

Water for Livelihoods Projects

External Review of Phase I (August 2011 to June 2013)



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Executive Summary

Phase I of the Water for Livelihoods (W4L) project financed by the Swiss Agency for Development and Cooperation and implemented by Intercooperation will be completed by the end of December 2013. To facilitate the planning process for Phase II an external review with an evaluative nature as well as a brainstorming on essential elements for the project's future was conducted from June 10 to 26, 2013. During this time a team of four consultants visited all field areas and met with communities and various relevant stakeholders. The main focus of the review mission was on three issues: development of a water thematic approach, diversity and implementation setup and strategy. As the project is rather young with respect to its presence in the field and interventions, this external review evaluated the project's approaches for impact potential to see whether it is overall on the right track towards contributing to the set outcomes.

The preliminary impact assessment during discussions with primary stakeholders in the field has shown that the project has a high potential to reach the set outcomes and is overall on the right track. Time savings, reduction in labour requirements, increased production and diversification of agricultural produce, decrease in migration/internal displacement and reduction of conflicts were reported. Communities have started to take responsibility for the operation and maintenance of implemented schemes. Their capacity to implement different rural infrastructure related activities has now been acknowledged by different government agencies.

Water thematic approach: W4L's outcomes contribute directly to Pakistan's Water Vision with its focus on the provision of adequate and equitable water supply for drinking and irrigation to meet the needs of all users. The project has long term experience in integrated water resources management, water conservation, and efficient water use, i.e. all corner stones of current water strategies, in some of the neediest areas of the province. Through its close collaboration with the relevant line agencies it developed a platform for up-scaling of promising results beyond project mandate. After the isolated implementation of individual water schemes early on, the project has seen an opportunity to widen its scope with a more thematic approach using different modalities: thematic packaging, multi-stakeholder dialogue and medium size projects that benefit a few communities at the same time. It is also evident that community implemented small rural infrastructure projects are accepted to be comparatively more cost effective, which is acknowledged by the involved government agencies. The schemes developed by the communities themselves with support from the project and technical assistance of government line agencies are qualitatively of high standard and considered to be of better quality than comparable projects without community participation. The project's approach is furthermore considered to foster communities' ownership, while affirmative action towards full involvement of women in the entire process needs further efforts.

Diversity: The diverse design of the project reflects the diversity and includes a cross-section of the province. It also includes areas that do not form the mainstream political power base and that are weaker in socio-economic status. Differences in aspects of social inclusion of minorities and all gender are reflected with the current working area selection. Thematically the project is broad based within the water theme. It addresses the topics of drinking water supply, irrigation water supply, soil and water conservation and disaster risk management. At the same time the project's design fails to address some pertinent issues related to these topics, e.g. general water conservation awareness, sanitation, hygiene and water treatment. It is recommended to

continue with the same geographic working area selection as the project has a comparative advantage to remain in the same districts in order to capture the cultural, linguistic and ethnic diversity of Khyber Pakhtunkhwa. The project shall change from a current conceptually independent to an interdependent integrated approach with a primary focus on irrigation and drinking water supply and disaster risk management. The approach shall accommodate qualitative issues such as water pricing, water use efficiency, low cost water treatment and sanitation more prominently. For topics that are not at the core of Intercooperation's expertise and/or where other initiatives are present, they may be covered through strategic partnerships/collaboration with other development partners/projects.

Implementation setup and strategy: The project is working through an interesting model in which non-governmental organisations (both local as well as national) are facilitating partners, government line agencies provide technical assistance and local village and women organisations are the implementers. The mission observed the organizational setup to be appropriate and appreciated by all partners. In order for all partners to be more effective in their roles and responsibilities it recommends capacity development including basic personal skills, exposure and basic facilities for line agency staff and facilitating partners. For achieving this objective, the mission recommends that W4L will need to invest in additional human resources. The mission further feels that there is potential to increase and strengthen coordination with government stakeholders at the district level using the already established mechanisms. This can be ensured through inviting the officials to regular review and planning meetings, providing them with logistical support for carrying out field visits and ensuring their participation in each individual project's milestone achievement monitored through their signature of milestone minutes. The recent Local Government Act 2012 may be explored as an opportunity for this.

The project has developed guidelines for individual schemes describing what facilitating partners, technical service providers and village/women organisations should ensure/look after for proper implementation of an individual scheme. To make full use of this valuable resource the project shall compile the process and different guidelines in a process manual including an easy to follow step wise approach including post-construction monitoring and support. The initiated water governance activities shall be replicated in other areas taking into account existing and relevant legislation (e.g. Water Users' Association Ordinance 1981, National Drinking Water Policy 2009, Local Government Act 2012) and indigenous management systems. Water has a cost: in addition to the capital and recurrent costs for the scheme, which communities share with the project, it also has an opportunity cost, i.e. the benefits foregone from possible alternative uses of the resource. However, the situation in each scheme is different and the project shall launch a debate during the planning exercise on a concept of water costing and if feasible propose pilot interventions in Phase II. Close collaboration with the Livelihood Project shall continue guided by the recently developed collaboration guideline.

The external review mission concluded that the project is doing overall a good job and is largely on track, both in terms of achievements as well as in terms of approaches. For the planning of Phase II the review mission has made 23 detailed comments. Overall the mission recommends to streamline the processes with a focus on integrated planning of water resources management and development and local level, to promote community implemented small infrastructure and to consolidate the initiatives with more focus on two to three key water topics. In this context the project is also encouraged to study the Local Government Act 2012 as an opportunity to localize the initiatives.

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The Water for Livelihoods Project

The Water for Livelihoods (W4L) project has emerged from the several years' experience of the Swiss funded and Intercooperation implemented Livelihood Project. W4L took over the water related activities from that project as a start of its activities resulting initially in small scale community driven and village based actions. In the second year, the project initiated activities in collaboration with the district level government departments with the aim towards a water-sector approach and impact of activities beyond the village level.

The W4L project is financed from the additional 0.5 per cent credit for Water and Climate Change through the Swiss Agency for Development and Cooperation and is designed as a multi-phase programme from August 2011 to July 2016 with a total budget of CHF 10.5 million. Phase I, with a budget of CHF 4.23 million, will be completed by the end of December 2013. The project has the goal to *'contribute to improving and securing livelihoods and increasing food security of communities in Khyber Pakhtunkhwa of Pakistan through sustainable, secure and equitable access to water'*.

The main components of the project are:

- A. Access to water (safe drinking water, water governance and water for irrigation)
- B. Protection of livelihood assets (disaster risk reduction structures and other interventions);
- C. Social organisation and empowerment;
- D. Improve capacities for management and quality of services.

The project is implemented by Intercooperation Pakistan in collaboration with the Planning and Development Department, Government of Khyber Pakhtunkhwa.

The Revision Mission

As the project's Phase I is coming to an end and the planning process for Phase II will be initiated soon, this review had an evaluative nature as well as included brainstorming on essential elements for the project's future. In this process the external consultants (Dr Juerg Merz, Ms Durre Shawar, Mr Karim Nawaz and Mr Sher Azam Khan) worked closely together with the Intercooperation country programme team and were supported by the W4L project team. The review was carried out during June 10 to 26, 2013. During this time the consultants visited all field areas and met with communities and various relevant stakeholders in the project areas as well as in Peshawar and Islamabad. A list of people that were met during the mission is attached as Annex 1.

The main focus of the review mission was on three issues: development of a water thematic approach, diversity and implementation setup and strategy. The detailed terms of reference including an updated mission schedule is attached as Annex 2.

As the project is rather young with respect to its presence in the field and interventions, it is too early to evaluate the project's results/impact and based on that, strategize for Phase II. This external review therefore evaluated the project's approaches for impact potential to see whether it is overall on the right track towards contributing to the set outcomes.

The Water Sector Context

Pakistan's Water Vision: By 2025, Pakistan should have adequate water available, through proper conservation and development. Water supplies should be of good quality, equitably distributed and meet the needs of all users through an efficient management, institutional and legal system that would ensure the sustainable utilization of the water resources and support economic and social development with due consideration to the environment, quality of life, economic value of resources, ability to pay and participation of all stakeholders.

The water discourse in Pakistan continues to be dominated by issues related to the Indus river basin, the water distribution amongst the provinces according to the Water Accord 1991 and infrastructure development for canal irrigation in the world's largest contiguous canal irrigation area. However, overall the main issue for discussion remains water scarcity; Pakistan is considered one of the most water-scarce countries in the world with a continuously growing population and water utilization reaching towards its limits. Only 15 per cent of the crop requirements of the country are met by direct rainfall, the rest has to be met by irrigation. The surface water resources are finite depending largely on the snow and glacial melt from the eastern Hindu Kush, Karakoram, and Western Himalayas. Groundwater, which to a large extent is also recharged by the irrigation system, is reported to supply over 50 per cent of the crop water requirements of the country. As never before, there is now a strong and growing need to manage this precious resource more carefully and efficiently to ensure water for all on a sustainable basis.

This discussion is reflected in Pakistan's Water Vision shown above, the draft National Water Policy and the Pakistan Water Sector Strategy, which is still awaiting formal approval. The strategy's objectives are (adapted from Ministry of Water and Power, 2002):

- Provision of water for all through water conservation, additional storage, providing improved water allocations;
- Improvement of institutional and management capacity;
- Poverty reduction, mainly through the irrigation and drainage and urban and rural water supply and sanitation sub-sectors;
- Improving the involvement of women in water mainly through the rural water supply and sanitation sub-sector;
- Increasing equity in water distribution for poverty alleviation, increasing irrigation efficiencies and reducing dependence on groundwater;
- Increasing stakeholder participation in irrigation and drainage and domestic water supply and sanitation;
- Improving public awareness and understanding and information to provide the foundation for increased stakeholder participation;
- Improving agricultural yields and production to meet the food needs the future;
- Increasing cooperation between irrigation and agriculture to accomplish improvements in irrigation efficiency and increased crop yields.

The National Drinking Water Policy of 2009 is based on the principles that access to safe water is a basic human right and that water allocation for drinking water is prioritized over other uses. Special attention is given to addressing the needs of the poor and the vulnerable and the importance of women's participation in planning, implementation, monitoring and operation and maintenance of water supply systems. The policy encourages rainwater harvesting, integrated

sanitation and hygiene promotion, water metering and community capacity building for implementation, operation and maintenance. The policy further foresees the establishment of Water and Sanitation Coordination Committees at different, including the local levels.

In Khyber Pakhtunkhwa, where overall the lack of infrastructure inhibits the province of taking full benefit from its allocated water share, surface irrigation plays a major role with surface irrigation schemes tapping water resources from the Indus, Kabul and Swat rivers. New infrastructure development is on-going on Gomal Zam in the South of the province. Localized groundwater has been crucial in supporting the agricultural sector, but abstraction in excess of recharge resulted in a lowered water table and the contamination from the underlying saline water (e.g. in Karak, Kohat, Bannu, D.I. Khan). As in the national case, the current debate in the province revolves also around the optimization of both surface and groundwater development including improved supply and demand management for drinking water supply and food production:

- Increasing efficiency in agriculture with a shift from a supply to a demand based irrigation management;
- Water conservation through storage of rain and storm water to increase water supply;
- Enhanced understanding of the available groundwater resources and safe yields¹.
- Institutional arrangements at local level for improved water resources management.

The Comprehensive Development Strategy 2010 - 2017 of the Government of Khyber Pakhtunkhwa prioritizes the expansion of the irrigated area in the province as well as maintenance and rehabilitation of existing schemes. Priority is also given to investment in water efficiency programmes, including small scale schemes, field levelling, rainwater harvesting, water conservation and regulation of groundwater, and flood protection. Water and sanitation programmes are to be undertaken by the local governments in order to increase water supply and sanitation coverage especially in the rural areas. Soil conservation has been identified as priority activity to increase agricultural productivity. In the short term, the priorities are the strategy aims at high visibility improvements in villages, notably for drinking water, with an associated institutional structure involving broad community engagement, labour intensive public works providing employment, especially to young men and investment in the construction, improvement, rehabilitation and maintenance of irrigation infrastructure, with a strong emphasis on maintenance.

There is no comprehensive water policy in Khyber Pakhtunkhwa. The Irrigation Department has developed a business plan for integrated water resources development in the province aiming to contribute to the National Water Vision (Irrigation Department, no date). The Rudh Kohi system in the South of the province is governed by the *Kulyat and Revajat-e-Abpashi* (principles and regulations). The recent publication of the Local Government Act in 2012 provides Union Councils the function to 'provide and maintain public sources of drinking water, including wells, water pumps, tanks, ponds and other works for the supply of water'. At the level of District Councils the 'construction and repair of embankment, supply, storage and control of water for agricultural purposes' and the formation of community associations are relevant functions in addition to water supply for drinking as in the case of Union Councils.

¹ The safe yield of groundwater is the amount of water that can be withdrawn from an aquifer without producing an undesired effect (e.g. reduced groundwater discharge, reduction in ecological base flow, depletion of reserves)

Overall Assessment

In the two years of W4L 97 different schemes have been completed or are being constructed benefiting 15,671 households (details in Table 1). As mentioned above the External Review was not tasked with the assessment of achievements against the logical framework. However, it is important to note that the project is on track to achieve the majority of the output targets except for output f (community based disaster risk management). Activities related to this output were only recently initiated in close collaboration between W4L and the Livelihoods Project.

Table 1: Selected outputs from W4L up to June 2013

Scheme type	Number	Households	Remarks
Drinking water supply schemes	11	945	
Livestock drinking water ponds	13	3,430	
Irrigation schemes	19	3,472	17,940 acres land irrigated. Includes rehabilitation, extension and new schemes.
Flood protection structures	25	4,091	631 acres land protected
High efficiency irrigation system	1	3	
Field inlets/outlets	12	257	
Gated structures	7	3,160	
Mini dam	1	200	The direct beneficiaries are 26 households, whose land will get irrigation water. Others will get indirect benefits (e.g. water for livestock)

While it is too early to make a comprehensive and representative impact assessment, discussions during the field visits with primary stakeholders have shown that the project has high potential to reach the set outcomes and is overall on the right track:

- Increased production and diversification of agricultural produce:** The new and extended irrigation schemes supported by the project have increased the command area in comparison to previous years. This has given the farmers an opportunity to cultivate land that was previously not cultivated and/or to have increased production by 100 per cent, i.e. from one to two crops annually. Farmers have also diversified their crops from previous staple to (high value) cash crops.
- Time savings:** Local communities used to spend a lot of time for collection of drinking water or for irrigation of their fields requiring a lot of labour. At times, school boys would be asked not to go to school and be with their parents on the farms. The same work that would take 24 hours before can now be done in one day's time (30 to 50 per cent reduction) and the rest of time can now be used for doing some other work. Similar findings were reported by the farmers involved in the high efficiency irrigation scheme in Dir, where they reported almost 70 per cent of reduction in irrigation time.
- Decrease in migration/internal displacement:** Through the initiatives in the Rudh Kohi (i.e. spate irrigation) system and the construction of flood protection walls, the project has contributed in reducing migration in the flood prone areas of D.I. Khan during monsoon

seasons. Men in these areas generally focus on the protection of their agricultural lands, on which their livelihoods largely depend. As a result, the responsibility to protect homes and belongings remains with the women who also take care of their children and elderly family members. This duty often compels them to migrate to places considered safe from floods.

- **Abatement of conflict:** The construction of irrigation schemes has reduced water conflicts within and in-between villages. A conflict between the communities of Gas Koro and Aspar/Chitral was resolved after the construction of a channel and a formal agreement on the water use. Similar practices were observed in D.I. Khan where water user groups and associations have streamlined the water use in accordance with the existing *Kulyat and Revajat-e-Abpashi* and water rights.
- **Community's capacity acknowledged:** Communities have managed the construction of different infrastructure schemes and they started to take responsibility for the operation and maintenance of implemented schemes. Their capacity to implement different rural infrastructure related activities has now been acknowledged by different line agencies.
- **Increased income, diversified food availability and reduction in water-borne diseases:** These benefits were mentioned by the communities during the field work for the cost-benefit assessment.

The field assessments and the recently conducted cost-benefit analyses of selected schemes have shown that the selected technologies are fit for purpose and the approaches and strategies are valid with proposed adjustments to be considered during planning of Phase 2. Pictures in Annex 3 show the difference without and with interventions of the project (attention: the locations are not the same, i.e. no before/after assessment).

In view of the upcoming planning of Phase II the project stakeholders may consider reviewing the logical framework in order to improve the activity-output-outcome-impact logic in the indicator selection. In the current logical framework with three outcomes and twelve outputs many indicators seem to overlap and the sense of outcome as an effect of the direct outputs is lacking. Furthermore, the indicators are not disaggregated according to the targeted primary stakeholders. Disaggregated indicators in terms of gender and marginalized population could support better understanding and sense of achievement as a result of the project's targeting efforts.

Recommendation 1: The logical framework shall to be simplified during the upcoming planning process to reduce duplication and increase clarity. A clear activity-output-outcome-impact pathway logic shall be maintained.

Recommendation 2: Disaggregated indicators in terms of gender and marginalized population (e.g. minority, landless, extremely poor, women headed households), shall be introduced at outcome level to ensure better targeting.

Development of a water thematic approach

The W4L project was planned and based on the experiences of the Livelihoods Project with the objective to upscale those experiences and to provide expert implementation support on water related interventions. The scope of the project's actions was therefore small scale community driven and village based in the beginning. Based on the lessons learned at local level, the project attempted to change its approach to a more water-thematic approach aiming at a water-sector dialogue and impact beyond the village level. With W4L's objectives to provide sustainable, secure and equitable access to water for rural communities, the project directly contributes to Pakistan's Water Vision (see above) and has a lot to offer to the sector. This does not only include experiences with water related technologies directly, but also with approaches relevant for the implementation of rural infrastructure projects even beyond water.

While it was very important to gain confidence in the promoted technologies and approaches at first, the project had recognized that it has to have a wider audience and scope than individual schemes. It has attempted this in a number of different ways:

- **Thematic packaging:** In cases the project has packaged several activities, e.g. construction of a mini dam combined with irrigation pipes and afforestation and erosion control structures in the uplands (planned) based on a watershed management plan in Karak and comprehensive activities in the Rudh Kohi system in D.I. Khan. The combination of these activities is expected to have an impact on the location's water availability, ecology and the people's livelihoods.
- **Multi-stakeholder dialogue:** The long term experience of Intercooperation and the Pakistan Agricultural Research Council in Rudh Kohi has led to a multi-stakeholder collaboration and recently an experience sharing workshop on Rudh Kohi system in Pakistan was organized in collaboration with different partners. Further efforts are now made in collaboration with different stakeholders to develop the local capacity of technical service providers as part of a multi-step capacity development programme.
- **Medium size projects:** The project is envisaging the implementation of schemes that were identified by the line agencies as part of their Annual Development Plan preparations, but could not receive the necessary funding. These schemes are relatively larger in nature and

Box 1: Mini-dam programme of the Soil Conservation Department

Reportedly the Government of Khyber Pakhtunkhwa intended to construct mini-dams in the current Annual Development Programme 2012/13 based on the experiences gained by the Punjab Government, who had constructed 1,000 mini-dams in the Barani region. However, no dams have been constructed and the amount allocated has been shifted to the new Annual Development Plan. The mini-dam constructed in Karak district by the community with the technical assistance of the Soil Conservation Department and financial support of the project may serve as a model for successful implementation of this programme.

cover typically several villages. In this case the government rules and regulations are followed for the entire process.

Intercooperation and its projects have considerable experience in integrated water resources management, water conservation, and efficient water use, i.e. all corner stones of current water strategies, in some of the neediest areas of the province. For promotion of technologies beyond the project

area it is important to document and exchange experiences with line agencies and likeminded development partners. The World Overview of Conservation Approaches and Technologies (www.wocat.net) provides the necessary instruments: a questionnaire for documenting salient features of different relevant technologies and approaches (<https://www.wocat.net/en/methods/slm-technologies-approaches.html>). These detailed questionnaires provide the basis for short summary sheets to describe the technology or approach for further marketing/dissemination.

Through its close collaboration with the relevant line agencies the project developed a platform for up-scaling of promising results beyond project mandate. Demonstrating good practices in its work so that similar approaches are further carried out by government is among the project's objectives. Recent development of ponds and mini dams to be started by the Soil Conservation and Irrigation Departments in the province in general and particular in the project area is an excellent opportunity where knowledge gained by the project can be replicated (see Box 1). For effective implementation of these projects and other relevant umbrella projects mentioned in the Annual Development Plan W4L may check the possibilities to be involved as technical assistance in working districts of Intercooperation projects in general. Similarly staff from line agencies can get advantages of such experience and knowledge in the form of visits, orientation course, sharing intellectual gains, procedures and methodology. These guidelines are an excellent source of knowledge to be used by line agencies in their work of similar nature thus saving time, efforts and resources to reinvent the wheel.

At local level the Local Government Act 2012 may provide a window of opportunity for the project. According to this act the responsibility for water resources development at local level is devolved to the level of Union Councils (i.e. *'Provision and maintenance of public sources of drinking water, including wells, water pumps, tanks, ponds and other works for the supply of water'* 81 A (vi)) and District Councils (i.e. *'Provision, maintenance, improvement and management of its public ways, culverts, bridges, public buildings, wells, water pumps, ponds and other works of water supply.'* 82 A (i) and *'Construction and repair of embankment, supply, storage and control of water for agricultural purposes'* 82 D (ix)). In the process of comprehensive water resources planning, the water use master plan may be an appropriate tool. The water use master plan is a holistic, participatory, and inclusive planning process that takes an integrated approach to the management of water resources and uses the lowest administrative unit as a planning unit (see Annex 4).

Recommendation 3: W4L shall develop a systematic and pre-designed engagement at different levels for up-scaling its activities based on the experiences with the different approaches mentioned above. This may include:

- **Local level:** water use master plan (including recharge, retention and reuse) at Union Council or watershed level;
- **Provincial level:** documentation of experiences with different approaches and technologies using the World Overview of Conservation Approaches and Technology tools, comparative analysis of cost-benefit assessments between different technology options, exchange of experiences including workshops and exposure for partner and project staff.

Recommendation 4: The mission endorses the project's idea of creating a Technical Advisory Group for independent expertise on different issues in the water sector.

Community and women participation

Community participation in the entire planning and implementation process was observed to be strong, which is to be expected based on the chosen approach; schemes are only financially supported by W4L upon request of the community. A third dialogue, i.e. a community meeting with all members from the village and women organizations, approves the intent with a resolution signed by all, which ensures overall accountability of all members. Communities are expected to contribute of 10 to 20 per cent of the construction costs, mainly in kind (labour, local material). The schemes are all constructed by the communities themselves with technical support in design and construction from the line agencies. This was evident during the field visits, where all schemes were observed to have operation and maintenance committees. These committees collect fees for maintenance from the beneficiaries on regular basis as documented in the committee's register.

The schemes developed by the communities themselves with support from the project and technical assistance of line agencies are qualitatively of high standard and considered to be of better quality than comparable projects without community participation. Furthermore, these schemes are accepted to be comparatively more cost effective. These findings were observed and endorsed by the mission member from the government side.

An issue for the long-term remains rehabilitation of these schemes. While minor maintenance is the responsibility of the community itself, major maintenance as a result of natural hazards or other unforeseen circumstances is beyond the capacity of the communities. At the same time government line agencies can only rehabilitate schemes for which they have the necessary records, i.e. schemes the line agencies have built themselves. As mentioned above, the Local Government Act 2012 should be discussed as a potential opportunity in this case and Union Councils may be interested to get support to develop a system for water scheme registration.

Recommendation 5: To ensure long-term sustainability and avoiding duplication of rehabilitation efforts the project shall develop a concept for local registration of schemes (irrigation, water supply, disaster management) in Union Councils or local line agencies.

The mission observed that women have a substantial role in disaster risk management, fetching water and are the main users/managers of drinking and non-drinking water. Their lives are directly affected by the availability of water and energy, but they seem to have limited role in decision making regarding the project interventions. Most of the communities, i.e. when involving both women and men, have favoured irrigation projects in areas where water is scarce or difficult to be channelled to their fields for better productivity and livelihood. However, if women are involved independently, they have different priorities and mainly request for drinking water supply, which is considered their domain, and protection walls, that save them and

Box 2: Washing pad on irrigation canals in Chitral (photo: Durre Shawar)



their families from internal displacement and migration.

W4L is working in communities that have both village and women organisations established through other, past initiatives of the Agha Khan Rural Support Programme in Chitral or the Livelihoods Project. The women organisations in all the visited areas are at varying level of maturity and hence have varied level of engagement in the project interventions. In Chitral district where women organisations are relatively mature due to their long development history and where women have participated in decision making of the schemes implemented in the their communities, they are contributing as members of the operation and maintenance, audit and procurement committees. One women organisation of Aspar has jointly implemented an irrigation project with the village organisation, and the project finances were even transferred to their account. In the other working areas in Lower Dir, Karak and D.I. Khan Districts, the role of women has been relatively weaker. They have been consulted on the project interventions, but their expressed needs remained un-addressed due to bigger livelihood needs for irrigation channels and systems. In some cases, protection walls have been erected especially on women's demands. In other cases, there is no involvement of women or even no women organisation mobilized alongside the village organisation.

The community men in general have orthodox views about women's participation and they often consider that women have the same needs as the community as a whole. Hence, they feel no or lesser need for women's engagement in project activities and believe that it is sufficient to talk to women inside their own family boundaries only. Across the board they have an understanding that women will benefit when men will benefit and when prosperity is achieved. When a discussion around women's participation arose, it generally ended up with the feedback, that women are indirect beneficiaries of the project. However, in areas where women's priorities were taken into account, i.e. drinking water and flood protection walls, male members of the communities acknowledged their role and understanding of communal issues.

The project in collaboration with its partner will need to look for ways and means and to allocate resources to strengthen the role of women from consultation and receiving indirect benefits to being equal partners and implementers in each stage of the project cycle. Separate projects may be implemented through women organizations as the needs of women often remain un-addressed. For that purpose Intercooperation may need to develop a gender policy/strategy with respect to all its projects including W4L. This policy/strategy will provide guidance, direction and technical assistance to its own staff and to the facilitating partners in designing and implementing project activities. It must identify the role of women and women organizations in the project and must take them as equal partners in decision making. This shall also provide guidance on how to engage women and village organisations simultaneously in identification, implementation and post completion stages of the project and how to ensure sensitization of village organisations and communities on the role of women. Furthermore the project will need to allocate additional resources in terms of training of its own and facilitating partners' staff in how to effectively engage with women organizations. The social mobilisation process must be given due weightage which will not only ensure successful implementation of the project, but will also enhance their sustainability. Gender role analysis can be carried out in each community to create sensitivity towards the role of men and women but also to use such information in the project design and planning. Affirmative action has to be designed into project strategies and interventions. Women not only have a role at the household level and agricultural activities, they also are equal partners in water usage and its conservation.

Recommendation 6: In order to raise the involvement of women throughout the process, Intercooperation must develop a gender strategy/guideline to be followed by the projects. Social mobilization to facilitate this process including proper gender role analysis needs to be given more attention.

Recommendation 7: Facilitation partners shall receive gender training that should enable them to conduct gender role analysis prior to the identification of possible schemes in the target communities and this shall ultimately strengthen the role of women organisations in the project cycle.

Networking

The networking efforts of the project differ depending on the different topics that are part of it: in case of Rudh Kohi, on which Intercooperation has already been working since about a decade, the networking is very strong. Several organisations are working in close collaboration on field implementation, applied research, training, policy dialogue and international linkages (Box 3). In other topics, particularly more recent topics such as water supply and irrigation water supply, the collaboration is limited to the respective government partners and local non-governmental partners. There is a general knowledge in the team about other activities in the region and sector, but no formal working relationships have been formed for common implementation. Other projects for collaboration:

- Pakistan Poverty Alleviation Fund (where Intercooperation provides technical assistance for a rural infrastructure component);
- World Bank's Water and Sanitation Programme;
- UNICEF's Sanitation at Scale Programme.

Box 3: Networking in Rudh Kohi

Intercooperation is in formal contact and collaboration with Pakistan Spate irrigation network to influence at policy level in the province and country. Joint meetings and workshops are being conducted on this subject. The local water users associations, groups and line departments engaged in spate irrigation are also involved in this collaboration. Both Intercooperation and Spate network intend to work on educational curricula to be introduced at academic level. The experience, knowledge and practices pertaining to spate irrigation are shared on regular basis and few innovative activities are jointly proposed in future, not only at national, but also at international level (<http://www.spate-irrigation.org>).

Recommendation 8: The project shall continue with and build upon the very successful networking activities in Rudh Kohi. For the other topics other stakeholders and collaboration potentials shall be identified.

Recommendation 9: Efforts to exchange knowledge with other projects through thematic networks are encouraged. Potential projects that may be beneficial are spate irrigation projects in other parts of the country, soil conservation projects in Punjab, Swiss supported projects in Nepal, Tajikistan and Kirgizstan and the World Overview of Conservation Approaches and Technologies programme.

Diversity

W4L is designed taking into account a geographic, thematic and social diversity. The diverse design of the project reflects the diversity of Khyber Pakhtunkhwa and includes a cross-section of the province. The aspect of

Working area (→ Geographic diversity)

The four working districts and one frontier region² were initially selected on the basis of the working districts of the Livelihoods Project and the project is currently active in eleven valleys or watersheds in these districts. Differences in aspects of social inclusion of minorities are reflected with the current working area selection. It includes areas that do not form the mainstream political power base and that are weaker in socio-economic status. It is intervening in areas with vulnerable people that are relatively poor with difficult and longer road access, i.e. Chitral. In this district the project is working with communities of the Kalash culture that are infrastructure wise not well developed as compared to other valleys in the same areas, have needs for water sector interventions and have low socio-economic status. In D.I. Khan the project has selected areas that are flood prone, are distant from road access and have a very poor population with no livelihood opportunities.

With this diverse selection of districts the project is able to show its results in a diversity of conditions present in the province so that the results are validated and tested in different conditions.

Recommendation 10: Geographically the project has a comparative advantage to remain in the same districts in order to capture the cultural, linguistic and ethnic diversity of Khyber Pakhtunkhwa, which is directly linked to the poverty and power structure in the province, and to consolidate the experiences before further up-scaling through different partners. The peripheries of existing districts may be included if appropriate.

Thematic interventions (→ Thematic diversity)

Thematically the project is broad based within the water theme. It addresses the topics of drinking water supply, irrigation water supply, soil and water conservation and disaster risk management (including community based disaster risk management and climate forecast applications; see Figure 1 on the left). Based on the overall goal of the project with a livelihood and not an environmental focus, the water conservation topic should not be addressed independently, but in combination with the other topics. This means that water conservation activities in this project should always be in association with a component that has a direct impact on the livelihood of the communities that implement the schemes. Water conservation schemes with the main purpose to provide benefits to entire downstream areas or watersheds may be beyond the scope of this project and the community led infrastructure development approach. The current cross-cutting topic of policy dialogue is considered to be too narrow and it is suggested to add the notion of awareness to this topic. With this new aspect government

² Frontier Region D.I. Khan; districts of Chitral, Dir Lower, Karak and D.I. Khan

officials' capacity development and exposure would gain more importance leading ultimately to a policy dialogue and development process.



Figure 1: Thematic shift of conceptually independent (left) to interdependent (centre and right) themes

Given the conditions in the rural areas of the Khyber Pakhtunkhwa, where the main water use is for drinking water supply and irrigation, these two sub-sectors are to be dealt with in an integrated approach. Access to drinking water is a basic human right and should therefore be given priority. However, this access is not productive and therefore does not add any economic incentive. This may be provided by the access to irrigation water, which results in improved food security and increased income. The additional income may provide the communities with an opportunity to enable them to pay for operation and effective maintenance not only of the irrigation schemes, but also the drinking water supply schemes. Social mobilisation and technical support are of very similar nature and therefore do not pose much additional burden to the project management compared to the benefits for the local population.

In case of disaster risk reduction the project needs to take a conscious decision about its added value and comparative advantage. Option 1 would include, like at present, disaster risk reduction as an independent topic with a focus on hydro-meteorological hazards. In the review mission's understanding this consists of small infrastructure, awareness and skill training to complete a full package. In option 2 disaster risk reduction would only form a part of the drinking and irrigation water supply activities as a function of the sustainability in these sub-sectors, e.g. protection of a channel from landslides or protection of a drinking water supply intake from flooding. Training and awareness related to disaster risk reduction would not be considered. The two options are compared in Table 2.

Table 2: Comparison of different options for thematic consolidation

	Option 1	Option 2
Focus theme	- Drinking water - Irrigation water - Disaster risk reduction	- Drinking water - Irrigation water
Cross-cutting	- Water conservation - Policy dialogue and awareness	- Water conservation - Disaster risk reduction - Policy dialogue and awareness
Remarks	Would include entire disaster risk reduction theme including infrastructure and training/awareness activities	Would include only infrastructure activities to protect drinking/irrigation water theme

The proposed consolidation of focus provides the opportunity to ensure that the chosen topics are covered more holistically. At present the drinking water activities fail to address the pertinent issues of sanitation, hygiene and water treatment. Given the policy background provided by the National Sanitation Policy 2006, which recognizes that households are already meeting the high costs of poor sanitation through very high expenditure on health services, the growing experience in Pakistan and elsewhere in South Asia that communities are capable of building and maintaining sanitation systems, and the right facilitation and support by the local governments, this component should be added as part of the social mobilisation efforts and awareness activities. It is important to note that the project should be involved in the physical construction of sanitation facilities. Low cost water treatment may be an additional issue to consider, particularly in the Southern districts where communities have to rely on flood waters or surface runoff harvesting (Box 4).

Box 4: From access to water to safe drinking water

The project is working in the drinking water supply sub sector in areas where open storage tanks and earthen ponds are the only probably option. Here issues of water quality remain unaddressed due to particular circumstances. During the field visit such delicate issues were discussed with the project engineer and professionals and opportunities of experience sharing of similar circumstances (pond water contamination etc.) were discussed. It is suggested to have a few days orientation/training on such aspects where low cost measures, tested somewhere else, can be discussed with project professionals. However, overall the project shall focus on ensuring access to potable drinking water first, which is in line with the activities of the Humanitarian Aid of the Swiss Government in Pakistan.

In case of the irrigation water supply general water conservation awareness would be crucial. For this the development of a farmer field school for on-farm water management was proposed.

Recommendation 11: The project shall change from a current conceptually independent to an interdependent integrated approach with a primary focus on two pillars, irrigation and drinking water supply, with disaster risk reduction activities as a function of these interventions' sustainability (*option 1*) or a focus on three pillars including drinking water supply, irrigation water supply and disaster risk reduction (*option 2*). The approach shall accommodate qualitative issues such as water pricing, water use efficiency, low cost water treatment, sanitation and hygiene awareness more prominently. For topics that are not at the core of Intercooperation's expertise and/or where other initiatives are present, they may be covered through strategic partnerships/collaboration with other development partners/projects (e.g. Water and Sanitation Programme, Humanitarian Aid).

Social Inclusion (→ Social diversity)

According to the project document of W4L, the target groups of the project 'consist of communities – with a special focus on poor and marginalised households - where access to water, both for drinking and irrigation purposes, remain a major challenge'. In addition the document mentions that the project also targets the women population.

Interventions such as drinking water supply schemes, drinking water ponds and flood protection walls cater to the needs of the entire population including the most marginalised in a given community. Multi-use systems combining new and improved irrigation with hydropower also benefitted the communities without any discrimination and particularly women benefited from these systems. Flood protection walls are meant for the most critical points in the community and are designed for holistic protection. They herewith do not discriminate. Improved irrigation channels and Rudh Kohi have directly benefitted farmers owning land of varying sizes i.e. from smaller to big landlords and influential people that have water rights through other means. These systems by design do not include the most marginalised population, but provide benefits to them indirectly, i.e. agricultural labourers are directly benefitting from the projects as they work on a 2:3 ratio on the lands with the owner and in case of increased production both get equally benefitted. The landless people i.e. *Syed, Nai, Hejam, Meras*³, all receive a part of the produce and as the production increases they also get more benefits. *Usher*, a religious tax paid on agriculture produce (typically it is about 1/10th of total produce but it may vary), is also given to the poor population. Moreover, poor receive residuals and wood and are allowed free grazing for their animals. The projects implemented an improved efficiency irrigation system in Lower Dir with farmers that are relatively well off and own tube-wells. With these kinds of intervention in future – three more systems are planned for 2013 - the project will need to carefully see and evaluate how to extend these schemes to the target population and how to economise on the scale.

The mission does not see any need to change this target population as the selection seems to be relevant. However, for easier communication and targeting, the target groups and the terms 'poor' and 'marginalized' shall be defined more precisely.

Recommendation 12: The focus on gender and marginalized groups shall be strengthened (see above).

Recommendation 13: The project defined the target groups as the communities – with a special focus on poor and marginalized households – living in remote and rain-fed areas of Khyber Pakhtunkhwa, where access to water, both for drinking and irrigation purposes, remain a major challenge. For easier communication and improved targeting the project shall define and communicate the terms poor and marginalized and set overall targets for this special focus.

Implementation setup and strategy

Implementation Setup

The implementation strategy of W4L relies on the close collaboration and expertise of governmental and non-governmental partners. Local village and women organisations are the scheme implementers taking the responsibility to construct, operate and maintain the schemes. Ten non-governmental partners (both local and national) are responsible for the social mobilization of these community organisations in the project districts. Five governmental

³ Nai, Hejam and Merasi: Barbers and dancers who are considered socially low class and relatively poor families that serve the affluent class around the year and on certain occasions); Syeds: are the decedents of prophet Muhammad family and are usually respected and given gifts by the local communities and poor and rich alike.

partners⁴ provide their technical expertise and, if possible, further extension support beyond the project activities. This process is facilitated by a small W4L team⁵ with an office in Peshawar and two regional offices in Dir Lower and D.I. Khan. Overall there is an agreement between the Planning and Development Department, Government of Khyber Pakhtunkhwa, donor and implementer. In the new Annual Development Programme for the fiscal year 2013/14 this agreement is reflected.

For ensuring the effective collaboration with and achieving cooperation of the government, the project enters into agreement with the line agencies through signing of a memorandum of understanding at provincial level. This agreement binds the district level line agencies to provide cooperation and technical assistance to the local communities via active facilitation of the facilitating partners. The memoranda have already been signed with the Pakistan Agriculture Research Council, Soil Conservation Department and the On-Farm Water Management Department, while the process has been initiated for the remaining departments.

Intercooperation has a long history of working with the facilitating partners, who are also involved in the W4L activities. They were all partners in various past projects and there is an inherent assumption that these organizations now have the capacity to implement project activities without further capacity building or social mobilisation support. Also there is an understanding that previous projects have provided enough inputs into organizing village and women organisations and that they are now mature enough for implementation of community level projects. For 'old' areas this assumption is accepted. The W4L project however, has worked both in communities where the village and women organisations are at varying level of maturity and having zero to multiple years of experience. The review team felt that some kind of social mobilization support will be required by the facilitating partners in these cases to allow them to work in communities.

This model is considered very good and appreciated by all involved partners as it has provided opportunities for all involved partners. It has led to successful government and community relationships. Communities have expressed their satisfaction with the technical services rendered by the line agencies and, in places, have been able to receive additional development support (such as further extension of piped irrigation network). These relations are expected to be maintained in future and will increase the sustainability of the different community based infrastructure interventions. However, there are districts where the relationship with the government still needs to be strengthened. In some cases the project is depending upon a single person's support, i.e. in D.I. Khan with a very strong dependency on Pakistan Agricultural Research Council for technical support. While such strong relationships are interpreted positively, similar relationships need to be established with government line agencies. In Chitral district, where the line agencies were not as accessible and where they had less time to spare for project activities due to seasonal limitations, the project has engaged a consultant from the private sector. This was an appropriate decision to overcome short-term difficulties, but should not become a rule in future.

⁴ On Farm Water Management Department, Public Health Engineering Department, Irrigation Department, Forest Department, Soil and Water Conservation Department, Pakistan Agricultural Research Council

⁵ Peshawar: Team leader, Community Development Coordinator/Deputy Team Leader, Senior Irrigation Engineer, Administration/Finance Officer, Driver; Dir Lower: Field Engineer, Community Facilitator, Administration/Finance Assistant, Driver; DI Khan: Field Engineer, Community Facilitator, Driver

W4L has provided technical training and exposure to district line agencies' staff in relation to new technologies (e.g. mini dam), but they often lack the capacity to fully take on the responsibility for technical assistance to the communities. This includes the lack of basic personal skills, relevant office facilities and field equipment. As a part of capacity development strategy the project may invite officials from the Planning and Development Department for joint field visits in the project areas. Staff from the provincial departments is encouraged to accompany their district colleagues to the field where possible for learning opportunities.

Good coordination with the different partners at the district level is crucial to reap synergies. For this regular, possibly monthly or quarterly, monitoring meetings between W4L, line agencies and non-governmental organisations will help to assess progress and adjust activities accordingly. First initiatives in this regards have been taken, but could be strengthened. The project shall assess whether the annual planning could be adjusted to the government planning cycle, so that the line agencies could bring some of these projects forward as part of the government's Annual Development Plan. As mentioned above, the recent Local Government Act 2012 may be explored as an opportunity for this purpose as well.

Up to date there is little involvement of the private sector in this project. However, in the case of high efficiency irrigation schemes closer collaboration with the private sector is crucial to develop a sustainable supply chain for the necessary equipment. A similar approach was developed by HELVETAS in Kirgizstan (Box 5). Another potential case would be the mobilization of bulldozers for earth moving operations in the Rudh Kohi system: the government has yearly funding in the Annual Development Plan and contingency to support local water user associations by deploying bulldozers. Under the conventional approach the revenue department transfers funds to the engineering wing of the Agriculture Department for bulldozer deployment before the monsoon flash floods arrive. Generally, the bulldozers are not in good working conditions and less in number to meet the high demand. Thus work often remains incomplete when spate flows reach. In this case, dialogue is

needed with the Revenue Department to simplify the rules and make them more flexible so that the available funds could be used to hire efficient earth moving equipment from the private sector.

Box 5: Private sector involvement for efficient water use in agriculture

In Kirgizstan HELVETAS has developed a value chain project for drip irrigation involving private sector producers and wholesalers in collaboration with the civil society and private sector retailers.



More information: www.helvetas.kg

Recommendation 14: The mission observed the organizational setup to be appropriate and appreciated by all partners. In order for all partners to be more effective in their roles and responsibilities it recommends capacity development including basic personal skills (e.g. computer applications, technical drafting), exposure and basic facilities for line agency staff and facilitating partners. This will further enable the line agencies to provide better services to the community for similar initiatives. For achieving this objective, the mission recommends that W4L will need to invest in additional human resources (see below).

Recommendation 15: The mission observed that the long standing and close relationship of Intercooperation in the Rudh Kohi areas and system has led to enhanced capacities of the partners and successful implementation. Similar efforts and capacity building in other topics are encouraged.

Recommendation 16: The mission feels that there is potential to increase coordination with government stakeholders at the district level. This can be ensured through inviting the officials to regular review and planning meetings, providing them with logistical support for carrying out field visits and ensuring their participation in each individual project's milestone achievement monitored through their signature of milestone minutes. The recent Local Government Act 2012 may be explored as an opportunity for this purpose as well.

Recommendation 17: The project is involved in different aspects of the water sector, where the private sector could play a bigger role. For this purpose the project should consider collaborating with the private sector where possible.

As mentioned above W4L is managed by a small team of Intercooperation staff. This small team has worked out so far and up to date as shown above with good results. This is believed to be thanks to the tireless efforts of all team members. However, in order to build the capacity of the project partners as recommended above and to provide impetus for more effective monitoring and knowledge management, the team needs to be expanded. There is a need of an additional field engineering expertise to closely collaborate with the technical service providers. In the Peshawar office a Monitoring, Evaluation and Knowledge Management is required to support and apprise the management on the project progress and future course correction as well as in the development of knowledge products. Two options, option 1 'Extended' and option 2 'Lean' for this are presented in Table 3.

Table 3: Proposed staffing⁶

Option 1 'Extended'	Option 2 'Lean'
<p>In Peshawar office (5): Team Leader, Deputy Team Leader, Monitoring, Evaluation and Knowledge Management Officer, Administration and Finance Officer, Driver</p> <p>In Lower Dir and D.I. Khan (8): Senior level coordinator (Senior Engineer), Field Engineer, Community Coordinator, Driver</p> <p>In Chitral and Karak (2): Field Engineer</p> <p>Total: 15 staff</p>	<p>In Peshawar office (5): Team Leader, Deputy Team Leader, Monitoring, Evaluation and Knowledge Management Officer, Administration and Finance Officer, Driver</p> <p>In Lower Dir and D.I. Khan (6): Senior level coordinator (Senior Engineer), who also takes on the responsibility as field engineer in one district, Community Coordinator, Driver</p> <p>In Chitral and Karak (2): Field Engineer</p> <p>Total: 13 staff</p>

⁶ This assumes that thematically the disaster risk reduction component is either dropped as a main topic or the disaster risk management trainings and awareness activities outsourced to another project/organization.

Recommendation 18: The mission recommends recruiting additional staff for the Project Support Unit in Peshawar, at regional and/or district level. A Monitoring, Evaluation and Knowledge Management Officer shall support more effective monitoring, capturing of field observations and experience documentation efforts. An additional senior level engineer may be recruited for providing technical assistance to the W4L field staff, management and support of the facilitating partners and strengthening the relationship with the line agencies at regional level.

Implementation strategy

The project relies on the need based implementation of small to medium sized infrastructure projects by the communities themselves, which has shown to be viable. The village organizations have implemented schemes as small as a water pond to small scale irrigation channels, to medium sized schemes catering to as many as 16 villages. These projects have maintained the quality of construction and led to ownership of communities for operation and maintenance. The government line agencies that the mission met during the review were appreciative of the viability of these projects and affirmed that the quality of these community implemented projects with the technical assistance from the government line agencies was better than comparable project without community involvement.

For effective implementation of the infrastructure schemes, the project has developed guidelines for schemes of each topic describing what facilitating partners, technical service providers and village/women organisations should ensure/look after. The guidelines include clear criteria for scheme selection including criteria to support the selection of schemes for rehabilitation. In general, rehabilitation of a scheme is only supported if the scheme was partially damaged by a natural disaster or the damaged scheme is very old and its physical maintenance has reached a level beyond community resources.

These guidelines are well developed and may be one of the main tools to be promoted for up-scaling in other projects of the civil society or the government. One of the facilitating partners in Chitral informed the review mission that they are using the same guidelines for implementation of other infrastructure projects as well. In order to capture the entire process including the proper application of the guidelines mentioned above, a process flow diagramme (two examples from Nepal are shown in Figure 2) may be helpful for easy reference of all partners, indicating roles and communication of the approach to primary stakeholders.

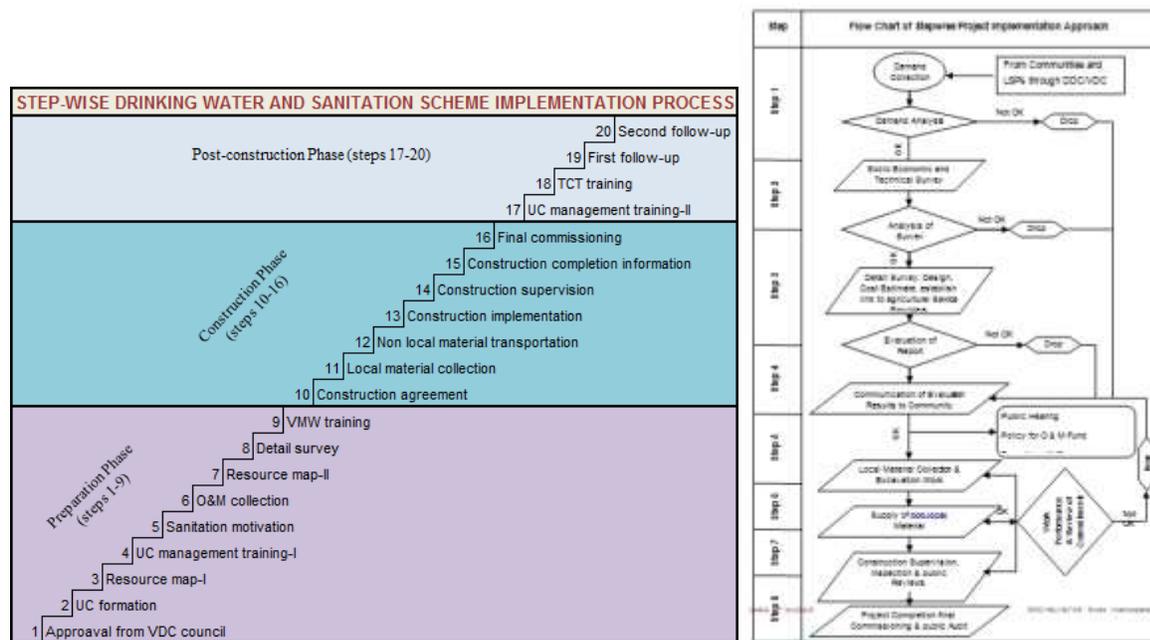


Figure 2: Step wise process flow diagramme for drinking water supply systems (left; Water Resources Management Programme, Nepal) and irrigation scheme (right; Local Infrastructure for Livelihood Programme, Nepal)

For effective post-construction support relevant steps may be added in above process flow diagramme. This could include steps in relation to sanitation follow-up in case of drinking water projects or agricultural extension support in case of irrigation projects. For this post-construction implementation support the close coordination with the Livelihood Project, in particular, or any other relevant project is crucial. Post-construction monitoring, once after about six months and another once after a period of about two years, is also crucial in order to identify any design faults or problems for which the community cannot be held responsible. Simultaneously the water use can be assessed and correction measures can be taken if needed.

- Recommendation 19:** The project shall compile the process and different guidelines in a process manual including an easy to follow step wise approach. This step wise approach must also include post-construction monitoring and support of the schemes constructed as part of the W4L. The post-construction support may include steps that relate to other projects (e.g. Livelihood Project, Rural Support Programmes, local networks, social welfare departments and local government). The last step shall clearly notify the end of the W4L’s support for an individual scheme (exit strategy). A possible last step could be community based economic analysis of the scheme to tune and align the communities’ thinking towards sustainability of the scheme and cost recovery for successful management. The above mentioned point shall be part of the guidelines to be evaluated and modified periodically.
- Recommendation 20:** The project has recently established a computer based Monitoring Information System that has captured all relevant information with respect to the implementation of individual schemes and in relation to the logical framework. This will enable the project to carry out more effective monitoring of the project given the system is made fully operational and relevant staff are trained in its use.

Water governance

In addition to the scheme based water governance activities with the operation and maintenance committees, the project has initiated water governance activities in the Rudh Kohi areas and in districts of Karak.

In the Rudh Kohi areas the project has engaged in a comprehensive area water approach, where water user groups are represented from three levels:

- **Village/hamlet:** individual land owners with water rights → water user group;
- **Gandi:** several villages → water user association;
- **Zam:** seasonal river level → apex body of water user association.

This system has the aim to govern the water at macro level but covering up-, mid- and downstream. Up to date the project has facilitated this process at two locations successfully and a similar exercise is underway in other locations in the project area. The International Spate Irrigation Network is considering testing this unique approach in other countries of the Middle East and Africa.

In other districts, the project has initiated the discussions about water user associations as sub-committees of the village organisations. This sub-committee should represent the different interests in the water sector. Given the complexity of the matter and the complicated legal framework with the Water Users' Association Ordinance 1981, the National Drinking Water Policy 2009 and the Local Government Act 2012 all referring to some sort of local coordination committees, the mission recommends that the project engages in an in-depth discussion also with stakeholders to develop a possible concept. The collaboration in developing this concept could later support up-scaling.

Traditionally water rights in many parts of Pakistan have been determined centuries ago on the basis of initial investment into the water source in different ways. These rights continue in more or less the same way until now. Water rights are similar to land rights and thus too sensitive and complicated to reform even by the government. However, new interventions in the form of new resource development, rehabilitation of existing schemes/sources, whether by government or projects, have the potential to bring changes in water rights especially in the favour of marginalized groups. To reform water rights, one needs to have comprehensive understanding and background of the situation, high negotiation and influencing skills and full understanding of nomenclature of previous and/or existing practices/water rights carefully and should find ways to incorporate different and new set of rules/water rights. Water as a resource has generally four broader categories of characteristics: acquisition, allocation, distribution and surplus/shortage and thus water rights are determined on the first step, i.e. who has acquired the water at the first instant by investing how much? In the case of W4L it could be argued that here it was the project and the government on behalf of the community that acquired the water source and therefore decide how the water is allocated. Hence, they are in the position to adjust the water rights to the new scenario.

Recommendation 21: With the successful implementation of water users associations in the Rudh Kohi areas, the project is considering replicating some of these concepts in other areas as well. In this regard the project is advised to take notice of the existing and relevant legislation (e.g. Water Users' Association Ordinance 1981, National Drinking Water Policy 2009, Local Government Act 2012) and indigenous management systems as implemented in Chitral and Dir. The project shall develop a clear concept to ensure compliance of its initiatives with the legal framework.

Recommendation 22: It is suggested that field engineers, technical staff, social sector professionals, staff from the line departments need orientation and basic training in integrated water resources development and management. Hard core engineers and staff have hardly enough exposure to social aspects of resource management from their academic and administrative background. Such orientation and training will be helpful in understanding the issues at initial stages of scheme implementation.

Water costing

Shortly before the external review mission, W4L commissioned two cost benefit analyses studies; one study was conducted in Chitral district including one irrigation, one drinking water and one disaster risk reduction scheme. Another study was done in Di Khan. Both studies came independently to the same conclusion:

Chitral: 'One can safely conclude that the schemes launched under W4L programme were initiated after thoughtful consideration of local needs for livelihoods improvement and economic development of the area. The benefit-cost analysis reveals that schemes are feasible with given costs and perceived benefits regime immediate after the completion. The sensitivity analysis also indicates that the schemes will remain viable even if, value of perceived benefits decreases up to 25 per cent.' (Zarif 2013)

DI Khan: 'The benefit cost analysis reveals that benefits exceed costs for all values of discount rates taken into account for the selected schemes in D. I. Khan and Karak. The values of internal rate of return further indicate the robustness of the results and support the main conclusion. The values of internal rate of return are far greater than prevailing discount rate and signify that the schemes will remain viable at any discount rates below estimated internal rates of return for each of the selected schemes.' (Jan 2013)

Recommendation 23: The provided cost-benefit analysis explains investment versus production and income in each individual scheme. This analysis shall be further substantiated with comparative analyses between different types of systems, e.g. on a) unit cost involved to convey the water from the source to the end use, b) unit cost per litre water and, c) increase in production and income as motivation for members of water user association to increase their repair and maintenance contribution than before. The results shall be brought to the notice of policy makers.

Communities are paying a considerable share of the schemes:

- The capital costs are shared by communities (9 - 35 per cent; depending on the size of the scheme) and W4L (remaining costs). Community contribution is inversely proportional to the size of the scheme.
- The operation and maintenance committees in all schemes have started to collect maintenance fee varying depending on the communities and the purpose of the schemes.
- On regular basis the communities pay for scheme operation (where applicable, e.g. drinking water supply scheme in Tal) or water charges (e.g. in the Rudh Kohi system). The charges are based on different parameters in different schemes, i.e. on household, land holding, pumping time, or actual water use basis. In cases they are symbolic for increasing ownership or have not been adjusted to current prices.

One of the reasons to introduce water pricing is the currently often inefficient use of water. The project has initiated first trials with high efficiency irrigation measures. In addition to the quite expensive options being tested at present, the project may also pilot low cost options, e.g. as the ones promoted by the International Development Enterprises. Different water saving technologies were tested by the HELVETAS funded On-Farm Water Management Project in Kirgizstan (see Annex 5). This project also tested options for water monitoring in irrigation channels, e.g. mobile Tompson and Chipolletty weirs, to increase water efficiency.

Recommendation 24: Water has a cost: in addition to the capital and recurrent costs for the scheme, it also has an opportunity cost, i.e. the benefits foregone from possible alternative uses of the resource. However, the situation in each scheme is different: in some locations water is scarce and careful water application is a prerequisite to ensure water availability for all. In other places there is enough water so that water demanding crops can be grown without measurable impact on the overall ecological health, but better impact on the farmers' incomes. The project shall launch a debate during the planning exercise on the concept of water costing and if feasible propose pilot interventions in Phase II.

Collaboration and Synergies with Livelihoods Project

The W4L and the Livelihoods Projects are complementary and produce mutually reinforcing impacts on sustainably protected livelihood assets and increased productivity of land, water and livestock resources. Thanks to the links with the Livelihood Programme, Agha Khan Rural Support Programme and others the water schemes are not implemented in isolation, but emerge from the village development plans, and contribute to value chain activities or even multi-use systems (e.g. irrigation and electricity generation in Shishi/Chitral).

The project will need the following synergies with the Livelihood Project or others at the following stages of the project:

- Before awarding of a scheme to a community, it should be mandatory to have a village and women organisation in the area, which has reached to a certain maturity level and opened a bank account.
- During and especially after completion of the scheme construction additional livelihood support may be required to make full use of the scheme's benefit, i.e. link with agricultural extension better seeds and inputs, market linkages, or linkages with the business communities for promoting, supporting and marketing organic farming. Similarly, linkages

can be developed with other partners working in hygiene promotion, economic and social development of women and poor populations.

To this end the projects have established detailed operational guidelines for cooperation in the field. The offices of both projects in Peshawar and in the field are housed under the same roofs, thereby utilising shared services and profiting from the exchange of expertise and experiences. They both use the same non-governmental partner organisations. In order to react on the needs of the other project without major delay, both projects have built some flexibility into their yearly plan of operation.

The effective collaboration of these two projects is crucial, particularly in the context of ensuring impact from the new irrigation water resources. 2013 is the first year of commonly planned projects and up to date, effective collaboration has started in two watershed management schemes in Karak and Chitral districts as well as in the Rudh Kohi areas. During the planning of Phase II it is important to involve the Livelihood Project throughout and potentially changes in their project document should be discussed with the donor.

Recommendation 25: The guideline provides an excellent basis of the collaboration and shall be implemented effectively.

Conclusions

The external review mission concluded that the project is doing overall a good job and is largely on track. Substantial progress has been achieved in a short period of time of less than two years. This progress was mainly possible because of the very good collaboration between community, government, civil society and the project team.

The model of community implemented rural infrastructure mobilized by the civil society and technically assisted by the government line agencies is observed to be very effective. All stakeholders appreciate the collaboration and see the project's impact potential impact even beyond project area and duration. The communities have taken responsibility and ownership over the small infrastructure projects. A majority of the beneficiary population in project villages is reaping the project benefits direct through increased access to drinking or irrigation water and protection from hydro-meteorological hazards. The schemes developed by the communities themselves with support from the project and technical assistance of line agencies are qualitatively of high standard and considered to be of better quality than comparable projects without community participation. Furthermore, these schemes are accepted to be more cost effective than government implemented projects.

For the planning of Phase II the review mission has made 23 detailed comments above. Overall the mission recommends to streamline the processes with a focus on integrated planning of water resources management and development and local level, to promote community implemented small infrastructure and to consolidate the initiatives with more focus on two to three key water topics. In this context the project is also encouraged to study the Local Government Act 2012 as an opportunity to localize the initiatives.

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Annex

Annex 1: People met

Name	Designation	Location
Intercooperation		
Arjumand Nizami	Country Director	Peshawar
Nadeem Bhukari	Acting Team Leader Livelihood Improvement Project	Peshawar
Water For Livelihoods Project		
Munawar Khan Khattak	Team Leader	Peshawar
Tawheed Gul	Community Development Coordinator	Peshawar
Khan Mohammad	Senior Engineer	Peshawar
Ismat Begum	Community Facilitator	Peshawar
Muhammad Sajid	Field Engineer	Peshawar
Mujahid Shah	Field Engineer	Karak
Aamir Hameed Mughal	Regional Program Coordinator	DI Khan
Raja Muhammad Zarif	Consultant	Peshawar
Dawood Jan	Consultant	Peshawar
Muhammad Fayaz	Consultant	Peshawar
Partners		
Syed Shabab Ali Shah	Chief Economist, Planning and Development Department	Peshawar
Akhtar Rehman	Chief (Infrastructure), Planning and Development Department	Peshawar
Abidnoor Afridi	Chief (Water), Planning and Development Department	Peshawar
Ahmad Said	Chief Planning Officer, Planning and Development Department	Peshawar
Aman Ilahi	Director General, On-Farm Water Management Department	Peshawar
Jehanzeb Khan	Director, Soil Conservation Department	Peshawar
Hamzullah	Regional Focal Person, Khwendo Kor	Karak
Shakirullah	Chief Executive, Al-Khidmat Development Organisation	Karak
Muhammad Yaseen	District Officer, Soil Conservation Department	Karak
Behram Jan	District Officer, On Farm Water Management Department	Karak
Muhammad Asif	Senior District Officer, Public Health Engineering Department	Karak
Akbar Zaman	Chief Executive, Yaraan Welfare Organisation	Karak
Mohammed Wali	Chairman GADO (Garm Chashma)	Chitral
Muhammad Amin	Manager GADO (Garm Chashma)	Chitral
Sohrab Khan	Chief executive CIDO (Shishi)	Chitral
Salim Kamil	Manager CIDO (Shishi)	Chitral

Name	Designation	Location
Atique	Manager BDOC (Birir)	Chitral
Asfand Yar	Chairman YSDO	Chitral
Aurnagzab	Manager ABKT, Amlok Dara	Lower Dir
Fazal Haider	OFWM Officer	Lower Dir
Tariq Ali Khan	XEN Irrigation Department	D.I. Khan
Inayatuulah Khan	SDO Irrigation Department	D.I. Khan
Rehmat Ali Khan	SE Public Health engineering Department	D.I. Khan
Yousaf Kundi	XEN Public Health engineering Department	D.I. Khan
Qadeerullah Khan	SDO Public Health engineering Department	D.I. Khan
Irfan Khan Masood	AC Rud Kohi	D.I. Khan
Faheem Khan	Chief Executive VEER	D.I. Khan
Mohamamd Qazafi Khan	Officer SPO	D.I. Khan
Noaman Latif	Principal Engineer, PARC/WRI	D.I. Khan
Afsheen Zaidi	Female Social Organizer VEER	D.I. Khan
Hussan Bano	Female Social Organizer VEER	D.I. Khan
Rania Zaidi	Female Social Organizer SPO	D.I. Khan
Communities		
Swiss Agency for Development		
Helmut Wolf	Programme Manager SDC	Islamabad
Ernesto Morosin	Coordinator Humanitarian Aid	Islamabad
Resource Persons		
Khalid Moatidullah	Independent	Islamabad
Usman Khalid Awan	IWMI	Islamabad
Zaheer ul Islam	PARC	Islamabad
Shahid Ahmed	IUCN	Islamabad

Annex 2: Terms of Reference

External Review Water for Livelihoods Project

June 2013

1. Background

The W4L project is financed from the additional 0.5% credit for Water and Climate Change and is designed as a multi-phase programme (from August 2011 to July 2016) with a total budget of CHF10.5 million. Phase I, with a budget of CHF 4.23 million, will be completed end December 2013.

The project operates in four districts of KP namely Chitral, Lower Dir, Karak and DI Khan and one FR of DI Khan. The project is institutionally anchored in Planning and Development Department of KP with Chief Economist being the ex-officio Director of the Project. The project operates in close collaboration with the relevant district line agencies (e.g. On Farm Water Management, Irrigation, Public Health and Engineering, Soil Conservation etc.). Eight local NGOs facilitate the project and partner communities in the field from identification of the scheme till finalization of the post construction operation and maintenance of the schemes as well as in forming and managing water user groups / associations.

2. The External Review mission

The project is now close to ending its phase 1 and soon embarking on planning process for the second phase. The review will have an evaluative nature as well as will include brainstorming on essential elements for the future of the project whereby external consultants will work closely together with the IC country programme team, supported by the W4L project.

The composition of the team is proposed to comprise the following consultants:

1. Dr. Juerg Merz, Team Leader (Water Specialist / hydrologist)
2. Mr. Sherazam Khan, Director, appointed by the Project Director
3. Mr. Karim Nawaz. Specialist community water governance / rights
4. Ms. Durree Shawar, gender/local governance specialist
5. Dr. Daud Jan, Economist⁷

The team will visit all the field areas and meet communities and various stakeholders identified beforehand as well as by the mission on spot as they deem necessary.

3. Main elements of the ToRs

The following main elements are proposed for the review and evaluation team to be analysed for recommendations:

⁷ Dr. Jan has already been commissioned as a consultant for conducting analysis of selected schemes in each domain of the project. These findings and his time as per demand will be available to the review team during the mission.

A. Development of a water-thematic approach

The W4L project was planned and based on the experiences of the Phase 1 of the Livelihoods Programme (2008-2011). This project up-scaled experiences on water related interventions and therefore it was meant that the scope of actions was small scale community driven and village based in the beginning in 2011. Based on lessons learned on small scale level the question arises whether this approach may or can be further developed into a more water-thematic approach, leading to some water-sector dialogue and impact beyond the village level. Such types of activities were started in the second year of the phase in direct collaboration with District level Government Departments.

- Analyse in how far the project has been successful in the shift from only village based community driven actions to more water-thematic activities?
- What factors favour this shift, and which ones were impediments?
- Analyze the communities' ownership and accountability over water-linked activities and the mandate of other authorities involved.
- Analyze the element of community participation, particularly of women in the entire planning, implementation, monitoring and evaluation process.
- Review the nature and scope of quality standards on water-linked topics without project and the project's target on this topic and achievements.
- How far the project was able to propel networking and synergies for the purposes of policy dialogue, knowledge transformation and quality of implementation.

B. Diversity

Because the origin of the W4L project is closely linked to the livelihood approach, the W4L-activities show a large diversity in its actions, ranging from water for irrigation; to safe drinking water, to livestock ponds, to flood protection and DRR. For the interest to build synergies and complementarities with the IC's Livelihoods Project the geographic coverage is also diversified over 4 Districts and 1 Frontier Region, thus operating in different agro-climatic zones. The 3rd element of diversity is the categories of social groups in the rural communities: – men, women, landowners, landless tenants and general villagers. The menu is to serve a wide range of clients in the districts.

- Analyze in how far this thematic, geographic and social diversity may be helpful or a challenge in acquiring a more water-sector oriented approach
- Recommend a priority setting that would give basis for influencing a water-sector oriented strategy while conserving the ownership of such sector activities by community Organisations as well as Government Agencies responsible for the sector.
- How to make sure that the thematic and geographic concentration, if recommended by the mission, do not jeopardise community participation.

C. Implementation set up and strategy

In order to plan, manage and implement the W4L-project the project team is comprised of a central team based in Peshawar and two regional teams based in the South and North of the Province. On local level the W4L project is implementing its activities through local NGOs. The Government Line Departments provide technical support to communities when implementing the project's activities.

- The mission is to analyse the current organizational set-up of the W4L project and recommend some appropriate revised one in view of some water-sector oriented support on some revised scale and scope
- Analyze the current implementation strategy and suggest how to further strengthen and improve the stakeholders' mandates and resources in view of future project objectives.
- Map the initial achievements of the project in water governance & management in the field, what needs to be done to strengthen this element.
- Understand dimensions of water costing and water economics for sustainability
- In how far the complementarities and synergy with the Livelihoods Project have been achieved and what to do to further improve this.

An overall note to the mission:

- The project is rather young with respect to its presence in the field and interventions. It has only started in June 2011 and therefore it is too early to evaluate the results / impact of the project and based on that, strategize for the second phase. Since the project is still being implemented and lessons are being draw, yet some short term changes and trends can be already be observed now which will suggest if the project is on the right track. It will be pertinent to analyze approaches and results if they are contributing, or are likely to contribute to the outcomes. It is evident that we cannot evaluate the outcomes at this stage.
- For a more water-sector approach, the review mission is expected to also be cognizant of relevant national debates, sector specific policies and priorities at the provincial level and existing initiatives in this regard. This will give us a picture of the external environment as well on the subject and how other actors involved in the same area are approaching this. IC has begun some desk review in this regard which will give some insights in this regard. The mission is expected to give a one page dedicated on the above just to give a sector contextual overview of the situation.

4. The Review mission schedule (proposed)

The mission will be formally fielded on 14th of June with a briefing with SDC. The Pakistani members of the team will begin the field visits to Chitral, and Lower Dir on 11th of June and join the team Leader on 14th in Islamabad for the remaining mission. The aspects on water costing and water economics are analysed under a separate mandate signed by W4L and Dr. Daud Jan, Economist, Results will be available at the onset of the review mission.

The updated mission schedule is appended below

5. Reporting:

- The structure of the mission report will be communicated and discussed at the briefing of the mission.
- One week after the debriefing of the mission the Teal Leader will submit the draft mission report for observations by SDC, IC and HSI.
- Four weeks after receiving observations on the draft mission report the Team Leader will submit the final mission report
- The mission is strongly encouraged to make a photo documentation with elements of with-out and with project interventions.

External Review Mission of W4L project of P&DD KP, field visit Plan (Tentative)					
10th June 2013					
17.00	20.00	Pakistani Team members gathering	Shelton Guest House, Peshawar	W4L	- The team members will meet each other and will discuss the field plan etc with project team.
11th June 2013					
Departure	Arrival	Activity	Place	Responsible	Remarks
Departure from Peshawar by Air					
07.00	09.00	Travelling by Air	Chitral	W4	- Check In Hotel Terichmir, - In case, due to any reason, the team did not travel by air, then the team will travel by road.
Field visit plan 11th June 2013					
10.30	12.00	Travel by road	Gobor valley, Garam Chashma	GADO, W4L	-After Check-In at Tirichmir hotel, the team will leave for field visit.
12.00	14.30	Flood protection wall	Gistini	GADO, W4L	-Site visit and meeting with VO/WO (joint)
14.30	16.30	Proposed DWSS	Burbunoo	GADO,W4L	-Meeting with VO/WO on Proposed Scheme
16.30	18.30	Travel back	Chitral	GADO,W4L	
12th June 2013					
07.30	09.30	Travelling by road	Shishi valley	CIDO, W4L	Will reach to the first meeting point/ site
10.00	12.00	Visit to Drinking water supply Scheme	Tangal	CIDO, W4L	Visit to scheme followed by meeting with the village organization. Separate meeting of VO and WO at Tangal
12:00	14:30	Irrigation channel	Taar	CIDO, W4L	Visit to scheme followed by meeting with the village organization .Separate meeting of VO and WO - Lunch
14.30	16.30	Watershed management (DRR structure)	Gaouch	CIDO, W4L	Visit of the site, meeting with community
16.30	18.00	Travel back	Chitral		
13th June 2013					
07.00	08.30	Travelling by Road	Birir Valley	BDOC, W4L	The team will travel to Birir valley to see the field activities of the project.
08:30	10:30	Irrigation channel	Grass Kuru	BDOC , W4L	Visit to the scheme and meeting with VO. Separate meeting of VO and WO at Grass kuru
10:30	12:00	Watershed management (DRR structure)	Bishal		Visit to the scheme and meeting with VO. Separate meeting of VO and WO at Bishal
12:30	17:30	Travel back	Birir to Dir Lower	W4L	The team will stay in Timergera, Dir Lower.
14th June 2013					
08:00	09:00	Travel by road	To Talash, Lower Dir	ABKT,W4L	Travel from Peshawar to Dir Lower by road
09.00	11.30	Improvement of irrigation scheme	Gumbatkai, Talash	ABKT,W4L	Visit to the scheme and meeting with Farmers (VO).
11:30	12:30	High Efficiency irrigation scheme (HEIS)	Amlook dara 2	ABKT,W4L	Visit to the scheme and meeting with Farmers (VO).
12.30	15:30	Travel by road	To Peshawar	W4L	- lunch on the way to Peshawar - Meeting with team leader in the evening
19.00	22.00	Joint Dinner cum team building	Green Hut	W4L	-ER Team, W4L team, IC management, Project Director
15th June 2013					
09.00	13.00	Projects (W4L) briefing	W4L office	W4L	Project Director will be invited to participate.

13.00	14.00	Lunch	W4L office	W4L	
14.00	18.00	Time for ER mission team - Interaction among their selves - Plan for south field visit. - Prepare a Table of Contents for the report	Shelton Guest house	ER Mission team members	
19.00	21.30	Joint Dinner	-to be announced	W4L	To discuss about the south field visit etc.
16th June 2013					
Departure from Peshawar for Karak					
Departure	Arrival	Activity	Place	Facilitate	Remarks
7:00	09.30	Traveling by Road from Peshawar	Arrival at Karak	W4L -IC	It take 2 & half hour to reach Karak
Field Visits to Chontra valley					
09.30 AM	10.30	Traveling to Site	Tabi Khwa	KK	
10.30 AM	12.30	Irrigation Scheme	Tabi Khwa	KK	Site visit, Meeting with VO
12:30	13.00	Traveling to Next site	Lak Kana	KK	
13.00	15.00	Watershed Management	Lak Kana	KK	Meeting with VO, Presentation of VO
15.00	15.30	Travel to circuit house	Karak	KK	Circuit house
15.30	16.00	Launch and Prayer and interaction (side meetings) with SPs-T , GLAs	Circuit house	W4L	Will discuss
16:00:	19:00	Meeting with line department	In respective office	W4L	PHED Karak, SCD Karak, OFWM Karak
17th June 2013 Thal valley					
07.30	08.15	Traveling	Ghani Shah Korona	W4L	
08.15	09.00	Irrigation scheme	Ghani Shah Korona		Rehabilitation of irrigation gallery
09.00	11.00	Visit to DRR structure	Jhandakai	Yaraan	Meeting with VO
11.00	13.00	Irrigation Scheme Meeting with VO	Nusrat Abad	AKDWO	CHAPI Banda Live Stock Pond, (optional) WO meeting parallel with Nusrat Abad
13.00	14.30	DWSS	Meyanki Banda	AKDWO	Meeting with VO and WO -Shanwa GUDI Khel is also a appealing site, where we have a DRR and DWSS, it could be one of the alternative
14:30	15.30	Lunch		AKDWO	
05.:30 PM	18:00	Travel to DI Khan	DIKhan	W4L	It will take 2 & half hour to reach DIKhan
18th June 2013					
07.30	09.00	Traveling to Field	Gara Matt	SPO, W4L	
09.00	11.00	-Site Visit (irrigation scheme and Inlet outlet) - Meeting with VO	Gara Matt	SPO, W4L	Water channel (rudh rehabilitation, de-siltation) to improve the water conveyance
11.00	11.30	Traveling	Gara Bukki	SPO, W4L	
11.30	13.00	-Site Visit (Gated Structure and Village Protection wall) -Meeting with VO	Gara Bukki	SPO, W4L	- Gated structure to divert the flood water for irrigation
13.00	13.30	Lunch at site		SPO, W4L	SPO will organize field lunch
13.30	14.30	Traveling			
14.30	17.30	Meeting with VOs,WUG/WUA Site Visit -Shahar Panah, Village Protection wall - Gated Structure - Sadd Naleen Irrigation scheme. -Inlet/Outlets. - Sadd Naleen Diversion structure	Gandi Esab/ Sadd Naleen	VDO, W4L	-Meeting with WUG of Mochiwall and Gandi Essab. Presentation about process and progress - Role and Responsibilities of O &M committee, Structure of committee, Fund collection process, Record Keeping and Rehabilitation done to committee.
17.30 PM	19.00 PM	Traveling Back to DI Khan	D.I.Khan	VDO, W4L	Overnight stay in National Club D.I.Khan
19th June 2013					

07.30 AM	08.30 AM	Traveling	Gara Mastan	VDO, W4L	
08.30 AM	11.00 AM	Meeting with WUGs/WUA. Visit to Structures -	Gara Mastan Ashiq	VDO, W4L	- Meeting with WUG of Gandhi Ashiq, New Gara Khan, Old Gara Khan, and Gara Mahmood, presentation will be done by WUGs regarding process, water rights, economic analysis, livestock and agricultural impact after w4l Intervention - - Role and Responsibilities of O & M committee, Structure of committee, Fund collection process, Record Keeping and Rehabilitation done to committee.
11:00 AM	17:00 PM	Travel Back To Islamabad including Lunch on the way			Check In at Islamabad Hotel
20th June 2013					
09.30	13.00	Meeting with SDC	SDC office Islamabad	W4L	-ER team, SDC, IC & W4L team members
13.00	14.00	Lunch			
14.00	15.30	Meeting with - Dr. Shahid - Dr. Zaheer	W4L office	W4L	-The meeting is subject to the availability of Dr. Zaheer & Dr. Shahid
16.00	18.00	Meeting with -Dr. Arif IWMI Lahore Dr. Khalid Mothadullah	W4L office	W4L	-The meeting is subject to the availability of Dr. Arif IMMI and Mr. Khalid Muttadullah - he will be invited to Islamabad for this meeting
18.00	20.00	Meeting with -Mr. Allah Bakhsh Focal Person Spate network Pakistan - Mr. Nasir Memon CE SPO Pakistan	W4L office	W4L	-The meeting is subject to the availability of Mr. Allah Bakhsh & Mr. Nasir Memon
Over Night stay in Islamabad					
21st June 2013					
08.00	10.30	Traveling	Peshawar	W4L	The team will travel from Islamabad in the morning to Peshawar, Check Inn at Shelton guesthouse.
11.00	18.00	Meeting with provincial stakeholders	Peshawar	W4L	-In consultation with ER team and based on their interest about the particular stakeholder to be invited for the meeting.
22nd & 23rd June 2013					
22nd & 23rd June 2013		Preparation of the draft Aide Memoir	W4L project Peshawar	ER Team	IC management & W4L team will be available for any support when required.
24th June 2013					
08.00	18.00	-Meeting with project team. - Finalization Aide Memoir, forward to project team, & SDC	W4L office Peshawar	ER team	
25th June 2013					
10.30	13.00	Joint briefing	P&DD Committee room	Programme Director/ Chief economist	-PD will organize the meeting and we will provide support -ACS, Secretary P&D, Chief water sector, CPO agriculture or Concerned DGs, SDC representatives, IC management, W4L team members, forest department, Chief F. Aid
13.00	14.00	Lunch	P&DD	W4L	-
14.00	18.00	Finalize next steps, Incorporating comments after joint briefing to final report/ revise Aide Memoir etc	W4L office Peshawar	ER team	

Annex 3: Pictures to show difference with/without interventions



River in Chitral without stream bank erosion control measures (photo: Karim Nawaz)



River in Chitral with control measures protecting houses from floods (Photo: Karim Nawaz)



Field irrigated through spate (photo: Karim Nawaz)



Gate structure supported by W4L in D.I.Khan (photo: Karim Nawaz)



Dryland in Kharak (photo: Juerg Merz)



Irrigated dryland after extension of an irrigation system (photo: Juerg Merz)

Annex 4: Water Use Master Plan (complete fact sheet available on <http://www.icimod.org/?q=10410>)



Water use master plan

Nepal: जनसुयोग गुरुयोजना

A water use master plan supports the development of integrated water resources at the local level; all stakeholders, including disadvantaged groups, take part in the plan.

A water use master plan (WUMP) is a holistic, participatory, and inclusive planning process that takes an integrated approach to the management of water resources and uses at the village level. The WUMP specifies the total water budget for its planning unit, the village development committee (VDC), and explores potential uses for it. It empowers marginalized groups to claim their rights to an equitable share of water within and between communities. The WUMP also helps local bodies with annual and periodic planning and project prioritization.

The WUMP is a 17-step process that includes social mobilization, the formation of inclusive management committees, capacity building for everyone involved in the process, and, as a final step, social assessment using various participatory rural appraisal (PRA) tools. Simultaneously, the technical part of the process evaluates the capacity of all water resources and their potential uses. In a workshop facilitated by NGO staff, the community discusses suggestions formulated by the two participatory assessments, prioritizes possible projects, and formulates plans. The VDC representatives decide which plans can be implemented using their own resources and which need external support. The WUMP then organizes a workshop to present these plans to various organizations in order to get their commitment and support. The prioritized projects are implemented according to the WUMP.

The plan also contains a series of long-term activities and during the course of its implementation, there is sufficient latitude to allow the community to rectify its original plans in order to put into practice lessons learned during earlier phases and to continue to review and modify the plan as needed.

Left: A community gathers for social and resource mapping; a facilitator talks them through the mapping exercise. (WARM-P)

Right: Household rainwater harvesting tanks in Dailekh. (WARM-P)



WOCAT database reference: QA NEP 36

Location: 15 districts in the Western, Mid-Western, and Far-Western Development Regions of Nepal

Approach area: >3,000 km²

Land use: Not specified

Type of approach: Project/programme based

Focus: Water conservation, water sources, catchment area

Related technology: Not described

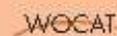
Compiled by: Madan Raj Bhatta, HELVETAS

Swiss Intercooperation

Date: July 2011, updated March 2013

Comment: This is a broad and integrated approach; WUMP advocates water conservation; water harvesting, and technologies that promote the efficient use of water

The technology was documented using the WOCAT (www.wocat.org) tool.



Annex 5: On-farm water saving methods (original available on www.helvetas.kg)

On-farm water saving methods tested & recommended by SEP project			
Title	Picture	Description	Advantages
Drip irrigation +/- 50%		<p>Drip irrigation is an irrigation technology of water supply in drops directly to the root zone of the plant and using special equipment for irrigation (drip irrigation system). The technology is known as one of the most efficient method of irrigation since water loss is reduced to minimum.</p>	<ul style="list-style-type: none"> • Saves water approximately up to 50%. • Possibility to give liquid fertilizers with water. • Less weeds since water given only to the root zones of the plants. • Keep soil fertility - no soil erosion. • Possibility to explore lands with water scarcity or without water.
Short furrows irrigation +/- 35%		<p>Short furrow is a surface irrigation method. Water is given to the field through furrows at about 80 - 100 meters length instead of 200 - 250 meters. However length of furrows depends on slope of the field and soil structure.</p>	<p>Short furrow irrigation is one of the most efficient ways of irrigation because:</p> <ul style="list-style-type: none"> • Saves water approximately for 35%. • Save time of irrigation for 15-19% because farmer can irrigate several section of the field at the same time. • Keeps soil fertility, as the topsoil is not washed away.
Fertigation +/- 20%		<p>Fertigation comes from combining two words: Fertilizer and Irrigation. This means that liquid fertilizers are given to plants at the same time with water during irrigation process. Fertilizers could be mineral and organic as well also. Traditionally farmers use organic fertilizer.</p>	<ul style="list-style-type: none"> • Save water approximately up to 20%. • Better fertilization of plant
Every second furrow irrigation +/- 15%		<p>Every second furrow irrigation technology is another surface irrigation method. With this technology water is given to every second furrow during irrigation process. Water infiltrates to the root zones of plants located on neighboring furrows.</p>	<ul style="list-style-type: none"> • Saves water approximately up to 15% • Saves time of irrigation up to 25% • Less weeds and easier weeding/controlling process on the field because no water to weeds is given on dry furrows and one furrow always stays dry.