Community-Based Adaptation
FAST FACTS

Grantee: Practical Action

Type of organization: NGO

Number of participants: 2,000

Location: The four villages of Chhotokupot, Boyarshing, Borokupot and Uttar Atulia; Atulia Union; Shyamnagar Upazila; Satkhira District

CBA Contribution: $49,990

Co-financing: Community $19,645 (in kind);

Practical Action $59,565 (in cash)

Project Dates: July 2011 – June 2013

BANGLADESH

Strengthening resilience of communities impacted by climate change induced factors in the southwestern coastal area of Bangladesh

BACKGROUND

The Community-Based Adaptation Programme (CBA) is a five-year UNDP global initiative, largely funded by the Global Environmental 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.

This CBA project aims to the minimize climate change impacts of 400 households in the Atulia Union located in the southwestern coastal region of Bangladesh. The project area is considered one of the most vulnerable areas to climate change due to its close proximity to water and high levels of poverty. Rice cultivation is the primary source of livelihood yet a significant number of families are either landless, living on *Khas* (public) land, or own only a negligible amount of cultivable land. Aquaculture is also an important source of income, as are fishing, trading, day labouring and poultry and livestock rearing. Over the last few decades both farming and aquaculture activities have become less productive as soil degrades, water salinizes and competition for resources increases. Currently, more than 56 percent of the population in the area is food deficient for two to six months a year. Severely damaged by *Aila,* the 2009 cyclone, the soil and water ecosystems in the area became weakened due to high salinity intrusion and are thus more vulnerable to subsequent climatic impacts. Villages in the area also suffered from damaged infrastructure, loss of property and loss of livelihood during the cyclone. These effects continue to hinder the development of the area.

Change of land use: salinity intrusion promotes shrimp culture over rice farming

CLIMATE CHANGE RISKS

Climate change projections for Bangladesh predict an increase in temperatures, reduced and erratic rainfall and more frequent rainstorms. According to the Bangladesh Meteorological Department, annual average rainfall in the project area has increased by 9.5 mm and has become more erratic between 1986 and 2005. Increased frequency of cyclones and extreme weather events are also predicted for the area. In addition, prolonged drought periods and unpredictable rainstorms are increasing in frequency with negative effects on the local rice production. Tidal surges during storms and rising sea levels have also increased salinity intrusion with reports showing penetration as far as 100 km inland along the coastal rivers. This has resulted in degraded farmland and fresh water resources. Increased salinity also poses a risk to freshwater aquatic animals and plants that cannot adjust to the quickly changing conditions. Continued increases in salinity intrusion may decimate aquatic animal populations, destroy ecosystems, and disrupt the livelihoods dependent on these resources.

PROJECT DESCRIPTION AND ADAPTATION MEASURES

The main objective of this project is to improve the resilience of coastal communities in Bangladesh to cope with increased

Contact information: CBA Project Management Unit at cba@undp.org
220 East 42nd St., 21st Floor New York, NY 10017 Tel: (646) 781-4402

salinity due to climate change impacts through strengthened ecosystems functions and protected livelihoods. If this is done, the area where community lives will have reduced climatic impacts and subsequently secure employment, food, and income. The project consists of the following components:

Local fisherman who rely on the sustainable production of aquatic species

- Demonstrating sustainable shrimp aquaculture and fish farming in saline-affected areas;
- Developing a biodiversity monitoring system to be used at community, union and local government levels;
- Training 30 skilled volunteers (extentionists) to assist in climate change adaptation and biodiversity monitoring;
- Building two community plant nurseries to raise seedlings resistant to wind impacts, and when fully grown, salinity;
- Rehabilitating mangrove forests around households and institutional premises; and
- Conducting capacity-building workshops, discussions and other activities that will improve awareness and understanding of climate change, climate-related risks and biodiversity conservation in the communities, local Atulia union government institutions, and 10 local NGOs.

The community will benefit from improved aquaculture practices and reduced negative pressure on natural aquatic animals to enhance livelihood opportunities. Both the community and local ecosystem will have improved resilience to detrimental climate change impacts and be able to pursue sustainable development.

FOCUS ON…

Global environmental benefit

Mangrove forests biomes have suffered significant loss worldwide in the last several decades and the rehabilitation of these important ecosystems within Bangladesh will prevent the continued rapid loss of mangrove forests in the region. The active planting of more mangrove tree coverage will also prevent the depletion of wood for local timber and fuel demands while providing safe habitats for aquatic animals. Baseline threats to biodiversity due to salinity will be addressed by introducing salinity-resistant species that will increase the resilience of the environment to adapt and thrive in changing conditions. The promotion of sustainable aquaculture prevents the over-exploitation of wild fish, crabs and shrimp, and encourages healthy stocks of farmed species in increased salinity conditions. Protecting and sustainably managing local resources increases biodiversity and ensures functioning ecosystem, while reducing anthropologic pressures on natural resources.

Community participation and sustainability

Working with existing groups of shrimp famers, crab and shrimp juvenile collectors, off-farm groups, women, and other stakeholders, the project ensures that all community perspectives and needs are addressed. Interest groups will be linked to trained community extentionists who offer technical and planning support and will assume increased responsibility as the project proceeds. By the end of the project, participants will be able to continue improved coping practices with minimum technical support that can be provided by the community extentionists and local government departments. Low-cost investment strategies also facilitate the continued use and spread of community-based adaptation strategies. In addition, technical aspects and lessons learned will be documented and shared with the Union Council Knowledge Resource Center in order to share and disseminate experiences with similar communities.

Policy Influence

At the local level, Atulia Union institutions will capture lessons learned and apply their gained understanding of climate change and adaption to future projects in the area. Lessons learned will also be mainstreamed with the National Adaptation Programmes of Action (NAPA) 2005, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009, and the Biodiversity Programme of Action 2020 for scaling up community-based adaptation projects throughout the country. NAPA suggested promoting adaptation to coastal fisheries through development of salt-tolerant fish species as one of 15 priority initiatives and experience in this area will be invaluable to expanding the initiative.

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 can be found at the Adaptation Learning Mechanism: ***www.adaptationlearning.net***

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