

TAJIKISTAN

Reducing Poverty in High Mountain Environments

Around Lake Sarez

In 1911, an earthquake in the Pamir mountain range of Tajikistan triggered the collapse of an entire mountain. The debris buried the village of Usoi in the valley of the river Murghab and formed the Usoi dam. Behind the dam, the river formed the massive Lake Sarez, named after a village drowned by its waters. There have always been concerns that the Usoi dam could break, causing a flash flood down the Bartang valley that would result in the death of thousands of people. An early warning system installed during Soviet times has long since ceased to function.

The Lake Sarez Risk Mitigation Project (LSRMP), a major initiative funded collaboratively by the World Bank, USAID and the Aga Khan Development Network (AKDN) was initiated in 2000 and included disaster preparedness training, preparation of emergency stockpiles and safe havens and the installation of a radio communications system.

It became clear during the implementation of the LSRMP that the inhabitants of the Bartang Valley were not only in need of safety, they were also in dire need of means to secure a sustainable livelihood. To address this issue, a separate project, financed by the Japan Social Development Fund (JSDF), was added to the LSRMP in 2003. The goals of the JSDF project were not only to safeguard people's lives but also, more fundamentally, to

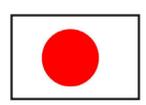


alleviate poverty, and reduce the isolation and the dependence on external aid of the estimated 8000 inhabitants of the Bartang Valley.

A Fragile Environment

The people of the Valley have a subsistence economy based almost entirely on limited agricultural production and animal husbandry. There is a severe shortage of arable land, with the average area cultivated being only 0.2 ha per person. Livestock (goats, sheep and cattle) graze mainly on the range, high up in the mountains in summer and around the villages during other times of the year. The main obstacle to livestock production, besides overgrazing, is the limited scope for making hay. According to the latest estimates, food self-sufficiency reaches only 60% in the Bartang valley, the rest being supplied by aid organizations.

Besides a food shortage, there is also a severe fuel shortage. The tersken shrubs on the mountain slopes are practically the only source of fuel and this resource is rapidly being depleted - contributing substantially to the denudation and erosion of the mountains.



The JSDF Project

The grant of US\$ 1,586,400 was given to Focus Humanitarian Assistance (FOCUS), an affiliate of the Aga Khan Development Network (AKDN) in 2003. FOCUS has a strong presence and extensive project experience in the Gorno-Badakhshan Autonomous Oblast (GBAO), the region where the Bartang valley is situated.

The project had three major components:

1. Priority Community Investments which focused on the protection of basic socio-economic infrastructure. These included mitigation projects such as the stabilization of slopes through protective afforestation, installation of anti-avalanche and anti-rockfall stonewalls, cleaning and rehabilitation of the mud slide channel routes, and creation of small tree nurseries.

Improvement of communication between villages was also addressed through the removal of major bottlenecks on the road along the Bartang river. A two-way radio communication system was also installed, providing Very High Frequency (VHF) communication to villages in Rushan and Shugnan districts and High Frequency (HF) communication to the key centers of the Vanch, Darvaz, Shurobad and Moskovsky Districts.

2. Small-Scale Community Based Sustainable Livelihood Activities supported income generation projects for the communities such as the construction of irrigation canals and the development of sustainable enterprises – financing small enterprises to provide improved livelihoods for the local people.

3. Independent Monitoring and Evaluation provided technical assistance to support the independent evaluation of the results of the grant and the use of funds.

Identifying and Implementing Sub-projects

A Project Advisory Board (PAB) that included members of the Government, the Embassy of Japan and the World Bank was established to approve all projects. An Operational Manual was also developed that laid out the procedures to be used in project implementation and the responsibilities of the different stakeholders.

The first step taken by FOCUS in the identification of sub-projects was the formation of the Rushan



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Team. The team consisted of local engineers, sociologists, geologists and trainers and was based in Rushan, at the confluence of the Bartang and Panj rivers, within easy reach of the FOCUS' office in Khorog, the capital of the GBAO. The Rushan team was responsible for soliciting proposals from the existing Village Organizations (VOs), technical assistance and training and supervision of the activities in the field.

Over 200 project proposals were collected. A selection was then made during a workshop in Khorog involving the local team and FOCUS personnel.

There was a remarkable consensus on the selection of the road rehabilitation and mitigation sub-projects. Feedback from the local population stressed the detrimental impacts of isolation and led to an emphasis on improving the road, the construction of car and foot bridges and the installation of radio communication systems.

The identification of projects under the second component proved to be more challenging. Over half of the proposed projects involved increasing livestock. As the range is already over grazed and there is very limited scope for the production of feed for the winter, no such projects were selected for financing as they were deemed both unsustainable and potentially environmentally detrimental. Irrigation projects were favored as these would, at least in principle, be sustainable, water being the main limiting factor for agricultural production in the few patches of flat land that are still unused.

Results

The JSDF project has had a major impact in the Bartang Valley in terms of reducing the vulnerability of communities to natural hazards and offering them greater economic opportunities.

The main concern voiced by the inhabitants of the valley, a sense of isolation and fear of being cut off in case of emergency, has been addressed. The construction and improvements of roads and bridges now

Project Data

- Implementing Agency: *FOCUS Humanitarian Assistance*
- Grant (TF051206) Amount: *US\$1.58 million*
- Implementation Period: *3/11/2004 to 10/31/2009*

allow villages in the valley to be reached by car practically year round. The installation of radios throughout the valley has been a great addition to the effectiveness of road improvement initiatives. The inhabitants are now instantly apprised of the situation in other villages and can come to their assistance when needed. Also, the early warning system provided by the radios and the emergency safe havens built along the valley have substantially improved the sense of security among the inhabitants.

The risks induced by natural hazards have been reduced by the various mitigation projects, including the introduction of gabions (wire baskets containing rocks). These projects have enabled the inhabitants to better safeguard their villages against flooding and to protect the road against erosion.

Priority Community Investments: In total, sixty-three projects were completed under this component including six mitigation projects, ten road and car-bridge rehabilitation initiatives, the construction of four car and six foot bridges, and the installation of twenty HF and VHF radio systems within the valley and fifteen outside the valley, in neighboring districts.

Road projects included cleaning of the road from rockfall and protection of the road from erosion by the Bartang River by way of gabions. Detailed designs for each road rehabilitation section were prepared by the local engineers from the Rushan team and submitted for approval to the World Bank. For the first time in many years the inhabitants of the Bartang valley enjoyed a practically uninterrupted year-round connection to the outside world.

Small-Scale Community-Based Sustainable Livelihood Activities: The income generation initiatives have all helped revitalize the economy in the Bartang Valley. The technical and engineering experience gained through the implementation of relatively large works has improved the capacities and employability of many of the inhabitants. Overall, the communities have been able to access additional monetary inputs which have diminished their dependence on humanitarian assistance.

Projects approved under this category included:

- **Bee Keeping:** an experienced bee-keeper living in Darjomj village prepared a proposal to manufacture fifteen bee hives, buy materials needed and teach potential bee-keepers in other villages in the Bartang Valley.
- **Rushan Agricultural Processing Plant:** the Rushan district is rich in fruit trees (apples, pears, apricots, peaches, plums, cherries, mulberries, walnuts, raspberries, currants, gooseberries and strawberries) but the market experiences surpluses at the time of ripening. A proposal was submitted by an NGO to establish

a small processing plant to can this fruit. The NGO submitted a list of goods and materials needed including those for the rehabilitation of a building to house the operation.

- **Barzuj Tree Nursery:** An NGO called “Bunyod” prepared a proposal for the establishment of a fruit tree nursery that would work in close cooperation with the Pamir Biological Institute in Khorog and the Pamir Botanical Garden.
- **Mobile Workshop:** this innovative idea from a NGO called “IMDOD” and consisted of providing a mobile mechanics workshop that could travel the Bartang Valley to maintain and repair the various machines and equipment installed, often by aid organizations. Repair and maintenance are often the bottlenecks to sustainable use of even fairly basic technology. The mobile workshop consisted of a truck with repair equipment including welding torches, a generator, etc. which is operated by an experienced technician. After the initial grant by FOCUS, the mobile workshop is expected to be self-financing.
- **Gabion Workshops:** Six workshops to produce gabion mesh were implemented in villages along the Bartang valley. These workshops are still producing the gabions needed to protect the river bank and to contain the mud flow channels. Interest in purchase of gabion mesh was expressed from Afghanistan and elsewhere in Tajikistan.
- **School Rehabilitation** - The village organization of Savnob village submitted a request for the rehabilitation of the village school and prepared, in collaboration with the Rushan Team’s engineers, the design and list of materials needed which FOCUS subsequently provided. Although not a typical income generation project, the rehabilitation of the school was financed because the school premises would be used after school hours to provide room for small cottage industries such as knitting, pottery and painting.



The Basid mudflow channel, wire gabions protecting fields and homes from being washed away.

- **The Road Users Association** - The heavy equipment introduced by the Project will be key to the maintenance of the Bartang road. The question of ownership and operation of the equipment was the subject of much debate. Various options were explored and after extensive consultation with the inhabitants a Road Users Association (RUA) was formed and registered with the Department of Justice of Tajikistan.

Beyond these immediate benefits, the JSDF project has resulted in an increased sense of self-reliance and ownership by the inhabitants involved them in the selection, planning and implementation of the various sub-projects. The project has strengthened the already considerable social cohesion in the valley.

The “opening up” of the Bartang Valley has improved commercial opportunities available to the inhabitants and the exchange of goods and services has markedly increased. The Road Users Association, which has been equipped with bulldozers and an excavator now allows the inhabitants to deal with emergency road situations quickly and autonomously, without having to wait for external help.

Local capacities have been improved. The engineers from the Rushan Team have received training in the use of computers to aid in technical design; the social experts have gained additional experience in participatory approaches to project identification and preparation; the Village Organizations have learned how to prepare the paperwork for aid organizations; and several NGOs are now working in the Bartang Valley.

Lessons Learned

In spite of the challenges posed by the physical environment, the impact of project activities was considerable and the communities have improved their livelihoods and living conditions. As well as material improvements, the outcomes were enhanced by the use of **participatory approaches which stressed local identification of the initiatives to be financed** under the grant. In particular, the opinions of village associations and



The JSDF project provided bee hives and materials for bee keeping to increase income.

councils were solicited in identifying community priorities in infrastructure investments. This built local capacities, introduced new communication channels and enhanced trust. **Community involvement** in risk reduction operations of this kind, particularly in such remote locations, is key to their success. Community engagement and sustained participation provides a strong basis for **sustainable future operation and maintenance** of the equipment and facilities delivered by the project.

The project benefited from its emphasis on reflecting, and reacting to, the context in which it was being developed. The team was able to dynamically re-visit some of the assumptions made during the initial project scoping and to apply this to the selection of priority investments. Some of these were clearly not sustainable (e.g. increasing livestock, re-forestation).

A major success factor in this project was the **selection of a CSO that had a track record and specific strengths in the locale**. FOCUS had extensive

knowledge of local contexts and issues and a demonstrated ability to work with local and international organizations. Sustainability concerns are also somewhat mitigated by the continued engagement of this NGO in the region.

Replicability: Although the initiatives financed under this activity were relatively small-scale and community managed, it delivered considerable benefits. As such, the potential for replicability remains high in situations.

Social impact: The project had a positive social impact due to the additional simple communication and access measures for local communities, supported by the JSDF. Specifically, the target communities clearly benefited from a project design that mitigated the risk that local residents face from potential disasters around Lake Sarez, while also improving their livelihoods and self-reliance.

Key Resources

FOCUS Humanitarian Assistance (2007), Reducing Poverty in High Mountain Environments Around Lake Sarez, Tajikistan”, Implementation Completion Report available at <http://www.worldbank.org/jsdf>

The Japan Social Development Fund -- The JSDF is a partnership between the Government of Japan and the World Bank that supports innovative social programs in developing countries. JSDF grants are executed by NGOs/CSOs and local governments and implemented at the community level. JSDF projects meet four basic requirements: (i) they target and respond to the needs of poor, vulnerable, and disadvantaged groups, and aim to achieve rapid results, (ii) they are innovative and pilot alternative approaches or partnerships, (iv) they use participatory designs and stakeholder consultation to design inputs and as an integral part of monitoring and evaluation, (iii) they empower local communities, local governments, NGOs/CSOs through capacity building and rapid feedback of lessons learned, and (v) they focus on scale-up potential, replication and the sustainability of interventions.