obtained by multiplying the value of the indicator by the reference population over 1000, and for MDGs 2, 5 and 7 it is obtained by multiplying 100 minus the indicator by the reference population and then dividing by 100.

### Box I.1 Social impact of the economic crisis

The Asia-Pacific region felt the impact of the global financial and economic crises from the third quarter of 2008. Those most affected were the poor, especially those who lost their jobs in export-oriented industries, those who saw a fall in remittances from overseas workers, and those who wanted to borrow from microfinance institutions that were less able to offer funds. Some families coped by consuming less food or other essentials, others withdrew their children from school – and sent more family members, including the young and the elderly, out to work.

- *Employment* – The industries most affected were manufacturing, agriculture, mining, tourism and financial services. In many of these, the majority of employees are women. For example, women make up 60% to 90% of the labour force in the clothing sector and are a high proportion of workers in call centres and financial services. ILO estimates that in manufacturing alone, 22 million women lost their jobs.<sup>a</sup> Many informal-sector jobs linked to these industries also disappeared.
- *Remittances* – Overseas migrants are often hired as temporary workers, so they get dismissed first during economic downturns. Many women working in labour-intensive industries have lost their livelihoods. The World Bank estimated that in 2009, remittances would decrease in nominal dollar terms by 4.2-7.5% in East Asia and the Pacific, and by 4.2-7.3% in South Asia.<sup>b</sup>
- *Microfinance* – The global liquidity crunch could reduce funds available for microfinance institutions. This would hurt women who are the majority of their 93 million clients.<sup>c</sup>
- *Food Prices* – Although prices have declined from their peaks in 2008, those of major food grains are still above average. Maize is 50% above its average 2003-2006 price, while rice prices are 100% higher.<sup>d</sup> This hurts poor families who spend 60-80% of their incomes on food.
- *Education and Health* – Families who cannot afford fees may take their children out of school. They will also find it more difficult to pay for health services and, especially, for drugs.
- *Family* – During difficult times, families often rely on women to care for the sick, the elderly and the extended family – resulting in longer working hours and a heavier workload for women.
- *Violence* – Previous economic downturns led to some ethnic tensions as well as rising crime rates, including abuse and violence against women.<sup>e</sup>

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<sup>a</sup> ILO (2009a). *Global Employment Trends for Women Report*, (Geneva, ILO).

<sup>b</sup> Ratha, D. and S. Mohapatra, (2009). "Revised outlook for remittances flows 2009-2011", *Migration and Development Brief 9*, (Washington, D.C., World Bank).

<sup>c</sup> ESCAP (2009a). "Responses to the economic crisis: Women's economic security and rights" prepared for High level intergovernmental meeting to review regional implementation of the Beijing Platform for Action and its Regional and global outcomes, ESCAP, Bangkok, Thailand, 16-18 November.

<sup>d</sup> World Bank (2009). "Food crisis: What is the World Bank doing?" accessed from [www.worldbank.org/foodcrisis/bankinitiatives.htm](http://www.worldbank.org/foodcrisis/bankinitiatives.htm), on 17 February 2010.

<sup>e</sup> Heyzer, N. and M. Khor (1999). "Globalization and the way forward", Development Outreach "Speaker's Corner" (Washington, D.C., World Bank) accessed from <http://devoutreach.com/summer99/GlobalizationandtheWayForward/tabid/819/Default.aspx> accessed in June 2009.

See also ESCAP (2010). *Economic and Social Survey of Asia and the Pacific 2010* (United Nations publication, Sales No. E.10.II.F.2).

**MDG-1 – Poverty** – The region has already almost halved the proportion of the population living below the poverty line of \$1.25 a day. But it has had less success in attacking hunger: between 1990 and 2007, it reduced the proportion of under-five children underweight, but only by eight percentage points, from 36% to 28%.

**MDG-2 – Education** – The Asia-Pacific region has made good progress in primary education: between 1999 and 2007 it increased net enrolment from 89% to 92%. This reflects increasing national spending on education. But the region has done less well in keeping those children in school: in 2007 only 73% of pupils in primary starting grade 1 were expected to reach the final grade. This is partly because of the quality of education on offer and because poor children can be forced out of school early due to the expense or the need to work (Patel, 2009).

**MDG-4 – Child mortality** – Here the prospects remain gloomy – the region has been slow to reduce the number of needless deaths of children. In 2007 the infant mortality rate was still high at 41 deaths per 1,000 live births, and the under-five mortality rate was 54 deaths per 1,000 live births. This reflects deficiencies in key child-survival interventions, including vitamin A supplementation, the use of insecticide-treated bed nets, exclusive breastfeeding and immunization against the commonest childhood diseases (United Nations, 2009a).

**MDG-5 – Maternal health** – Here the situation is also depressing. Although there are insufficient data to present an aggregate view of Asia and the Pacific as a whole, subregional pictures indicate the extent of the problem. Estimates for 2005 show that maternal mortality ratios per 100,000 live births varied from 50 in East and North-East Asia to over 490 in South Asia (WHO, 2007). Other, related indicators also showed unsatisfactory progress – with still relatively low coverage of antenatal care and too few births attended by skilled health professional and low contraceptive prevalence (United Nations, 2009a; ESCAP/ADB/UNDP, 2010).

**MDG-7 – Environmental sustainability** – Here different indicators point in various directions:

while the region is an early achiever in half of the indicators, it is off track in the other half. It is, for example, progressing only slowly in halving the proportion of people without access to basic sanitation, and for other key indicators it is regressing – moving backwards, for example, in the proportion of land area covered by forests.

Another major concern is that even in areas where the region has achieved good progress, millions of people remain deprived. Thus in the Asia-Pacific region in 2007, 979 million people – one in every four – were living below the poverty line. At the same time, 35 million children were out of school, 16 million mothers were not covered by antenatal care, 5 million people suffered from HIV and AIDS, and 9 million from tuberculosis – and 466 million lacked access to safe drinking water.

Moreover, regional averages invariably mask disparities between countries. Even on indicators for which the region is already an early achiever, many countries are lagging. For instance, although the region is an early achiever in the provision of clean drinkable water, 23 countries are expected to miss the target. This is illustrated in Figure I.1. This shows that all countries need to accelerate progress in at least one indicator. The green squares show where the country is on track or an early achiever; the red squares where it is off track or regressing. The gaps indicate a lack of internationally comparable data.

It should be noted that some countries in this chart are indicated as off-track even when, compared with other countries, they have already achieved high standards. For example, economies with net primary enrolment ratios above 90% can still be considered off track if they already had strong achievement in 1990 but subsequently did not make much further progress. This is the case for Hong Kong, China which has a primary enrolment ratio of 95% and Macao, China with an enrolment ratio of 93%. The situation is similar for the Republic of Korea for MDGs 3 and 4, and for the Russian Federation for targets related to MDGs 2 and 5.

Figure I.1 Asia-Pacific countries on and off track for reaching selected targets

	1	2	3	4	5	6	7
	\$1.25/day poverty Underweight children	Primary enrolment Reaching last grade Primary completion	Gender primary Gender secondary Gender tertiary	Under-5 mortality Infant mortality	Antenatal care, at least once Births by Skilled Professional	HIV prevalence TB incidence TB prevalence	Forest cover Protected area Water, total Sanitation, total
<b>Asia Pacific</b>	■	■	■	■	■	■	■
<b>East and North-East Asia</b>	■	■	■	■	■	■	■
China	■	■	■	■	■	■	■
Hong Kong, China	■	■	■	■	■	■	■
Macao, China	■	■	■	■	■	■	■
Korea, DPR	■	■	■	■	■	■	■
Korea, Republic of	■	■	■	■	■	■	■
Mongolia	■	■	■	■	■	■	■
<b>South-East Asia</b>	■	■	■	■	■	■	■
Brunei Darussalam	■	■	■	■	■	■	■
Cambodia	■	■	■	■	■	■	■
Indonesia	■	■	■	■	■	■	■
Lao, PDR	■	■	■	■	■	■	■
Malaysia	■	■	■	■	■	■	■
Myanmar	■	■	■	■	■	■	■
Philippines	■	■	■	■	■	■	■
Singapore	■	■	■	■	■	■	■
Thailand	■	■	■	■	■	■	■
Timor-Leste	■	■	■	■	■	■	■
Viet Nam	■	■	■	■	■	■	■
<b>South and South-West Asia</b>	■	■	■	■	■	■	■
Afghanistan	■	■	■	■	■	■	■
Bangladesh	■	■	■	■	■	■	■
Bhutan	■	■	■	■	■	■	■
India	■	■	■	■	■	■	■
Iran (Islamic Republic of)	■	■	■	■	■	■	■
Maldives	■	■	■	■	■	■	■
Nepal	■	■	■	■	■	■	■
Pakistan	■	■	■	■	■	■	■
Sri Lanka	■	■	■	■	■	■	■
Turkey	■	■	■	■	■	■	■
<b>North-Central Asia</b>	■	■	■	■	■	■	■
Armenia	■	■	■	■	■	■	■
Azerbaijan	■	■	■	■	■	■	■
Georgia	■	■	■	■	■	■	■
Kazakhstan	■	■	■	■	■	■	■
Kyrgyzstan	■	■	■	■	■	■	■
Russian Federation	■	■	■	■	■	■	■
Tajikistan	■	■	■	■	■	■	■
Turkmenistan	■	■	■	■	■	■	■
Uzbekistan	■	■	■	■	■	■	■
<b>Pacific</b>	■	■	■	■	■	■	■
American Samoa	■	■	■	■	■	■	■
Cook Islands	■	■	■	■	■	■	■
Fiji	■	■	■	■	■	■	■
French Polynesia	■	■	■	■	■	■	■
Guam	■	■	■	■	■	■	■
Kiribati	■	■	■	■	■	■	■
Marshall Islands	■	■	■	■	■	■	■
Micronesia, Fed. States of	■	■	■	■	■	■	■
Nauru	■	■	■	■	■	■	■
New Caledonia	■	■	■	■	■	■	■
Niue	■	■	■	■	■	■	■
Northern Mariana Islands	■	■	■	■	■	■	■
Palau	■	■	■	■	■	■	■
Papua New Guinea	■	■	■	■	■	■	■
Samoa	■	■	■	■	■	■	■
Solomon Islands	■	■	■	■	■	■	■
Tonga	■	■	■	■	■	■	■
Tuvalu	■	■	■	■	■	■	■
Vanuatu	■	■	■	■	■	■	■

■ On Track ■ Off Track

Source: ESCAP calculations based on data from United Nations Statistics Division, Millennium Development Goals Indicators database.

Notes: 1 - The indicators included in the table are based on internationally comparable data, which allow the calculation of trends in the progress towards the MDGs. 2 - On-track means that the MDG target was already reached based on the latest available data or that it is likely that the MDG target will be reached by 2015. Off-track means that progress has been made but at slow pace and the MDG target may not be reached before 2015 or that no progress has been made in achieving the MDG target. 3 - The methodology to classify countries according to on-track and off-track is described in ESCAP/ADB/UNDP (2010).

### **The environmental deficit**

In many countries, economic achievements, and to some extent MDG progress, have had significant environmental costs. And the situation could deteriorate further as countries put greater pressure on their natural resource base. While Asia and the Pacific has one and a half times the world average population density, it has only 60% of the world average per capita productive area. It also has the lowest per capita availability of fresh water (ESCAP, 2006a).

These deficits can be assessed by considering the region's "biocapacity", which refers to the land area available to support human activity, vis-à-vis its "ecological footprint" which refers to the land actually required to support current levels. The Asia-Pacific region has only 0.8 hectares per capita, as compared to an ecological footprint of 1.6 hectares per capita— a deficit of 0.8 hectares per capita, compared with an average deficit of 0.6 hectares per capita for the rest of the world (WWF, 2008).

This has profound implications. Environmental destruction not only hampers future advances but also threatens many existing achievements. If the countries of the region pursue an environmentally unsustainable development model they will become more vulnerable economically – and experience threats to energy and food security. And in the longer term some countries could suffer catastrophic damage from climate change.

**Energy security** – By 2030, the region is expected to increase its energy demand by 50% – and it is likely to be meeting more than four-fifths of that demand with fossil fuels. The least developed countries, landlocked developing countries, and small island developing states in particular will be exposed to volatile energy prices that will compromise their efforts to sustain economic growth (ESCAP, 2007a).

**Food security** – The region may also face chronic food shortages. Asia's food demand is expected to double by 2050, and unless they can boost productivity, many countries will have to rely heavily on imports – at costs that could be huge, and politically untenable. The food crisis of 2008 may be only an initial signal of what lies

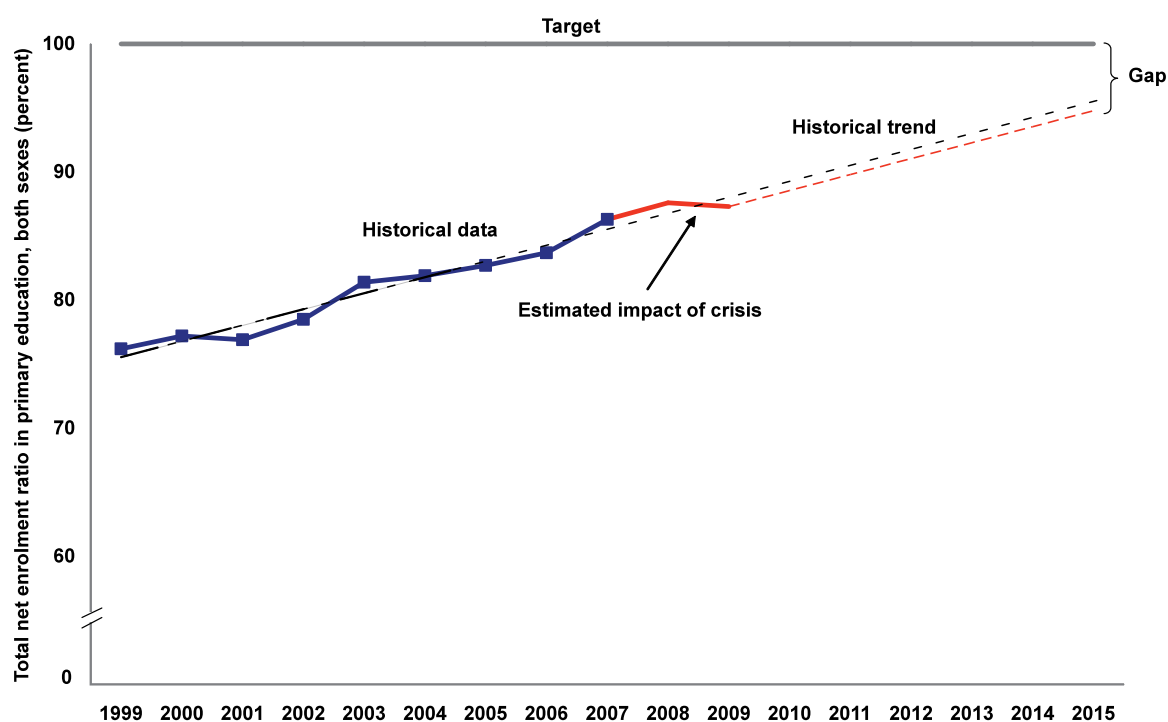
ahead. In order to meet food needs countries will need to increase arable land, improve irrigation infrastructure and use even more water. If they cannot increase productivity, by 2050 farmers in South Asia will need to divert up to 57% more water to agriculture and 70% in East Asia (FAO, 2009). Better water management will thus be an important element of a sustainable agriculture agenda for the region (ESCAP, 2009b).

**Climate change** – In many countries, climate change is likely to increase poverty, reduce access to drinking water, damage the health of the poor, and threaten food security (AfDB and others, 2003). The region will also be hard hit if climate change increases the frequency or severity of natural disasters: over the past eight years 80% of the global casualties related to extreme weather events occurred in Asia and the Pacific (ESCAP, 2009b). For many Pacific Island States it is a question of their survival or extinction (Heyzer, 2009).

### **Investment required to meet the MDGs**

What would it take for all countries in the region to meet their MDG targets? In many cases they can achieve a great deal simply by pursuing existing policies more effectively. But some of these policies would also require greater financial investment. The scale of this investment can be estimated by starting from the number of people who will be deprived if the targets are missed. In the case of tuberculosis, for example, as indicated in Figure I.1, five countries may not reach that target by 2015: Cook Islands, Kazakhstan, Republic of Korea, Tajikistan, and Uzbekistan. The number of people who would be deprived by this failure can be considered in two parts. The first part is the "pre-crisis" estimate up to 2007 – which is based on historical trends for which there are internationally comparable data and was the basis for the on- or off-track projections in Figure I.1. The second part is the additional number of people deprived as a consequence of the economic crisis. Since there are as yet no data on each indicator on actual performance, the post-crisis estimate has to be derived instead from modelling – based on historical correlations between GDP and the levels of each MDG indicator. The relationship between the pre- and post-crisis estimates is illustrated in Figure I.2 for one of the primary education indicators. In this case the pre-

**Figure I.2 Illustration of an indicator gap for primary education**



Source: ESCAP calculations based on data from United Nations Statistics Division, Millennium Development Goals Indicators database.

Note: This figure, based on actual data, illustrates how gaps in the achievement of MDG indicators are estimated for this report.

crisis gap in the indicator was 4.5 percentage points, but as a result of the crisis it has been re-estimated at 5.2 percentage points. The computation of the number of people deprived if MDG targets are missed has been performed country-by-country for 11 indicators for which detailed data are available for most countries.

Table I.2 shows the results of this computation for off-track countries. In the case of poverty, for example, the estimated target was to reduce the number living on less than \$1.25 per day in these off-track countries to 420 million. Before the crisis it was estimated that the number would only have been reduced to 498 million by 2015. As a result of the crisis, this estimate for 2015 was increased by 10 million. Thus, failing to meet the MDG target would mean an additional 88 million people living in poverty. “Additional” means on top of the 420 million people who would still be living in poverty even if the target were reached.

Table I.2 also shows that missing the MDG targets would result in an extra 1 million deaths

of children under five years of age in 2015. In addition, 31 million more children would be suffering from hunger and 7 million more would be out of school. Many more mothers would also be affected – 14 million more would have to give birth without the assistance of skilled professionals and 8 million more would be without any kind of antenatal care. Around 82 million more people would lack access to clean water and 387 million more people would be without access to basic sanitation. And two million more people would be living with HIV and AIDS.

It should also be noted that these numbers refers only to deprivation in 2015. To take into account the full implications of a failure to meet the MDG targets would also mean considering the human cost in the intervening years – for example, the number of additional children who will die each year until 2015.

Meeting the MDGs in many countries would require urgent changes in policy, and in most cases additional investment. This report estimates

**Table I.2 Number of people deprived as a result of failure to meet the MDG targets in off-track countries (millions)**

Goal	Indicator	Latest	Target 2015	Pre-crisis projection for 2015	Additional number due to crisis 2015	Number of people deprived due to missing the target.
		(1)	(2)	(3)	(4)	(5)=(3)+(4)-(2)
<b>MDG1</b>	\$1.25/day poverty	608	420	498	10	88
	Underweight children	82	47	74	4	31
<b>MDG2</b>	Primary enrolment	13	3	9	1	7
<b>MDG4</b>	Under-5 mortality	4	2	3	0	1
<b>MDG5</b>	Births by Skilled Professional	25	7	20	1	14
	Antenatal care, at least once	15	3	10	1	8
<b>MDG6</b>	HIV prevalence	2	2	4	0	2
<b>MDG7</b>	Water, urban	43	27	59	2	34
	Water, rural	113	68	108	8	48
	Sanitation, urban	411	310	448	7	145
	Sanitation, rural	1 208	743	979	6	242

Source: ESCAP calculations based on data from United Nations Statistics Division, Millennium Development Goals Indicators database and reference populations from World Population Prospects: the 2008 Revision (United Nations, 2007). For target “\$1.25/day poverty” columns (1) and (2) are based on data available at World Bank’s PovCalnet website.

Notes: 1 – Estimates calculated for groups of countries that are off-track in reaching each of the targets. 2 - For the indicator “\$1.25/day poverty”, estimates exclude Kazakhstan and Turkey, whose headcount poverty rates are below 5%. 3 - See Annex 1 for technical details.

the likely requirement in three parts. The first addresses income poverty, and considers the level and character of economic growth that would be needed to meet the target. The second considers the public investment needed to reach the other MDG targets. The third addresses the cost of climate change mitigation and adaptation.

There will inevitably be considerable overlap between these estimates. Equitable economic and green growth that reduces poverty would also

facilitate the achievement of many of the other MDGs. At the same time, government expenditure that leads to better education and health would also help reduce poverty and stimulate economic growth. Similarly, investment in reducing environmental gaps and protecting development gains against the risks posed by climate change will also contribute to the achievement of other MDGs. These estimates are therefore only indicative, but they can provide complementary insights on what it will take to close the gaps.



*The economic growth needed to close the income-poverty gap*

Based on their past performance, 11 Asia-Pacific countries with poverty headcounts above 5% are likely to miss the income-poverty target: Bangladesh, Cambodia, Georgia, India, Kyrgyzstan, the Lao People's Democratic Republic, Mongolia, Nepal, the Philippines, Sri Lanka and Uzbekistan. These countries are either progressing too slowly towards their target or they are regressing.

In the case of poverty, the aim is to halve the 1990 poverty rate. For these 11 countries Table I.3 shows the most recent poverty rates based on the \$1.25-a-day poverty line, along with their targets and the gaps between the two. What economic growth would be required between now and 2015 to eliminate those gaps?

Poverty rates are obtained from household surveys on the basis of per capita consumption or income. Those households whose per capita consumption or income are below the \$1.25-a-day poverty line, adjusted by PPP and measured in international 2005 dollars, are classified as poor. Therefore,

for poverty reduction there are two principal considerations. The first is the average growth in per capita household consumption. The second is how that growth is distributed, for which a commonly used measure is the Gini coefficient – which varies between 0 for absolute equality to 1, which would correspond to one person owning everything. Poverty is likely to fall more rapidly if the average increase in household consumption is accompanied by a fall in inequality (Bourguignon, 2003; Kraay, 2003; Klasen and Misselhorn, 2008). The ways in which change in average per capita household consumption and inequality affect poverty can be illustrated by the experience of rural China between 1990 and 2005 – as a result of policy changes favouring rural development (Box I.2). Figure I.3 shows the outcome so far, along with two projections. Since the starting point in 1990 was a poverty rate of 74%, the target for 2015 is 37%. Following the story along the brown line from 1990 indicates how, from 1990 to 1993 average per capita consumption increased, but since this was accompanied by a rise in the Gini coefficient, poverty fell only slightly, from 74% to 70%.

**Table I.3 Poverty rates in 11 countries off track for poverty reduction (percentage)**

	Latest available circa 2005 (1)	Target 2015 (2)	Gap (1)-(2)
<b>Bangladesh</b>	50.5	33.4	17.1
<b>Cambodia</b>	40.2	24.3	15.9
<b>Georgia</b>	13.4	2.2	11.2
<b>India</b>	41.6	24.5	17.1
<b>Kyrgyzstan</b>	21.8	9.3	12.5
<b>Lao People's Democratic Republic</b>	44.0	27.9	16.1
<b>Mongolia</b>	22.4	9.4	13.0
<b>Nepal</b>	55.1	34.2	20.9
<b>Philippines</b>	22.6	15.4	7.2
<b>Sri Lanka</b>	14.0	7.5	6.5
<b>Uzbekistan</b>	46.3	16.1	30.2

Source: ESCAP calculations based on data available at World Bank's PovCalnet website.

Note: Latest poverty headcount for the Lao People's Democratic Republic and Sri Lanka – 2002; Nepal and Uzbekistan – 2003; Cambodia and Kyrgyzstan – 2004; Bangladesh, Georgia, India, Mongolia – 2005; and the Philippines – 2006.

### Box I.2 Promoting agriculture and rural development in China

Since the 1990s the government has focused on providing economic resources to the rural areas.<sup>a</sup> In 1993, it introduced the “three-farm policies” to improve productivity in farming, promote economic development in rural areas and increase the incomes of farmers – which included increasing capital investment and helping farmers use better technologies. Further measures announced by the State Council included measures to improve the quality of land, diversify the output mix and establish market mechanisms for the distribution of grain. The government also aimed to improve rural water supplies, roads and electricity and develop industrial and service industries in rural areas.

In 2005 the government abolished all taxes for farmers. Agriculture and rural areas were also to receive a higher proportion of national fiscal spending, and of investment on fixed assets and credits. The overall policy document reiterated the importance of agriculture and marketing, and announced measures to facilitate the migration of rural labour and increase the funding of rural education and the training of farmers – along with more financial support for the new rural cooperative health care system.

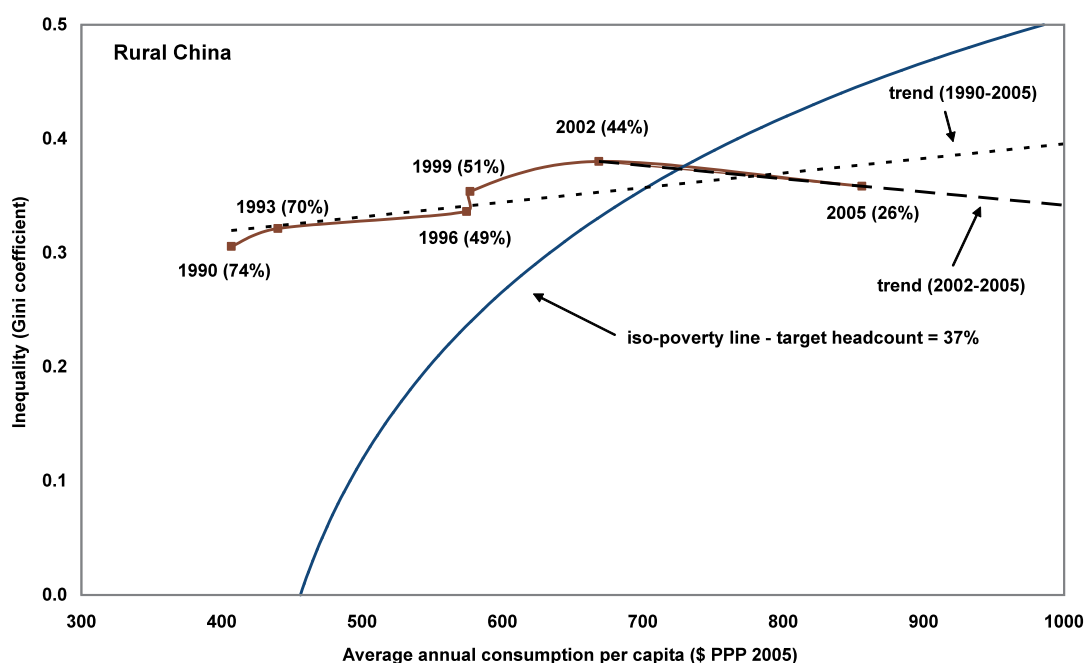
In 2006, the “three farm” policies were incorporated in the 11<sup>th</sup> Five-Year Plan under the heading of “building a new socialist countryside”. Between 2004 and 2006 the budget for agriculture, rural areas and farmers increased by more than 10% per year.

Agricultural reform in China has produced dramatic results. Between 1978 and 2008 the production of grain increased from 305 tonnes to 529 million tonnes and of meat from 9 to 73 million tonnes. And while farmers’ incomes increased substantially many people also found off-farm employment. Between 1978 and 2006, the proportion of workers employed in secondary and tertiary industries increased from 30% to 57%.<sup>b</sup>

<sup>a</sup> Chow, G.C. (2006). “Rural poverty in China: Problem and policy”, *Center for Economic Policy Studies Working Paper*, No. 134, September.

<sup>b</sup> Zhang, H. (2009). “China’s rural reform: review and outlook” in FAO, *Agricultural Reforms and Trade Liberalization in China and Selected Asian Countries: Lessons of Three Decades*, Policy Assistance Series 6, (Bangkok, FAO).

**Figure I.3 How rural China reduced poverty**



Source: ESCAP calculations based on data obtained from the World Bank’s PovCalnet website.

Note: The iso-poverty line represents combinations of average household consumption per capita and the Gini coefficient for which the headcount poverty rate is constant, in this case 37%. See Annex 1 for details.

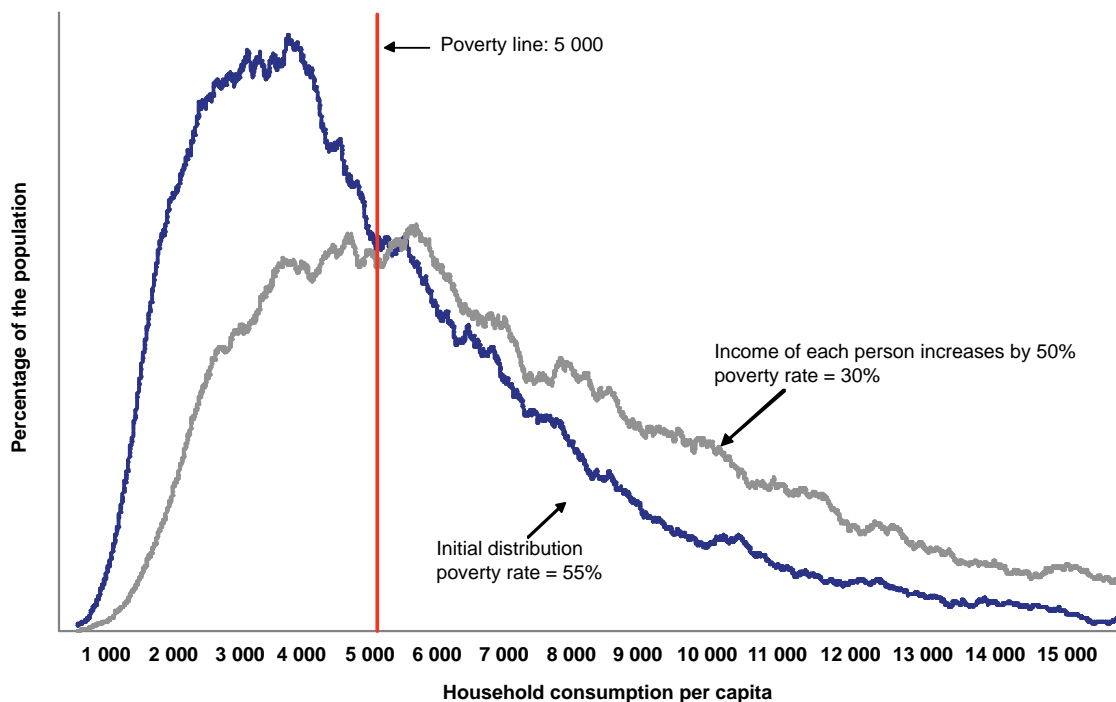
In the period from 1993 to 1996, however, average consumption per capita grew more rapidly while inequality grew more slowly. This generated a far more substantial drop in poverty, from 70% to 49%. From 1996 to 1999, per capita household incomes stagnated while inequality increased, so the poverty rate increased to 51%. Inequality continued to rise between 1999 and 2002, but because average consumption per capita grew at a faster pace, the net effect was that the poverty headcount fell by 7 percentage points – to 44%. Then from 2002 the trend became even more positive – as consumption rose to \$850 per capita and inequality dropped back to its 1999 level. As a result the poverty headcount dropped to 26% – already below the MDG target, illustrated by the iso-poverty line (see note to Figure I.3). How much faster will rural poverty be reduced in China would depend, however, on which trend continues – that of 1990-2005, or that of 2002-2005.

This example demonstrates that the relationship between economic growth and poverty is far from straightforward. In general, the highest poverty

reduction is obtained when increases in average per capita consumption are accompanied by decreases in inequality. However, fast economic growth often contributes to decreasing poverty even if it is associated with increases in inequality. This is illustrated by the two hypothetical income distributions in Figure I.4. The first distribution, in blue, has a poverty rate of 55%, measured as the area under the curve to the left of the poverty line (shown in red). The second distribution, in grey, assumes that per capita consumption increases 50% in all the households. In this case the poverty rate goes down to 30%. Nevertheless, although everybody would get proportionally the same increase in income, the distribution becomes more unequal. This is to be expected because after the 50% increase, someone making 10,000 will get a 5,000 increase, while someone making 1,000 will only get a 500 increase.

To be sure, the example above is a stylized one. In real growing economies not everyone's income increases at the same rate. Some people who are stuck in poverty, employed in subsistence activities,

**Figure I.4 Poverty, growth and income distribution – a hypothetical example**



Source: ESCAP calculations

Note: The picture shows two empirical density functions. The total area under each of them equals one, and the area under each of them to the left of the poverty line indicates the share of the population living in poverty. The blue density function was obtained from a random sample of 10,000 observations drawn from a log-normal distribution with a mean of 10,000 and a standard deviation of 7,000. The grey density function, which has a mean of 15,000 and a standard deviation of 10,000, was obtained by multiplying each observation from the blue density function by 1.5.

or earning the bare minimum to survive may be completely bypassed by economic growth. Others may be able to lift themselves out of poverty by migrating or by finding employment or self-employment opportunities, in which case their income could increase significantly faster than the average. Overall, what matters the most for poverty reduction is what happens at the bottom end of the income distribution. An economy will be most successful in reducing poverty if it can generate earnings opportunities for those at the bottom of the income distribution. Fast economic growth is a necessary but not sufficient condition for this to happen.

In fact, however, in most countries it would be an achievement even to hold inequality constant. An analysis of 15 Asia-Pacific countries during the period 1990-2005 reveals that inequality increased

in most cases. On average it is estimated that a 1% increase in mean consumption per capita has been associated with a 0.15% increase in the Gini coefficient. Moreover, had these countries been able to hold inequality at their 1990s levels until the mid 2000s then the total number of people living in poverty would by then have dropped by an additional 54 million (ESCAP, 2010, Table 3.3).

A similar analysis can be performed with data from the 11 Asia-Pacific countries that are off track for the poverty target. What difference would variations in the rate of growth of consumption and in inequality make to the pace of poverty reduction? Table I.4 shows the percentage point reduction in the poverty rate that would be achieved either by a 1% increase in per capita consumption or a 1% decrease in the Gini coefficient.

**Table I.4 Impact on poverty of variations in average incomes and inequality, selected countries**

Country	Average household consumption per capita (\$PPP 2005)	Gini Coefficient	Reduction in poverty headcount (percentage points)	
			“Growth effect” – of a 1% increase in mean consumption per capita	“Distribution effect” – of a 1% decrease in inequality
	(1)	(2)	(3)	(4)
Bangladesh (2005)	570	0.31	0.70	0.47
India – rural (2005)	599	0.30	0.70	0.54
Lao People’s Democratic Republic (2002)	613	0.33	0.66	0.52
Uzbekistan (2003)	617	0.37	0.59	0.46
Nepal (2003)	674	0.47	0.45	0.39
India – urban (2005)	749	0.38	0.54	0.57
Cambodia (2004)	773	0.42	0.49	0.52
Mongolia (2005)	875	0.33	0.49	0.67
Kyrgyzstan (2004)	877	0.33	0.49	0.68
Philippines (2006)	1 188	0.44	0.36	0.58
Sri Lanka (2002)	1 201	0.41	0.35	0.58
Georgia (2005)	1 398	0.41	0.34	0.53

Source: ESCAP calculations based on data available at World Bank’s PovCalnet website.

Notes: 1 - Estimates of growth and distribution effects – columns (3) and (4) are based on Klasen and Misselhorn (2008). See Annex 1 for details. 2 - Latest household consumption and Gini coefficient data year are in parentheses.

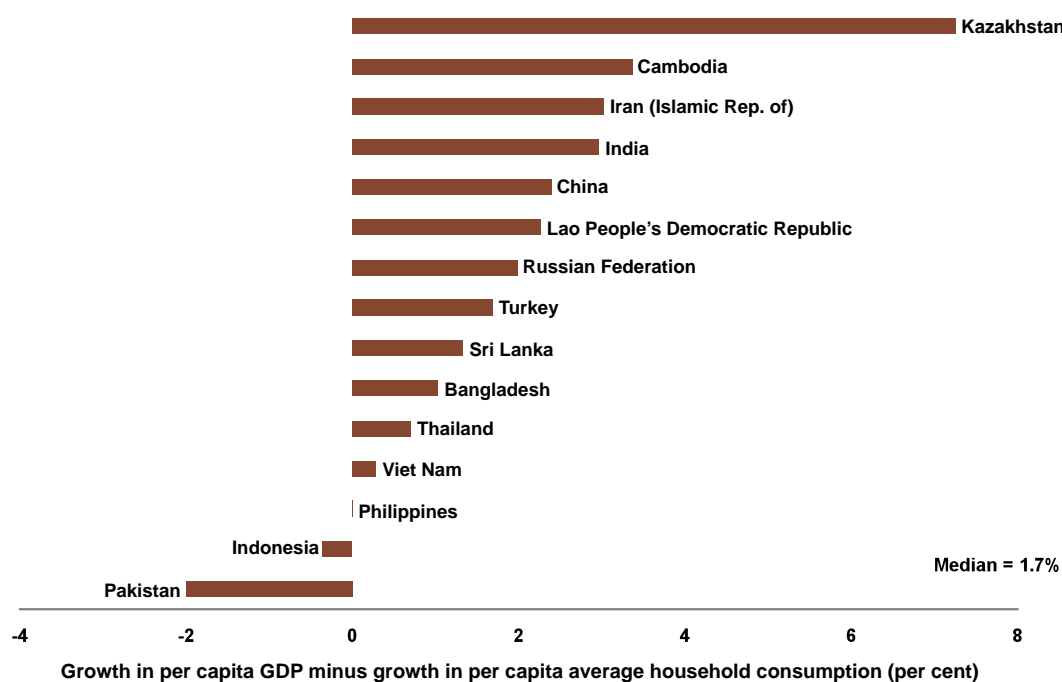
The first two columns in Table I.4 show for these 11 countries the most recent values for the average household consumption per capita and the Gini coefficient. The third column shows the potential “growth effect” – the reduction in the poverty headcount resulting from a 1% increase in the rate of growth of per capita consumption without any change in inequality. Among the countries listed in the table, those that would benefit most from faster growth would be Bangladesh and India (rural) where every one per cent increase in mean consumption per capita would reduce poverty by 0.70 percentage point. The Lao People’s Democratic Republic, Uzbekistan and urban India would also benefit significantly from such a strategy, with a poverty reduction of more than half a percentage point.

The fourth column of Table I.4 shows the effect of a one per cent decrease in inequality keeping per capita consumption constant. On this basis, the country that would stand to gain most would be Kyrgyzstan, which would see a 0.68 percentage point decrease in the poverty headcount, closely followed by Mongolia at 0.67 percentage points.

As indicated in Table I.4, it is typically the poorer countries that benefit more from promoting an increase in household consumption. As countries become richer, the benefit for poverty reduction of increasing household consumption decreases and the impact of reducing inequality becomes more significant. In Sri Lanka, for example, a 1% increase in household consumption per capita would reduce poverty by only about half as much as in Bangladesh. On the other hand, a 1% decrease in inequality in Sri Lanka would reduce poverty by 0.58 percentage point compared with 0.47 percentage point in Bangladesh.

It is important to note that a high-growth strategy may not necessarily produce commensurate gains in average household consumption. In fact, for many countries in the region over the 1990 to mid-2000s period this growth rate has been noticeably smaller than the rate of per capita GDP growth. As shown in Figure I.5, in 10 out of 15 countries, GDP per capita grew at least 1% faster than household consumption per capita, and the median difference in favour of the former was 1.7% per year. This

**Figure I.5 Difference in annual average growth rates of GDP per capita and average household consumption per capita, selected countries**



Source: ESCAP calculations based on data available at World Bank’s PovCalnet website and GDP per capita (PPP 2005) from the World Bank’s World Development Indicators database.

Note: Average annual growth rates computed using data from circa 1990 to the mid 2000s.

suggests that the region had a potential for reducing poverty faster than it did – if the rate of growth of average consumption would have been closer to the rate of per capita GDP growth. In a counterfactual analysis, ESCAP (2010, Table 3.3) showed that an additional 172 million people would have been lifted out of poverty between 1990 and the mid-2000s if household consumption per capita had grown 1% faster than it did (see ESCAP (2010) for a discussion of reasons for the discrepancy between per capita GDP growth and per capita household consumption). It should be pointed out that there are data issues. Household consumption data come from household surveys while GDP data come from national income accounts, and the results are often not compatible (Ravallion, 2001 and 2003).

### *Closing the poverty gap*

If countries wish to close the poverty gap they will thus need to be concerned about GDP growth, average household consumption growth, and inequality. Three potential scenarios until 2015 are considered:

*Scenario 1: Business as usual* – Inequality continues along the historical trends between 1990 and the mid-2000s. Household income also rises according to the historical trend and the relationship between per capita growth in GDP and household consumption are similar to what they were over that period. Poverty reduction would thus be the outcome of changes in mean consumption offset or amplified by changes in inequality. Much would depend therefore on the historical trend in inequality. If this was increasing it could well outweigh any gains from increased household consumption. Similarly, if per capita household consumption did not grow commensurately with per capita GDP, progress in poverty reduction would be slower.

*Scenario 2: Inequality held constant* – The relationship between the growth in per capita household consumption and the growth in per capita GDP remains the same, but in this case inequality does not increase. This would be the case, for example, if the government was determined to hold inequality in check, perhaps through more progressive forms of taxation.

*Scenario 3: Increase in the rate of growth of consumption* – Over the period 2010 to 2015, inequality is held constant, as in Scenario 2, and average household consumption per capita grows at an additional 1 percentage point per year above its current trend. This would be possible through a combination of policies focusing on strengthening social protection, promoting agricultural and rural development as discussed in ESCAP (2010) and through enhancing financial inclusion, as discussed below.

For each of these scenarios, the growth and distribution effects identified in Table I.4 can be used to estimate the GDP growth required to meet the MDG income poverty target for each of these 11 countries (see Annex 1 for technical details). The results are shown in Table I.5. The first column shows the IMF's current growth projections to 2015, which take into account the effect of the economic crisis. If these forecasts were to prove correct then, as indicated in Figure I.1, under the business-as-usual scenario 10 of the 11 countries would miss the target. The exception is Mongolia. The difference arises because the on- or off-track estimates in Figure I.1 are based on long-term trends, while those in Table I.5 are based on the latest forecasts for the period 2010-2015, which for Mongolia present a more optimistic picture than the historical trend would suggest. If these countries were to achieve the poverty targets under the business-as-usual scenario, which generally implies a rise in inequality, then they would have to boost economic growth considerably, perhaps to unfeasibly high levels – two or three times the current IMF forecasts.

Under scenario 2, if they could hold inequality constant the prospects would improve significantly. Kyrgyzstan, for example, would achieve the target by 2015, and other countries would not be far behind: India would reach it by 2016; the Philippines and Sri Lanka by 2017; and the Lao People's Democratic Republic by 2018. Indeed, with only moderately faster growth all three could hit the target: India, for example, would need to increase its average annual GDP growth rate from 7.9% to 8.9%.

**Table I.5 GDP growth required to reach the MDG1 target assuming different scenarios**

	Scenario 1 Business as usual			Scenario 2 No change in inequality		Scenario 3 Additional 1% in average household consumption per capita	
	Average annual GDP growth rates, IMF forecasts 2010- 2015 (%)	Year of achievement based on IMF forecasts	Estimated annual GDP growth to reach MDG target by 2015 (%)	Year of achievement based on IMF forecasts	Estimated annual GDP growth to reach MDG target by 2015 (%)	Year of achievement based on IMF forecasts	Estimated annual GDP growth to reach MDG target by 2015 (%)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Bangladesh</b>	6.2	2021	12.4	2019	10.0	2015	5.2
<b>Cambodia</b>	6.1	2025	16.3	2024	15.2	2019	9.8
<b>Georgia</b>	4.3	2033	17.8	2031	16.2	2026	12.2
<b>India</b>	7.9	2017	9.9	2016	8.9	2013	5.0
<b>Kyrgyzstan</b>	4.6	2016	4.8	2015	4.1	2014	3.8
<b>Lao People's Democratic Republic</b>	7.1	2019	10.9	2018	9.8	2012	3.4
<b>Mongolia</b>	7.3	2014	6.0	2014	5.5	2013	4.1
<b>Nepal</b>	5.1	2021	10.4	2021	9.9	2016	5.8
<b>Philippines</b>	4.2	2018	6.0	2017	5.2	2015	3.9
<b>Sri Lanka</b>	5.6	2020	9.7	2017	7.5	2014	4.7
<b>Uzbekistan</b>	6.4	2028	20.6	2027	19.9	2023	15.1

Source: ESCAP calculations based on data available at World Bank's PovCalnet website.

Notes: 1- Estimates of average annual GDP growth rates are based on IMF forecasts for GDP growth 2010 to 2014 available in IMF (2009). *World Economic Outlook – October 2009* and IMF (2010). *World Economic Outlook Update - January 2010* (Washington, D.C., IMF). 2 - See Annex 1 for details of the estimation of the GDP growth rate required to reach MDG target by 2015.

The third scenario, of faster growth in household consumption as a component of GDP as well as no increase in inequality, would further accelerate the achievement of poverty target. Indeed, it would enable the Lao People's Democratic Republic to meet the target by 2012, while India and Mongolia would do so by 2013.

Overall, the message is clear. Most of these countries will not hit the poverty targets if they focus solely on economic growth. They will want to make sure that GDP growth is broad based and translates into household consumption growth – through fiscal policy, for example, or by offering incentives to promote the type of economic development that will most benefit the poor (Box I.3).

More equitable growth would also bring many other benefits, political and economic. Given changing world economic conditions, many countries of the region will want to diversify their sources of growth. Less able in future to rely on exports to the United States and Europe, they will be looking instead to boost local demand – which can be achieved by putting more money in the hands of poor consumers (see ESCAP, 2010).

#### *Closing the other MDG gaps*

How much investment would it take for the countries of the region to close the other MDG gaps? For such a large and diverse region the strategies and the costs will vary considerably from country to country. However, it is possible to arrive

### Box 1.3 Policies for more equitable growth

Unprecedented growth since 1990 has helped lift 548 million people across Asia and the Pacific out of extreme poverty (Table I.1). But the benefits of overall growth have not trickled down to everyone: Asia and the Pacific is still the home to the majority of the world's people, both rural and urban, without basic sanitation, of under 5 children who are underweight, of people infected with tuberculosis, of people living on less than \$1.25 a day.<sup>a</sup> Growth is still vital; experience suggests that equity is best pursued in a growing economy. But growth is not sufficient. Indeed some countries, such as Uzbekistan, have had strong growth but seen poverty rise while others, such as India, with more modest growth have seen poverty fall. Growth clearly needs to be accompanied by a set of pro-poor policies. Across the region, these have included:

*Promoting agriculture* – Most of the poor live in rural areas and work in agriculture, so it is essential to increase rural productivity and the opportunities for marketing crops. Policies will include increasing output and diversifying into labour-intensive high-value production such as horticulture and livestock while improving infrastructure and access to credit and market information. From the 1980s, China, for example, adopted an agriculture-led development strategy which sparked off historically unprecedented reduction in poverty.<sup>b</sup> In Viet Nam too, agricultural reforms have contributed to a remarkable reduction in poverty.<sup>c</sup>

*Investing in education and healthcare* – In the 1960s, levels of economic development, measured in terms of GNP per capita, were relatively similar across the region. Subsequently, however, the gaps started to widen. In the period from the 1970s to the 1990s, the least developed countries, and the developing countries in South Asia, increased their per capita GDPs between two and five times. But growth was far more rapid elsewhere; in the Republic of Korea over a similar period, per capita GDP increased by a factor of 65, in Thailand by a factor of 13, and in Malaysia by a factor 10.<sup>d</sup> The disparities can be attributed partly to spending on education which in the slower growing countries was only between 40 cents and \$1.60 per capita, compared with \$9.10 by the Republic of Korea, for example, and \$16.40 by Malaysia. Similarly, while Pakistan was only spending 12 cents per capita on health care, Malaysia was spending \$5.50 per capita.

*Progressive industrial and labour policies* – Governments can help SMEs by improving their access to management and technical skills, and to credit facilities – a strategy followed, successfully in China.

*Offer social protection and social safety nets* – Industrial policy should be accompanied by support for particularly vulnerable workers. In response to the 1997 financial crisis, the Republic of Korea, for example, introduced public works programmes to employ workers who had been laid off, along with means-tested temporary livelihood protection for the ultra-poor. Similar programmes are now being offered in many other countries. Bangladesh, for example, has introduced social measures in the past two years which have amounted to more than 15% of the total budget. These have included educational stipends and other types of allowance, and in 2008 an Employment Guarantee Scheme.

*Develop new centres of growth* – Asia and the Pacific has seen rapid urban growth and by 2003 had nine cities with populations of 10 million or more.<sup>e</sup> Much of this growth is due to rural-urban migration which is putting a greater strain on the urban infrastructure and environment. A key objective over the medium term should therefore be to develop the smaller cities and towns into vibrant centres of economic growth.



### Box 1.3 Policies for more equitable growth (continued)

*Protecting disadvantaged groups* – A number of people are particularly disadvantaged. The largest numbers are women. An ESCAP study shows that the region as a whole is losing \$42-\$47 billion per year because of restrictions on women's access to employment opportunities and another \$16-\$30 billion per year because of gender gaps in education.<sup>f</sup> Other groups for whom governments need to be concerned include older people and people with disabilities.

<sup>a</sup> ESCAP/ADB/UNDP (2010). *Achieving the Millennium Development Goals in an Era of Global uncertainty: Asia-Pacific Regional Report 2009/10* (United Nations publication, Sales No. E.10.II.F.10).

<sup>b</sup> See Box 1.2.

<sup>c</sup> Kakwani, N., S. Khandker and H.H. Son (2004). "Pro-poor growth: Concepts and measurement with country case studies", *UNDP International Poverty Centre Working Paper*, No. 1, August.

<sup>d</sup> Hasan, A. (2001). "Development planning in a market economy", *Least Developed Countries Series*, No.6 (ST/ESCAP/2174).

<sup>e</sup> Tandon, A. (2005). *Urbanization and Poverty in Developing Asia* (Manila, ADB).

<sup>f</sup> For more details see Chapter 3 of ESCAP (2007b). *Economic and Social Survey of Asia and the Pacific 2007* (United Nations publication, Sales No. E.07.II.F.4).

at a general sense of what would be required in Asia and the Pacific on the basis of a needs assessment carried out by the United Nations Millennium Project (United Nations, 2005). This was a detailed analysis of five countries: Bangladesh, Cambodia, Ghana, Tanzania and Uganda. It covered the following 11 areas: hunger, education, gender equality, health, environment, water and sanitation, the lives of slum dwellers, science and technology, energy, and roads. For each of these it estimated the required investments in pro-MDG interventions, starting in 2006 and scaling them up linearly to meet the MDGs in 2015.

On the basis of the needs assessment for these five countries, a modelling exercise was carried out to estimate some corresponding costs in Asia and the Pacific. As with the Millennium Project, we focus on the total costs required for meeting the MDGs. In other words, we estimate the total needs for achieving the MDGs including the resources required to sustain current coverage levels (see Millennium Project, 2004, p. 32). Full details on the methodology are given in Annex 1. Table I.6 shows the results for nine indicators, covering all countries in the region. It shows what they are likely to spend to reach their projected achievement for 2015. For the off-track countries the table also shows the additional cost of closing the gap between the current projection and the target.

As indicated in Table I.6, some of the MDG gaps can be closed with relatively low investment. The underweight children target, for example, can be reached if countries that are off track on this indicator invest an additional \$23 billion. The gap in the provision of clean water and basic sanitation in rural areas can be closed by investing \$3 billion and \$8 billion, respectively. Overall, it should also be noted that the cost of reaching the targets in rural areas is much less than in urban areas – between one tenth and one fourth – and around twice as many people would benefit.

Table I.6 covers only the nine indicators for which there were corresponding data from the United Nations Millennium Project. The areas not covered are: gender equality, slum dwellers, energy, roads, rural development, education at levels other than primary, water shortages, hygiene education, tuberculosis and malaria. This report estimates that the nine indicators in Table I.6 should cover around 40% of the total costs. Scaling up to cover the remaining indicators would imply therefore multiplying the total cost of \$434 billion by 2.5 to reach \$1,084 billion, and multiplying the \$254 billion cost of the gap by 2.5 to reach \$636 billion. It should be noted, however, that this scaling-up does not include any costs related to income poverty or any further objectives related to climate change.

**Table I.6 Costs of meeting nine of the MDG targets in Asia-Pacific countries, 2010-2015**  
(in billions of United States dollars)

MDG Indicator		Cost of reaching the current projected values (1)	Cost to close the gaps (2)	Total cost to reach the targets (3)=(1)+(2)	Gap as a proportion of the total cost, % (4)=100*(2)/(3)
<b>MDG 1</b>	Underweight children	20	23	43	53
<b>MDG 2</b>	Primary enrolment	43	65	108	61
<b>MDG 4</b>	Under-5 mortality	25	33	58	57
<b>MDG 5</b>	Births by Skilled Professionals	7	17	24	72
<b>MDG 6</b>	HIV prevalence	29	42	71	59
<b>MDG 7</b>	Water, rural	10	3	13	25
	Water, urban	16	30	46	66
	Sanitation, rural	6	8	14	55
	Sanitation, urban	23	34	57	60
<b>Total</b>		<b>180</b>	<b>254</b>	<b>434</b>	<b>59</b>

Source: ESCAP calculations based on data from United Nations Statistics Division, Millennium Development Goals Indicators database, reference populations from World Population Prospects: the 2008 Revision (United Nations, 2007) and estimates of the United Nations Millennium Project (United Nations, 2005).

Notes: See Annex 1 for calculation details.

**Table I.7 Estimated annual investment to meet the non-income MDG indicators**  
(in billions of United States dollars)

Year	Cost of reaching the current projected values (1)	Cost to close the gaps (2)	Cost to close the gaps (Total cost to reach the targets) (3) = (1) + (2)
	<b>2010</b>	47	96
<b>2011</b>	57	99	156
<b>2012</b>	67	104	171
<b>2013</b>	79	108	187
<b>2014</b>	92	112	204
<b>2015</b>	106	117	223
<b>Total</b>	448	636	1 084

Source: ESCAP calculations based on data from United Nations Statistics Division, Millennium Development Goals Indicators database, reference populations from World Population Prospects: the 2008 Revision (United Nations, 2007) and estimates of the United Nations Millennium Project (United Nations, 2005).

Notes: 1- Estimates cover selected targets and do not include target of income poverty reduction (\$1.25-a-day) or the environmental targets related to climate change. 2 - See Annex 1 for details.

Table I.7 shows how this investment could be distributed over the next six years. The cost of closing the MDG gaps starts at \$96 billion in 2010, rising to \$117 billion in 2015. The cost is distributed in this way because it is assumed that in the earlier years the country will have less absorptive capacity. It may, for example, have to train cadres of new teachers, whose numbers and salaries would increase in later years.

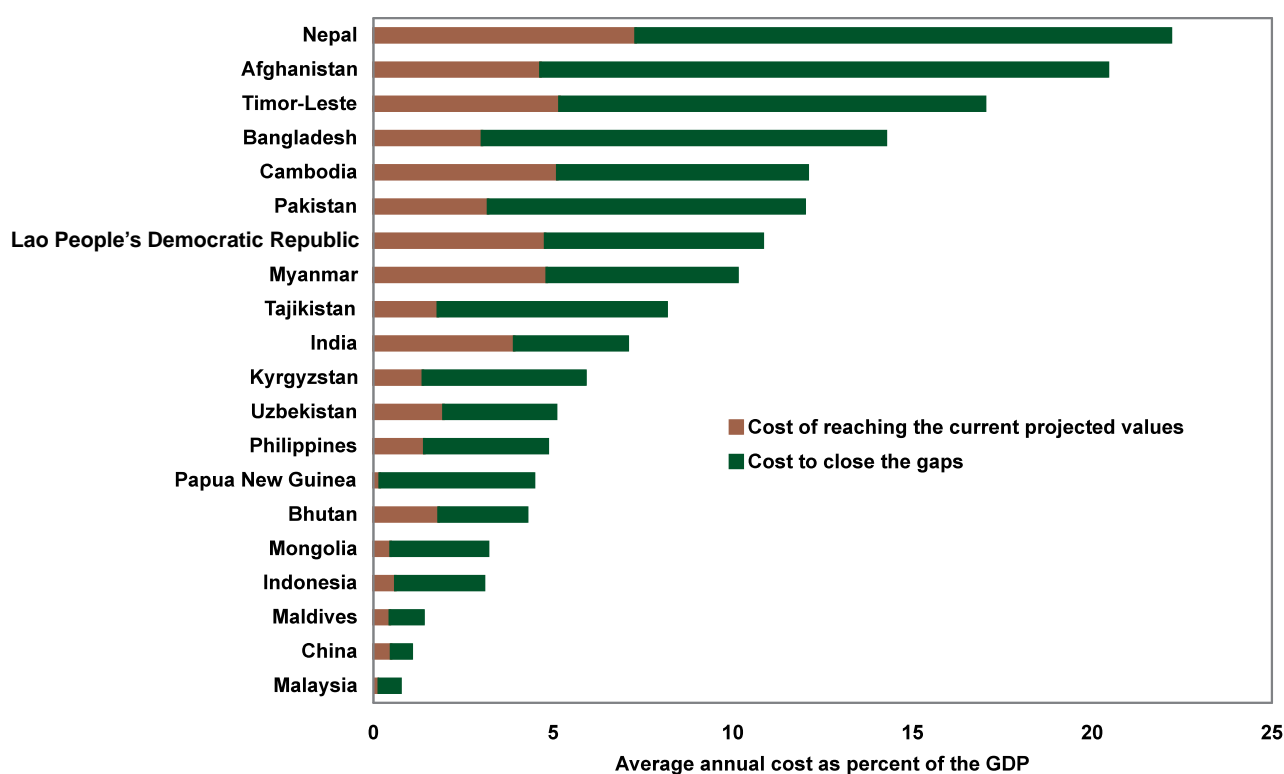
While for the region as a whole the costs of meeting the targets may not seem unduly high, for some countries especially the poorest ones, they are steep. This is illustrated in Figure I.6. The greatest costs, expressed as a percentage of GDP, are in Afghanistan, Nepal and Timor-Leste. Nepal and Afghanistan would require annual investments of over 20% of GDP to reach the targets, and over two thirds of these investments would require additional funding. Other countries that require large investments to reach the MDG targets are Timor-Leste (17% of GDP), Bangladesh (14%

of GDP), Cambodia and Pakistan (12% of GDP in both cases). Moreover, as Figure I.6 shows, financing gaps (in green) exceed projected financial costs (in brown) in all countries except India. Therefore, almost all countries will need to more than double their financial efforts in order to reach the MDG targets.

#### *Climate change mitigation and adaptation*

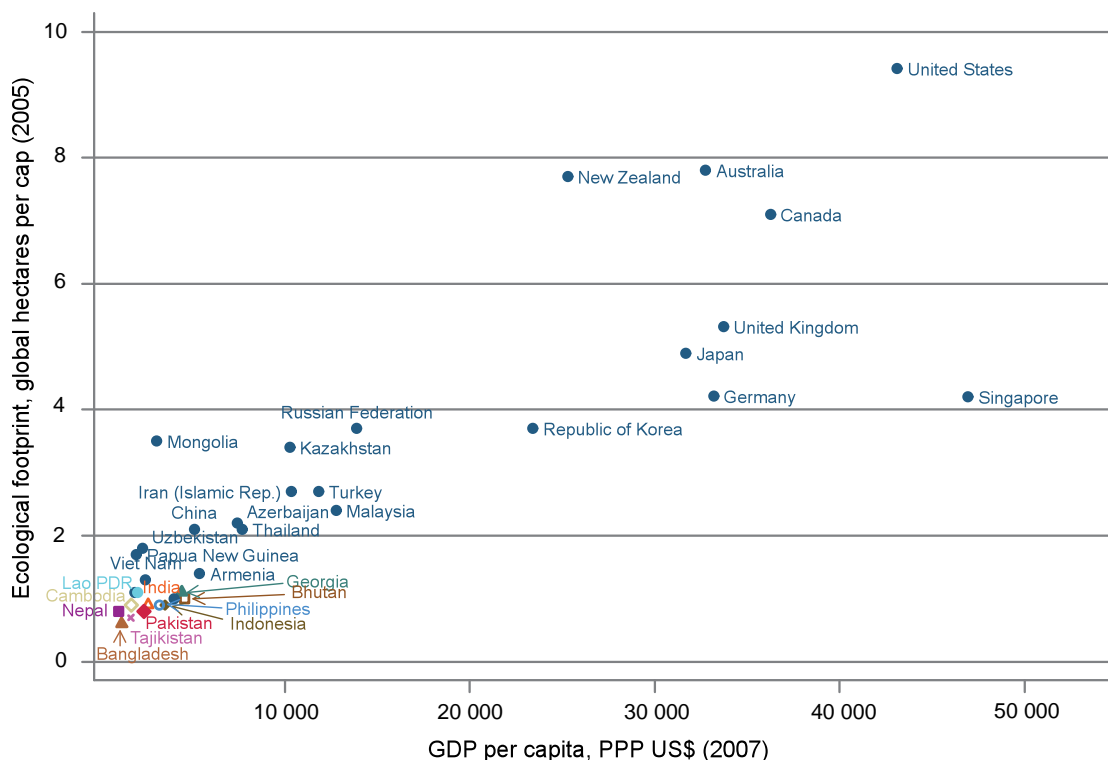
While MDG7 did include environmental dimensions it did not consider fully many of the costs associated with what is now recognized as an impending global crisis. Countries in the Asia-Pacific region, especially the poorest, stand to be among the most affected by climate change, which threatens to roll back development gains achieved over the last decades. Figures on the overall cost of addressing climate change, both in terms of mitigation and adaptation, differ according to various studies. The Stern Review, for example, estimated that the overall costs and risks of climate change will be equivalent to losing between 5% and

**Figure I.6 Estimated investment required to close the MDG gap – annual average, LDCs and selected middle-income countries, selected targets (percentage of the GDP )**



Source: ESCAP calculations based on data from United Nations Statistics Division, Millennium Development Goals Indicators database, World Population Prospects: the 2008 Revision (United Nations, 2007), United Nations Millennium Project (United Nations, 2005), International Monetary Fund, International Financial Statistics database.

**Figure I.7 Ecological footprint and GDP per capita**



Source: Ecological footprint per capita: data provided by the Global Footprint network, July 2005; GDP per capita: World Bank, World Development Indicators database.

20% of global GDP each year, now and forever (Stern, 2006). However, the costs of taking action to counter the impact would be much lower – only around 2% of global GDP each year.

ADB has similarly estimated that in South-East Asia the cost of inaction could be equivalent to a loss of 6.7% of the subregion’s combined GDP by 2100, more than twice the world average estimates. However, the cost of taking action in climate change mitigation would require investments of around 1% of the subregion’s GDP (ADB, 2009a). The World Bank estimates that the cost for developing countries to adapt to climate change would range between \$75 billion and \$100 billion per year for the period 2010–2050. The highest cost – between \$19.6 billion and \$25.0 billion – would be borne by the East Asia and the Pacific subregions (World Bank, 2008).

What appears clear is that the cost of taking action now will be far lower than the long-term cost of inaction. Investments in the next 20–30 years will

be critical. It is also evident that future economic growth must not only be more equally shared, it must also be delinked from environmental pressures. Achieving the growth needed to reduce poverty without compromising environmental sustainability is not only necessary, but feasible. This is suggested, for example, in Figure I.7 which shows that countries with similar levels of per capita GDP can have very different levels of ecological footprints.

**Bridging the gaps**

The Asia-Pacific region has already made progress towards achieving the Millennium Development Goals. On present trends it will achieve many, but by no means all. This will leave significant gaps in 2015, with millions of people deprived. As this chapter has demonstrated, however, most of these gaps can still be bridged, given sufficient commitment to inclusive and green growth. In some cases this will mean stepping up investment, though perhaps only by a few percentage points of GDP. The next chapter considers where those additional funds might be found.



