

## LATIN AMERICA AND THE CARIBBEAN

G L O B A L E N V I R O N M E N T O U T L O O K

The fourth *Global Environment Outlook – environment for development (GEO-4)* assessment report is published in 2007, exactly two decades since the World Commission on Environment and Development (WCED) published its seminal report – *Our Common Future* – which placed sustainable development on the agenda of governments and other stakeholders. *GEO-4* is the most comprehensive UN report on the environment prepared by about 390 experts and reviewed by more than 1 000 others across the world.

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GEO-4 highlights that, for Latin America and the Caribbean, extensive and unplanned urbanization, threats to terrestrial biodiversity and ecosystems, coastal degradation and marine pollution and regional vulnerability to climate change are key priorities among the major environmental issues in the region.

### Unplanned urbanization

Latin America and the Caribbean is the most urbanized region in the developing world. Between 1987 and 2005, the urban population increased from 69 to 77 per cent of the total population.

Urban poverty is a key issue: 39 per cent of urban families live below the poverty line, and 54 per cent of the extremely poor are urban.

Air pollution is being monitored and better managed in big cities such as Mexico City and Santiago, but it is increasing in medium and smaller cities, where resources and control of technologies for urban area management are less available.

Production and consumption are concentrated in urban areas, thus affecting the surrounding ecosystems through deforestation, land degradation, loss of biodiversity, soil, air and water contamination, and extraction of building materials.

Municipal solid waste production increased in the region. Although 81 per cent of all municipal solid waste generated is collected, only 23 per cent is adequately disposed of.

The solution to these problems is, among others, looking into the use of economic instruments and effective compliance with environmental law, which needs to be coupled with participatory and ecologically oriented urban planning.

### Threats to biodiversity and ecosystems

Latin America and the Caribbean has the largest species diversity of the world's regions, many of which are endemic and hosts several of the world's greatest river basins. Six of its countries (Brazil, Colombia, Ecuador, Mexico, Peru and Venezuela) are considered mega-diverse.

This immense biodiversity is under threat due to habitat loss, land degradation, land-use change, deforestation and marine pollution. Some 66 per cent of the global forest cover loss from 2000 to 2005 occurred in this region. Only eight eco-regions in Latin America and the Caribbean are relatively intact and 27 are relatively stable. 55 are vulnerable, 51 are endangered and 31 eco-regions are critically endangered.

The area under protection (both terrestrial and marine IUCN Categories I-VI) almost doubled from 1985 to 2006, and now shields 10.4 per cent of total territory, with greater coverage in South America (10.6 per cent) and Meso-America (10.1 per cent) than in the Caribbean (7.8 per cent). New efforts are being made, such as the creation of the Mesoamerican Biological Corridor, which extends from southern Mexico to Panama, and the Pilot Programme to Conserve the Brazilian Rain Forest.

Payment for environmental services may be a crucial instrument for effectively protecting biodiversity and promising examples are underway in several countries, such as Mexico, Costa Rica and Colombia.

### Coastal degradation and marine pollution

Specific threats to Latin America and the Caribbean's marine waters include:

- About 86 per cent of the sewage goes untreated into rivers and oceans; in the Caribbean, the figure sometimes rises to 90 per cent.

- There is elevated oil pollution from refineries in the Greater Caribbean, off Brazil and the Gulf of Mexico where oil spills are a serious problem.
- Agrochemical runoff is also important, and high concentrations of certain agrochemicals have been found in estuaries in the Caribbean, Colombia and Costa Rica.
- Overfishing is a major source of concern, particularly in the Caribbean, where pelagic predator biomass appears to have been depleted.

Despite all this, integrated marine and coastal areas management is gaining ground, with increasing efforts to establish marine protected areas, but more focus is needed on the integration of coastal area and inland river basin management as a key response to coastal and marine pollution.

### Regional vulnerability to climate change

Tropical rain forests in Meso America and the Amazon basin, mangroves and coral reefs in the Caribbean and other tropical areas, mountain ecosystems in the Andes, and coastal wetlands are some of the ecosystems more vulnerable to the effects of

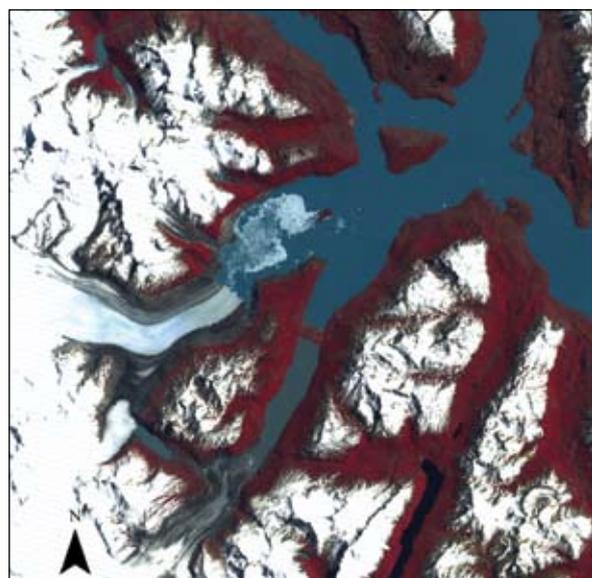
climate change. Other effects include the increased geographic distribution of infection disease vectors that results in higher vulnerability of people to malaria, dengue fever, yellow fever and bubonic plague.

The loss of Latin American glaciers is particularly dramatic evidence of climate change: the Andean ridge and Patagonia in Argentina are showing signs of glacier retreat and a reduction in snow covered zones. Glacier loss in the Andes and saltwater intrusion from sea-level rise will affect the availability of drinking water, as well as agricultural production and tourism.

The region has limited information, observation and monitoring systems, capacity building initiatives, and political, institutional and technological frameworks to deal with climate change. It has generally low income, and many settlements are in vulnerable areas. Under the United Nations Framework Convention on Climate Change (UNFCCC), countries in the region agreed to mitigation and adaptation activities in the energy, transport, agricultural and waste management sectors, and to increase the capacity of carbon sinks. For example, Costa Rica committed to become carbon neutral by 2021.

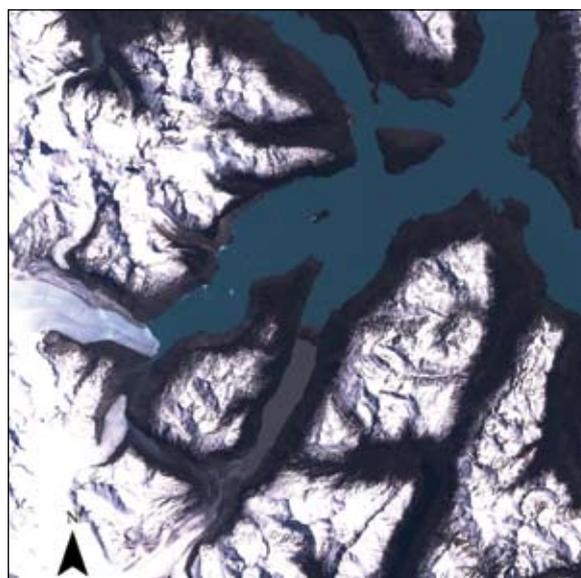
**Retreating glacier zone in the border area between Argentina and Chile:**

a) 1973



0 5 400 10 800 metres

b) 2000



0 5 400 10 800 metres

Source: Compiled from lansat.org

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