



PARAMOS

Enhancing capacities and coordination to cope with climate change effects



The Challenge

The paramos form a neotropical high altitude ecoregion distributed mainly along the Andean mountain range in Peru, Ecuador, Colombia and Venezuela. Paramos extend between the upper tree-line and the perennial snow-border (3200 to 5000 metres above sea level) representing a type of island archipelago. They have an estimated area of 35,770 square kilometres.

The paramos play a fundamental role in sustaining the lives of millions of people, providing essential ecosystem services such as water production for urban use, irrigation and hydropower generation. Paramos soils and vegetation provide efficient forms of carbon storage and sequestration.

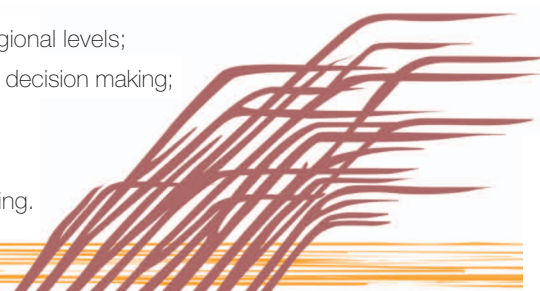
More than 40% of the paramos are included in protected areas. However, some economic activities – such as afforestation, agricultural expansion, grazing, mining, inadequate water management and urban encroachment – pose severe risks to their longevity. Moreover, climate change is likely to cause further impacts in the paramos functioning, distribution and species composition. These in turn might jeopardize the lives and livelihoods of human populations that depend upon this ecosystem.

The II World Congress of Paramos (Ecuador, 2009) urged the implementation of climate change mitigation and adaptation measures in the paramos. Until now, the topic has been addressed from scientific, political and economic viewpoints, with limited local involvement.

The challenge is to enhance resilience of natural and human systems to the effects of climate change through an integrated strategy that:

- Increases protection and sustainable use of paramos ecosystems;
- Improves coordination of adaptation and mitigation actions at local, national and regional levels;
- Facilitates integration of local communities' experience and knowledge into high level decision making;
- Integrates inter-sectoral approaches into sustainable management;
- Enhances capacities of local stake-holders and decision makers.

It is hoped that these actions will also contribute to the improvement of human well-being.



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Photo: Francisco Cuesta Espeletia on the paramos

The Opportunity to Make a Difference

The paramos are one of the South American temperate grasslands ecoregions in which stronger efforts for conservation and sustainable use have been developed at local, national and regional levels. Progress in paramos becomes evident throughout:

- National and regional public policy and strategies;
- National and regional coordination programmes;
- Rapid advances in knowledge generation and exchange;
- Community sustainable management examples;
- Re-establishment of traditional knowledge;
- Public awareness of ecosystem value;
- Ongoing payments for environmental services.

The climate change topic related to paramos conservation has been recently integrated in ongoing or new initiatives. New efforts need to focus on strengthening field implementation of policies, developing more knowledge and experience, improving local capacities and identifying new financial mechanisms for climate change mitigation and adaptation.

This project can make a difference by facilitating multi-stakeholder, multi-sectoral and multi-level coordination and knowledge generation for climate change adaptation and mitigation in the paramos.

Throughout its regional and global platform, the Temperate Grasslands Conservation Initiative (TGCI) is very well placed to establish a productive interaction between various institutions and experts in order to increase support for paramos conservation and sustainable use in the context of climate change.

In particular, TGCI in the paramos can add value by:

- Involving the IUCN South America Regional Office, Commissions, institutional members and other key regional partners within a common approach, seeking joint actions and solutions.
- Providing a comprehensive framework that complements and enhances ongoing efforts.
- Building on the capacities, knowledge and legal framework that already exist in the region.
- Linking partners in the paramos to other grasslands experts around the world included in the TGCI global network.
- Working towards the achievement of TGCI global target of improving conservation and sustainable use of temperate grasslands worldwide.



Photo: Bert De Bievre
Landscape of the paramos

Scope of the Project

The main goal of the project is **to increase capacities and coordination of stakeholders and decision makers at local, national and regional levels to plan and implement climate change adaptation and mitigation measures in the paramos of Colombia, Ecuador, Peru and Venezuela.**

The specific objectives are:

1. To improve knowledge and capacities of local stakeholders and decision makers to understand the climate change effects in paramos and to plan for adaptation and mitigation measures.
2. To develop and promote the application of sustainable management practices in paramos to contribute to climate change mitigation and adaptation.
3. To promote multi-stakeholders coordination and good governance of paramos at local, national and regional levels for climate change adaptation and mitigation.
4. To support an increased protection of paramos and encourage effective management within conservation units as means of adaptation to climate change.

The project will work in the paramos of Colombia, Ecuador, Peru and Venezuela.

Three pilot sites per country will be selected based on the existence of ongoing conservation efforts; opportunities for institutional alliances; biological and cultural relevance; and experience in sustainable management.

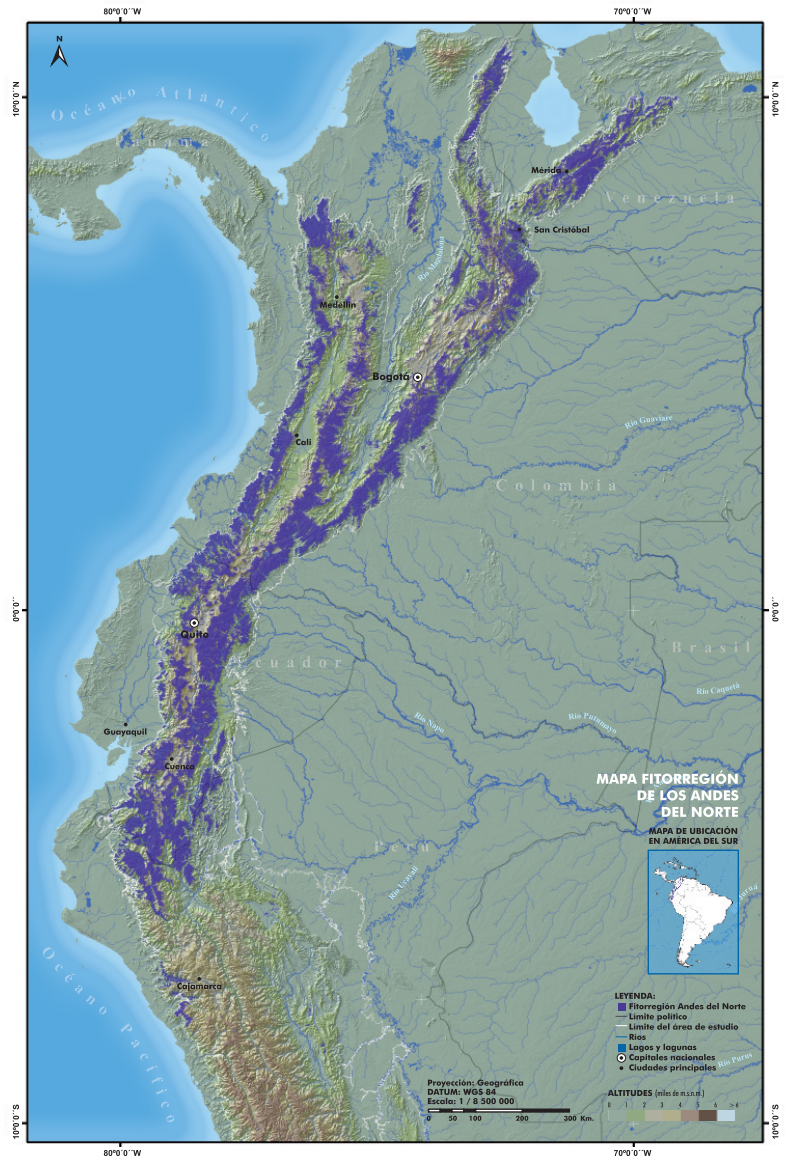
Discussions of progress and continual exchange of knowledge and capacities will take place between Colombia, Ecuador, Peru and Venezuela partners and key stakeholders of the project, in a joint effort towards successful achievement of project goals.

The pillars of the project are: knowledge, field application, adaptive management, influence in policy development/adjustment, capacity-building of decision makers and land managers.

From this project, it is hoped that in the paramos ecoregions of Colombia, Ecuador, Peru and Venezuela:

- Local environmental and social vulnerability to climate change in paramos is reduced through the application of adaptation actions.
- Financial mechanisms to support the sustainable management of paramos are implemented as a means of mitigating and adapting to climate change.
- Local stakeholders and decision makers at national and regional level have enhanced capacities and knowledge to apply actions for climate change adaptation and mitigation.
- Inter- and intra-sectoral coordination for climate change adaptation and mitigation contributes to the implementation of national and/or regional policy and agreements.
- The Andean Community of Nations and the four countries strengthen their environmental agendas for climate change adaptation and mitigation with regards to paramos ecosystems.
- A target of a 300,000 hectare increase of paramos is included within protected areas (national, municipal, community, private, IBAs, etc.) to achieve a minimum of 50% protection of paramos in each of the four countries.
- Existing protected areas and other conservation units that contain paramos ecosystems have updated their management tools to include strategies for the monitoring, adaptation and mitigation of climate change effects.

Paramos Ecoregion



Map publication source:

Josse et al. 2009. Mapa de Ecosistemas de los Andes del Norte y Centro. Bolivia, Colombia, Ecuador, Perú y Venezuela. Secretaría General de la Comunidad Andina, Programa Regional ECOBONA, CONDESAN-Proyecto Páramo Andino, Programa BioAndes, EcoCiencia, NatureServe, LTA-UNALM, IAvH, ICAE-ULA, CDC-UNALM, RUMBOL SRL. Lima. Peru.

Implementing Agencies and Partners

The project will be managed by the TGCI through the IUCN South America Regional Office, in conjunction with linked expert Commissions, institutional members and other key partners in the region.

IUCN

South America Regional Office
World Commission on Protected Areas
Commission on Ecosystem Management
Commission on Education and Communication

COLOMBIA

Unidad Páramos – Ministerio de Ambiente, Vivienda y Desarrollo Territorial de Colombia
Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales (UAESPNN), Ministerio de Ambiente, Vivienda y Desarrollo Territorial de Colombia

ECUADOR

EcoCiencia
Centro Ecuatoriano de Derecho Ambiental (CEDA)
Dirección de Cambio Climático – Ministerio de Ambiente de Ecuador (MAE)

PERU

Instituto de Montaña

VENEZUELA

Instituto de Ciencias Ambientales y Ecológicas, Universidad de los Andes

TRANSNATIONAL

Birdlife International
Consorcio para el Desarrollo Sostenible de la Ecorregión Andina (CONDESAN)

Funding Requirements and Timetable

The indicative budget for this project is \$3,600,000US over 4 years in the four countries (Colombia, Ecuador, Peru and Venezuela). Funds are likely to be leveraged by other ongoing initiatives that will be complemented by this project.

ACTIVITY	YEARS				BUDGET PER ACTIVITY (US\$)
	I	II	III	IV	
Project Administration	X	X	X	X	600,000
Capacity Building	X	X	X	X	300,000
Sustainable Use	X	X	X	X	1,000,000
Governance	X	X	X	X	600,000
Protected Areas	X	X	X	X	1,100,000
Budget per year (US\$)	600,000	1,000,000	1,000,000	1,000,000	
TOTAL BUDGET (US\$)					3,600,000



Temperate Grasslands Conservation Initiative

http://www.iucn.org/about/union/commissions/wcpa/wcpa_what/wcpa_conserving/wcpa_grasslandstf/

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