

## GUATEMALA

### Adapting to Climate Change through Sustainable Reforestation and Soil Conservation techniques that improve Tree Nurseries, Forests and Gullies

**Grantee:** Grupo Mixto Los Reforestales

**Type of organization:** CBO

**Number of participants:** 24 families (31% Men; 69% Women)

**Location:** Comitancillo Municipality in the San Marcos Department

**CBA Contribution:** \$20,395.83 USD

**Project Partners:** None

**Co-financing:** \$12,923.15 USD (in cash) and \$11,099.06 USD (in-kind)

**Project Dates:** January 2011 – January 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 "Adapting to Climate Change through Sustainable Reforestation and Soil Conservation techniques that improve Tree Nurseries, Forests and Gullies" is located in the Comitancillo municipality of the Santa Marcos department in western Guatemala. The project focuses on the indigenous peoples of the Los Reforestales community who are subsistence farmers and primarily rely on native species such as corn and beans, and on raising bovine and ovine on a smaller scale. According to SESAN<sup>1</sup>, this area is ranked no. 5 with regard to indigenous populations dedicated to grain production for subsistence and income-generating agriculture. Approximately, 70-80 percent of local production is for the community's own consumption. The municipality of Comitancillo has 6,722 acres of land to grow grains, which constitutes 49.5% of the municipal territory. However, this area currently can only be used for forestry, and not for agricultural production due to its degraded state. The ancestral pieces of land that the Los Reforestales community have inherited and currently own are in the same non-agricultural conditions. Soil erosion and water scarcity is a main problem in the area due to the non-existence of soil cover to protect against heavy rains and not having enough water infrastructures to save rainwater. Climate change impacts such as irregular and torrential rains, droughts and increased temperatures exacerbate the conditions in the area. The project sites have increasingly experienced more landslides and mudslides, loss of soil fertility, loss of flora and fauna, extinction of endemic species and water pollution. The community members lack knowledge on climate change and need help in coping with its adverse impacts to ensure food security and protect their land.



*Maladaptive practice, such as planting trees before they have reached the age to be planted, for tree nursery improvement and conservation are done by the community members due to lack of funds.*

#### 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.

## 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 agro-forestry management. Using a participatory approach, the project is implemented by the Grupo Mixto Los Reforestales, the project partner CBO. Activities in these project are enhancements to activities (building tree nurseries that hold 10,000 native trees) started by the CBO in 2007. The project increases the adaptive capacity of local communities through the following activities:

- Building 24 micro-stables for each family where little cattle will produce organic material compost for soil conservation.
- Applying the terracing technique on 1.38 hectares of land to prevent mudslides and to conserve the crops and soil.
- Replanting of 2,000 alder and fir trees by the community members which are used to improve the forest cover.
- Building gulleys to improve flow of water, to prevent flooding and soil erosion and to conserve irrigation water.
- Providing training sessions on organizational, administrative and financial management, in addition to knowledge-enhancement workshops on the sustainable soil conservation, reforestation and land management, to capacitate the community members in the operational aspects of the project. These leaves them resource tools which increase their sustainability.



Community members maintain newly planted tree nurseries. In this photo, they monitor presence of pests and diseases on newly planted tree nurseries.

### 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](http://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](http://www.adaptationlearning.net)



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