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Summary for Latin America and the Caribbean

On the Eve of Rio+20

**Strict Legislation, Enforcement Needed to Protect Natural
Resources in Latin America and the Caribbean**

**Population Growth, Consumption Driving Damage to
Environment, But Examples of Positive Change Growing**

Latin America and the Caribbean's rich natural resources are crucial to the planet's environmental health, but attempts to protect them will continue to fall short unless governments increase efforts to enforce existing policies and create new ones.

Yet there is no shortage of inspiring examples of efforts to put the region on a path toward a sustainable future, from policies that have reduced deforestation rates in the Amazon to mass-transit systems in Brazil and Colombia that can help reduce emissions and thus slow down the pace of climate change.

If scaled-up and accelerated, such measures could assist in a transition to a Green Economy as nations across the globe prepare for the Rio+20 Summit later this month.

The above are among the main findings for Latin America and the Caribbean (LAC) from the Global Environment Outlook 5 (GEO 5), which analyzes the worldwide state of the environment and tracks progress towards agreed goals and targets.

The region is home to 23 per cent of the world's forests and 31 per cent of its freshwater resources. Yet population growth and unsustainable consumption patterns have driven the decimation of natural environments for agriculture and raw material extraction, with impacts on the region's biodiversity.

The region's growing population, already largely urbanized, poses challenges to providing safe water and sanitation in towns and cities as well as to addressing air pollution and the contamination of its freshwater, oceans and seas.

Competition for scarce resources and the inequitable distribution of benefits have led to emerging socio-environmental conflicts and risks to the traditional lifestyles and livelihoods of local and indigenous communities.

The main issues, according to the report, are weak political will, limited procedural continuity due to short terms of office and inadequate enforcement instruments.

Governments need a stronger commitment to both new policies and making existing policies more effective through adequate financial resources, transparency, accountability and inclusion.

On a regional level, GEO 5 pays particular attention to policy approaches, highlighting successful national and regional policies that can be scaled-up and replicated elsewhere. Emerging trends and regional priorities for action are also explored.

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Drivers

Central to the GEO 5 methodology is the concept that environmental pressures can only be effectively tackled if underlying drivers are addressed. Policies are most effective, argues the report, when they proactively address the causes of environmental degradation, rather than reacting to the effects.

Population

The region's 33 nations include Brazil, the seventh-largest economy in the world in 2011, and small island developing states with fragile economies. The population hit 583 million in 2010 according to World Bank figures, more than double the figure in the 1960s. Some 79 per cent of this population is urbanized, with greater Sao Paulo ranked as the third-largest megacity in the world, standing at 20.3 million.

Economic Development and Globalization

Data published by Global Insight in 2010 suggest that in the next 40 years Brazil, along with Russia, India and China, will start to approach the United States in terms of Gross Domestic Product (GDP).

Urbanization, demographic change and household wealth in countries such as Brazil suggest that changes in food consumption patterns are likely to have profound effects on regional food systems. Kilocalories consumed per person per day in LAC grew by almost 5 per cent between 1997 and 2008.

The environmental impacts of meat production around the world depend on intensity, extent and management. Nonetheless, growing demand for meat worldwide has been an important driver of deforestation in Latin America, as forest is cleared to plant soy for livestock feed.

The 2007–2008 food price spike and biofuel blending requirements in the EU and other countries has inspired the expansion of oil palm plantations in Colombia and Guatemala, sugarcane ethanol production in Brazil, and soy in Argentina and Brazil.

State of the Environment - Priority Issues

During regional preparatory consultations for GEO 5, five priority environmental issues were identified for LAC: Land, Freshwater, Biodiversity, Climate Change, and Environmental Governance, which was also selected as a 'cross-cutting' theme.

Land

Population growth and unsustainable consumption patterns have driven increased pressure on land for agriculture and raw material extraction, leading to wide deforestation.

The Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 40b, which calls for the development of integrated land management, is the key internationally agreed goal for this issue.

Since the 1960s, arable land has increased by 83 per cent in Latin America, coinciding with significant deforestation. In 2009, more than 280,000 Latin American and Caribbean producers managed 23 per cent of the world's organically farmed land, with the highest regional shares in Dominican Republic and Uruguay.

As meat production has grown (by 37 per cent between 1970 and 2008), so has the area harvested for soybean crops used to feed cattle, which expanded globally to 98.8 million hectares in 2009 from 74.3 million hectares in 2000, and 50.4 million hectares 30 years ago. Soybean area harvested in LAC rose almost 80 per cent between 1999 and 2008.

LAC is seeing the world's worst deforestation rates. It lost four million hectares per year in 2005-2010, down from almost 5 million per year over the previous ten-year period.

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CASE STUDY: Action Plan for Protection and Control of Deforestation in the Amazon

A drop in deforestation during 2004–2011 (from over 25,000 km² per year to just over 5,000) coincided with the introduction of new Brazilian policies as part of the Action Plan for Protection and Control of Deforestation in Brazil's Legal Amazon. The plan included:

- Creating new protected areas in deforestation hot spots
- Establishing a deforestation monitoring programme using satellite imagery
- An assertive law enforcement strategy allowing for property apprehension, forfeiture or even destruction
- Withholding public rural credit from producers who break environmental regulations
- An obligation on municipalities to reduce deforestation rates below a certain threshold and register protected areas in a database to make illegal deforestation promptly apparent.

The report identifies three broad policy measures that need renewed focus to reverse land degradation, namely: multi-scale land-use planning, sustainable agriculture and livestock production, and the recovery of degraded lands. For example, indigenous land management of traditional communal lands of the Bolivian Amazon has improved the well-being of rural and indigenous peoples and helped protect forest services.

Freshwater

LAC has the second-largest green water footprint (rainwater stored in the soil) behind North America, at just below 1500 cm³ per person per year, and faces challenges to sanitation and drinking water.

The Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 26, which calls for the efficient use of water resources and sensible allocation among competing sectors, was selected as a key goal for this issue.

Growing meat consumption has a negative effect on water. Livestock accounts for over 8 per cent of global freshwater use and is among the largest sources of water pollution, leading to eutrophication (the excessive flow of nutrients to bodies of water), coral reef degradation, human health issues and antibiotic resistance.

A quarter of the population did not have access to improved sanitation in 2010, well short of the Millennium Development Goal (MDG) of 16 per cent by 2015. Also, the Wider Caribbean coasts had among the worst concentrations of marine litter of 12 seas surveyed between 2005 and 2007.

The report identified the need for action in the following broad policy areas to achieve the internationally agreed goal: integrated water resources management, sustainable water provision and consumption, expansion of drinking water and sanitation systems and integrated coastal zone management.

CASE STUDY: Fund for the Protection of Water (FONAG)

FONAG is a trust fund to which water users in Quito, Ecuador contribute. This fund is used to co-finance activities, projects and programmes for the rehabilitation and conservation of 65 000 hectares of watersheds that supply Quito and surrounding areas. Similar funds have been developed in Colombia and Peru.

Biodiversity

LAC is home to approximately 70 per cent of the world's species and almost 20 per cent of its eco regions. Its economy is highly dependent on this rich biodiversity, yet it is increasingly under threat from human activities: biodiversity in the tropics, which includes much of the LAC region, has fallen by 30 per cent since 1992.

In the context of the new Aichi Targets under the Convention on Biological Diversity (CBD), CBD Article 10 was selected as the internationally agreed biodiversity goal related to this priority issue.

Biodiversity in the region is threatened by a number of linked factors, including: habitat loss, conversion and alteration; overharvesting or unsustainable use of terrestrial and aquatic resources; unsustainable land management practices; and demographic pressures and globalization.

The reports calls for equitable, evidence-based, participatory, cross-sectoral policies designed to protect and restore biological resources, falling under the following four broad themes:

- Increasing and expanding protected areas, improving their management and creating greater connectivity
- Applying the ecosystem approach to biodiversity management
- Enhancing biodiversity conservation through payment for ecosystem services
- Access and benefit sharing

CASE STUDY: Protected Areas

LAC's protected areas, including marine, cover more than 500 million hectares in 4,400 different zones. They are considered to be one of the region's most important policy measures for conserving biological diversity, and also can help climate change adaptation and mitigation and contribute to GDP if properly managed.

One example is the Mesoamerican Biological Corridor, established by eight Central American countries, which acts as a pathway between large and important areas of habitat. By promoting greater involvement for residents, the corridor helps promote a greater sense of human well-being while ensuring that the biological heritage of the region is protected.

Climate Change

Global climate change exacerbates many of the region's existing problems and also threatens development gains, poverty reduction and economic growth. Although the region accounts for only 12 per cent of the world's greenhouse gas emissions, it is already experiencing the adverse consequences of climate change: extreme weather patterns and climatic events are increasing in frequency and intensity, and sea levels are rising, affecting the region's most vulnerable groups.

To address climate change, the region needs to commit to the sustained implementation of international and regional goals, such as the United Nations Framework Convention on Climate Change and its Kyoto Protocol (UNFCCC 1998, 1992), and the Hyogo Framework for Action (ISDR 2005).

Highlighting the scale of the problem is the Amazon. The Amazon is a vital component of the Earth System as it contains the greatest terrestrial diversity of organisms on the planet, exchanges vast amounts of water and energy with the atmosphere and thus affects local and regional climates, and is a major carbon sink and reservoir containing 90 billion tonnes of carbon – about a fifth of the total carbon contained in the world's tropical forests.

The Amazon experienced two once-in-a-century droughts in 2005 and 2010, causing rapid, widespread tree mortality and large increases in carbon emissions in regions that are normally net carbon sinks. Droughts increase vulnerability to fires by enhancing forest flammability and fire spread. According to simulations, the effect of climate change alone could reduce the extent of the Amazon biome by one-third by 2100.

The report calls for the sustainable environmental management of forests and key ecosystems; reducing the vulnerability of populations through efficient adaptation; energy efficiency and the development of new, renewable energy sources; ecoagriculture; and the transformation of transport systems, implemented in a socially and environmentally responsible way, and supported by international financial and economic mechanisms.

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CASE STUDY: Rapid-transit buses

Careful analysis of social needs facilitates the implementation of more effective environmental initiatives that can also address social development. For example, an initiative that replaced the conventional transport system with a bus rapid-transit system, implemented first in Curitiba, Brazil, and subsequently in Bogotá, Colombia and other cities, illustrate that well-designed projects can yield multiple environmental and social benefits, such as climate mitigation and improved mobility options.

Environmental Governance

Environmental governance in LAC is a complex mosaic, stemming from the wide diversity of governance systems with different degrees of institutional development and approaches to environmental issues, and different levels of governance mechanisms and performance. Some of the challenges include:

- Regional and sub-regional mechanisms play an important role in environmental management, although in many cases the environment is not their main focus.
- Most Latin American and Caribbean countries have developed national environmental legal and institutional frameworks, but have limited enforcement capacity
- The weak development of environmental policies in the face of economic, financial, commercial and technological globalization has aggravated the situation
- Managing national environmental policies and balancing internal priorities while engaging in environmental agreements constitutes a major challenge for the region
- The timescales over which policies, programmes and projects are realized do not always coincide with those of political terms of office.

The report calls for action in the following areas to improve environmental governance, and thus boost action under the other priority themes:

- Generating environmental information and improving the science-policy interface
- Education and environmental culture, and improved public participation
- Environmental economics and market mechanisms
- Collaboration and coordination
- Improving environmental justice and
- Longer terms of office and greater autonomy for technical environmental officers
- Creative financing mechanisms to facilitate political independence.

CASE STUDY: Accounting to Estimate Cost of Environmental damage in Mexico

The National Institute for Statistics and Geography of Mexico uses the World Bank's Integrated Environmental and Economic Accounting to track the cost of damage to natural resources and the environment. According to the Environmental and Economic accounts, for the period of 2005-2009, environmental damage and depletion of resources such as water and minerals cost Mexico nearly \$US 90 billion annually.

Because "what we measure affects what we do", the ability to monetize environmental damages provides decision makers with tangible criteria for the design of environmental policy.

The Way Forward

The region has many laws relating to the environment, but the lack of management and capacity to implement them has limited their effectiveness. In addition, policies are not keeping pace with production practices or adapting to global trends and integration.

Governments need a stronger commitment to new policies and to making existing policies and mechanisms more effective through adequate financial resources, scientific research and information, a culture of environmental awareness and standard governance principles such as transparency, accountability and inclusion.

Achieving a more sustainable model of development requires improved national and regional strategies to facilitate cross-sectoral policies, at relevant scales, that can address environmental and economic issues simultaneously. To improve governance, active community participation and a high level of inter-institutional cooperation are also needed. The combination of these approaches can help improve environmental problems while enhancing human well-being. These types of initiatives are also crucial to address the most serious challenges faced in the region: poverty and inequality.

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