**left:** People from Roy-e Sang CDCs of Kahmard district constructing soil bunds in Sourakhak watershed, in return for cash. Kahmard valley (downstream) is visible in the background (Photo source: HELVETAS Swiss Intercooperation)

**right:** Greener watershed: An *Acacia* tree growing in Sourakhak watershed (Photo source: HELVETAS Swiss Intercooperation)

# Community watershed management

## Afghanistan – Tanzim Abreza ba sathe Qarya (Dari)

### Watershed (upland) management through people's participation

In the mountainous Kahmard district of Afghanistan, the predominantly rural population sustains on limited irrigated land in the bottom of the valleys. Uncontrolled use of the limited natural resources on less fertile land in high altitude rangeland leads not only to flash floods in the valleys and decreasing soil fertility but also to reduced income of the farmers. The degradation of the watersheds responsible for the floods, which threaten houses, agricultural land and infrastructure in the villages of Kahmard district, must be reduced. The problem can only be solved in the long term by an improved management of the areas where runoff and erosion originate. This is why HELVETAS Swiss Intercooperation launched a community-based watershed management project in 2008 focusing on short- and long-term solutions.

The approach aimed to demonstrate the relevance of community-based watershed management in Afghanistan for mitigating flash flood and drought risks by enhancing local capacities to: (i) undertake restoration measures (structural, vegetative and management) in the critical watersheds to control flash floods and droughts, and protective and relief measures in the downstream areas to safeguard against floods, and (ii) apply sustainable income generating activities to improve livelihoods.

The (upland) watershed approach described here comprised activities like establishment of watershed management committees, identification of critical water courses and respective protective measures to be implemented, elaboration of revegetation and land use concepts, discussion with land users on type of interventions as well as implementation of identified interventions aiming at fodder, fuel wood and cash crop production in designated areas. Whereas the inter-linked downstream approach comprised activities for rural energy management (e.g. community bakeries, bio-briquette, passive solar house, energy plantations), protective infrastructures (e.g. flood ways and flood protection wall), nurseries establishment and vegetable gardening.

The approach had ecological, social and economic impacts: e.g. reduced flood risks and damage, rehabilitation of degraded watersheds, productive use of degraded land and cash for work schemes to improve economic situation of the communities, reduced conflict related to land and water use. An important aspect of the approach was the involvement of the local communities so that they take over the responsibility and contribute increasingly from their own resources. The community-based approach is useful also for decision-makers at national level as the Afghan government works on new policies to promote sustainable, community based rangeland and forest management legislations.



**Location:** Sourakhak Watershed, Kahmard district, Bamyan province
**Approach area:** About 10 km² (uplands)
**Land use type**: Grazing land (originally)
**Type of Approach:** Project based (started in 2008)
**Focus**: Mainly conservation with other activities
**WOCAT database reference:**
**Related technology (ies):** Continuous Contour Trench, *Kanda*, Community Bakery
**Compiled by:** Bhuchar Sanjeev
**Contributors**: Azami Mohammad Khalid, Ashraf Homayoun, Sediqi Ali Ahmad, Sthapit Keshar, Ziauddin Arbob and other Sourakhak watershed management committee members
**Date:** 30/12/2012
**(Editors comments):** This documented fact sheet refers to the approach supported by HELVETAS Swiss Intercooperation for managing the upland areas. For activities in the valley bottoms, e.g. community bakeries, energy plantations, nurseries, protective infrastructure, home based gardening, the approaches followed were different. In all the cases, target CDCs were the main implementing partners of HELVETAS Swiss Intercooperation. Projects related to bio-briquettes, home-based gardens and nurseries were women-specific.

## Problem, objectives and constraints

**Problems: Watershed degradation due to overgrazing, shrub cutting for fuel wood purpose, ploughing of pastures for rain fed wheat cultivation and recurring droughts resulting in severe flash floods and damages.**

**Aims/Objectives**
The goal of the approach was to increase the livelihood security of selected communities of Kahmard district through flash flood and drought risk mitigation.

**Constraints addressed**

| Major | Constraint | Treatment |
|---|---|---|
| Financial | Lack of funds for rehabilitating degraded watersheds, particularly common lands | Funding support from Swiss Re, HELVETAS Swiss Intercooperation and Swiss Agency for Development and Cooperation (SDC) |
| Institutional | Lack of local organisational and institutional mechanisms for sustainable land and water management | Watershed management committees and rules and regulations formed in a participatory way |
| Land use rights | Ambiguous land use rights and ownership with regard to common grazing lands/upland watersheds even though, formally, the land belongs to the state | Clarification of land ownership and use rights through a participatory process involving respective local communities and the district government authorities |
| Technical | Low capacities of local communities to apply community based sustainable land and water concepts and methods | Piloting and scaling-up of multi-purpose conservation measures in the upland and valley bottoms. Capacity building of local communities and project staff. |
| **Minor** | **Constraint** | **Treatment** |
| Policies | Lack of policies and institutional frameworks for community based natural resource management | Lessons learnt shared with relevant government agencies at the district, provincial and national levels, and with SDC and SwissRe. |

## Participation and decision making

**Stakeholders / target groups**


Land users: Group


SLM specialists


Planners: District Government and DDA, CDCs

**Approach costs met by:**

| | |
|---|---|
| International Donors (SDC, SwissRe Award) | 90% |
| Land users | 10% |
| **TOTAL** | 100% |

**Annual budget for SLM component**: About 30,000-40,000 USD. This is based on 5 years average. In some years, there was more expenditure and in others less. It also depends on the site selected and the technologies to be applied.

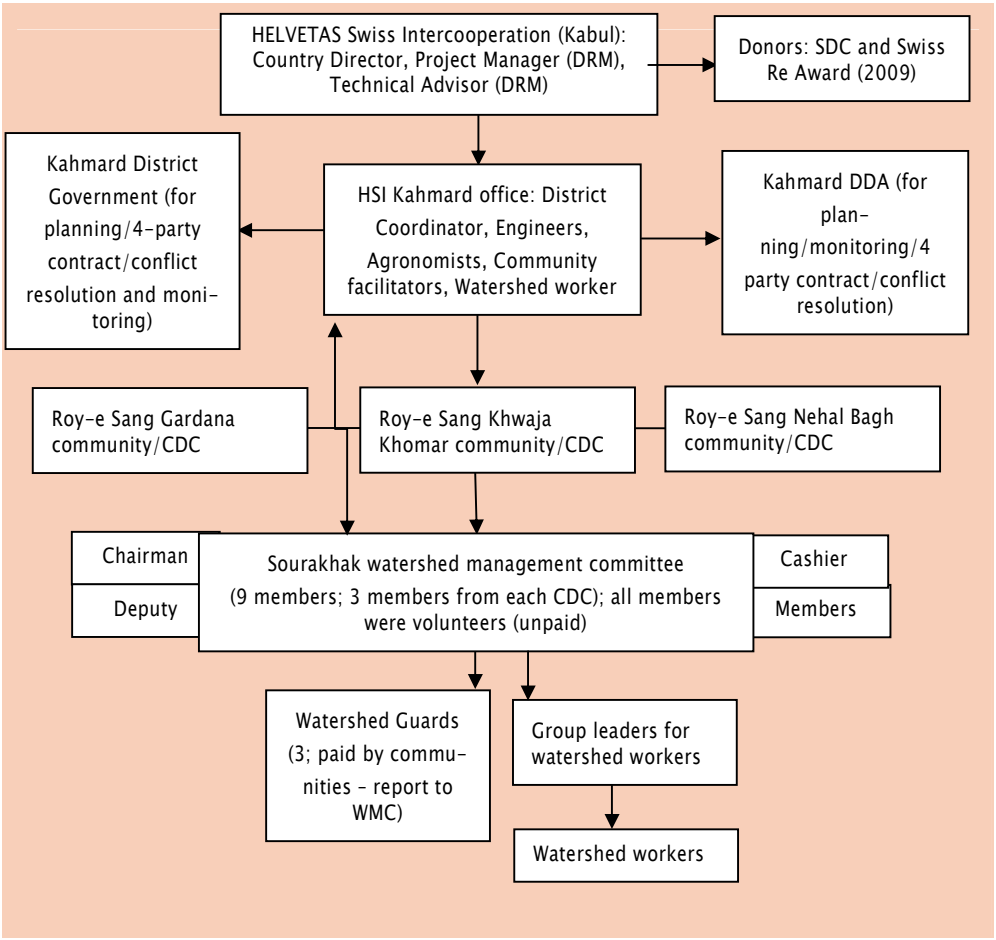
**Decisions on choice of the Technology (ies):** Mainly by SLM specialists in consultation with the land users.
**Decisions on method of implementing the Technology (ies):** Mainly by SLM specialists in consultation with the land users.
**Approach designed by:** The approach was designed by international and national SLM specialists and land users.
**Implementing bodies**: International non-governmental organisation (HELVETAS Swiss Intercooperation); international donors, namely, SwissRe Award and SDC; Kahmard district government; 3 Roy-e Sang Community Development Councils (CDCs), Sourakhak Watershed Management Committee and land users (about 670 families).

**Land user involvement**

| Phase | Involvement | Activities |
|---|---|---|
| Initiation/motivation | Self-mobilisation | Local communities submitted request to HELVETAS Swiss Intercooperation for project support aiming at reducing flash flood risks |
| Planning | Interactive | A participatory planning workshop was organised in 2008. Project proposal was prepared and awarded. Pre-feasibility and feasibility studies were conducted. |
| Implementation | Interactive | SLM options were identified. Technical and financial proposals prepared. Code of conduct with respective CDCs and a 4-party contract was signed. Watershed management committee was appointed by the 3 CDCs and through that committee, all the works were organised with technical support from the project staff. |
| Monitoring/evaluation | Interactive | All the stakeholders, including district government, DDA and local communities, were involved in assessing the quality of work. Surveys were conducted to assess the outcomes and lessons learned. Social audits were also organised for financial transparency. |
| Research | None | |

**Differences between participation of men and women:** There were great differences due to cultural reasons. Mostly men participated in the planning and implementation of upland activities. However, there were projects specific for women in the valleys like projects on bio-briquettes, private nurseries, home based vegetable gardens, vegetable cash crop cultivation, etc.

**Involvement of disadvantaged groups**: There was no specific approach for involving the disadvantaged groups as everyone had equal opportunity.




**Organogram**

Organisational structure for the watershed (upland) management component of the Sourakhak watershed management approach supported by HELVETAS Swiss Intercooperation

(Drawing by Sanjeev Bhuchar)

District government and DDA were involved in planning, conflict mitigation, monitoring and knowledge sharing activities. They were signatories to the 4-party contract.

Abbreviations:

CDC: Community Development Council

DDA: District Development Assembly

DRM: Disaster Risk Mitigation

HSI: HELVETAS Swiss Intercooperation

SDC: Swiss Agency for Development and Cooperation

WMC: Watershed Management Committee

## Technical support

**Training / awareness raising:** Practical trainings (mostly on the job) were organised for Watershed Management Committee members, watershed workers and group leaders. Selected project staff participated in international and national training courses organised by the International Centre for Integrated Mountain Development (ICIMOD, Nepal) and Sustainable Land Management Institute Organisation in Bamyan (Afghanistan), respectively.
**Advisory service:** There was no formal advisory service from the government but HELVETAS Swiss Intercooperation provided continuous technical backstopping.
**Research:** No, but lessons learned and good practices were evaluated, documented and shared with different stakeholders.

## External material support / subsidies

**Contribution per area:** International Swiss Re Award (2009) for sustainable watershed management, SDC, HELVETAS Swiss Intercooperation and participating communities (about 20% contribution) were the main contributors.
**Labour:** The project had a "Cash for Work" approach and national daily wage rates were applied. All the participating families from Roy-e Sang CDCs had the right to work in the watershed. The Sourakhak Watershed Management Committees organised watershed works while for projects in the valley bottoms, CDC members were involved. Whenever there was a need for workers, announcements were made through the mosques so that everyone received information. People worked in groups and each group had a group leader who had the overall responsibility for ensuring that the work was done properly and on time.
**Inputs:** All the equipments, constructing materials and planting materials were financed under the approach.
**Credit:** There was no provision for credit for any party.
**Support to local institutions:** The project built capacities of participating CDCs and the watershed management committees by providing technical, training, and financial and equipment support. By involving government authorities and District Development Assemblies in monitoring activities, their capacities were also enhanced.

## Monitoring and evaluation

| Monitored aspects | Methods and indicators |
|---|---|
| Bio-physical | Plant survival rates, changes in land cover (natural vegetation) and flash flood risks were observed, and application of grazing and shrub cutting rules monitored. Project staff, WMC, CDC and DDA members, and government authorities were involved in the monitoring. |
| Technical | The quality and quantity of SLM measures applied were monitored on a regular basis by the project staff together with the Watershed Management Committee, District Development Assembly (DDA) and designated government officials. |
| Socio-cultural | Reduction in food gap and migration due to cash for work schemes were measured through surveys and case studies. |
| Economic/production | Survey methods were used for measuring change in family income and migration pattern and harvest methods employed for assessing crop yields. |
| Area treated | Areas treated/to be treated were surveyed with the help of watershed management committee members and by using Google Earth technology. |
| No. of land users involved | Direct and indirect project beneficiaries for each major activity were identified during pre-feasibility studies by the project staff in consultation with respective CDCs and watershed committee members. |
| Management of Approach | Participatory annual reviews were conducted by the project management. Based on lessons learned, slight adjustments to the approach were made. |

**Changes as result of monitoring and evaluation:** Some: e.g. Continuous Contour Trenches were constructed in place of staggered trenches; Mulching and pitcher irrigation methods were included for plantations; Community bakery designs were slightly modified. Plantations of tree species were reduced due to remoteness of the areas, water scarcity problem and micro climate. Watershed worker paid by HELVETAS Swiss Intercooperation was appointed for supervision and plantation caretakers were appointed who also guarded the areas.

## Impacts of the Approach

**Improved sustainable land management:** Sourakhak watershed is greener. Shrubs and other useful plant species are re-establishing. There are no more severe flash floods from Sourakhak, and the communities living downstream are protected.
**Adoption by other land users/projects**: Yes, a few: e.g. Doro CDC in Kahmard district, Sayed Baba, Deh Nola, Khudaded Khel, Qwarana CDCs in Saighan district and also in Ruy-e Doab implement similar approach.
**Improved livelihoods / human well-being:** Yes greatly. Flash flood risks were reduced. About 600 families earned cash from work which reduced food gaps and migration. Due to community bakeries, women, children and men are relaxed and there is more cash saving as people purchase less shrubs for baking bread. Many students continue their studies due to increased family income from the watershed works.
**Improved situation of disadvantaged groups:** Yes little, due to cash for work schemes and reduction in flash flood risks.
**Poverty alleviation:** Yes, little due to more cash for work opportunities and protection of private assets from floods.
**Training, advisory service and research:** Trainings provided to land users as well as project staff were effective.
**Land/water use rights:** Clear land ownership and use rights and people's willingness to work collectively are critical factors for the smooth implementation and sustainability of watershed activities.
**Long-term impact of subsidies:** Providing subsidies or external support for community watershed management projects will have positive long-term impacts on local and national economy and the environment and reduce flash flood and drought risks provided too much cash injection (through cash for work) does not cause inflation.

## Concluding statements

**Main motivation of land users to implement SLM:** Reduction of flash flood risks, increased on-site and off-site production and improved well-being of rural population.
**Sustainability of activities:** People will sustain the activities. They will get a boost if there is policy and institutional support from the Afghan government for community based natural resource management.

| Strengths and → how to sustain/improve | Weaknesses and → how to overcome |
|---|---|
| Flash floods risks from Sourakhak watershed reduced (no more severe flash floods and damages) → People must maintain the applied measures, keep control over grazing and shrub cutting and plant more fodder, fuel wood and cash crops. | Lack of institutional support from the government, although the Kahmard district governor is very supportive of the approach → Lessons learnt must continue to be shared with the government. Register watershed committee with the Government following endorsed national guidelines for natural resource management. |
| Cash for work approach improved people's well-being → Fodder, fruit, timber, fuel wood and cash crops (Asafoetida and Cumin) will provide sustainable economic/production benefits in the long-term and they should be further promoted. | Benefit-sharing mechanism is missing → A mechanism should be developed in a participatory way with all the stakeholders and by involving all the community members of Roy-e Sang CDCs. |
| Local organisational capacities for sustainable watershed management enhanced → Social mobilisation aspect needs to be improved. Capacities of staff and watershed management committee members also need to be enhanced for better social mobilisation. | Less involvement of women → Women should be involved in the planning and implementation process in culturally sound way. Men also need to be sensitized about the role of gender in natural resource management and rural livelihoods. |
| The approach facilitates a participatory process based on principles of good governance → The entire target population and not just CDC members and selected land users should be considered during the planning phase. The government should take an active role in supporting community-based and holistic watershed management and disaster management approaches. | Sometimes people think watershed management is about digging trenches and do not have complete idea about which technology should be applied where → People need to visualise and plan holistically. As there is now experience gained, it will be better to prepare watershed management master plans considering community development plans and participatory water and land use plans. |

**Key reference(s):** http://www.youtube.com/watch?v=ySR-qWnZZgM
**Contact person(s):** Mhd. Khalid Azami, Deputy Country Director, HELVETAS Swiss Intercooperation, Afghanistan (khalid.azami@helvetas.org)