CBA Success Stories

CBA Kazakhstan - Sadu Shakirov

It is increasingly recognized that small communities are likely to be the most severely affected by climate change impacts, and yet least equipped to cope and adapt. The Community-Based Adaptation (CBA) project, a five-year United Nations Development Programme (UNDP) global initiative that is funded by the Global Environmental Facility (GEF), has been designed to pilot community-based projects that seek to enhance the resiliency of communities, and/or the ecosystems on which they rely on, to climate change impacts. In ten participating countries (Bangladesh, Bolivia, Guatemala, Jamaica, Kazakhstan, Morocco, Namibia, Niger, Samoa, and Vietnam) small-scale 'project/policy laboratories are created to build the resilience and adaptive capacity of local communities to climate change. Partners include the GEF Small Grants Programme (SGP), the United Nations Volunteers (UNV), and the Governments of Japan, Switzerland, and Australia.

In Southern Kazakhstan, the CBA project ***"Autumn/winter irrigation as an adaptive mechanism for efficient use of water resources in Sadu Shakirov"*** is located in the Sadu Shakirov village in the desert zone, near the Talas River. The project aims at reducing the climate change-induced risks on Kazakhstan's land resources by increasing local adaptive capacity thru trainings and workshops, and by introducing sustainable techniques for climate-resilient land and water management. At the national level, the project aims to influence policy by demonstrating adaptive practices to government officials, disseminating lessons learned from its implementation for replication. Thereby, this project contributes towards securing climate change resilient global environmental benefits. This CBA project started in April 2009 and will close in August 2011.

Kazakhstan's climate is continental with the average temperature varying from -12˚C in the winter to 30˚C in the summer. Although Kazakhstan's economy relies mainly on oil, mineral resources and metals exports, agriculture remains an important economic activity. Sadu Shakrov's local community members rely on cattle breeding and subsistence farming for their livelihoods. During the last ten (10) years, climate changes (such as reduction in rainfall, increase in summer and winter temperatures, pronounced droughts, and increased intensity of hot winds) have posted a serious barrier to development of animal husbandry in the region. Additionally,

Restoration of canal gateways in Sadu Shakirov.
Photo: Katerina Yushenko/UNDP CBA

the steady decrease of summer and winter precipitations in the region have resulted in a decrease in the Talas River's water level. The river water, usually used for farmland irrigation before it is utilized for the local communities' pastures, does not reach the village leading to unsustainable methods of irrigated agriculture, resulting in salinization and land degradation. Ultimately, the local community members use degraded lands for unsystematic grazing leading to further degradation and amplified by climate change.

Thru a community participatory approach, the CBA project was delivered thru the Small Grants Programme (SGP) allowing for a fast, flexible and proven mechanism to reach communities and civil society at the local level and using its National Steering Committees for decisions on grant making, as well as the infrastructure and technical expertise of its National Coordinators. Under the supervision of the SGP National Coordinator in Kazakhstan, the project was implemented by Public Association Kogal (a local CBO) with the partnership of Limited Partnership "Zhardemshi". Together with the local community members, they developed adaptive practices in water and land management to address the climate change challenges they are faced with. In the project site and many parts of Kazakhstan, only winter snowmelt is beneficial to the soil as summer rain moisture does not seep in to the soil. With winter temperatures continually increasing, there is shortage in beneficial water to the soil. To this regard, innovative methods such as saving autumn-early spring water alongside the canal, when it is not deficient, enabled the local community members to irrigate fields and pastures for free. Autumn water irrigation saturates the soil, covers the lack of winter precipitation and increases the period of accumulation of moisture in the topsoil layer, as melting of frozen water flows the same speed as the melting snow. These new adaptive practices have led to the growth of fodder crops (alfalfa) and increased the productivity of pastures, thereby creating a forage base to improve livestock productivity.

Co-financing funds from the Government of Switzerland have allowed this project to expand its knowledge management activities. Information, lessons learned and best practices from this CBA project has been shared locally and nationally in Kazakhstan, and regionally with other countries in Central Asia. Through trainings, round-table meetings and conferences, lessons learned and experiences gained both locally and nationally in Kazakhstan are transferred to nearby countries facing similar climate change threats. Knowledge about climate change at the local, regional, and national levels have been enhanced, and appropriate adaptation responses have been identified based on Kazakhstan's experience.

Sadu Shakirov's population, approximately 1,462 people (266 households), have directly benefitted from this CBA project. The "Sharuashylyk" irrigation canal (12 km) was restored by the project participants including the walls of the canal and five (5) water-distributing gateways. These canals are now used to save water from the autumn-early spring season. 100 hectares of land were irrigated, and 60 hectares of degraded land have been restored thru the planting of alfalfa. 30 tons of alfalfa hay and 30 tons of hay from 60 hectares of natural lands have been gathered from the irrigated lands. In the first year after the alfalfa was sowed, and yields of hay has increased by 20-30%. Today, the hay harvest provides forage for 500 heads of cattle for two (2) months which have increased cattle weight. From the concrete results of this CBA project, the local communities started generating an income. In the first year of the project, they earned1400 USD.

Repaired "Sharuashylyk" main canal.
Photo: Katerina Yushenko/UNDP CBA

The GEF Strategic Priority on Adaptation (SPA) grants for the implementation of this CBA project has increased the resiliency of the Sadu Shakrov village residents to climate change. The local communities were able to increase their knowledge on climate change and how to adapt to it. With the increased knowledge, land in the project sites has been restored thru the adaptive practices of the communities, while increasing the yields of crops. Today, the local communities generate an income, an absent component before the CBA project. The members of the local communities have noted that the project results has given them confidence that they are able to adapt to increasing climate aridity in Kazakhstan. The project activities, especially efficient water resource use and sustainable land management, have decreased the local communities' vulnerability to climate risks and have increased their sustainable livelihood.

Today, the community members know how to save water, when to save water, and the adaptive way of how to use irrigated lands and planting of fodder crops in order to cope with water shortage. They now understand that fodder crops demand less watering, is resistant to drought, and therefore, it creates the basis for additional forage for livestock in winter and early spring period. In addition, they now know that the seeding of alfalfa helps restore the fertility of degraded arable lands. The project has reached the goals due to coordinated work of the local community, understanding of the activities and willingness to further project development. Further expansion of irrigated territories and the area under drought-tolerant crops will promote further animal husbandry development in the area and improvement of living conditions of the local communities. Additionally, as the project activities have finished successfully, the neighboring communities have been replicating Sadu Shakirov's activities. The adaptive practices initiated in this CBA project will continue to be implemented in other communities.

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