PROJECT SUMMARY

Adaptation to the Impact of Rapid Glacier Retreat in the Tropical Andes Project – "PRAA"

TOPIC: Climate Change (Adaptation) in Bolivia, Ecuador and Peru

INTRODUCTION

The current and forecasted impacts of climate change represent a real and growing threat to CARE's vision of a world where poverty has been defeated and people live safely and with dignity. Around the world, those living in poverty, though having contributed the least to its causes, are the most vulnerable to the negative effects of climate change. In order to mitigate the potentially disastrous effects on these impoverished communities, a focused effort needs to be made to create highly functional adaptation projects, as well as garner the means to implement and sustain them. A failure to do so means that those least able to cope with rapidly changing environmental conditions will pay the highest price.

In the tropical Andean Regions of Bolivia, Ecuador and Peru, the effects of global warming are likely to be of a greater magnitude, and experienced sooner, than in other parts of the globe. Recent research shows that climate change will be more pronounced in high-elevation mountain ranges. The temperature increases brought about by global warming have resulted in the retreat of the regions tropical glaciers that have for thousands of years been critical to providing freshwater to and sustaining the well being of millions of inhabitants in the rural and urban areas of the region.

In order to mitigate risks, sustain rural livelihoods and lift communities out of poverty, CARE has entered into a comprehensive partnership known *as The Adaptation to the Impact of Rapid Glacier Retreat in the Tropical Andes Project* (Proyecto de Adaptation al Impacto del Retroceso Acelerado de Glaciares en los Andes Tropical, PRAA). This project is being implemented by the Community of Andean Nations (Comunidad Andina de Naciones CAN) on behalf of the Governments of Bolivia, Ecuador and Peru. The project is mainly funded by the Global Environment Facility (GEF), which channels project funds through the World Bank in its capacity as the GEF Implementing Agency.

As a project partner, CARE will play an integral role in the PRAA project, working directly with vulnerable communities, to strengthen their capacities to adapt to their quickly changing environment. During the first phase of PRAA, CARE will play a lead role in the development and implementation of pilot adaptation projects in the region. The objective of these pilot projects is to demonstrate the costs and benefits of adaptation and generate a knowledge base that then can be used to design projects in other vulnerable communities faced with similar challenges.

CONTEXT

The Tropical Glaciers of the Andes are especially sensitive to global warming given their location in high-elevation mountain ranges. While many of the regions glaciers have been in retreat for decades, global warming is causing them to retract at an ever accelerating pace. This coupled with an increase in extreme weather events, also linked to global warming, has amplified the vulnerability of poor communities across the Andean region. The potential loss of the glaciers stands to threaten the well being of the nearly 30 million people who are dependent on the water supply from the glaciers for agriculture, human water consumption, electricity generation and livestock production.

Since 1970, Glaciers in the Andes have lost an estimated 20 percent of their volume. According to independent research projects carried out by the Paris-based Development Research Institute and the UNDP, the glaciers of the Cordillera Real mountain range in Bolivia have lost somewhere between 30 and 40 percent of their volume between 1975 and 2006.[1] The Chacaltaya glacier, located in Bolivia, has lost most of its surface area and, as of 2010, has almost completely disappeared. This dramatic loss of glacial volume threatens large cities in the region that are dependent on glacial runoffs for their water supply. The capital cities of La Paz, Bolivia and Quito, Ecuador draw 30 percent and 50 percent, respectively, of their water supply from the glacial basins. In Peru, the volume of the lost glacier surface is equivalent to 7,000 million cubic meters of water, or about ten years of water supply for Lima.

[1] "Climate Change Impacts: Glacial Melt, Past, Present and Future," in *Bolivia Information Forum Bulletin Special Edition: Focus on Climate Change*, October 2009, p. 6, www.boliviainfoforum.org.uk/documents/752261669_BIF%20Bulletin%20Special%20Edition_Focus%20on%20Climate%20Change.pdf

Other than supplying water to large urban areas, runoff from tropical glaciers plays a critical role in the integrity of arid mountain ecosystems and its reduction will have lasting implications for economic activities, especially for vulnerable rural communities. Glacial runoff is vital in sustaining parts of the region which experience extended dry seasons. Particularly threatened by these changes are the Andean indigenous communities dependent on mountainous ecosystems.

As the glacial runoff dwindles in the Andes, rural communities will no longer be able to use the traditional means of water management which they have relied on for hundreds of years. They will need to adopt a wide range of systems in order to cope with changing climatic conditions. These systems include water management (to insure sustained access to potable water), water capture and irrigation systems, agricultural and food production systems and livestock management. The pervasiveness of poverty (above 50 percent of the population in Andean countries) and extreme poverty (between 15 and 35 percent of the population) limits the response capacity of communities and state institutions in the face of climate change.

Already, Andean communities dependent on the glaciers have had to significantly change their lifestyles and agricultural production in order to adapt to the changing environmental conditions brought about by glacial retreat. For example in Bolivia, the community of Corpa Grande has had to shift their agricultural production from a staple potato crop to peas and onions as well as cut back on the number of animals due to a decrease in quality grazing land. This shift has decreased the availability of locally grown food staples, and increased reliance on outside markets for sustenance. Other communities, such as Chalahuancane, have experienced a boost in agricultural production as a result of increased glacial melt. This increased output due to increased water availability, however, is ultimately unsustainable. As runoff dwindles with the retreating of the glaciers these communities will face difficulties in adapting to newly emergent conditions.

Global warming and glacial retreat is, and will continue to be, an area in which urgent action is needed at all levels. Facilitating the adaptation process will require active community participation, political will and support from national and multinational institutions, academic research and development, as well as financial investment and support. The PRAA provides the institutional framework for all these elements. As a regional partnership between CARE, the World Bank, and CAN under the auspices of the governments of Bolivia, Ecuador and Peru, the PRAA brings to bear the resources, breadth of knowledge and experience necessary to aid those most vulnerable to the consequences of climate change in their efforts to adapt to changing circumstances.

Into this partnership, CARE brings its long experience of working with rural communities in Bolivia, Ecuador and Peru. Drawing on this experience, CARE is responsible for the implementation of pilot adaption activities to demonstrate the costs and benefits of adaption. For this purpose, CARE has pledged to raise an additional 1.2 million USD to supplement existing GEF project funds.

OBJECTIVES

Overall objective:

To strengthen the resilience of ecosystems and local communities to consequences generated by the rapid retreat of glaciers in the tropical Andes.

Specific Objective:

To ensure that national and local governments in Bolivia, Ecuador and Peru, as well as community-based organizations and groups participating in the PRAA, incorporate into their policies and development plans strategies for progressively adapting to reduced availability of water for agriculture and human consumption, caused by the retreat of glaciers in the Andean region.

1. To participate as an active Strategic Partner in a high profile project at the regional level. This will spark the interest of other national governments and international organizations, such as the World Bank and the GEF, to work in association with CARE elsewhere in Latin America on issues related to climate change.
2. To generate capacity building and validate climate adaptation models through the implementation of pilot measures to secure availability of water in the geographic locations of the project.
3. To create and enhance interacting processes among the different institutions participating in the PRAA to ensure the mainstreaming and integration of climate change into the decision making procedures and international negotiations of the countries involved in the project.

COMPONENTS

1. Pilot adaptation measures activities under the PRAA framework in priority areas in Peru, Bolivia, and Ecuador are developed incorporating climate change perspective.
2. Leaders, officials, and social actors are awareof the incorporation of climate change into planning and development policy.
3. A working group based in the Ministries of the Environment of the three countries to improve dialogue on climate change and adaptation measures among them.

MAIN ACTIVITIES

1.1 Participatory design of pilot adaptation projects in PRAA project identified areas.

1.2 Co-funding of pilot adaptation projects.

1.3 Monitoring and technical assistance in the implementation of pilot adaptation projects.

2.1 Implementation of a capacity building plan.

2.2 Implementation of a communications plan.

2.3 Systematization and documentation of the experience.

3.1 Facilitating the development of an Andean agenda on adaptation to climate change.

3.2 Events with the participation of governments, forums or annual workshops on a rotational basis in each country.

MAIN CARE ACTORS

CARE offices in Peru, Bolivia and Ecuador.

KEY PARTNERS IN THE PRAA

General Secretariat of the Andean Community under CAN, Ministry of the Environment of Ecuador, Ministry of the Environment of Peru, Ministry of Environment and Water-Viceministry of Environment, Biodiversity and Climate Change of Bolivia through the Climate Change National Program, The World Bank, Special Climate Change Fund (SCCF) under the Global Environmental Facility (GEF), Peru's Program for Productive, Agricultural and Rural Development (AGRORURAL), and local governments in the three countries.

BENEFICIARIES

Bolivia:

- Municiapality of Batallas – Cullucachi micro basin in the communities: Cullucachi, Calasaya, Suriquiña, Catacora, Pariri, Palcoco, Yaurichambi, Chirapaca and Caluyo y Huayrocondo; and
- Municipality of Palca: Tapacaya micro basin and Amachuma Grande micro basin.

Ecuador:

- Napo and Pichincha Provinces (Antisana micro-basins);
- Comunnity Valle del Tambo, Comuna of Jamanco; and
- Cooperative San José del Tablón y Papallacta.

Peru:

- Shullcas sub-basin-communities of Acopalca: Vilcacoto, Palían, Uñas, Cochas grande, Cochas chico, Cullpa Alta, Culpa Baja and Pacchapampa; and
- Santa Teresa sub-basin-communities of Sullucuyoc: Cochapampa, Andihuela, Saucepampa, Yanatile, Ahobamba, Paltaychayoc and Sahuayaco y Totora.

ORGANIZATION

One of the greatest strengths of the PRAA is its regional character. CARE also takes part at the regional level as a Strategic Partner. CARE Regional Coordinator is assigned by the country office in Peru.

CARE Peru will work together with the Regional Project Management Unit (RPMU) of the PRAA at the General Secretariat of the Andean Community in Lima, Peru.
In addition, each country office will assign a National Coordinator, who will be in charge of CARE's actions at the national level and will coordinate directly with the National Technical Specialist of the PRAA (part of RPMU), representatives from the Ministry of the Environment, and other participating players in their respective country.

IMPLEMENTATION PERIOD

From July, 2009 to September, 2012 – 36 months

TOTAL ESTIMATED COSTS

$1,234,142

CONTACT

Sofia Sprechmann: sofia.sprechmann@lacrmu.care.org