

“What causes mudflows and why do we see more each year?”

Action at the Frontline, Tajikistan

SUMMARY:

The following case study was conducted in Bobuchak village, Ghonchi district, Tajikistan by ACTED. The focus of the study itself was based on a common question raised by village residents specifically, “What causes mudflows and why do we see more each year?”

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INTRODUCTION:

As confirmed by community members, Bobuchak village is located in a “high-risk” area; throughout the year the village sees several mud and debris flows damaging local houses, schools, and medical facilities. The main focus of this case study was two-fold: first, we looked at identifying and mapping community risks and the root causes of the village’s vulnerability, and second, the project team focused on developing, alongside community members, an integrated and holistic plan to reducing everyday risks within the village. This



plan centred on increasing local capacities to reduce village vulnerability to risks through improving the management of natural resources.

The case study took place in the mountainous area, specifically Bobuchak village, Rosrovut jamoat, Ghonchi district.

This village was chosen due to their acute vulnerability to mudflows and location on the upper part of the watershed (more capable of affecting longer-lasting reductions in natural hazards for lower-stream communities).

Bobuchak village, a small, rural, mountain village, is located in the Ghonchi district of Sughd province. The village consists of an exclusively Tajik population of 531 people (119 households), including 274 men and 257 women and is bordered from the east with by Hishekat village and from the north by Kalai Dust village.

The distance from Bobuchak to the centre of the district is 40 km, and the main mode of transportation of cargo is by car or truck. As the community is quite remote, agricultural yields are not only a source of income for village residents, but also food the production of foods for local household sustenance. In Bobuchak, local farmers are engaged in an agricultural cooperative, called a "Hishekat" and grow mainly potatoes and carrots. Currently, the village boasts 40 hectares of cultivated commercial farmland, 7.8 hectares of household plots, and 2 hectares of "Presidential" land, totaling 49.8 hectares. Approximately 40 hectares are dependent on rainfall while 9.8 hectares are irrigated.

There is one school in the village, with 18 teachers (6 women), 95 pupils, and one medical point with 2 staff. The village is currently void of any manufacturing facility and has only one small grocery store.

The key actors in this case study are teachers, medical workers, youth, elderly, farmers, representatives of local authorities.

OVERCOMING CHALLENGES:



The most challenging aspect of the project was trying to convince the population that reducing the community's vulnerability to mudflows and natural hazards was the responsibility of the community members themselves, and that the restoration of forests, planting of trees, and increased regulation of pasture use will lessen the frequency and severity of destructive mudflows. Taking into account the project's aim to reduce the village vulnerability to natural hazards, these long-term prevention measures are much

more effective than construction of dams or other mitigation projects that seek only to treat the symptoms, not sources of the natural hazards. However, as the "natural resource management" approach is new to the citizens of Bobuchak, further dialogue and explanations with local authorities and community leaders was necessary in order to ensure their support for the project activities.



The next main challenge for the project centred around increasing "Natural Resource Management" in a village with suffering from acute shortages of energy. Despite the village's cold, mountainous climate many villages have lived within the area without access to electricity, or gas for many years- forcing communities to cut down trees in order to cook or heat their homes. In response to this issue, our project team conducted practical trainings within the community on the construction of energy efficient cooking stove, designed to halve the fuel use within each household.

These trainings were conducted within the local school using a hands-on approach that ensures that those participating will be able to replicate similar systems, at a low cost, within their own homes. Additional trainings were held with the villagers on energy efficient ways to cook and boil water, and how collective baking groups would enable villagers to saving firewood.

Within the scope of the intervention, the project team organized practical trainings for community members on how to reduce the risk of natural disasters (mudflows) within the village. These trainings included the production of two videos that featured community members constructing modern cooking stoves, engaging in collective bread baking, and utilizing pressure cookers, all in an effort to save firewood. The idea being, in order to decrease the deforestation of the area, leading to the degradation of lands and increased mudflows, we should first tackle the village's need to heat their homes and cook with limited access to firewood - the main source of energy within the village. This decrease in the amount of firewood used by each household not only saves families money, but is a very important factor contributing to the prevention of natural disasters as it means:

- 1). Villagers will need less firewood and will not cut down shrubs within the mountains allowing for more vegetation to grow and act as a buffer for mudslides;
- 2). Biomass fuel, (dried manure) can be used for fertilizer, resulting in enhanced agricultural production, as opposed to be used for heating in the winter.

Within the scope of these, and other efforts to decrease village vulnerability to natural hazards, community members were trained on:

- The participatory creation of disaster preparedness plans;
- The identification and mapping of dangerous and safe zones within the village
- The production and installation of a hazard alarm bell.
- Basic principles of "Integrated Water Resource Management"
- The development of SIP (Self-Implemented projects) to be designed and implemented by the community
- Family action plans in case of natural disaster

The project team worked directly with all community members to ensure that each resident understood basic elements that could reduce their risk to natural hazards. Additionally, local authorities were also involved in the scope of the project - specifically in the development and implementation of plans for terracing and the creation of a protective "forest belt" for the community. These projects required the involvement of local executive authorities as they require a large amount of land, most of which is held by the government.

In order to ensure local authorities agreement with the plan, a meeting was held at the Jamoat level with active participation of Bobuchak residents and government officials. Within the scope of this meeting, local officials agreed that the construction of terraces in Bobuchak would become a model for other villages within Rosrovut Jamoat. Through this and other meetings, ACTED aims to build community dialogue platforms and promote improved understanding of the causes and exacerbating factors of natural hazards while facilitating the creation of regional cooperation and preparedness.



The most pressing issue not easily corrected within the scope of the intervention, was the issue of improved pasture management. Despite the existence of legislation regulating field grazing, to date the law has no mechanism of action, as it contradicts other legislative acts regarding land rights. A resolution to this issue requires time, and eventually the approval of the supreme legislative authority will need to be received in order to fully reform pasture law. However, through working directly with village residents, the community independently to resolve the issue through the establishment of grazing schedules and temporarily suspending degraded pasture areas.

Thus far, the most valuable action taken within the scope of the intervention was actually enacted by the communities themselves - by establishing grazing timetables and on the basis of a lease agreements, negotiating with land users to suspend degraded pastures, community members filled the gaps left by ineffective policy and affectively took matters and their lives into their own hands.

A general assembly meeting at the village level was organized with the participation of all groups - women, elderly, medical workers, teachers, young people, representatives of the authorities, who expressed their opinion and as result there was decided to vote for the choice of the main risk. After the meeting separate meetings were held with the youth alone, with elderly separately, with the owners of land etc. All meetings confirmed the selected risk.

We considered land use patterns, long-term “green projects” and despite requiring more time to be effective in reducing community vulnerability.



Within the scope of a general assembly meeting held with community, 13 representatives were selected based on their demographics roughly mirroring the demographic spread of the village. These village representatives (which included women, young people and the elderly) were then charged with choosing key risks on which to focus, organizing events, and monitoring the implementation of small projects to reduce disaster risks. However, as the community is quite small, and only two risks were identified by the community survey as “important” both risks identified were taken into consideration in the design and implementation of risk reduction measures.

Because the target village is very small, each villager is seen as a key actor within the community. Overall, the population is open to contact and speak with, and the needs of elderly persons and persons with disabilities are seen to affect the community as a whole.

The main obstacle faced in the community’s reduction of disaster risks would be the lack of responsiveness of the legislative environment to regulate land use. Despite this, Bobuchak community members were able to congregate and establish systems to bridge these legislative gaps.

RISK PROFILE:



100 people were surveyed on the priority risks within the community; survey participants included men, women, young people, civil society, and local authority representatives.

The first stage of the survey’s demographics were as follows:

| Groups | quantity | men | women |
|---------------|-----------------|------------|--------------|
| teachers | 18 | 12 | 6 |
| medical staff | 2 | 1 | 1 |
| youth | 26 | 13 | 13 |
| elderly | 26 | 15 | 11 |

| | | | |
|------------------------|------------|-----------|-----------|
| farmers | 27 | 14 | 13 |
| Local authorities | 1 | 1 | - |
| Total quantity: | 100 | 56 | 44 |

Out of 100 survey participants, 80 identified mudflow as a priority risk.

| Groups | quantity | men | women |
|------------------------|-----------|-----------|-----------|
| teachers | 18 | 12 | 6 |
| medical staff | 2 | 1 | 1 |
| youth | 20 | 11 | 9 |
| elderly | 19 | 13 | 6 |
| farmers | 20 | 12 | 8 |
| Local authorities | 1 | 1 | 0 |
| Total quantity: | 80 | 50 | 30 |

Out of 100 survey participants, 20 identified Natural Resource Management (access to fuel) as a priority risk.

| Groups | quantity | men | women |
|-------------------------------|-----------|----------|-----------|
| youth | 6 | 2 | 4 |
| farmers | 7 | 2 | 5 |
| elderly | 7 | 2 | 5 |
| Total quantity on NRM: | 20 | 6 | 14 |

The target community has identified weak land use planning, insufficient financial resources for DRR, insecure land rights as underlying root causes of the priority risk.

LESSONS LEARNT:

One village may act as an example for other villages, and as such, communication between villagers within the area can be very helpful.

The main lesson the community took away is that it mustn't wait for help from others. Everything is in their possession.

CONCLUSIONS:

Within the scope of the intervention, the next steps will include the integration of small projects - aimed at increasing the management of natural resources and decreasing the vulnerability of the village to natural disasters - into jamoat and district level development plans. These plans act as a public document that forecasts and dictates measures to be taken within each sector of community development. The integration of these risk reduction projects into the aforementioned plans can be done through lobbying with development committees and working groups, charged with drafting and monitoring the plans.

