Community-Based Adaptation
FAST FACTS

Grantee: Farmer and Entrepreneur Support Fund

Type of Organization: NGO

Number of Participants: 2,500

Location: **Shyrkyn Village,** Shymkent, Kazakhstan

CBA Contribution: $50,000

Project Partners: Kara-Kazim Production Cooperative

Co-Financing: Farmer and Entrepreneur Support Fund, ($2700 - in cash ; $780,000 - in kind

Project Dates:

March 2009 – April 2011

KAZAKHSTAN

Forest Protection Belts to Combat Increasing Aridity in Shyrkyn Village

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 AusAID. The CBA programme's goal is to strengthen the resiliency of communities to address climate change impacts.

The CBA project, "Forest Protection Belts to Combat Increasing Aridity in Shyrkyn Village", aims to reduce the vulnerability of Shyrkyn village in Kazakhstan to the adverse impacts of climate change. The landscape varies from heavily populated mountainous regions in the east and energy-rich lowlands in the west, to Siberian terrain in the north and fertile soils in the south. Shyrkyn village is an agricultural and livestock-raising community in southern Kazakhstan, near the foothills of the Tien Shan Mountains and the border with Uzbekistan. The local climate is extremely continental and dry, consisting of hot summers and long winters. Precipitation ranges from 150 mm/year in the lowlands to 800 mm/year in higher elevation areas. Only winter precipitation is useful for agricultural activities. Livelihoods are based predominantly on agriculture and livestock. Commodities, including cereal crops, rice, vegetables, cattle, sheep, and goats, are used for consumption and commerce. Increasing winter temperatures are leading to the degradation of the fragile ecosystem upon which the population of Shyrkyn village depends, reducing their profitability from farming and cattle breeding, thus threatening their livelihoods.

Planting of shelter belts

CLIMATE CHANGE RISKS

Long-term climate change forecasts for Kazakhstan and Central Asia include increasing temperatures, especially in the winter, as well as increasing levels of evapotranspiration in the summer. Temperatures are expected to increase from 1.4˚C by 2030 to 2.7˚C by 2050. The arid climate found in southern Kazakhstan is expected to move northward into historically wetter areas. In the project area, rising temperatures and decreasing precipitation will lower availability of water in the soil, and will reduce the resilience of croplands and pastures to dust storms and dry winds. As dust storms and dry winds become more frequent, the aridity and the soil erosion increases, stressing the

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natural ecosystem and reducing the productivity of farmlands and pasturelands. These climate change risks will later trigger a cycle of poverty and food insecurity in this region.

PROJECT DESCRIPTION AND ADAPTATION MEASURES

The CBA project's goal is to reduce land degradation risks stemming from increasing summer temperatures, hot winds and declining winter snowfall. The project was prepared through a participatory process carried out by the local NGO, Farmer and Entrepreneur Support Fund Public Foundation, and involved all sectors of the community. It is designed to increase the adaptative capacity of the Shyrkyn village to climate change variability by building forest protection belts to reduce wind erosion, and by piloting a drop irrigation system as a water efficiency method in the context of increasing aridity and lack of water resources. Accordingly, the following activities are being implemented:

Drip irrigation system installation on the project territory

- Drilling of wells to provide water for irrigation;
- Installation of pumps to provide irrigation water to communities;
- Transportation of young cattle to remote pastures (to lands owned by local production cooperatives)
- Conducting studies to ascertain precise locations of forest belts for wind erosion reduction;
- Planting orchards/forest shelter belts in a pilot site (lands of local production cooperatives);
- Establishing and demonstrating improved irrigation systems at pilot sites.

The project contains a capacity building component that aims to train community members on efficient use of drain wells and forest belts to reduce soil moisture loss and soil erosion caused by winds, as well as to improve remote grazing practices. It also includes an awareness programme to help the community better understand the long-term risks

FOCUS ON…

Global environmental benefit

The project area is enduring serious land degradation from increasing winter temperatures leading to soil erosion caused by winds. The project addresses land degradation issues by the establishment of a forest belt that will maintain and improve the quality of land.

Community ownership and sustainability

Community participation was a key component in the project implementation. The members of the local production cooperative provided their lands for pasture and for the establishment of the forest belt.

Policy influence

Lessons learned from the project implementation will be leveraged for replication and then mainstreamed into regional 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 can be found at the Adaptation Learning Mechanism: www.adaptationlearning.net