



Community-Based Adaptation FAST FACTS

GUATEMALA

Recovery with organic composting, crop and soil conservation structures in Pin Pin Canton in the San Marcos department of Guatemala

Grantee: COCODE Cantón Pin Pin
Type of organization: CBO
Number of participants: 169 people
(875Men; 94 Women)
Location: Las Majada Village, Tacana Municipality, Pin Pin Canton in the San Marcos Department
CBA Contribution: \$18,137.36 USD
Project Partners: None
Co-financing: \$20,385.38
Project Dates: May 2011 – December 2012

BACKGROUND

The Community-Based Adaptation Programme (CBA) is a five-year UNDP global initiative, largely funded by the Global Environment Facility (GEF) along with other donors. Delivering through the GEF-Small Grants Programme (SGP) and UNDP Country Office, the goal of the Project is to strengthen the resiliency of communities addressing climate change impacts. UNDP partners with the United Nations Volunteers (UNV) programme to enhance community mobilization, recognize volunteers' contributions and ensure inclusive participation around the project, as well as to facilitate capacity building of partner non-governmental organizations (NGOs) and community-based organizations (CBOs). Testing the Vulnerability Assessment Reduction (VRA) and other community-engagement tools, the Project is generating invaluable knowledge and lessons for replication and upscaling. The Government of Japan, the Government of Switzerland, and AusAID provide additional funding.

The CBA project "Soil Recovery with organic composting, crop and soil conservation structures in Pin Pin Canton in the San Marcos department of Guatemala" is located in the village of Las Majada in the Tacana municipality. The project area is located in the river basins and surrounded by the Tacana volcano, the second highest peak in Central America. It is characterized by deeply dissected rocky terrains (plutonic and metamorphic), and a mountainous climate with high humidity. The area has a high population density with 296.5 people/square kilometer, which is 60% over the national average. The ecosystems have been degraded due to the over-population and poor distribution of land that is suitable for agriculture. Additionally, climate change events, such as heavy rainfall, hurricanes, the increasing recurrences of cold fronts



Establishment of irrigation ditches and barriers for soil conservation.

brought on by the El Niño phenomenon in the winter season, and higher temperatures and extended range of the hottest months in the summer season, further exacerbate the fragile ecosystems. In the recent years, the community members have been overwhelmed by the droughts, floods, soil erosion and landslides brought on by the unpredictable climate change events. Decreased production yields and increased incidences of malaria and other health risks due to water contamination are threatening their livelihoods and existence. Additionally, the coniferous forest cover, which contributes to 80% of the productivity in the area, is continually decreasing as it is non-tolerant of the new weather conditions. This negatively affects the regeneration, growth and production of fruits, corn and beans. Reduction in corn production is estimated at 15% and for beans, a 66% reduction. Lastly, the warming trend in the area interferes with the germination and other crucial life stages of endemic species. Dependent on subsistence agriculture, the livelihoods of the Pin Pin community and the ecosystems they rely on are continually threatened by climate change adverse impacts.

CLIMATE CHANGE RISKS

The First National Communication on Climate Change of the Ministry of Environment and Natural Resources forecast the continuity of the increasing warming trend in Guatemala. The increasing temperatures during the summer season (November-April) lead to the extended range of the hottest months (December-January). On the other hand, there will be less rainfall and more aridity during the rainy season (May–October), especially during the months of June-August due to the observed changes in atmospheric circulation in the Pacific-North America zone. Additionally, the weather events (hurricanes, torrential storms and cold fronts) associated with the El Niño phenomenon will be magnified.

Contact information: Project Management Unit at cba@undp.org
220 East 42nd St., 21st Floor New York, NY 10019 Tel: (646) 781-4402

PROJECT DESCRIPTION AND ADAPTATION SOLUTIONS

The CBA project aims to strengthen the communities' resiliency to climate change through awareness-raising workshops and capacity-building activities on natural resource management. Using a participatory approach, the project is implemented by the COCODE Cantón Pin Pin, the project partner CBO. The project increases the adaptive capacity of local communities through the following activities:



Capacity-building activities including women make them less vulnerable to climate change, while simultaneously benefitting the whole community

- Soil conservation through the establishment of irrigation ditches and barriers on .8 hectares and using the terracing technique on another .4 hectares of land are applied to prevent flooding and soil erosion. It also addresses the water contamination and the health risks associated with it.
- Rehabilitation and conservation of native species (*Pinus rudis* (red pine), *Pinus ayachahuite* (white pine), *Alnus ssp.* (alder), *Quercus spp* (oak-oak) and planting of 15,000 trees used for reforestation to maintain the coniferous cover that agricultural production rely on.
- Establishing 20 tree nurseries are maintained by the community and applied to land of project partners to address flooding and landslides occurrences and protect the soil and agriculture.
- Using farming techniques that have low environmental impact such as 1.) Potato (*Solanum spp.*) production, 2.) use of organic fertilizer, and 3.) proper use of pesticides structures for organic composting to improve soil quality impacted by high temperatures.
- Providing training sessions on organizational, administrative and financial management, in addition to knowledge-enhancement workshops on the sustainable resource management, to capacitate the community members in the operational aspects of the project. These leaves them resource tools which increase their sustainability.

In this specific project, migration of men and boys to other areas are high, leaving women and girls alone at home. The women's low literacy rate of 33% (while men's literacy rate is 66%) leave them highly vulnerable. Additionally, women in the area live longer with a life expectancy is 67.2 years as compared to men's life expectancy of 61 years old and the national average of 64 years old. In this regard, gender mainstreaming activities is a strong focus to address these issues. Lessons learned and sustainable best practices are shared by community members to neighbouring communities.

FOCUS ON...

Global environmental benefit

The project's reforestation practices enrich and secure energy forests. Thus, the carbon sequestration promotes global environmental benefits.

Community participation and sustainability

All community members were involved in the project development and implementation. All strategies and activities are easy to understand, low-cost and easily replicated to ensure the ownership and sustainability of the communities.

Policy Influence

Best practices are aimed to be integrated into local and national policies.

For more information about CBA or CBA projects visit: www.undp-adaptation.org/project/cba

Further information, lessons learned, and experiences gathered from climate change adaptation activities globally are available at the Adaptation Learning Mechanism: www.adaptationlearning.net



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