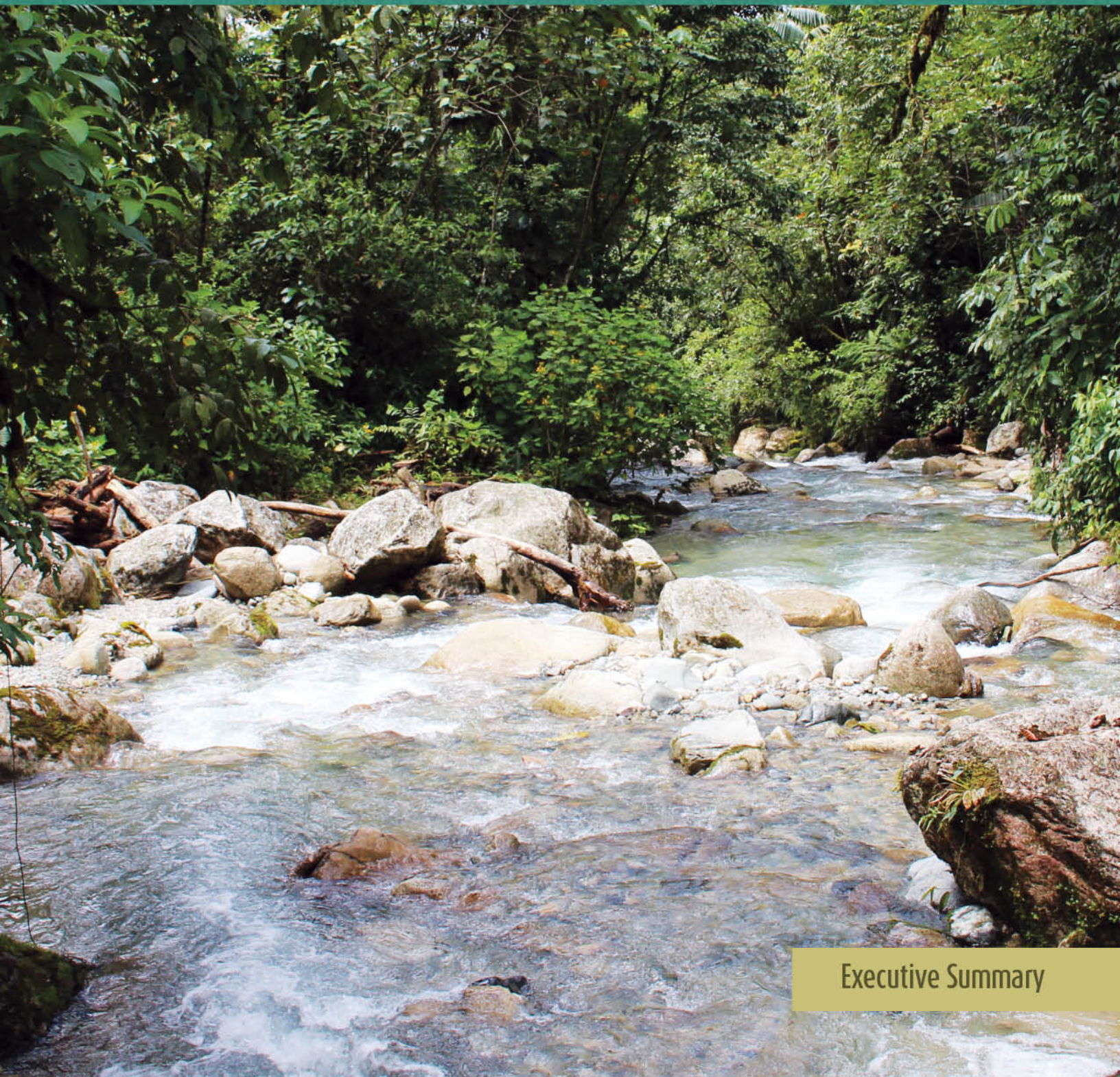


# Policies of the Amazon Countries and Climate Change:

## Protected Areas as an Adaptation Strategy



Protected Areas  
Natural Solutions  
to Climate Change



Executive Summary





**Analiz Vergara**  
analiz.vergara@wwf.org.ec

**Julia Gorricho**  
jmgorricho@wwf.org.co

**Diseño, diagramación e impresión:**  
Manthra Comunicación

# Contents

FOREWORD	5
INTRODUCTION	6
PROTECTED AREAS AND CLIMATE CHANGE ADAPTATION IN POLICY INSTRUMENTS	7
BOLIVIA	8
BRAZIL	9
COLOMBIA	10
ECUADOR	11
GUAYANA	12
FRENCH GUIANA	13
PERU	13
SURINAME	15
VENEZUELA	15
REGIONAL ORGANIZATIONS	16
PROGRESS IN IMPLEMENTATION OF THE CONVENTION ON BIOLOGICAL DIVERSITY'S PROGRAMME OF WORK ON PROTECTED AREAS –CBD POWPA–	17
CONCLUSIONS	17
RECOMMENDATIONS	19
Contacts for further information:	19
BIBLIOGRAPHY	20
Annex:	23







## FOREWORD

**T**his document summarizes the main ideas and recommendations in the publication 'Policies of the Amazon Countries and Climate Change: Protected Areas as an Adaptation Strategy', which analyses the role of protected areas as opportunities for climate change adaptation in public policies, laws, agreements and regulations related to climate change, protected areas, development, land-use planning and strategic sectors of the Amazon countries. The publication seeks, on the one hand, to provide insight for decision makers on the approaches, progress and gaps in each country's policies relating to the role of protected areas for climate change adaptation. On the other hand, it strives to identify opportunities for moving this agenda forward and integrating protected areas as adaptation strategies in Amazon countries' public policies relevant to climate change.

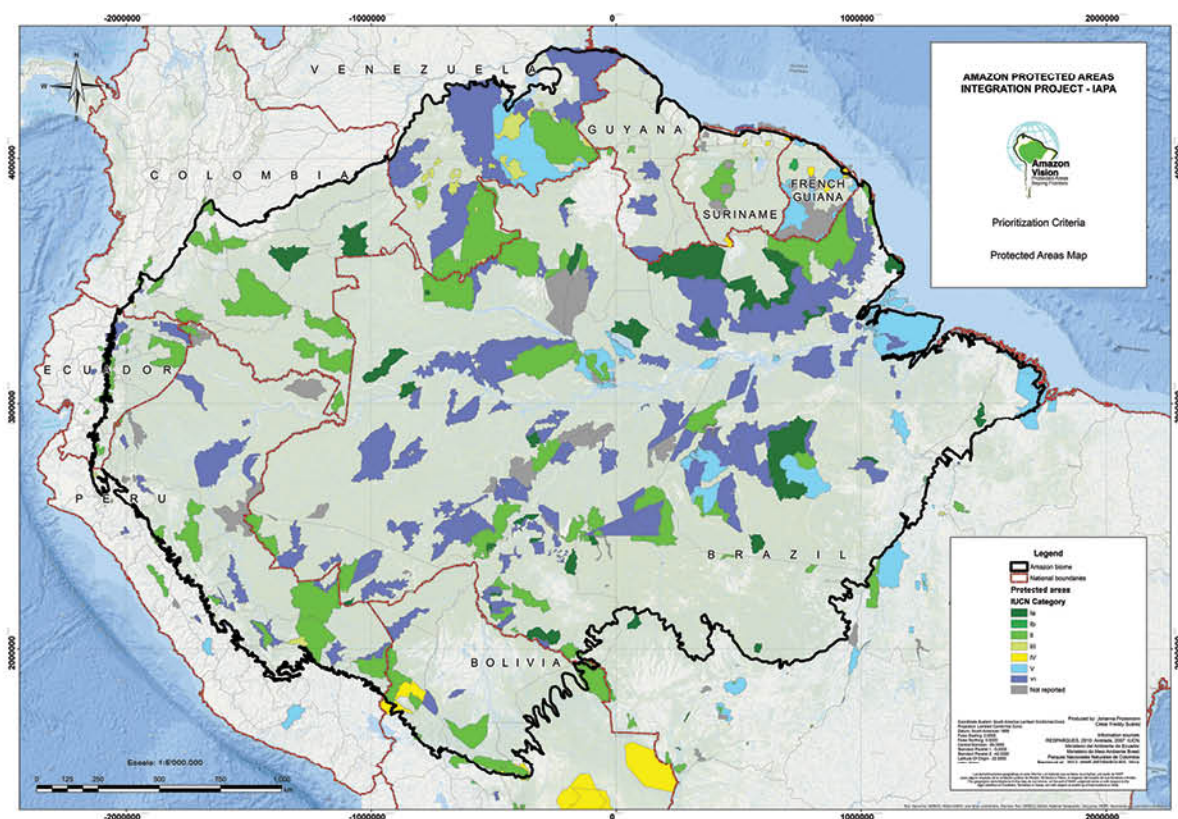
<sup>1</sup> Published August 2015 (in Spanish) as part of the Amazon Vision: Protected Areas Natural Solutions to Climate Change project, led by the Latin American Technical Cooperation Network on Protected Areas –REDPARQUES- with the support of WWF Living Amazon Initiative -WWF LAI- and thanks to funding of the German Ministry of Environment – BMUB- and WWF Germany. Find the publication here: [http://d2ouvy59podg6k.cloudfront.net/downloads/politicas\\_publicas\\_de\\_los\\_paises\\_amazonicos\\_y\\_cambio\\_climatico.pdf](http://d2ouvy59podg6k.cloudfront.net/downloads/politicas_publicas_de_los_paises_amazonicos_y_cambio_climatico.pdf)



## INTRODUCTION

Protected areas in the Amazon (Map 1) are crucial for facilitating the adaptation of communities and nature to climate change. These areas strengthen resilience to global change, mitigate impacts of extreme climate events, guarantee the supply of ecosystem services in a climate change scenario and protect biodiversity. In fact, protected areas are the best-known mechanism for conserving ecosystems and the services they provide for human wellbeing, including the natural infrastructure required for food production and for safe-

guarding our security and health, and the spaces required for cultural diversity to thrive. Specifically in the Amazon, National Protected Areas Systems make up a biodiversity safety net that contributes to maintaining ecosystem health and integrity of the biome and the region, in the face of climate change impacts and pressures exerted by drivers of land use change in different fronts. The Amazon countries can benefit from integrating the role of protected areas in their climate change strategies and development plans as part of their efforts to achieve climate resilient development and safer climate conditions for generations to come.



Map 1. Protected areas in the Amazon biome.

Area protected in the Amazon has progressively increased since 1960 (Table 1), reaching 25% of the biome in 2013: approximately 170 million hectares in 390 areas under diverse management categories and their respective protection and sustainable use

levels (Maretti et al. 2014). Countries such as Bolivia, Brazil, Ecuador and Venezuela have protected 20 to 30% of their Amazon territory, while others like Colombia, Peru and Suriname protect from 10 to 20% (Ibid., 2014).

**Table 1.** Total number, area and percentage of protected areas in the Amazon biome (1960-2013)<sup>1</sup>.

	Number of Protected Areas in each country's share of the Amazon		Total area under protection (ha) in the Amazon		Percent of each country's share of the Amazon under protection
Bolivia	23	5.9%	9,172,711	5.5%	20.8%
Brazil	255	65.2%	114,939,615	68.4%	28.6%
Colombia	18	4.6%	9,557,906	5.7%	19.1%
Ecuador	14	3.6%	2,876,323	1.7%	25.1%
French Guiana	11	2.8%	3,904,464	2.3%	48.1%
Guyana	3	0.8%	1,044,139	0.6%	4.8%
Peru	34	8.7%	13,951,893	8.3%	17.7%
Suriname	8	2.0%	1,827,988	1.1%	13.0%
Venezuela	25	6.4%	10,750,081	6.4%	26.9%
<b>Total</b>	<b>391</b>	<b>100%</b>	<b>168,025,121</b>	<b>100%</b>	<b>25%</b>

<sup>1</sup> Adapted from Maretti et al., 2014.

Protected Areas Systems in the Amazon countries are as diverse as the countries themselves. Their governance structures differ in terms of history, degrees of development and level of collaboration and coordination with the government departments in charge of climate change and planning. In spite of a growing awareness, at the international level, of the importance of protected areas and their role in building resilience and helping us adapt to climate change impacts, most Amazon countries are still in the early stages of integrating protected areas as effective strategies in public policy instruments.

For protected areas to function efficiently as climate change adaptation strategies two aspects are required: i) adjusted management, design and

scope of protected area systems; and ii) management of a broader landscape such that actions developed guarantee functional connectivity. This is fundamental in regions of transnational importance like the Amazon biome where protected areas and their functional connections are key for building resilience. These two aspects are important and urgent for developing ecological networks of protected areas and other conserved and managed territories in the Amazon, keeping in mind the need to revert current Amazon forest degradation and deforestation trends. A conservation and resilience vision for the Amazon under a climate change scenario requires a strong level of coordination among the Protected Areas Systems of the countries that share the Amazon.

## PROTECTED AREAS AND CLIMATE CHANGE ADAPTATION IN POLICY INSTRUMENTS

Amazon countries acknowledge and value the role played by natural ecosystems, especially forests, in the population's wellbeing—benefitting indigenous territories and local communities, and providing

ecosystem services. As such, all policies related to climate change refer to conservation, sustainable use and protection of natural ecosystems and the species they harbour. Nevertheless, the link





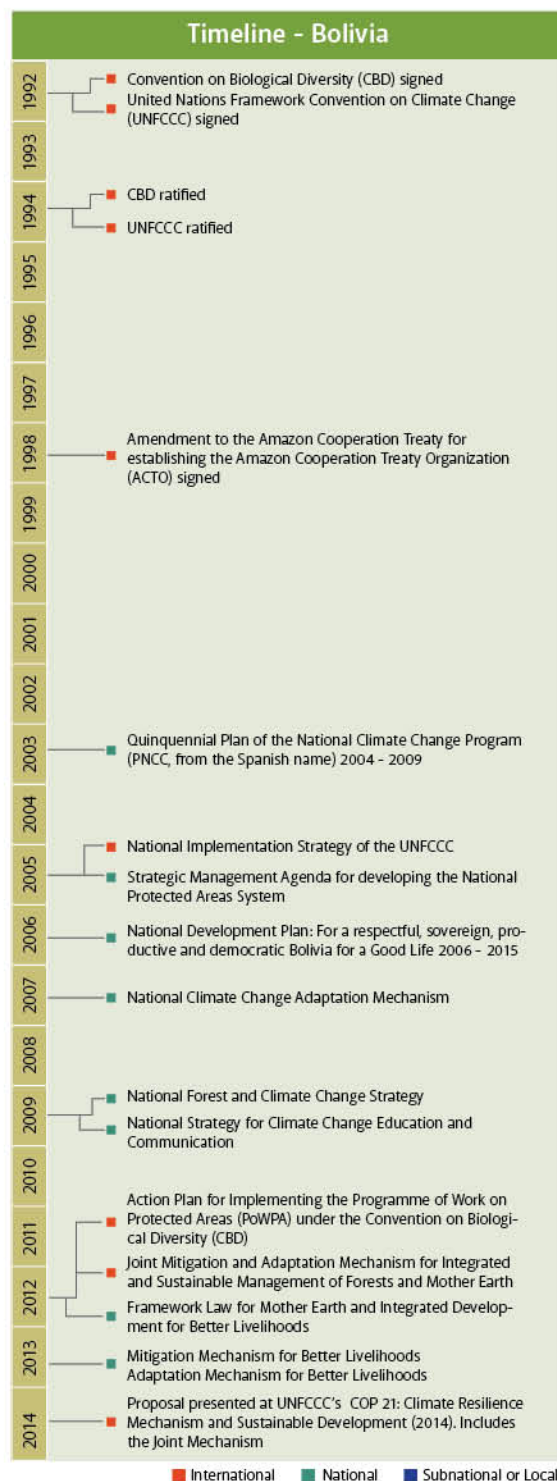
between the protection of ecosystems for addressing climate change and the specific role of protected areas as adaptation strategies is missing in most cases.<sup>2</sup>

For example, Peru's new National Climate Change Strategy highlights the importance of reducing the vulnerability of forests and other ecosystems to climate change and proposes developing management plans to reduce vulnerability of natural ecosystems to climate impacts, but does not incorporate the role of protected areas. This, however, does not mean protected areas are not valued for their overall role in conserving biodiversity and ecosystem services in Amazon countries' policies. Furthermore, policies in countries such as Brazil recognize the role of protected areas for **mitigation**—since these areas can help reduce greenhouse gas emissions (GHG) from deforestation and forest degradation—often over their role in **adaptation**.

Regional organizations differ broadly in their level of development of environmental policies. The Andean Community (in Spanish *Comunidad Andina de Naciones*, CAN), in particular, has considered the role of protected areas vis-à-vis climate change, while other regional institutions have not materialized the link between protected areas and climate change in their policies.

## BOLIVIA

Bolivia's engagement with climate change management, including in the areas of capacity building and research for climate change adaptation and risk management, took off with the country's adherence to the United Nations Framework Convention on Climate Change –UNFCCC– and the Hyogo Framework for Action –HFA– (PNUD Bolivia 2011; Calderón *et al.* 2010). Even though no climate specific objectives are included in legislation, the Bolivian Constitution highlights the importance of forests and refers to integrated and sustainable management



<sup>2</sup> See the Annex for a list of nationally-enforced policies that consider the role of protected areas for climate change adaptation in Amazon countries.



of forests and Mother Earth; so does the Framework Law for Mother Earth and Integrated Development for Better Livelihoods (Plataforma Climática Latinoamericana and Ryan 2012).

Policies for the management of protected areas are abundant and frequently refer to the importance of these areas in addressing climate change. Forests—and their diverse roles, among them buffering the impacts of climate change and contributing to climate change mitigation—are at the intersection of climate change and protected areas in Bolivian policies. Policies such as the Joint Mitigation and Adaptation Mechanism for the Integrated and Sustainable Management of Forests and Mother Earth recognize the role of the forest. However, the implementation of instruments such as the Joint Mechanism has yet to begin since the country is still “starting to develop instruments intended for the State to execute policies promoting integrated management of forests and land” (Johnson 2014). The progress achieved by environment policies in the conservation of priority areas contrasts with the management objectives of sectors such as agriculture but the Bolivian forest regime—and its restriction on forest conversion for agricultural purposes—has to a certain extent contributed to conserving a large proportion of this natural resource (Plataforma Climática Latinoamericana y Ryan 2012).

## BRAZIL

The strong political impetus given by the Brazilian government to environmental issues is reflected in the more than 20 national planning, jurisdictional and regulatory instruments having to do with climate change. Most of these instruments establish a link between forests and mitigation, focusing on combating deforestation of the Amazon and Cerrado biomes. The National Climate Change Policy has focused on restraining deforestation to reduce GHG emissions in Brazil, but has somewhat set aside national level adaptation policies. Initiatives for adaptation are dispersed, local, and for the most part do not recognize the link between ecosystem conservation and protected areas in constructing resilience, mitigating impacts or guaranteeing the supply of ecosystem services in a climate change context.





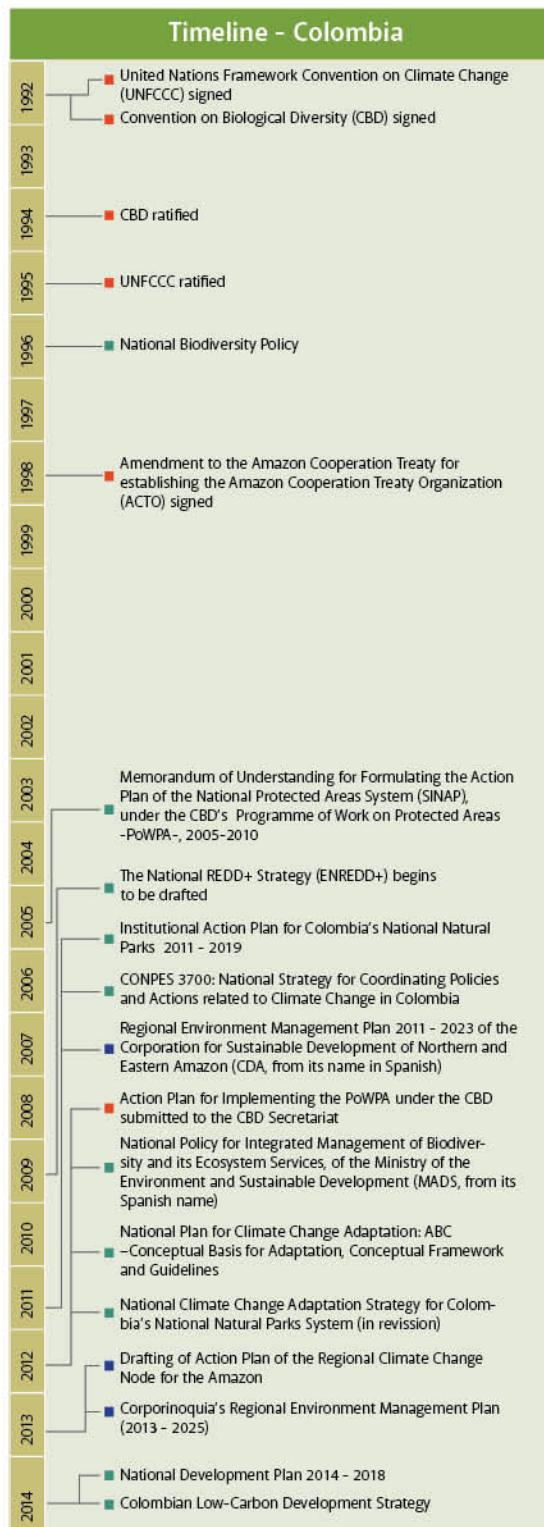
At the subnational level, development plans for the Amazon region, its indigenous territories, and the zones of influence of large highways like the BR 163 approach climate change from the perspective of environmental management and land-use planning, and most do not deal explicitly with climate change adaptation. In addition, there is a broad array of policies at the Federal State level related to climate change issues, which is beyond the scope of this report.

Sectorial climate change plans also place their emphasis on climate change mitigation, with a focus on economic development and efficiency. However, the link between climate policies and sectorial and macroeconomic policies is weak at the level of implementation and development of objectives (Plataforma Climática Latinoamericana and Ryan 2012).

Contrary to climate policies, the main planning instrument for protected areas, the *National Protected Areas Strategic Plan*, does include protected areas management actions for increasing ecosystem resilience in the face of climate change and mitigating impacts.

## COLOMBIA

Climate change policies in Colombia have been strengthened by the establishment of the National Climate Change System by the National Council for Economic and Social Policies (*Consejo Nacional de Política Económica y Social*, CONPES 3700), and by the development of strategies related to adaptation, mitigation and REDD+. An important milestone in the consolidation of the System has been the designation of the National Planning Department (*Departamento Nacional de Planeación*, DNP) as the institutional leader for coordination of climate change policy. However, there are still weaknesses in intersectorial coordination and on policy implementation monitoring (Plataforma Climática Latinoamericana and Ryan, 2012). The role of protected areas in building resilience to climate change is evidenced in planning instruments such as the Institutional Action Plan for National Natural Parks





and, though not explicitly, in the guidelines of the Policy on Biodiversity.

The Regional Climate Change Nodes (*Nodos Regionales de Cambio Climático*, NRCC) are an important effort for coordination of the development processes of the different regions with the climate change agenda. Their impact could be greater if actions coordinated by the NRCC were included in regional planning instruments (WWF Colombia, 2012). For example, collaboration with the National Planning Department and the Ministry of the Environment and Sustainable Development could promote the inclusion of climate change issues in the integrated risk management regional plans.

Constraints in policy implementation include limited resources and, in some cases, an incipient technical capacity of local authorities in relation to these issues (Plataforma Climática Latinoamericana and Ryan, 2012). An important opportunity to influence local planning is through the ten-year Land-Use Plans of the departmental governments, which currently undergoing a process of review and should be ready by the end of 2015. Another opportunity is in the inclusion of adaptation variables focused on increasing resilience of protected areas and recognizing their role as natural solutions to climate change in management plans.

## ECUADOR

Ecuador has made important progress in formulating policies and mainstreaming climate change issues in its institutions. The degree of implementation of these policies, however, has not advanced at the same speed (Plataforma Climática Latinoamericana and Ryan, 2012).

Climate change and protected areas matters are thoroughly included in Ecuador's planning instruments and regulations, despite an absence of an explicit recognition of the link between protected areas and climate change adaptation in the majority of them. The Guide for Incorporating Climate Change in Local Planning is an important example of a policy where the connection between the two issues is explicitly drawn.



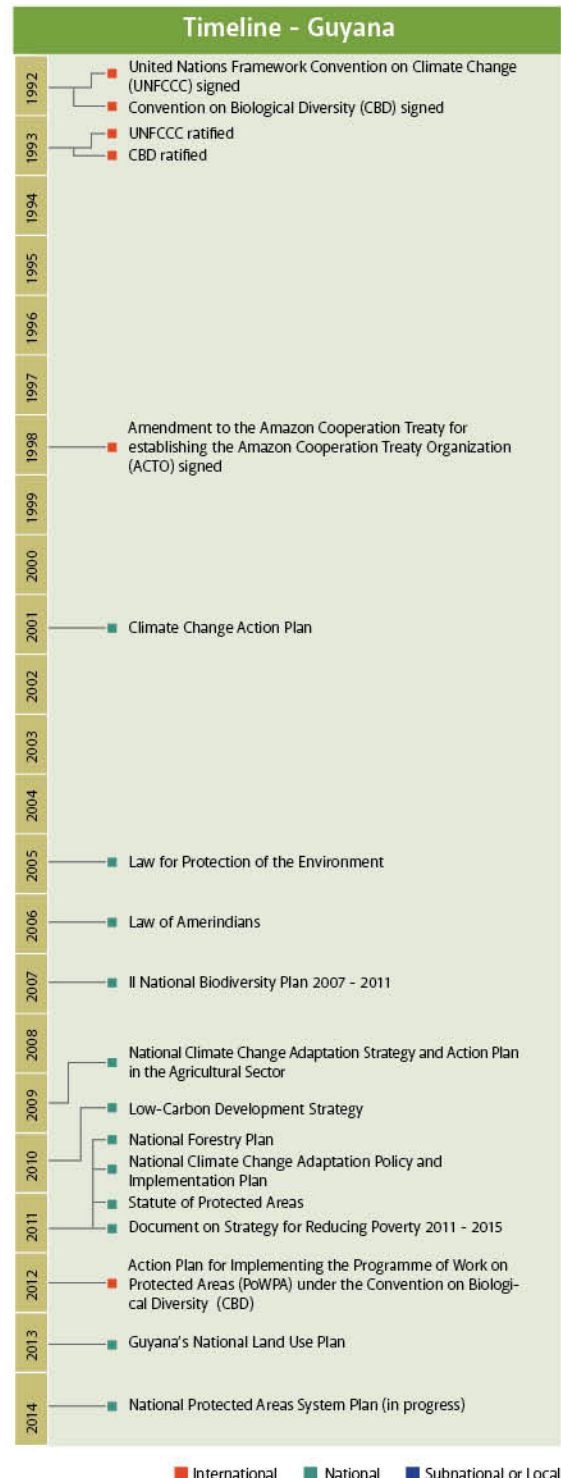


The main opportunities for promoting integration of the role of protected areas in adaptation strategies lie in the Management Plans of protected areas and in local governments' Development and Land-Use Plans (*Planes de Desarrollo y Ordenamiento Territorial*, PDOT). This, thanks to the fact that local planning instruments are currently undergoing a process of updating and review and because existing regulation promotes the inclusion of climate change adaptation in local planning<sup>3</sup>. An important instrument that supports the inclusion of protected areas as tools for climate change adaptation in the PDOT is the Guide for Including Climate Change in Local Planning, produced by the Ministry of the Environment, and the possibility of forming partnerships with civil society stakeholders for its implementation.

## GUYANA

Climate policies in Guyana are strongly linked to the development agenda, for two main reasons: the country can derive multiple benefits from implementing a low-carbon development model and it has a strong need to build a resilient economy in the face of imminent impact risks in the coastal zone that could become even greater due to climate change. Even though adaptation policies offer strategic orientation for several sectors, they lack clear guidelines for conducting activities and for defining the potential role of protected areas in climate change adaptation. The scarce representation of protected areas in the territory of Guyana accompanies institutional weaknesses in the management of these areas, and incipient coordination at the sectorial and subnational levels.

In this context, important opportunities appear in the creation and updating of protected areas policies that consider their adaptation role while taking advantage of the great potential of these areas as possibilities and mechanisms for climate change-resilient and low-carbon development.



3 By means of the jurisdiction of the Autonomous Decentralized Governments, as spelled out in the Organic Code for Territorial Organization, Autonomy and Decentralization (Código Orgánico de Organización Territorial, Autonomía y Descentralización, COOTAD), the policy guidelines of the National Development Plan (Plan Nacional del Buen Vivir, PNBV) and the National Climate Change Strategy (Estrategia Nacional de Cambio Climático, ENCC).



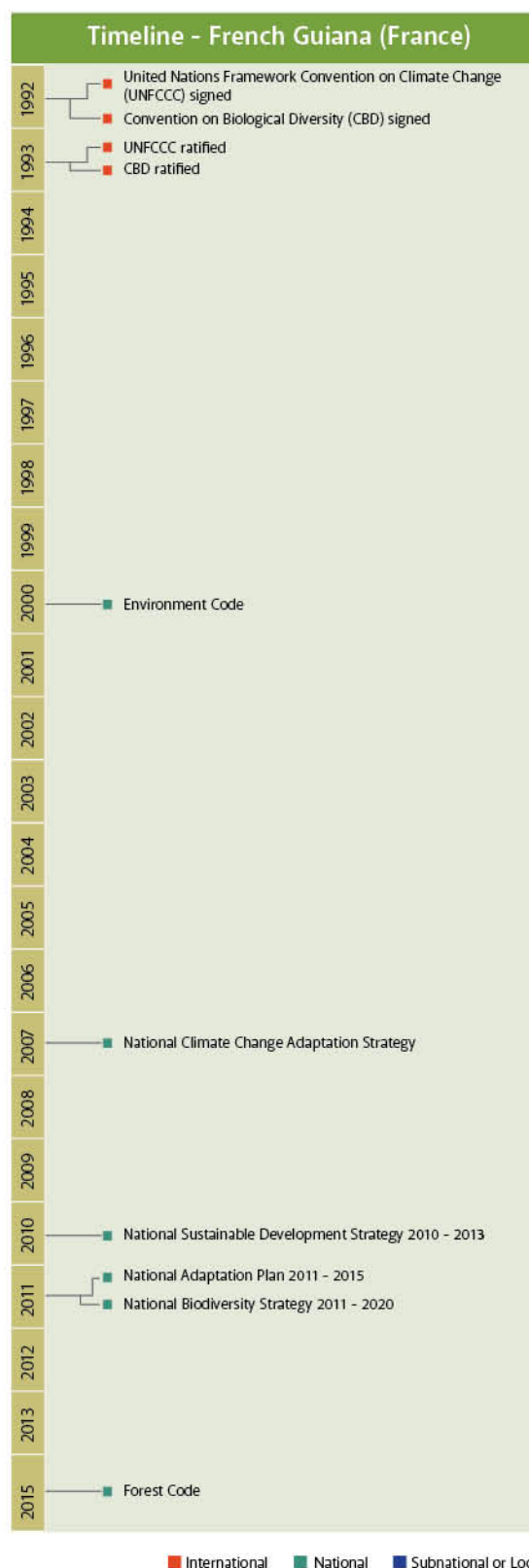
## FRENCH GUIANA

Climate is a priority in public policies of the French government, particularly because of its interest in the energy sector. Similarly, biodiversity occupies a predominant place in national policies due to the country's geographic characteristics and especially for the diversity of its departments and overseas territories, such as the French Guiana. The high level of harmonization of sustainable development and environmental policies under the vision of a 'green and fair economy' highlights the importance of environmental issues in French policy. Biodiversity and climate change issues appear in an integrated manner in policy, one that acknowledges the role of protected areas for climate change adaptation. This is evident in the three most relevant strategies around this issue: the Sustainable Development Strategy, the Climate Change Strategy and the Strategy for Biodiversity.

Finally, it is worth highlighting that almost all environmental policy tools include specific directives for French Guiana, due to its environmental importance. The French Forest Code is remarkable in that it takes into account the specific characteristics of French Guiana's forest, including respect for traditional uses by the local communities.

## PERU

The regulatory and policy scenario associated to climate change and protected area issues is very rich in Peru, even though complementarity between protected areas and adaptation is not explicit in most cases. The support for the development of regional climate change strategies—present in both the National Climate Change Strategy and the Action Plan for Climate Change Adaptation and Mitigation—represents an important opportunity to promote the recognition, in policy instruments, of protected areas as an integral part of

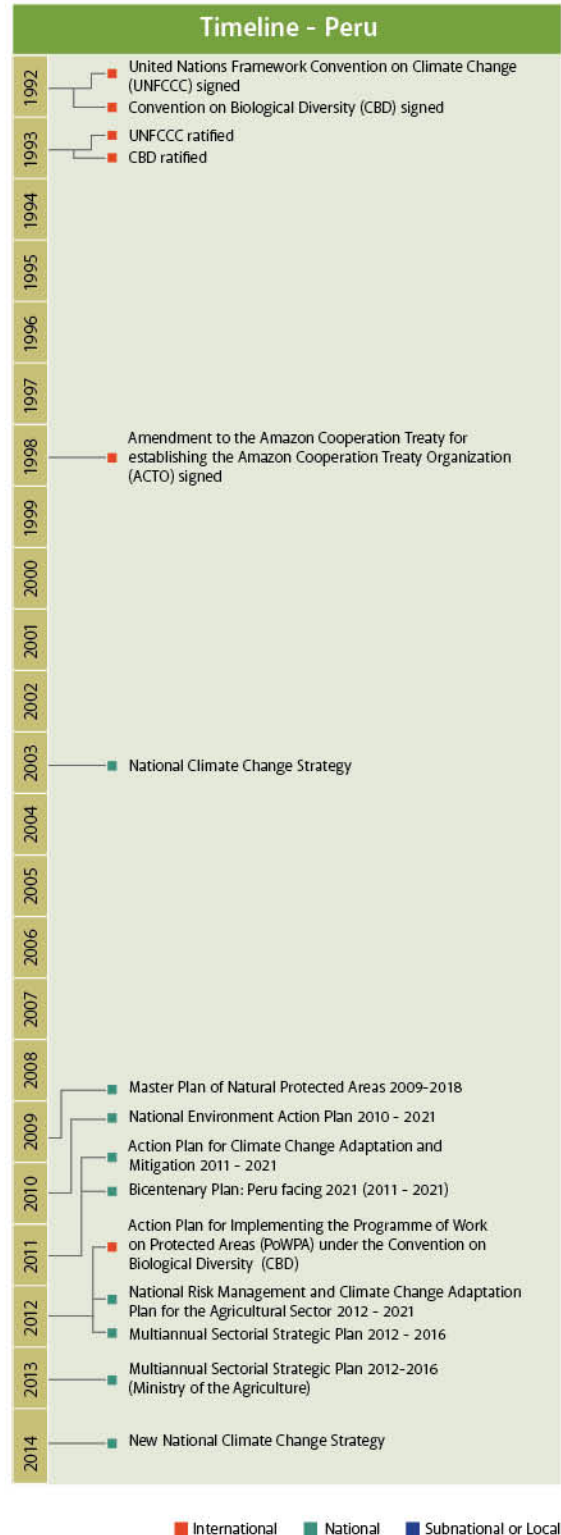




strategies to reduce vulnerability of communities and ecosystems. At the subnational level, it is worth highlighting the opportunity to influence several other policy documents in the jurisdiction of regional government agencies, such as concerted development plans, biodiversity strategies, institutional strategic plans and policy documents. For example, the National Environmental Action Plan 2010–2021 (*Plan Nacional de Acción Ambiental*, PLANAA) calls for the development of regional (subnational) and local climate change adaptation and mitigation strategies. In Peru, however, decentralization of responsibilities has not always meant decentralization of capabilities and resources, thus limiting the degree of consolidation of policies in the hands of regional authorities around environmental issues (Plataforma Climática Latinoamericana and Ryan, 2012).

Peru approaches climate change as a crosscutting issue in national planning, and places high importance in the coordination of all sectors around this issue. The agricultural sector has made an important effort to implement the sectorial climate policy, which is worth noting as an example for defining intersectorial policies in other countries of the Amazon biome.

The ongoing process of drafting a National Climate Change Law could open opportunities for positioning the role of protected areas for climate change adaptation. Finally, conceptual models have started to include climate scenarios in protected areas management plans. This is key for interpreting the way in which climate change can affect conservation in protected areas in the context of local conditions. The current challenge is, therefore, to establish monitoring systems that can validate the work hypotheses and verify the efficiency of actions carried out in protected areas, especially those focused on adapting to climate change.





## SURINAME

By comparison, Suriname has few public policies addressing environment issues at the national, sub-national or sectorial level. Nevertheless, there is an interest in broadening the array of planning tools related to climate change and forests, and in applying REDD+ mechanisms to reduce emissions by conserving forests.

The country is considering the possibility of expanding its protected areas system and wishes to deepen its involvement in the issue of climate change adaptation, in the context of improving the wellbeing of local communities and vulnerable groups, which is a priority issue in public policy in Suriname. Thus, the interest in establishing new environmental policies has to do with consolidating actions based on addressing the most pressing needs of vulnerable human groups that depend on natural resources. The potential for managing protected areas with a focus on climate change adaptation is yet to be explored.

## VENEZUELA

Climate change and protected areas are priority issues in Venezuela's Constitution and development strategy but this political priority is not yet evident in national, subnational or sectorial planning instruments specific to these issues. Nonetheless, the mandate for developing a *National Adaptation Plan* is present in both the National Development Plan and in the Law of Risks, which offers an interesting opportunity for coordinating climate and protected areas issues in the implementation.

The Venezuelan policies assessed for this report do not identify the role of protected areas, or more generally of ecosystems, in adapting to or



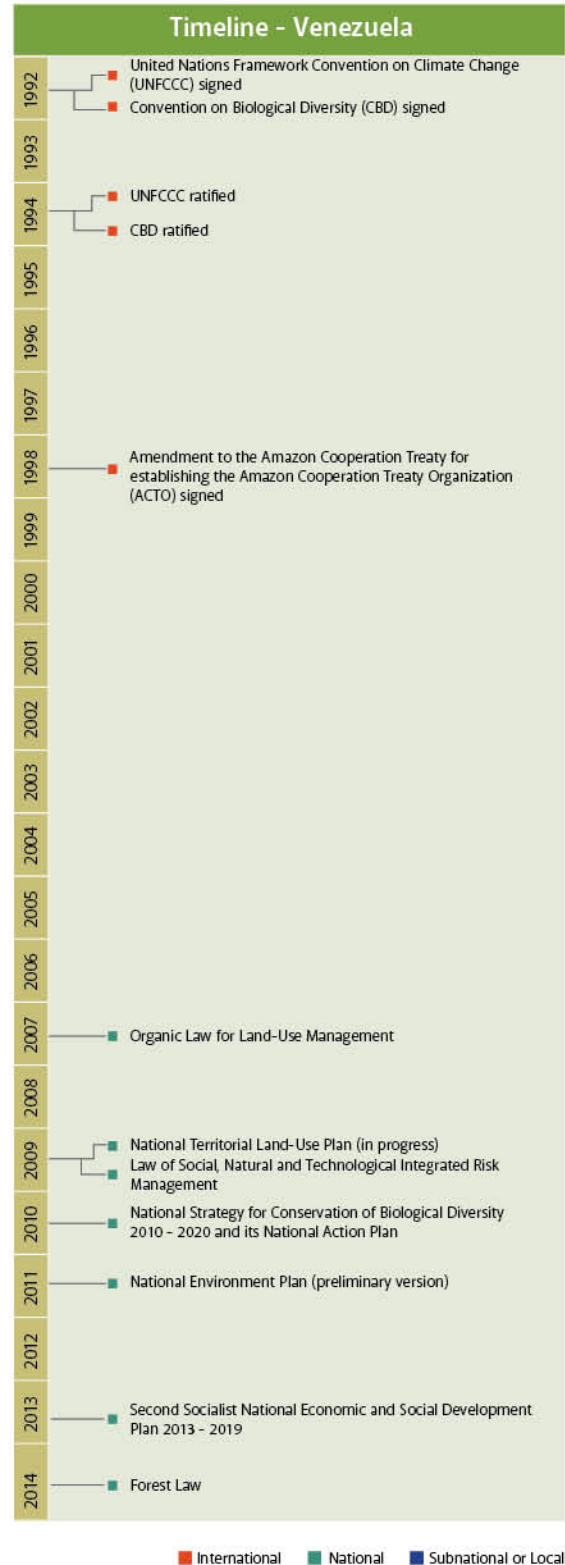


mitigating climate change. Recent establishment of the new national environment authority in 2015 could serve as the platform for exploring new opportunities to advance in developing and updating environmental policies for protected areas and climate change, at the different government levels and sectors.

## REGIONAL ORGANIZATIONS

Even though most public policies assessed do not recognize an explicit link between protected areas and climate change adaptation, important progress has been achieved in policy at the regional level. For example, the Andean Community is one of the multilateral organizations in the region that has best advanced research and transnational conservation measures related to protected areas and climate change, as separate issues, but with successful experiences in joint protected areas management and landscape connectivity in neighbouring countries' areas, such as those of the Colombia-Ecuador-Peru Trinational Program. The CAN includes adaptation objectives based on ecosystems and water basins in its Environmental Agenda and establishes guidelines in for the inclusion of risk reduction and disaster management in protected areas planning.

As for the Amazon Cooperation Treaty Organization –ACTO–, both its Environmental Coordination Work Plan and its Strategic Amazon Cooperation Agenda offer special treatment to climate change and protected areas. There is a clear interest in working on these issues regionally, with emphasis on the capacity building of member countries and the inclusion of local populations. Nevertheless, coordination of the two themes of interest—climate change and protected areas—is not present in the organization's environment planning instruments.





## PROGRESS IN IMPLEMENTATION OF THE CONVENTION ON BIOLOGICAL DIVERSITY'S PROGRAMME OF WORK ON PROTECTED AREAS -CBD POWPA-

The Amazon countries participate in a number of multilateral, supra-regional environmental platforms that Foster coordination of policies and actions on issues such as protected areas and climate change. The CBD's PoWPA-adopted in 2004-has been one of the most important of such commitments regarding protected areas. Its objective is to strengthen national and regional protected areas systems and to ensure that they are comprehensive, effectively managed and ecologically representative.

The Latin American Network for Technical Cooperation on National Parks, other Protected Areas, and Wild Flora and Fauna – REDPARQUES- recognized the Amazon biome as one of the priority places for the sub regional implementation of the PoWPA (REDPARQUES, 2010). As such, REDPARQUES decided to launch the Amazon Biome Ecosystem-based Conservation Vision as an opportunity within PoWPA to advance in processes of transnational cooperation and ecological networks (Ibid. 2010).

The first element of the PoWPA refers to the implementation of actions for planning, selection, establishment, strengthening and management of protected areas systems and sites. Regarding the issue of climate change in particular, the following PoWPA goals are the most relevant:

- Goal 1.2: integration of protected areas in terrestrial and marine landscapes to maintain ecological structure and function.
- Goal 1.3: creation and strengthening of regional networks and transboundary protected areas and collaboration between adjacent protected areas in different countries.
- Goal 1.4: integration of climate change adaptation in protected areas planning and management strategies and in protected area systems design.

Achievement of these objectives requires climate-smart and landscape-level planning of protected areas and protected areas networks, in order to increase their viability and resilience and their ability to contribute to the adaptation of communities to climate change. The most recent progress reports submitted by countries to the CBD on the implementation of climate-related PoWPA goals show a low level of inclusion of climate change aspects in protected areas management, a relatively higher level of integration of protected areas in their wider landscapes and an initial level of work in transboundary and internationally adjacent protected areas.

## CONCLUSIONS

An assessment of policies in the Amazon countries shows progress in recent years in the development of political and legal frameworks for climate change mitigation and adaptation. Particularly at the national scale, though differing on where they place their emphasis, all countries have generated laws, policies, strategies and/or action plans that provide guidelines for implementing mitigation and adaptation actions. Bolivia, for example, places an emphasis on forests and their close relationship with indigenous peoples, small farmers and intercultural communities starting at its Constitution. Brazil, focusing also on forests, places a special weight on controlling deforestation of the Amazon and the Cerrado, as a measure to mitigate climate change, and incorporates the importance of ecosystem-based adaptation in its National Climate





Change Policy. Even though policy instruments at the national level still need strengthening, all countries have made important progress and developed significant experiences at the subnational and local levels.

Progress, although relatively small, has been achieved in intersectorial coordination, particularly around the establishment of land-use planning processes that take into account the vulnerability of the territory and the communities that inhabit it, as well as around the need for a landscape level consideration of the role of protected areas in adaptation and mitigation measures. Dudley *et al.* (2010) emphasize the importance of this kind of coordination when referring to the role of protected areas, highlighting that at the landscape level (marine and terrestrial) it is important for different sectors—conservation, agriculture and forestry, among others—to plan and work together and not isolated. Several Amazon countries have identified the need for better intersectorial coordination and have established government bodies at the national scale to

facilitate generating synergies among institutions and government agencies in the development and implementation of policies related to climate change, such as the intersectorial coordination to adopt low-carbon development and climate change mitigation and adaptation measures. Examples of these bodies include Brazil's Interministerial Committee on Climate Change, Ecuador's Interinstitutional Climate Change Committee, Peru's National Climate Change Commission, created over 20 years ago, and the recently created National Climate Change System of Colombia that seeks to coordinate intersectorial actions at the national and regional scales to reduce vulnerability and to facilitate sustainable development.

In several of the countries studied, national institutions in charge of protected areas have included climate change adaptation in their own policies: Bolivia, Brazil and Peru include the issue in protected areas systems plans. Colombia includes it in the Institutional National Natural Parks Strategic Plan; and several other Amazon countries have started to



include the climate variable in management plans of protected areas (See the Annex). On the contrary, other government bodies assign relatively low importance to the role of protected areas in adapting to climate change, evidenced by the absence of this concept in most climate change and risk management strategies, development plans, and sectorial policies, such as those for agriculture, energy and health. In fact, the majority of climate change policies of the Amazon countries do not link protected areas and adaptation. Only 23% of the more than 150 public policies analysed for the report specifically refer to the role of protected areas in adaptation and/or building resilience to climate change. Of these, 37% are climate change instruments; 26% are protected area strategies; 20% are general environmental policies; and the remaining ones are development planning instruments and policies of other relevant sectors.

Beyond the specific instances where progress is evident, it is still crucial to increase efforts, at all levels, for the integration of the role of protected areas as nature-based strategies to address climate change in the Amazon biome countries and in the rest of the world.

## RECOMMENDATIONS

- In order to strengthen the role of protected areas in climate change adaptation we recommend.
- Recognizing the importance of protected areas in the wider context of climate-resilient development planning in the Amazon countries and in the region as a whole.
- Evaluating and improving the contribution of protected areas to reducing vulnerability to climate change, building resilience and supplying ecosystem services in a context of environmental change.
- Promoting at an interinstitutional level (industry, strategic sectors and others) greater knowledge about the importance of protected areas in general and on their role as effective, cost-efficient strategies for ecosystem-based adaptation.

- Including the role of protected areas for climate change adaptation in the review and updating processes of national adaptation strategies.
- Integrating the role of protected areas for adaptation in policy instruments, strategies and sectorial, regional, national and local climate change and development plans.
- Raising awareness among local communities on the role of protected areas in the face of climate change for their ability to maintain provision of ecosystem services, contribute to buffering impacts from natural disasters, and guaranteeing food, water and energy security.
- Promoting the inclusion of protected areas in the commitments and actions of the international climate regime through the UNFCCC.
- Conducting research on the role of protected areas in climate change adaptation.
- Coordinating protected areas planning with regional and local land-use planning, and with ecosystem-based sectorial initiatives (RED-PARQUES 2010).
- Strengthening regional collaboration to implement the Amazon Conservation Vision led by REDPARQUES.

## Contacts for further information:

Analiz Vergara

[analiz.vergara@wwf.org.ec](mailto:analiz.vergara@wwf.org.ec)

Julia Gorricho

[jmgorricho@wwf.org.co](mailto:jmgorricho@wwf.org.co)

This publication is another contribution of the Amazon Conservation Vision developed by the Amazon countries in the framework of the Program Work on Protected Areas of the Convention on Biological Diversity (CBD – PoWPA).



## BIBLIOGRAPHY

- Abdala, Guilherme C. 2015. La Amazonia brasileña : desafíos para una efectiva política de combate a la deforestación.
- Alianza Amazonas 2030. 2013. Índice Amazonas 2030 Fichas metodológicas de creación de indicadores con base en información de municipios, corregimientos departamentales y departamentos.
- Arce Rojas, Rodrigo. 2013. SERIE MANUALES / MANUAL No8 Ordenamiento Territorial y Cambio Climático Metodología para incorporar Cambio Climático y Gestión del Riesgo de Desastres en procesos de OT.
- Asamblea Legislativa Plurinacional. 2012. Ley Marco de la Madre Tierra y Desarrollo Integral para Vivir Bien. Asamblea Legislativa Plurinacional.
- Bajaña, Fernando, y Xavier Viteri. 2002. Plan Preliminar de Manejo del Corredor Ecológico Llanganates - Sangay CORREDOR ECOLÓGICO LLANGANATES-SANGAY. Quito.
- Calderón, Rayne, Willman Garcia, Bruno Condori, y Hernán Montaño. 2010. Bolivia: Estado de situación de la agricultura, seguridad alimentaria y gestión de recursos hídricos destinados a la agricultura frente al cambio climático.
- Centro Nacional de Planeamiento Estratégico (CEPLAN). 2011. Plan Bicentenario: El Perú hacia el 2021.
- Comitê Interministerial sobre Mudança do Clima. 2008. «Plano Nacional sobre Mudança do Clima - PNMCL-».
- Comunidad Andina. 2002. «Estrategia Regional de Biodiversidad para los Países del Trópico Andino (CAN DEC523).»
- . 2011. Estrategia Andina para la Gestión Integrada de los Recursos Hídricos (DEC763 CAN).
- CONDESAN, y SG-CAN. 2012. Panorama andino sobre cambio climático: Vulnerabilidad y adaptación en los Andes Tropicales. Editado por F. Cuesta, M. Bustamante, M.T. Becerra, J. Postigo, y J. Peralvo. Lima.
- Consejo de la Provincia de Pastaza. 2012. Plan de Ordenamiento Territorial de la Provincia de Pastaza 2025 (actualización 2012).
- Corpoamazonia. 2012. Plan de Acción Institucional 2012 - 2015 «Amazonía, un compromiso ambiental para incluir». Corporación para el desarrollo sostenible del sur de la Amazonia.
- Corpoamazonia, y EcoinTEGRAL Ltda. 2009. Plan de ordenación y manejo de la cuenca de la Quebrada La Resaca (Belén de los Andaquíes), Departamento del Caquetá.
- Cruz, Kleber. 2012. Plan de Desarrollo y Ordenamiento Territorial Parroquial Rural Río Negro.
- Departamento del Putumayo, y Jimmy Harold Díaz Burbano. 2012. Plan Departamental de Desarrollo: Putumayo Solidario y Competitivo 2012 - 2015.
- Departamento Nacional de Planeación. 2010. Plan Nacional de Desarrollo 2010-2014. Bogotá, Colombia.
- . 2011. CONPES 3700: Estrategia institucional para la articulación de políticas y acciones en material de cambio climático en Colombia.
- . 2014. Bases del plan nacional de desarrollo 2014-2018: Todos por un nuevo país. Versión preliminar para discusión del Consejo Nacional de Planeación.
- Dirección de Planificación del Honorable Gobierno Provincial. 2013. Agenda Tungurahua 2013-2015.
- Estado Plurinacional de Bolivia. 2010. Ley Marco de Autonomías y Descentralización «Andrés Ibáñez».
- . 2014. Framework for Various Approaches and Non-Market-Based Approaches: Submission by the Plurinational State of Bolivia.
- Fundación Futuro Latinoamericano. 2013. «Retos de la política de cambio climático a nivel regional.»
- GAD Baños de Agua Santa. 2012. Plan de Desarrollo y Ordenamiento Territorial Baños de Agua Santa.
- GAD del Cantón Mera. 2012. Propuesta Plan de desarrollo y ordenamiento territorial 2012-2020.
- Gobernación de Caquetá. 2012. Caquetá Gobierno de Oportunidades. Plan de Desarrollo 2012 - 2015.
- Gobierno Nacional. 2006. Plan Nacional de Desarrollo: Bolivia digna, soberana, productiva y democrática para Vivir Bien.
- Gobierno Regional de Cajamarca. 2009. Estrategia Regional de Biodiversidad de Cajamarca al 2021: Experiencia Participativa para la Sostenibilidad de la Región.
- Godar, Javier, Toby a Gardner, E Jorge Tizado, y Pablo Pacheco. 2014. «Actor-specific contributions to the deforestation slowdown in the Brazilian Amazon.» Proceedings of the National Academy of Sciences of the United States of America 2013 (8). doi:10.1073/pnas.1322825111.
- Government of Suriname. 2012. «Ontwikkelingsplan 2012 - 2016.»
- Ibishi, Pierre, y Christoph Nowicki. 2011. Análisis de la vulnerabilidad y estrategias para la adaptación al cambio climático en la Reserva Comunal El Sira-Perú (Ficha Metodológica 2).
- IDEAM, PNUD, MADS, DNP, y Cancillería de Colombia. 2015. Nuevos Escenarios de Cambio Climático para Colombia 2011- 2100 Herramientas Científicas para la Toma de Decisiones - Enfoque Nacional-Regional: Tercera Comunicación Nacional de Cambio Climático.



Instituto Ecuatoriano Forestal y de Áreas Naturales y Vida Silvestre Dirección Nacional de Áreas Naturales y Vida Silvestre (DNANVS). 1998. Plan de manejo estratégico del Parque Nacional Sangay.

Johnson, James. 2014. Políticas Regionales y Deforestación en la Amazonía : El estado del arte en Bolivia.

MADS. 2013. Nota sobre esta versión de la remisión formal de la Propuesta de Preparación para REDD+ (R-PP) (Versión 8.0 - Septiembre 30 de 2013).

MAE. 2007. Políticas y Plan Estratégico del Sistema Nacional de Áreas Protegidas 2007 - 2016. Quito.

———. 2013. Plan de manejo Parque Nacional Llanganates 2013.

Maretti, C.C., J.C. Riveros S., R. Hofstede, D. Oliveira, S. Charity, T. Granizo, C. Alvarez, P. Valdujo, y C. Thompson. 2014. State of the Amazon: Ecological Representation in Protected Areas and Indigenous Territories. Brasília and Quito.

Melo Cevallos, Mario. 2013. Documento descriptivo, analítico y comparativo de las políticas públicas sobre cambio climático en Colombia , Ecuador , Perú y Bolivia y su relación con el conocimiento tradicional .

Mena Álvarez, José Luis, y Gisella Valdivia Gonzalo. 2010. Conociendo el Santuario Nacional Tabaconas Namballe. Lima.

Mena, José Luis, Rosmary Robles, Claudia Veliz, Juan Carlos Riveros, Cecilia Alvarez, Rudy Valdivia, y Cindy Vergel. 2014. Análisis de vulnerabilidad de las Áreas Naturales Protegidas frente al cambio climático al 2030, 2050 y 2080. Documento de trabajo.

MinAmbiente, y WWF Colombia. 2013. Nodos Regionales de Cambio Climático: Articulando acciones e intereses frente al Cambio Climático. Noviembre 2013.

Ministerio de Agricultura. 2012a. Plan de Gestión de Riesgos y Adaptación al Cambio Climático en el Sector Agrario período 2012-2021. Lima.

———. 2012b. Plan estratégico sectorial multianual 2012-2016 del Ministerio de Agricultura.

Ministerio de Agricultura Pecuaria y Abastecimiento. 2012. «Plano Setorial de Mitigação e de Adaptação às Mudanças Climáticas para a Consolidação de uma Economia de Baixa Emissão de Carbono na Agricultura.»

Ministerio de Ambiente y Desarrollo Sostenible, y Programa de las Naciones Unidas para el Desarrollo. 2014. Quinto Informe nacional de Biodiversidad de Colombia ante el Convenio de Diversidad Biológica. Bogotá.

Ministerio de Desarrollo Rural Agropecuario y Medio Ambiente. 2008. Política nacional para la gestión integral de los bosques.

Ministerio de Desarrollo Rural y Tierras. 2010. Plan del sector desarrollo agropecuario «Revolución rural y agraria».

———. 2014. Plan del Sector. Sector Desarrollo Agropecuario 2014 2018 «Hacia el 2025».

Ministerio de Medio Ambiente y Agua. Viceministerio de Medio Ambiente Biodiversidad y Cambios Climáticos. 2009. Estrategia Nacional de Educación y Comunicación para el Cambio Climático. La Paz.

Ministerio de Planificación del Desarrollo, y Viceministerio de Planificación Territorial y Ambiental. 2007. Mecanismo Nacional de Adaptación al Cambio Climático.

Ministerio del Ambiente. 2010. Plan de acción de adaptación y mitigación frente al cambio climático.

———. 2011. Plan Nacional de Acción Ambiental.

———. 2014. Estrategia Nacional ante el Cambio Climático (Borrador).

Ministerio del Ambiente del Ecuador. 2015. Quinto informe nacional para el convenio sobre la diversidad biológica. Quito.

Ministerio del Poder Popular para el Ambiente. 2012. Estrategia Nacional para la Conservación de la Diversidad Biológica 2010-2020 y su Plan de Acción Nacional. [http://diversidadbiologica.info.ve/biblioteca/ENCDB-PAN\\_2010-2020.pdf](http://diversidadbiologica.info.ve/biblioteca/ENCDB-PAN_2010-2020.pdf).

Ministerio del Poder Popular para el Ambiente. Oficina Nacional de Diversidad Biológica. 2011. «Cuarto Informe Nacional Convenio de Diversidad Biológica de la República Bolivariana de Venezuela», 107. <http://www.cbd.int/doc/world/ve/ve-nr-04-es.pdf>.

Ministério do Desenvolvimento Indústria e Comércio Exterior (MDIC). 2013. «Plano Setorial de Mitigação e Adaptação à Mudança do Clima para a Consolidação de uma Economia de Baixa Emissão de Carbono na Indústria de Transformação.»

Ministério do Meio Ambiente, y Grupo Permanente de Trabalho Interministerial. 2013. Plano de ação para prevenção e controle do desmatamento na Amazônia Legal (PPC-DAm): 3a Fase (2012-2015) pelo uso sustentável e conservação da Floresta. Brasília.

Morales Ayma, Evo. 2013. 13 Pilares de la Bolivia Digna y Soberana: Agenda Patriótica 2025.

Municipio de San José del Fragua, y Departamento del Caquetá. 2013. Esquema de Ordenamiento Territorial. Acuerdo Municipal No. 008 de 2013. Vol. 3.

Nachmany, Michal, Sam Fankhauser, Terry Townsend, Murray Collins, Adam Matthews, Carolina Pavese, y Katharina Rietig. 2014. The GLOBE Climate Legislation Study.

Naranjo (Ed.), Luis Germán. 2010. Cambio climático en un paisaje vivo: Vulnerabilidad y adaptación en la Cordillera Real Oriental: Colombia, Ecuador y Peru. Cali.

Nepstad, D.C. 2008. «The amazon basin in a heating world: state of our knowledge and opportunities for mitigation.»



- Organización del Tratado de Cooperación Amazónica. 2010. Agenda Estratégica de Cooperación Amazónica. Aprobada en la X Reunión de Ministros de Relaciones Exteriores del TCA.
- OTCA. 2014a. El Cambio Climático en la Región Amazónica.
- . 2014b. Plan de Trabajo 2014. Coordinación de Medio Ambiente.
- Pacheco Balanza, Diego. 2014. Hacia la descolonización de las políticas ambientales y de los bosques: el mecanismo conjunto de mitigación y adaptación para el manejo integral y sustentable de los bosques y la Madre Tierra. Universidad de la Cordillera.
- Parques Nacionales Naturales de Colombia. 2010. Plan de Acción del Sistema Nacional de Áreas Protegidas de Colombia.
- . 2011. «Plan de Acción Institucional Parques Nacionales Naturales de Colombia.»
- Plataforma Climática Latinoamericana, y Daniel Ryan. 2012. Informe sobre el Estado y Calidad de las Políticas Públicas sobre Cambio Climático y Desarrollo en América Latina: Sector Agropecuario y Forestal.
- PNNC. 2012. Estrategia Nacional de Cambio Climático para el Sistema de Parques Nacionales Naturales de Colombia.
- PNUD Bolivia. 2011. Tras las huellas del cambio climático en Bolivia: Estado del arte del conocimiento sobre adaptación al cambio climático, Agua y seguridad alimentaria.
- Presidência da República. 2008. «Plano Amazônia Sustentável: Diretrizes para o desenvolvimento sustentável da Amazônia brasileira», 112.
- Presidencia de la República de Venezuela. 2013. «Plan de la patria. Segundo Plan Socialista de Desarrollo Económico y Social de la Nación, 2013-2019», 2013-19.
- REDPARQUES. 2010. Avances en el Desarrollo del Programa de Trabajo sobre Áreas Protegidas Región : Bioma Amazónico.
- REGATTA: Portal Regional para la Transferencia de Tecnología y la Acción frente al Cambio Climático en América Latina y el Caribe. 2010. Perfil de País: Marco Regulatorio y Financiamiento para Cambio Climático. Brasil.
- República de Venezuela. 2009. Plan Nacional de Ordenamiento del Territorio.
- Republique Française. 2010. «National Sustainable Development Strategy: Towards a Green & Fair Economy.»
- . 2011. Stratégie Nationale pour la Biodiversité 2011-2020.
- Santos, Lucio. 2010. Proceso REDD Colombia (.ppt).
- SENPLADES. 2013. Plan Nacional de Desarrollo para el Buen Vivir 2013-2017. Quito.
- SERNAP. 2011. Estrategia para el desarrollo del turismo en el sistema nacional de áreas protegidas.
- . 2012. Plan Estratégico Institucional 2012-2016.
- . 2013. Deforestación y regeneración de bosques en Bolivia y en sus áreas protegidas nacionales para los periodos 1990-2000 y 2000-2010.
- Seroa da Motta (Ed.), Ronaldo, Jorge Hargrave, Gustavo Luedemann, y Maria Bernadete Sarmiento Gutierrez. 2011. Mudança do Clima no Brasil: aspectos economicos, sociais e regulatórios. Brasília: Instituto de Pesquisa Econômica Aplicada - Ipea.
- Solano, Pedro. 2009. Marcos Regulatorios Nacionales de Areas Protegidas : Perú.
- Sopher, Peter, y Anthony Mansell. 2013. Brazil. The World's Carbon Markets: A Case Study Guide to Emissions Trading.
- TCA. 1978. Tratado de Cooperación Amazonica.
- Viceministerio de Medio Ambiente. 2014. IV informe nacional al Convenio de las Naciones Unidas sobre la Diversidad Biológica.
- Viceministerio de Medio Ambiente Biodiversidad y Cambios Climáticos. 2009. Estrategia Nacional Bosque y Cambio Climático.
- WWF Colombia. 2012. Informe Final: Convenio No. 084 de 2012 Entre el MADS Y WWF Colombia.
- . 2013a. Nodos regionales de cambio climático: Reporte consolidado de línea base análisis de riesgos climáticos y necesidades de adaptación climática.
- . 2013b. Anexos: Nodos Regionales de Cambio Climático. Articulando acciones e intereses frente al Cambio Climático.



# Annex:

Amazon countries nationally enforced policies that consider the role of protected areas for climate change adaptation.

Country	Sector				
	Environment	Protected Areas	Climate Change	Development/ Land-Use Planning	Other
Bolivia	Law for Mother Earth and Integrated Development for Better Livelihoods	Action Plan for CBD – POWPA Implementation	National Climate Change Adaptation Mechanism	National Development Plan Bolivia for better livelihoods	
	Joint Mitigation and Adaptation Mechanism for the Integrated and Sustainable Management of Forests and Mother Earth	SERNAP's <sup>4</sup> Institutional Strategic Plan for the Period 2009 – 2013 (working document)	Regulations for National UNFCCC Implementation Strategy		
		SERNAP's Institutional Strategic Plan 2012 – 2016	National Forest and Climate Change Strategy		
Brazil		National Protected Areas Strategic Plan (PNAP) <sup>5</sup>	National Climate Change Policy/Law No. 12.187	Pluriennial Plan -PPA - for 2012-2015 : Program 2050	
Colombia	National Policy for Integrated Management of Biodiversity and its Ecosystem Services (PNGIBSE) <sup>6</sup>	Institutional Action Plan for National Natural Parks	CONPES <sup>7</sup> 3700: Policies and Actions related to Climate Change in Colombia National Coordination Strategy		
			National Plan for Climate Change Adaptation: ABC – Concepts, Framework and Guidelines		
			National Natural Parks System National Climate Change Adaptation Strategy (working document)		
Ecuador				Ministerial Agreement on Climate Change Plans, Programs and Strategies for local governments (GAD), and Regulation for Climate Change inclusion in Development and Land-Use Plans (PDOT)	
Guyana		Law of Protected Areas			
French Guiana (FR)	National Biodiversity Strategy		National Adaptation Plan		
			National Climate Change Adaptation Strategy		
Peru		Law of Natural Protected Areas Regulations and Plan	Action Plan for Climate Change Adaptation and Mitigation		Agriculture Multiannual Sectorial Strategic Plan 2012-2016

4 SERNAP: Servicio Nacional de Áreas Protegidas, (National Protected Areas Service)

5 PNAP: Plan Estratégico Nacional de Áreas Protegidas

6 PNGIBSE: Política Nacional para la Gestión Integral de la Biodiversidad y sus Servicios Ecosistémicos

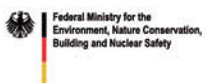
7 CONPES: Consejo Nacional de Política Económica y Social (National Council for Economic and Social Policies)





**Protected Areas**  
Natural Solutions  
to Climate Change

Supported by:



based on a decision of the German Bundestag



Ministerio  
del Ambiente



PERÚ

Ministerio  
del Ambiente

Servicio Nacional  
de Áreas Naturales  
Protegidas por el Estado

