

Global Environment Outlook

Policy options for Latin America and the Caribbean



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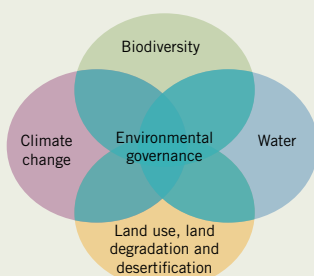
While playing a vital role in maintaining essential ecosystem services, biodiversity is threatened by a number of interlinked factors. Those include habitat loss through conversion, alteration and contamination of terrestrial and aquatic ecosystems from intensive economic activities. Because maintaining biodiversity has economic, social and environmental positive impacts on local and global population, addressing the drivers of its deterioration, along with ensuring its sustainability, requires equitable, evidence-based, participatory, cross-sectoral policies and action.

States acknowledging the importance of biodiversity and their responsibilities towards it, might want to consider implementing policies in accordance with Article 10 of the Convention for Biological Diversity (CBD). Improving, expanding and creating greater connectivity between protected areas could, in this regard, help accelerate the region's progress towards meeting this goal.

POINTS TO REMEMBER

- In terms of conserving biological diversity, protected areas are presented as one of the region's most important policy measures;
- Not only do PAs play a role in conserving species and habitats, they also deliver ecosystem services, are considered important in climate change adaptation and mitigation and dispense a range of valuable social benefits.

GE05 process reflects priority areas for environmental action in LAC



SELECTED GOAL

GE05 provides a scientific analysis of selected environmental challenges and the solutions available to address them, including their environmental and social costs and benefits.

A global intergovernmental and multi-stakeholder consultation undertaken as part of the GE05 process established a High-Level Intergovernmental Advisory Panel to identify and concur on internationally agreed goals to be analyzed as part of the GE05 process, to identify gaps in their achievement, and to frame the regional policy assessment. The Panel also provided high-level strategic advice to guide chapter authors when evaluating the gaps in achieving these goals and identifying the policy options for speeding up their achievement. The Latin America and the Caribbean Regional Consultation was held in Panama City, Panama, from 6 to 7 September 2010. Participants at the consultation selected a set of regional environmental challenges, together with a set of internationally agreed goals which were considered to be the most effective in addressing these challenges.

For climate change, the selected goal, the United Nations Framework Convention on Climate Change, Article 3, paragraph 1-3, reads as follows:

"Each contracting party shall, as far as possible and as appropriate:

- Adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity;
- Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements;
- Support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced; and
- Encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources."

Focusing on biological conservation and sustainable resource management through effective implementation of protected areas and the creation of biological corridors, could play a pivotal role in helping to reduce (and in some cases even reverse) the loss of biodiversity and integrity of ecosystem services. Therefore the Global Environment Outlook (GEO5), recommends improving, expanding and creating greater connectivity between protected areas as a policy option to achieve goal sets by CBD's Article 10.

POLICY OPTIONS

Protected areas (PAs) located in the Latin America and Caribbean (LAC) region, including Marine protected areas (MPAs), cover over five million km² in 4,400 different areas. Characterized by Bovarnick et al. (2010) as “clearly defined geographical spaces, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values¹”, PAs are considered to be one of the region's most important policy measures for conserving biological diversity¹⁻²⁻³.

BENEFITS

Not only have PAs been documented to play a role in conserving species and habitats, but they also deliver a range of ecosystem services and are considered important in climate change adaptation and mitigation⁴. More specifically, PAs act as life buffers by serving as sanctuaries and strongholds of species, protect natural resources that are critical to human populations and provide the settings for healthy outdoor living and recreation⁴.

Once properly managed, protected areas can tangibly and directly contribute to national Gross Domestic Product (GDP) and can help to support their own costs (see Case study 1). PAs also contribute to a range of social benefits including equity improvement as well as poverty alleviation; and the empowerment of women, rural communities, and indigenous peoples – all of which are important considerations in the region¹. Those benefits are cross-cutting and can span a wide range of sectors – including agriculture, fisheries, forestry, tourism and hydrological services (see Table 1)⁵.

Greater connectivity can also improve resilience to climate change for human populations and for eco-systems generally⁶⁻⁷. The use of ecoagricultural landscapes as biological corridors¹ provide, multiple benefits of agriculture provision, biodiversity conservation, ecosystem service provision and livelihood maintenance⁶.

ENABLING CONDITIONS

Ways to enhance PAs' effectiveness in LAC include:

- Increasing conservation in marine and freshwater areas that are still largely underrepresented;



- Effectively integrating indigenous and local communities in PAs management, including, where relevant, by promoting Indigenous and Community Conserved Areasⁱⁱ (ICCAs) (see case study 2);
- Promoting the links between conservation and development goals, using land-use planning as a fundamental tool;
- Improving research capability and strengthening links between research and decision-making frameworks;
- Strengthening the capacity for managing PAs⁷⁻⁸⁻⁹⁻¹⁰⁻¹¹⁻¹²⁻¹³⁻¹⁴⁻¹⁵⁻¹⁶⁻¹⁷.

In addition, some key instruments for PA management in LAC have been identified; these are ecotourism and sustainable tourism programmes; balancing the relationship between conservation and development through mechanisms such as payment for ecosystem services (PES) systems; the selective extraction of resources; CO₂ capture and sequestration services; and environmental stewardship and usage fees³⁻¹⁸. Measures such as

tax incentives, preservation easements, education, decentralized administration, and partnerships with international organizations may also encourage and promote PAs (and associated connections).

CHALLENGES AND WAYS FORWARD

Although PAs have demonstrated both progress and success in biodiversity conservation in LAC, they face a number of challenges. An important one is that isolated PAs often offer insufficient biodiversity protection because of fragmentation. Creating biological corridors

and improving landscape-scale connectivity are ways to encourage connections between PAs and effectively improve their performance¹⁹⁻²⁰⁻²¹.

Another limitation is the mismatch between the fairly large financial investment that will be required to put many of the proposed measures in place, and the limited available funding sources⁹. Bovarnick et al., (2010) have indicated, for example, that the financing gap required to achieve more effective management of PAs in LAC is approximately US\$700 million/year¹. In some instances, the protection of certain lands for conservation

purposes may result in users having to trade off other uses which may cause conflicts.

REPLICATION AND TRANSFERABILITY

Regional experiences of protected areas carry a strong replication potential – both in terms of design and implementation. However, understanding the specific environmental conditions in different areas and the links between the socio-economic and political systems, as a vehicle for successful replication and transferability, should not be underestimated.



Case study 1: User Fees supporting Marine protected areas (MPAs) activities in Jamaica

The establishment of Marine protected areas (MPAs) has been a common government response to regulate activities affecting coral and marines resources (e.g. fishing and tourism). However, once implemented MPAs often suffer inadequate funding of funds and/or simply become “paper parks”. Nevertheless, user-supported policies, such as taxes and fees, might sustain the operations of MPAs.

In order to understand how to sustainably finance the Montego Bay Marine Park (MBMP-Jamaica) following a decline of funding and the resulting degradation of the marine ecosystem, various marine and coastal economic valuation studies -which assign a monetary value to the goods and services provided by ecosystems - were conducted. A study conducted by Reid-Grant and Bhat (2009) found that moderate taxes or user fees would not reduce visitor numbers to the Montego Bay area²⁴.

Authors noted that total annual surplus benefits (consumer surplus) of cruise travelers and air travelers were estimated to be US\$189 and \$993 million respectively, while projected 2010 administration costs of the MBMP were US\$117,448. It was demonstrated that the management costs of the park amount to less than 0.1% of the annual total visitors’ willingness to pay (WTP). In that context, recreational users might be willing to pay a small portion of that gain toward the management costs. Given the small size of the tax or fee necessary to provide funding, Reid-Grant and Bhat (2009) conclude the additional cost would have little influence on visitation of the park²⁴.

Case study 2: The Xingu Indigenous Park (Brazil)

Created in 1961 by the Brazilian government in an attempt to mitigate the effects of colonization on traditional communities, the Xingu Indigenous Park (PIX) covers almost 30 000 km² of the Mato Grosso State of Brazil. It is home to 14 indigenous groups and hosts fragile ecosystems characterized by acid soil susceptible to erosion²⁵.

The important sizes of the reserve, the lack of federal resources as well as pressures caused by human activities and urbanization processes taking place in the headwater area (outside the reserve), have had important environmental and social repercussions on indigenous people residing in the PIX²⁵. In 1999, in an attempt to overcome those challenges, the Park's Indigenous communities sought the help of The Amazon Conservation Team (a non-governmental organization working in partnership with indigenous people of Latin America to conserve biodiversity in greater Amazonia), to identify and map their cultural and territorial knowledge and their specific needs. The mapping effort was subsequently used to help indigenous organizations of the Xingu Indigenous Park to be put in charge of the management of their own land and cultural conservation efforts²⁶.



Figure 1: Location of the Xingu Indigenous Park

Xingu Indigenous Park also hosts several projects developed by the Socio-Environmental Institute (*Instituto Socioambiental* - ISA). Mainly focused on four themes (protection and enforcement of indigenous land, education, natural resource management and strengthening of associations), these projects facilitate and encourage the cooperation of indigenous communities and organizations with governmental, non-governmental and research institutions.

Table 1:
Examples of cross-linkages and cross-benefits between the improvement, expansion and creation of greater connectivity between protected areas and other regional environmental priorities

	Water	Biodiversity	Land use, land degradation and desertification	Climate change	Environmental governance	Oceans and seas
Improving, expanding and creating greater connectivity between protected areas	<ul style="list-style-type: none"> Safeguards existing carbon stocks; Contributes to forest carbon sequestration. 	<ul style="list-style-type: none"> Reduces losses of key fauna; Maintains supporting ecosystem services. 	<ul style="list-style-type: none"> Supports water related ecosystem services; May help to improve watershed condition, and contribute to water provision. 	<ul style="list-style-type: none"> Supports the mobility of key pollinators for agricultural use. 	<ul style="list-style-type: none"> Promotes knowledge of ecosystems and information to halt deforestation; Helps inter-institutional coordination at different territorial levels. 	<ul style="list-style-type: none"> Reduces losses of key marine species; Contributes to maintain supporting marine ecosystem services.

Case study 3: Valuing Mexico's protected areas²⁷⁻²⁸

Mexican protected area systems, covering land managed at the federal, municipal, private and community levels, are one of the primary mechanisms for national biodiversity conservation. Mexico's protected areas cover 24.5 million hectares which account for about 10% of its total land area, and 1.5 % of its marine territory. Almost 6% of the rural population, or 1.3 million people, live and work inside protected areas.

In order to appreciate the value of PAs and their contribution to human and economic well-being, some of nature's valuable goods and services were assessed by the Nature Conservancy (a conservation organization working around the world to protect lands and waters). It was estimated that Mexico's Federal protected areas provide economic benefits and save economic costs worth almost US\$3.4 billion every year, just through storing carbon (approximately US\$2.5 billion saving each year), protecting water supplies (worth between \$130 million and \$260 million to the national economy) and supporting the tourism industry (inject tourist spending of US\$550 million). This represents an economic return of US\$56 for each dollar invested in protected areas from the federal budget. If all their benefits were to be valued, the total figure would be far higher.

This assessment also explored alternative funding sources for protected areas. A public infrastructure development compensation tax - paying for the diffuse negative environmental impacts of construction - could generate \$307 million in funding for PAs. A carbon emissions tax for in country air travel could raise US\$6.7 million a year, without a negative impact on flight costs. Redirecting 0.1% of existing public rural and fisheries budgets towards environmentally friendlier production could generate over US\$34 million yearly.



Figure 2: Mexico's protected areas

One of the problems found in the implementation of this project was the lack of specific information of values that can be assigned directly or indirectly to protected areas. This resulted in valuating only a few goods and services provided by the federal PAs, leaving out a whole array of other values provided by federal, state, municipal, community and private areas. The results are certainly very conservative and represent an undervaluation of the goods and services provided by Mexican protected areas. Nevertheless this initial valuation will generate new studies and information that eventually will overcome these drawbacks. The results of this assessment were presented to Mexican legislators, situation which has helped increase the budget assigned to protected areas even within the context of the current financial crisis.



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ⁱ Biological corridor: "Area of suitable habitat, or habitat undergoing restoration, linking two or more protected areas (or linking important habitat that is not protected) to allow interchange of species, migration, gene exchange etc ²²".

ⁱⁱ Indigenous and Community Conserved Areas (ICCAs) is defined as "natural and modified ecosystems including significant biodiversity, ecological services and cultural values voluntarily conserved by indigenous and local communities through customary laws or other effective means ²³".

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