

KAZAKHSTAN

Demonstration of adaptive land management under climate change conditions in Priozernoye

Grantee: Association of Landscape Planning Development

Type of organization: NGO

Number of participants: 1,740

Location: Priozernoye settlement, Tselinograd district, Akmola area

CBA Contribution: 50,000 USD

Project Partners: Rodina Farming company

Co-financing: 55,250 USD (Rodina Farming Company)

Project Dates: April 2010 – September 2011

BACKGROUND

The Community-Based Adaptation Programme (CBA) is a five-year United Nations Development Programme (UNDP) global initiative funded by the Global Environmental Facility (GEF) within the Small Grants Programme (SGP) delivery mechanism. The UN Volunteers partners with UNDP and GEF/SGP to enhance community mobilization, recognize volunteers' contribution and ensure inclusive participation around the project, as well as to facilitate capacity building of partner NGOs and CBOs. In addition, funding is provided by the Government of Japan, the Government of Switzerland and the Government of Australia. The CBA's goal is to strengthen the resiliency of communities addressing climate change impacts.

This CBA project in Kazakhstan's rural Priozernoye community aims at developing a model of climate-adapted land use and demonstrating its environmental, economic and social validity under the climate change conditions. Located in Central Asia, Kazakhstan is the world's ninth largest country. The climate is continental with average temperatures varying from -12°C in the winter to 30°C in the summer. Although Kazakhstan's economy relies mainly on oil, minerals and metals exports, agriculture remains an important economic activity. The site of the project is Priozernoye, situated approximately 150 Km north of the capital Astana in the transition zone between the dry and moderately-dry steppe. The land is composed of low to moderate sloping hills and the main economy activity is the production of spring wheat. Winter snowfall is the most important precipitation for agriculture as melt-water provides the moisture required for agricultural production. Declining precipitation and the increasing ratio of rainfall to snowfall threaten to intensify erosion and desertification on the sloping lands as rainfall is more likely to run off, rather than slowly infiltrate. This is likely to be compounded by rising temperatures and increased evapotranspiration.



Severe erosion damage in the project area

CLIMATE CHANGE RISKS

Long-term climate change projections for Kazakhstan forecast higher temperatures as well as an increasing level of evapotranspiration. As a whole, temperatures are expected to increase to 1.4°C by 2030 and 2.7°C by 2050. All seasons will be warmer, but the winter months will likely see the greatest increase in temperatures. Rainfall patterns are also projected to change. The arid climate traditional in south of the country is expected to expand northward into historically wetter areas. The cumulative effect of these factors will increase aridity across the country. In the project site, reduced winter rainfall combined with higher air temperatures will lead to a premature depletion of soil moisture reserves. Summer precipitation critical to agricultural activities, which constitute an

important component of residents' livelihoods, is also expected to decrease. In addition, changes in hydrothermal conditions will increase the exposure of grain crops to various diseases resulting in lower grain quality and smaller yield. Scientific evidence suggests that the risk of dangerous climate-driven droughts will continue to grow.

PROJECT DESCRIPTION AND ADAPTATION MEASURES

The key goal this CBA project is to demonstrate new approaches and methods of sustainable land management at the local level. The project was prepared through a participatory process carried out by the Association of Landscape Planning Development and incorporated many different sectors of the local community. Building on baselines of sustainable agro-ecosystem management, the project will consist of rehabilitation initiatives to pilot new agricultural practices adapted for changing climates. In order to advance these goals, the following activities will be implemented:

- Restoration of existing land infrastructure
- Environmental stabilization of landscapes
- Development of landscape-environmental plans for the territory
- Integration of changing climate parameters into agricultural landscape management



The project activities prevent further land degradation.

The project also includes capacity building components for the community, and a component on lesson sharing with government and other national stakeholders.

FOCUS ON...

Global environmental benefit

The project will introduce two new techniques to control land degradation and will restore 1133 hectares of degraded land and 50 hectares of regressed drainage ravines.

Community ownership and sustainability

The local community has played an essential role in the formulation of the project and will be involved in its implementation in a continuous basis. The sustainability of the project stems from the capacity of the community to replicate lessons learned after the completion of project.

Policy influence

Lessons learned from the implementation of the project will be incorporated in the local district development plan and shared with government and national stakeholders to inform 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 can be found at the Adaptation Learning Mechanism: www.adaptationlearning.net

