

Goal 7: Ensure Environmental Sustainability

From 1990 to 2005, 85,000 square kilometers of **forest area** were lost to other uses, and six economies that are major producers of tropical hardwoods reported a combined loss of 440,000 square kilometers—an area roughly the size of Uzbekistan. Per capita emissions of **carbon dioxide** are rising in most economies in the region including all five most populous economies. The five most populous countries are also high or medium-high consumers of **ozone-depleting substances**. About half of the economies for which data are available have either cut the proportion of urban population without access to **improved sanitation** by at least half or kept the proportion at 5% or below. But 13 economies still have more than a quarter of urban households without access to improved sanitation.

Introduction

Goal 7 has four targets:

- 7.A *Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.* This target is applicable to the developed as well as to the developing economies of the region, hence the relevant figures and boxes below include data for Australia, Japan, and New Zealand.
- 7.B *Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.* This is a new target introduced in the revised MDG framework.
- 7.C *Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.*
- 7.D *By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.* Slums are defined as dwellings in urban areas with at least one of the following characteristics: (i) lack of access to improved water supply, (ii) lack of access to improved sanitation, (iii) overcrowding (three or more persons per room), and (iv) dwellings made of nondurable material. This target is for the world as a whole and does not refer to any particular economy.

Only the third target can be unambiguously quantified, but the tables for the other targets give statistics that indicate in a broad fashion progress toward those targets.

Key Trends

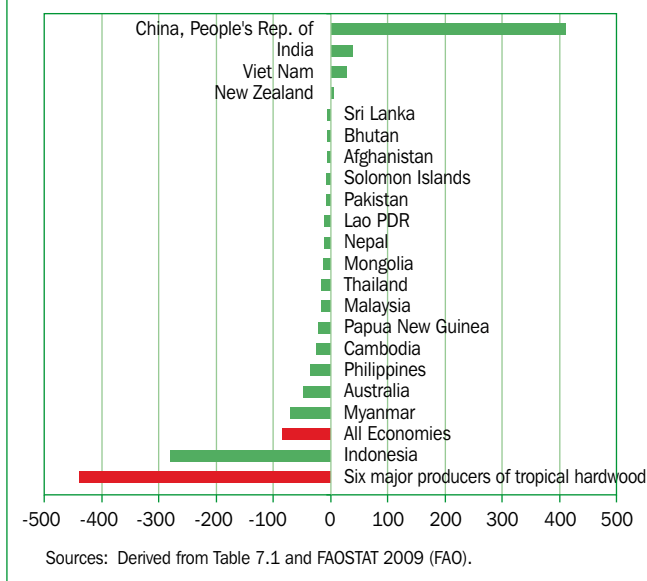
Forest area losses in the region far outweigh the gains.

Environmental resources include land, forests, natural species, air, water, and subsoil assets. Table 7.1 gives indicators relevant to some aspects of these resources. Figure 7.1 shows the change in forest area from 1990 to 2005. Bars to the left mean deforestation; bars to the right indicate an increase in forest areas. Economies not shown in Figure 7.1 reported zero or very small changes.

Four countries reported increases in forest areas—People's Republic of China (PRC), India, New Zealand, and Viet Nam—but these gains were far outweighed by losses reported by the other 16. The red bar for “All Economies” shows the net effect of losses and gains for all countries, including those with only small changes that are not shown in Figure 7.1. The net loss of forest area came to 85,000 square kilometers.

The longer red bar shows the net loss of forest area for six major producers of tropical hardwoods: Cambodia, Indonesia, Malaysia, Myanmar, Philippines, and Thailand. The total loss was just under 440,000 square kilometers—an area roughly the size of Uzbekistan. Indonesia was the main contributor to this catastrophic loss of a crucial natural resource. Apart from the inherent value of the timber, tropical forests are home to a rich variety of fauna and act as a natural sink to absorb carbon dioxide emissions.

Figure 7.1 Change in Forest Area between 1990 and 2005 (thousand square kilometers)

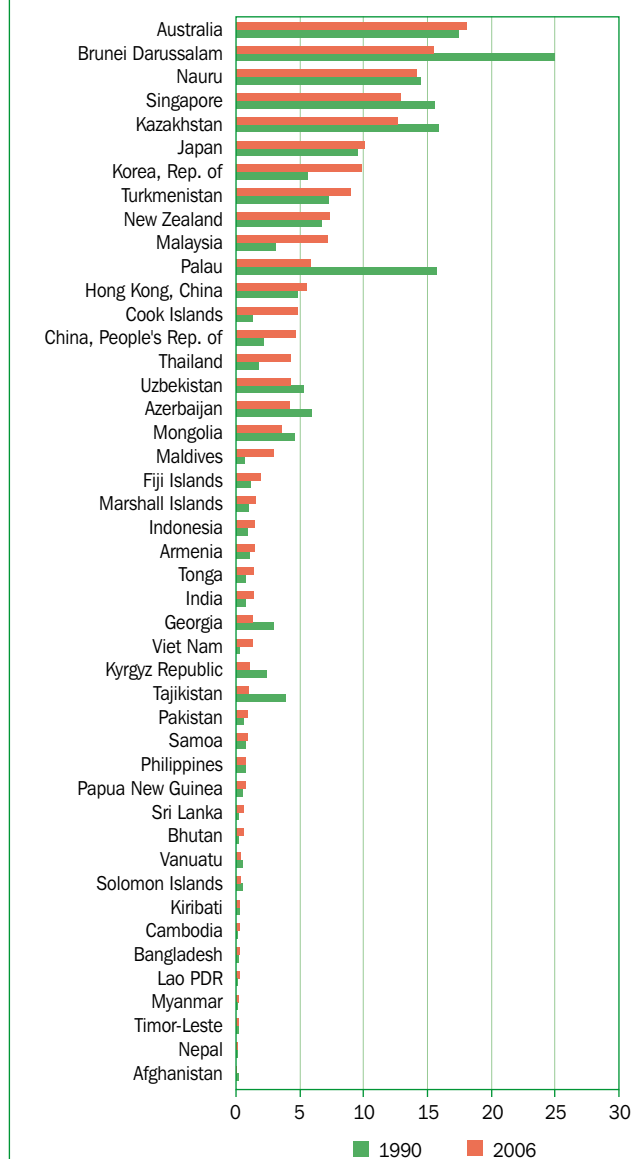


Carbon dioxide emissions: Catastrophe ahead? Figure 7.2 shows per capita emissions of carbon dioxide (CO₂) from consumption of carbon fuels for heating, transport, and electricity generation; emissions from cement production and gas flaring are also included but they do not include CO₂ emissions from deforestation or agriculture. There is a positive correlation between per capita emissions and per capita income. Rising incomes seem to inevitably involve higher CO₂ emissions and this is why the developed member economies are in the top part of Figure 7.2. On the other hand, Afghanistan, Nepal, and Timor-Leste are among the poorest economies in the region and have the lowest per capita CO₂ emissions.

Exactly one third of the 45 economies shown in Figure 7.2 reduced per capita emissions from 1990 to 2006. Particularly large reductions were reported by Brunei Darussalam, Kazakhstan, Palau, Singapore, and Tajikistan. Among the 30 economies reporting rising emissions, particularly large increases in emissions were recorded for PRC, Cook Islands, Republic of Korea, Malaysia, Maldives, and Thailand.

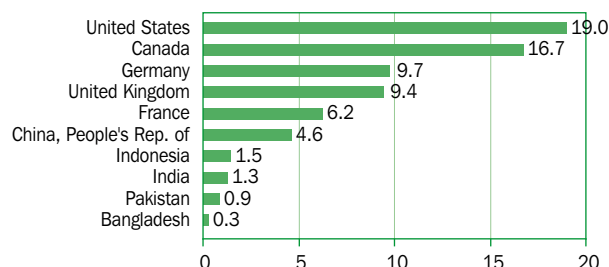
Among the five most populous developing economies, the PRC has the highest per capita emissions followed by Indonesia, India, Pakistan, and Bangladesh. All five economies increased their emissions from 1990 to 2006. Although, with the exception of the PRC, the increases were not large on a per capita basis, their contribution to global warming is substantial because of their huge populations.

Figure 7.2 Per Capita Emissions of Carbon Dioxide, 1990 and 2006 or Nearest Years (metric tons)



To put CO₂ emissions from Asia in a global context, Figure 7.3 compares emissions by the five most populous economies of the Asia and Pacific region with emissions by five large developed countries. The differences between the five countries at the top of the table and the five Asian economies are striking. In 2006, each resident in the United States was emitting as much CO₂ as 71 residents in Bangladesh, 21 in Pakistan, 14 in India, 13 from Indonesia, or 4 in the PRC.

Figure 7.3 **Per Capita Emissions of Carbon Dioxide in Five Industrialized Countries and in the Five Most Populous Countries of Asia, 2006 (metric tons)**



Sources: Table 7.1 and Millennium Indicators Database Online (UNSD 2009) for Canada, France, Germany, United Kingdom, and United States.

If the huge populations of the five Asian economies were to emit CO₂ at the per capita levels currently typical of the industrialized countries, the consequences for climate change would be catastrophic. Future increases in per capita CO₂ emissions by Asian economies are inevitable as their living standards rise. Can these be counterbalanced by reduced per capita emissions in the industrialized countries of North America and Europe? France offers one possible solution. It has the lowest CO₂ emissions of the five industrialized countries because most of its electricity is generated by nuclear power.

The ozone layer is under attack. Box 7.1 shows consumption of substances that deplete the ozone layer. Economies are grouped into four categories according to the levels of consumption for 2007. The five most populous countries are all either high consumers of ozone-depleting substances or medium-high consumers. Japan is also in the medium-high category but the other two developed country members, Australia and New Zealand, are medium-low consumers. Chlorofluorocarbons (CFC) gases used for refrigeration and air-conditioning are the main cause of the depletion of the ozone layer. Non-harmful but more expensive gases can be used instead of CFCs and are now widely used in the developed countries of Europe and North America, but ozone-depleting gases are still being used in many economies in Asia.

Box 7.1 **Consumption of All Ozone-Depleting Substances, 2007 (ODP metric tons)**

High consumers (over 1,000)

China, People's Rep. of	25189.9	India	2971.0
Korea, Rep. of	4552.7	Thailand	1316.6

Medium-high consumers (101–1,000)

Japan	996.6	Viet Nam	298.2
Malaysia	664.2	Bangladesh	192.7
Indonesia	500.1	Singapore	153.0
Pakistan	354.0	Kazakhstan	120.9
Philippines	325.7		

Medium-low consumers (10–100)

Australia	82.7	New Zealand	27.4
Sri Lanka	77.6	Cambodia	19.9
Afghanistan	61.3	Vanuatu	16.6
Armenia	29.4	Brunei Darussalam	10.4

Low Consumers (below 10)

Papua New Guinea	9.5	Solomon Islands	0.9
Turkmenistan	8.3	Azerbaijan	0.8
Lao PDR	8.0	Micronesia, Fed. States of	0.5
Georgia	6.3	Marshall Islands	0.2
Kyrgyz Republic	5.8	Samoa	0.2
Fiji Islands	4.5	Bhutan	0.1
Maldives	4.4	Kiribati	0.1
Tajikistan	3.8	Palau	0.1
Myanmar	2.4	Tonga	0.1
Mongolia	1.7	Uzbekistan	0.1
Nepal	1.2		

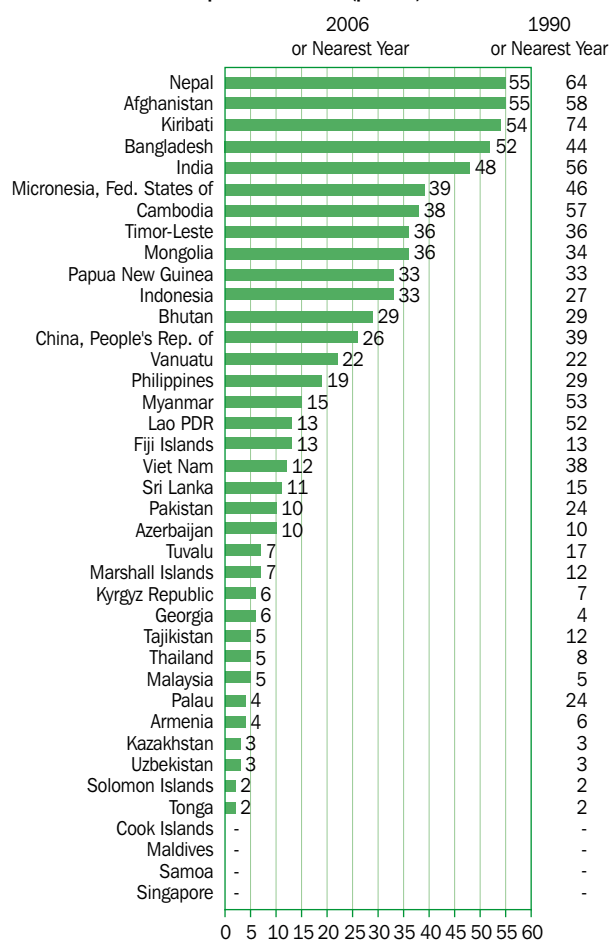
Source: Table 7.1.

Good progress has generally been achieved in providing basic sanitation to urban households. Target 7.C relating to access to improved water sources and sanitation facilities is broken down into urban and rural areas. Figure 7.4 shows progress made toward achieving one of these targets, i.e., halving the proportion of urban households without access to improved sanitation.

Eighteen of the 39 economies in Figure 7.4 have either reduced the proportions of urban population without access to improved sanitation by at least half or kept the proportion at 5% or below. In 10 of the other 21 economies (including Bangladesh and Indonesia), the percentages of urban population without access to improved sanitation have remained unchanged or risen. Thirteen economies still have more than a quarter of urban households without access to improved sanitation.

The data in Figure 7.4 are also relevant for Target 7.D: *By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.* The revised MDG Framework includes lack of access to basic sanitation as one of four criteria for defining slums, the others being lack of access to improved water supply, overcrowding, and dwellings made from nondurable materials.

Figure 7.4 Proportion of Urban Households without Access to Improved Sanitation (percent)



Source: Derived from Table 7.3.

Data Issues and Comparability

Data on forests and on land set aside for protecting biodiversity come from administrative sources supplemented by satellite imagery. They are broadly comparable and reasonably reliable. Information on CO₂ emissions comes mainly from international agencies and is derived by applying emission coefficients to estimates of fuel consumption, cement production, and gas flaring. Emissions by international carriers (ships and aircraft) are usually omitted because they cannot be assigned to a particular country.

Data on housing conditions come mainly from population or housing censuses or from sociodemographic and living standard surveys.