

The coastal district was home to one of the world's earliest settled civilisations and also became one of the largest tomato producing regions in Asia. Now this area is waterlogged and can barely sustain agriculture.

Extreme weather events have persistently affected coastal areas of Badin, often provoking humanitarian disaster. Now the prospect of global warming in delta regions brings added problems, including salt water intrusion of crops and the increased risk of extreme climatic events. These problems are having tremendous impacts on areas already affected by severe environmental strain as a result of human activity.

The Project

In 2008, Oxfam GB in Pakistan undertook community-based research to better understand the implications of climate change for communities living in the Badin coastal region of Pakistan. This research was initiated following discussions between programme staff and partners about the Inter-governmental Panel on Climate Change's (IPCC) 2007 reports, as well as the UNDP Human Development report of the same year.

This case study is an analysis of a pilot climate change adaptation project designed by Oxfam GB in response to the research.

Project Area

The Project area covers two villages; Mohammad Ali Chandio and Village Khamoon Mullah, in the Union Council of Bhugra Memon in Tehsil and District Badin. This is home to some of the most poverty-affected people in Pakistan.

Communities in the area have seen profound and bewildering changes to their environment. Mismanagement of natural resources has contributed to their plight. Large areas of what was productive land are waterlogged, salinated or parched. Seawater intrusion is now a fact of life and coastal habitats, essential for the well being of marine resources and livelihoods, are under enormous stress.

Project Components

The Project has been divided into two components; adaptation measures and advocacy activities. The community adaptation component will provide benefits directly to the most vulnerable communities. Advocacy activities will support the activities on the ground by initiating dialogue that is aimed at policy change to help coastal communities adapt to climatic changes.

Activities

1. Strengthening and expansion of existing water ponds including installation of solar panels and pumps

Existing water ponds will have strengthened linings and be increased in size to increase yield and water collection for drinking purposes. Installation of solar panel pumps will pump water from the ponds into the



Climate change in Pakistan

- Temperature increases.
- Erratic rainfall including increasing frequency and intensity of rainfall in coastal areas.
- Reduced freshwater fish and prawn catches from saline intrusion.
- Reduced agricultural production and degradation of land due to saline intrusion.
- Seasonal out-migration due to reduced productivity.

Objective

To enhance the capacity of coastal/rural communities to adapt to climate change.

agricultural fields. This will have dual benefits for the community and the environment; more reliable water for irrigation and low-carbon alternative for pumping of water.

2. Construction of embankments using pressed earthwork

More than 20 villages will be protected from the surges and sea intrusion at surface level. On the land side of the embankment, fields will be protected from degradation by planting flood tolerant plants and trees.

3. Rehabilitation of degraded land and use of appropriate crop varieties

Over 25 acres of land will be rehabilitated using organic and biological processes for agricultural use.

4. Advocacy

Seminars, workshops, co-ordination and meetings with legislative bodies will be carried out with proactive participation of communities.

5. Disaster preparedness activities

Training, simulations and drills, as well as the construction of flood emergency shelters will be undertaken.

Project highlights

This project aims to improve the capacity and sustainability of existing resources, empowering affected communities with their own adaptive capacity for the foreseeable future.

This project can mobilise human resources more effectively and ensure that communities are better prepared to deal both with extreme and unpredictable events as well as stresses that are set to increase over time. Despite of a lack of technical knowledge and information, the communities know their areas well, and if provided with the required technical assistance, they will be able to recognise problem areas and act on them accordingly. Knowledge of their land and climatic patterns combined with the technical know-how will enable communities to be better prepared for the future and fight prevailing poverty through adaptation to climatic changes.

Major Challenges

Since the project has not yet entered the implementation phase, there is insufficient information to identify practical challenges. However, one major challenges that can be foreseen at this stage is:

- To encourage increased gender equality that will enable women to have equal participation in project activities including a strong voice in decision-making.

“20 to 30 years ago we had many sources of drinking water, there were sweet water lakes and well water. Now that has all become brackish and we can no longer use them. The only source left for us and our livestock is the canal water, which is not clean as all the factories are throwing their waste there. This is making our children sick.”

Bachoo Mallah, 61 years old.

“In the old days (30 years ago), the land here used to be under cultivation, we grew wheat, tomatoes and watermelon. But now because of repeated flooding and heavy rains, and the cyclones, the seawater has intruded making the water brackish and leaving the land degraded, we can no longer grow anything.”

Bhaagi, 60 years old.

Expected Lessons

It is expected that the project will demonstrate how existing resources can be modified to adapt successfully to climate change. By proving the case for employing different approaches to community education in the management of land and human resources, local communities will be empowered to take control of their lives and livelihoods.

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