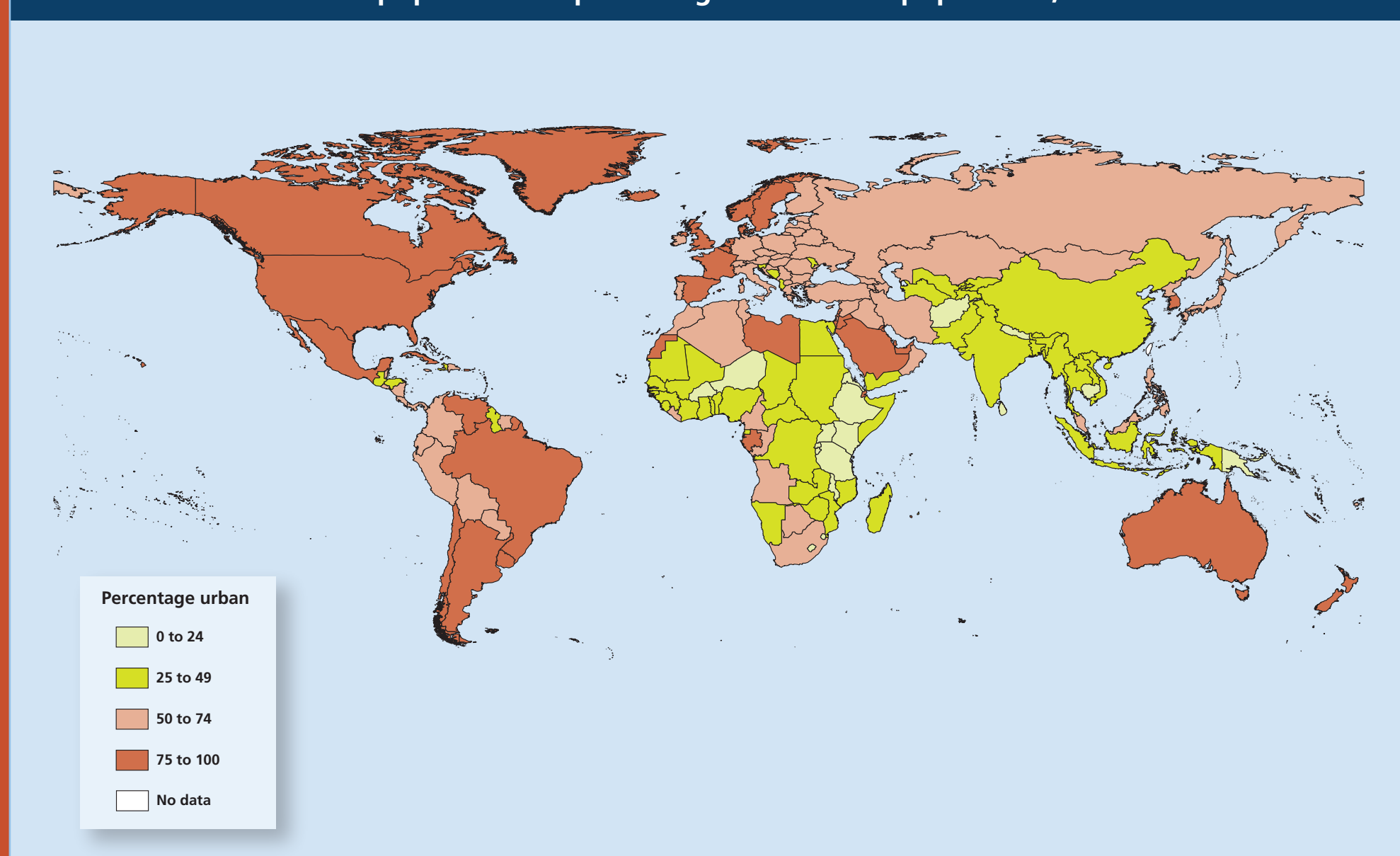




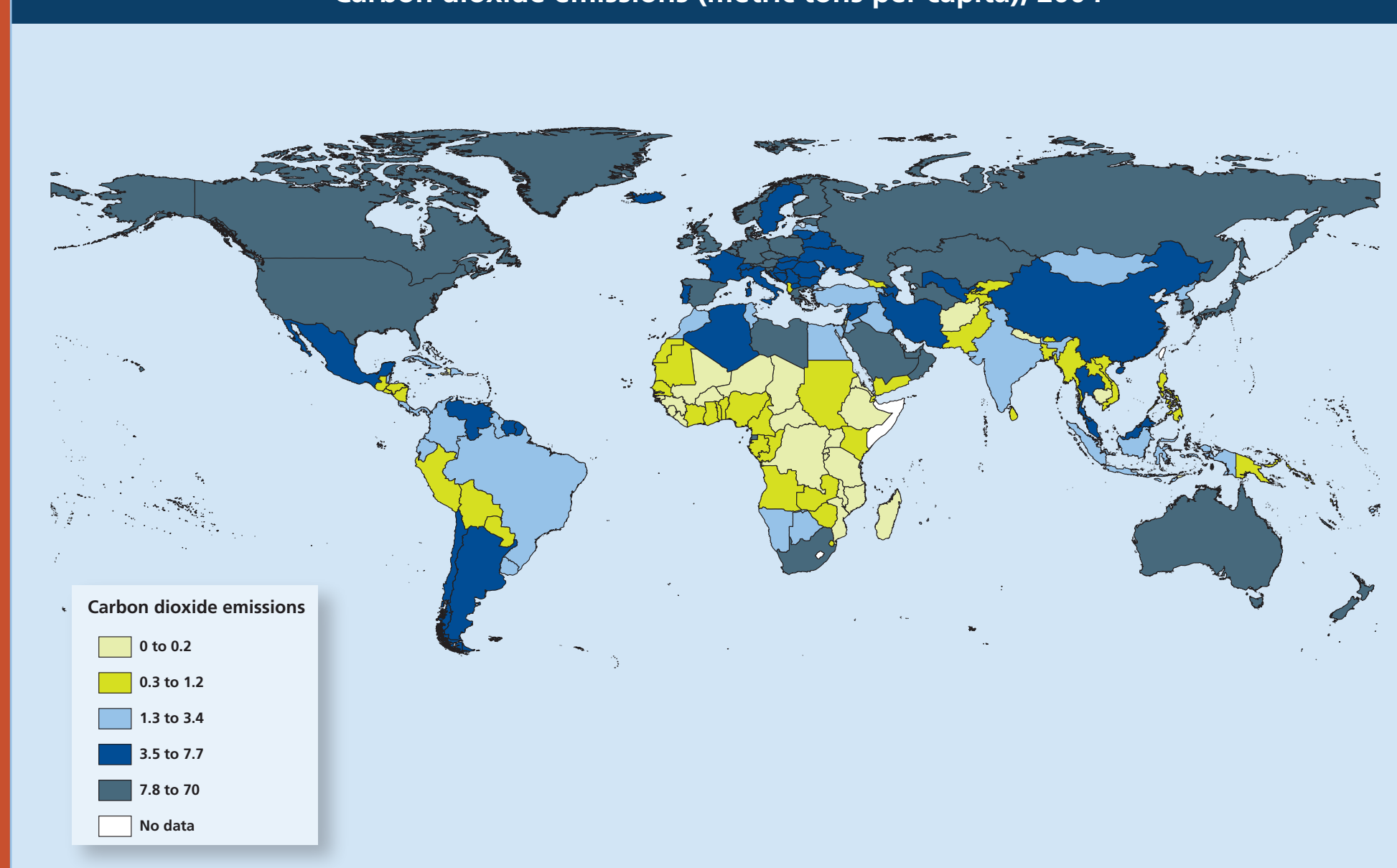


Urban population as percentage of the total population, 2005



Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.

Carbon dioxide emissions (metric tons per capita), 2004



Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.

## Urban Population, Development and the Environment 2007

**Total population.** In 2005, the world population reached 6.5 billion persons, and it is expected to reach 9.2 billion in 2050. The additional 2.7 billion persons expected—equivalent to the total world population in 1950—will be absorbed mostly by the less developed regions, whose population is projected to rise from 5.3 billion in 2005 to 7.9 billion in 2050. The population of the 50 least developed countries will likely more than double, passing from 0.8 billion in 2005 to 1.7 billion in 2050. In contrast, the population of the more developed regions is expected to remain nearly unchanged at 1.2 billion.

**Urban population.** The twentieth century witnessed the rapid urbanization of the world's population. In 1900, urban-dwellers made up only 13 per cent of the global population. The proportion urban grew to 29 per cent in 1950 and reached 49 per cent in 2005 (3.2 billion people). By 2030, 60 per cent of the global population, or 5.0 billion people, are expected to live in urban areas. The populations of Europe, Latin America and the Caribbean, Northern America and Oceania are already over 70 per cent urban. Africa and Asia are the least urbanized regions of the world (approximately 40 per cent urban), but

by 2030 a majority of the population in these regions is projected to live in urban areas. Currently, the average annual growth rate of the urban population in the less developed regions (2.7 per cent) is almost over four times that of the more developed regions (0.6 per cent). Africa has the world's highest rates of urban population growth, averaging 3.4 per cent per year during 2000-2005. Growth in the urban areas of the less developed regions is projected to account for almost all of total world population growth between 2005 and 2030 (93 per cent). Although urban growth rates have been decreasing in most countries, every year a larger absolute number of persons is being added to the world's urban population. The number added annually was about 62 million during 2000-2005 and is projected to rise to 73 million in 2015-2020 and to reach 76 million in 2025-2030.

**Urban density.** Although nearly half the world's population lived in urban areas in 2005, urban settlements were estimated to occupy just 2.7 per cent of the world's land area. At the world level, urban density averages 906 persons per km<sup>2</sup>, but urban population density is considerably higher in the less developed regions (1,392 persons per km<sup>2</sup>) and espe-

cially in the least developed countries (2,547 persons per km<sup>2</sup>). In the more developed regions, rising affluence accompanied by improved transportation networks and increased access to motor vehicles has typically led to a lower density of urban settlement, averaging 482 persons per km<sup>2</sup>. A few countries or areas, notably Macao Special Administrative Region of China and the Maldives, exhibit exceptionally high urban densities.

**Urban population in slums.** In 2005, 37 per cent of the urban population of the less developed regions were estimated to be living in slums. In the least developed countries, almost three quarters of the urban population were slum-dwellers. By region, Africa had the largest proportion of the urban population living in slums in 2005 (51 per cent), followed by Asia (35 per cent) and Latin America and the Caribbean (27 per cent).

**Access to improved water sources and sanitation in urban areas.** Access to safe drinking water and adequate sanitation improves health, well-being and economic and social productivity. Access to safe water and sanitation are also among the indicators that the international community uses to monitor progress towards environmental sustainability, since surface and groundwater sources are increasingly at risk of pollution by pesticides, industry effluents and untreated household wastewater. The overextraction of water for agriculture and manufacturing has

threatened the sustainability of water resources in many parts of the world. Globally, 170 million urban-dwellers (5 per cent) lack access to an improved water supply and over 600 million (20 per cent) lack adequate sanitation services. Most of these people live in informal, overcrowded urban settlements in developing countries, particularly in Africa and Asia. In Africa, 16 per cent of the population lack access to an improved water supply and 38 per cent lack adequate sanitation.

**Gross domestic product (GDP) per capita.** Between 1995 and 2005, per capita GDP growth accelerated in low-income and middle-income countries. Growth in GDP per capita was more rapid in developing countries than in high-income countries during 2000-2005. However, these favourable recent trends have produced only a small narrowing of the wide income gap that still exists between the developed and the developing economies. Average GDP per capita in the developing regions, expressed in purchasing power parity terms, stands at \$5,181 and is equivalent to 18 per cent of that in the more developed regions. In the least developed countries, the average GDP per capita is equivalent to 5 per cent of that in the more developed regions.

**Value added by industry and services.** A fundamental aspect of economic development is the increasing concentration of activity in high value added sectors, including industry and services, which

in turn are mostly concentrated in urban areas. In most countries, the share of services has been rising in recent periods, while that of agriculture has declined. The share of industry has changed less. Currently, industry and services account for 95 per cent of the GDP in the more developed regions and 89 per cent of that in the less developed regions. In the least developed countries, the share of industry and services in GDP is lower, at 74 per cent.

**Energy use.** Although access to energy is essential for development, its production and use as well as its by-products have heavy impacts on the environment. Energy generated by the combustion of fossil fuels and biomass often results in air pollution, with negative impacts on the health of both people and ecosystems. On average, per capita energy use in the more developed regions is five times greater than in the less developed regions and more than 15 times greater than in the least developed countries. Whereas energy consumption in developed countries has continued to increase and currently accounts for about 70 per cent of the world energy demand, much of the future growth in energy demand is expected to occur in developing countries where a large proportion of the population still lacks access to modern, high-quality energy sources.

**Carbon dioxide (CO<sub>2</sub>) emissions.** Atmospheric concentrations of carbon dioxide, the main gas linked with global warming, have increased substantially in

the course of economic and industrial development. CO<sub>2</sub> emissions are largely determined by a country's energy use and production systems, its industrial structure, its transportation system, its agricultural and forestry sectors, and the consumption patterns of the population. In addition to the impact of CO<sub>2</sub> and other greenhouse gases on the global climate, the use of carbon-based energy also affects human health through local air pollution. Currently, CO<sub>2</sub> emissions per person are markedly higher in the more developed regions (11.9 metric tons per capita) than in the less developed regions (2.5 metric tons per capita) and are lowest in the least developed countries (0.2 metric tons per capita).

**Motor vehicles in use.** In recent years, ownership of passenger cars has increased considerably worldwide and the transportation of goods and services by road has intensified. Rising demand for roads and vehicles is associated with economic growth but also contributes to urban congestion, air and noise pollution, increasing health hazards, traffic accidents and injuries. Motor vehicle use also places pressure on the environment, since transportation now accounts for about one quarter of world energy use and half of the world's oil consumption and is a major contributor to greenhouse gas emissions. The number of motor vehicles per capita in the less developed regions remains markedly lower than in the more developed regions, but is now increasing more rapidly than in the more developed regions.

### Conferences

The International Conference on Population and Development (ICPD) adopted the Programme of Action<sup>1</sup> in 1994, which recommended, inter alia, the following actions to address the interactions between population, environment and development:

- Integrate demographic factors into environmental impact assessments and other planning and decision-making processes aimed at achieving sustainable development;
- Implement measures for poverty eradication, with special attention to income-generation and employment strategies directed at the rural poor and those living within or on the edge of fragile ecosystems;
- Utilize demographic data to promote sustainable resource management, especially of ecologically fragile systems;
- Modify unsustainable consumption and production patterns through economic, legislative and administrative measures, as appropriate, aimed at fostering sustainable resource use and preventing environmental degradation;
- Implement policies to address the ecological implications of future population increases, particularly in ecologically vulnerable areas and urban agglomerations.

The United Nations Conference on Environment and Development, which adopted Agenda 21<sup>2</sup> in 1992, identified a number of key objectives relative to population, including:

- To incorporate demographic trends in the global analysis of environment and development issues;

- To develop a better understanding of the relationships among demographic dynamics, technology, cultural behaviour, natural resources and life-support systems;
- To assess human vulnerability in ecologically sensitive areas and centres of population to determine the priorities for action at all levels;
- To implement population programmes along with national resource management and development programmes at the local level to ensure the sustainable use of natural resources, improve the quality of people's lives and enhance environmental quality.

The key actions for the further implementation of the ICPD Programme of Action,<sup>3</sup> the Programme for the Further Implementation of Agenda 21<sup>4</sup> and the Plan of Implementation of the World Summit on Sustainable Development,<sup>5</sup> adopted in Johannesburg in 2002, made further recommendations for changing unsustainable patterns of consumption and production as well as for promoting sustainable development. The recommendations contained in those documents set priorities for action to eradicate poverty, combat environmental threats to health and promote sustainable development in the rural and urban areas of the world.

<sup>1</sup> Report of the International Conference on Population and Development, Cairo, 5-12 September 1994 (United Nations Population Division, Sales No. E.95.XIII.18).

<sup>2</sup> Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 (vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.XI.8)).

<sup>3</sup> Resolution S-12/2.

<sup>4</sup> Resolution S-19/2, annex.

<sup>5</sup> Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002 (United Nations publication, Sales No. E.03.XI.A.1 and corrigendum, chap. I, resolution 2, annex).

### Participation in multilateral treaties

To address global environmental issues, many Governments have signed and ratified<sup>1</sup> international treaties launched in the wake of the 1972 United Nations Conference on the Human Environment and the 1992 United Nations Conference on Environment and Development. The following are some of the major multilateral environmental treaties currently in force:

The Vienna Convention for the Protection of the Ozone Layer (1985), ratified by 191 countries, aims to protect human health and the environment by promoting research on the effects of changes in the ozone layer and on alternative substances and technologies, monitoring the ozone level and taking measures to control the activities that produce adverse effects.

The Montreal Protocol on Substances that Deplete the Ozone Layer (1987), ratified by 191 countries, requires that countries help protect the Earth from excessive ultraviolet radiation by cutting chlorofluorocarbon consumption by specific amounts and target dates, with allowances for increases in consumption by developing countries. The Protocol contained flexible implementation schemes and evaluation procedures and recognized the principle of "common but differentiated" responsibilities for developed and developing countries. The Protocol has contributed to reducing levels of ozone-depleting substances.

The United Nations Framework Convention on Climate Change (1992), ratified by 192 countries, aims to stabilize atmospheric concentrations of greenhouse gases at levels that will prevent human activities from interfering dangerously with the global environment. The Convention was not binding and did not establish targets or deadlines.

The Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997), ratified by 176 countries, entered into force in 2005. It commits 36 developed countries to reduce their greenhouse gas emissions by 2012 to at least 5 per cent below emission levels of 1990. In December 2007 in Bali, Indonesia, the United Nations Climate Change Conference adopted the Bali Road Map, which charts the course for a new negotiating process to be concluded by 2009 that will ultimately lead to a post-2012 international agreement on climate change.

The United Nations Convention on the Law of the Sea (1982), ratified by 155 countries, went into effect in 1994 and created a comprehensive legal regime for seas and oceans. Rules were established for environmental standards and enforcement provisions, while international rules and national legislation to prevent and control marine pollution were developed. The Convention afforded all countries the right to manage marine resources within their 200-nautical-mile Exclusive Economic Zone. For many developing countries, however, it is difficult to enforce regulations over such a vast expanse.

The Convention on Biological Diversity (1992), ratified by 190 countries, promotes conservation of biodiversity among nations through scientific and technological cooperation, access to financial and genetic resources and transfer of ecologically sound technologies. The major objectives are to conserve biodiversity, ensure its sustainable use and guarantee the fair and equitable sharing of its benefits.

Source: United Nations Treaty Collection. Status as of 1 January 2008. Data available at: [untreaty.un.org](http://untreaty.un.org)

<sup>1</sup> Ratification including acceptance, approval, accession or succession. Ratification in the strict sense whereby a State indicates its consent to being bound to a treaty if the parties intend to show their consent by such an act.



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