

# **Capacity Development Strategy**

**The Integrated Water Resource Management in Fergana Valley Project**

Phase IV

2009

## Abbreviations

<b>CMO</b>	Canal Management Organization
<b>CWC</b>	Canal Water Committee
<b>ICWC</b>	Interstate Commission for Water Coordination
<b>IFI</b>	International Financial Institution
<b>ISF</b>	Irrigation Service Fee
<b>IWMI</b>	International Water Management Institute
<b>IWRM</b>	Integrated Water Resources Management
<b>MAWR</b>	Ministry of Agriculture and Water Resources
<b>NCSG</b>	National Coordination and Support Group
<b>O&amp;M</b>	Operation & maintenance
<b>PRA</b>	Participatory Rural Appraisal
<b>RRR</b>	Roles, rights, and responsibilities
<b>SIC ICWC</b>	Scientific Information Center of the Interstate Commission on Water Coordination
<b>SDC</b>	Swiss Agency for Development and Cooperation
<b>SMID</b>	Social Mobilization and Institutional Development
<b>SWC</b>	System Water Committee in TSRs - same as WCC at pilot canals
<b>TSR</b>	Transboundary Small Rivers
<b>UCWU</b>	Union of Canal Water Users
<b>USWU</b>	Union of System Water Users in TSRs - same as UCWU in pilot canals
<b>UWU</b>	Union of Water Users, same Union of Canal Water Users
<b>WUA</b>	Water Users' Association
<b>WUG</b>	Water Users Group

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## **1. Introduction**

The Integrated Water Resource Management in Fergana Valley Project (IWRM-Fergana) is dedicated to improving rural livelihoods of Central Asia region by demonstrating on a pilot scale the impact of integrated water resources management (IWRM). The project has already completed several phases. The current phase IV is focused on dissemination of the positive results achieved so far in the pilot objects to a wider area. The project has been reforming the existed water management approaches and creating new user based organizations for water users to actively participate in irrigation water management.

Among the tasks of the project is building the capacity of these newly created user based organizations for integrated water resources management (IWRM) at different levels - tertiary, secondary, main canal and basin systems levels, and helping the existing organizations to adapt to new IWRM conditions. Their capacity development is essential to achieve the wider objectives of the IWRM Fergana project. In fact some view the project in totality as a 'capacity development' effort, rather than an 'institutional reform' project.

The main focus of capacity development to date has been training seminars at different levels on various aspects of integrated water resource management (IWRM) in selected pilot organizations. Training and other capacity development activities have enhanced the sustainability of these new institutions. However, the new task of disseminating this experience to a wider area requires the defining and elaboration of the adapted Strategy for Capacity Development in a comprehensive and coherent manner, which is the goal of this ensuing document.

This document is a joint output by IWMI staff and external consultancy. The authors deeply appreciate the key role played and the experiences shared by Social-Mobilizers of the project at every stage of this document development. Also, it is important to credit the contributions made by the SDC, SIC team, National managers of the project in each country, the officials of relevant govt. organizations in the target areas, community leaders who are now in the driving seats of these newly created water management institutions, and of course the groups of farmers from three target countries.

This document lays down the capacity development strategy used in the project. In addition, proposes some improvements to it (networking, sequencing, balance the modular, methods, site selection, and materials). It also, presents a sample annual plan of activities to be implemented, and recommends ways to enhance women's participation, knowledge management and monitoring & evaluation.

## 2. Objectives

The ongoing Phase IV of the project has three immediate objectives. These objectives, are interrelated and mutually reinforcing. Their relationship with capacity development is elucidated below.

**Objective A: Pilot and TSR Areas.** The first objective is that Pilot Areas and selected Transboundary Small Rivers (TSR) function according to IWRM principles. The Pilot Areas encompass the Southern Fergana Canal, Aravan-Ak Bura Canal and Khoja-Bakirgan Canal command areas. Transboundary Small Rivers include the basins of the Shahimardan Say (Kyrgyz Republic and Uzbekistan) and Khoja-Bakirgan Say (Kyrgyz Republic and Tajikistan). The achievement of Objective A will require the continuation and expansion of capacity development activities in pilot and TSR areas, including heretofore undeveloped WUAs, and the consolidation of approaches, in readiness for promotion in other areas of the region.

**Objective B: Governments and Donors.** The second objective of Phase IV is that governments and donors follow the same principles concerning the roles and scope of IWRM institutions from Water Users' Association (WUA) to basin level. Objective B will entail in-depth consultation, cooperation, and coordination with government entities, as well as supporting donors and IFIs, concerning approaches to institutional development and an enabling environment for it (in particular in the key areas of policy, law, political will, and making adequate provision for the economic productivity of agriculture). An improved enabling environment can greatly enhance both the process and the sustainability of these new organizations.

**Objective C: Financial and Economic Aspects and project Impact.** The final objective of Phase IV is related to monitoring and evaluation. The project intends to achieve clarity on financial and economic aspects, as well as the ability to pay at the different operational and management levels. This will involve the following actions:

- In-depth analysis of financial and economic viability of institutions;
- Determination of the ability of water users to pay for services and the rehabilitation of infrastructure; and
- Assessment of the economic, social, and environmental impacts of project interventions.

The project impact assessment and financial and economic analysis components of Objective C will make it possible to more precisely identify the next round of needs in capacity development activities. Moreover, together with the existing experience, financial and economic analyses and impact assessments are needed for the promotion of and evidence-based advocacy for the development of policy and legal frameworks for IWRM.

Each year, the IWRM Project has spent a fair amount of resources on products and activities designed to enhance the capacity of new organizations established in pilot areas of target countries to carry out improved water management. The level of commitment reflects the belief that the project's mission will not succeed unless target groups improve their ability to use the assistance and new knowledge as well as the other resources at their disposal. The Association implementing the project – SIC & IWMI and the SDC understands that capacity cannot be imported as a turnkey operation. Instead, it must be developed from within, with the

Associations and their experts acting as catalysts, facilitators, and brokers of knowledge and technique. What is needed is a more comprehensive and sustained approach, one that builds a permanent capacity to manage water and deliver services. Hence, there is a need for a “need based, demand driven” capacity building strategy. The objective of this document is to elaborate this capacity development strategy used in the IWRM Project.

### ***3. Capacity Development so far ...***

The approach taken by IWRM-Fergana project for capacity development starts from social mobilization and institutional development, building the competence of individuals and organizations, complemented by activities to enhance the enabling environment.

Under the project, a number of organizations have been formed to provide a structure for implementing the IWRM. Within pilot main canals and TSR areas, the project has undertaken the formation of hydrographic WUAs and Water User Groups at the secondary, tertiary and quaternary canal levels. WUAs have been formed throughout the project areas but in some locales the reconfiguration of WUA service areas and institutional strengthening activities are still ongoing. Sixty percent of potential WUGs have been formed. At the main canal level, established Unions of Canal Water Users (UCWUs) and Canal Water Committees (CWCs) provide a means for the input of water users from various sectors into governance.

Local Social Mobilization and Institutional Development (SMID) teams are under contract to implement on-site awareness-raising, training, and technical assistance activities in IWRM among the organizations created for it (WUGs, WUAs, UCWUs, and CWCs). In WUG and WUA development, the project has emphasized social mobilization through the creation of Initiative Groups within WUAs and participation in the General Assembly, as well as training individuals on technical areas of water and financial management.

IWRM-Fergana training to date has included primarily WUA directors and head engineers (gidro-tekhniki), Council members/WUG leaders, UCWU & CWC leaders at canal level and some officials from government water management organizations. Water users in general and WUA members in particular, have been the target of social mobilization activities and technical assistance in General Assemblies.

Project staff and social mobilizers conduct workshops with UCWUs and CWCs to deliver training in water allocation demand management, business planning and financial management, as well as to discuss water governance issues. IWRM-FV Ph IV project training and workshop events reached 2,508 participants in 2008. In addition, teams have distributed a variety of booklets, leaflets, and posters concerning WUG and WUA formation, governance, and management.

The provision of equipment and facilities and rehabilitation of infrastructure has been minimal. It has been limited to the construction of hydroposts and in some WUAs, refurbishment of office facilities and supply of equipment. This is in stark contrast to the majority of projects in the region with participatory irrigation management and/or IWRM components, which have emphasized “hardware” over “software.” Even the hydroposts were constructed with 30-40%

contribution from water users. These hydroposts have increase the capacity of WUA to save water (stopping wastage), reduce conflicts and in some places to move to volume based irrigation service fee collection.

At the main canal level, there are UCWUs and CWCs, which provide critical support and governance functions to main canal management organizations. UCWUs and CWCs have Chairpersons with various backgrounds, as well as a diverse membership on their Councils, and/or Boards of Directors (comprised of WUA Chairpersons and Directors, representatives of Basin and Main Canal/Irrigation System Administrations, province, district, and/or village governments, the Nature Protection Committee/Ministry, the Hydro-meteorological Service, and/or local industrial concerns). Among this group of stakeholders, members of the Board of Directors and Councils figure most prominently, together with the staff of main canal administration that is directly involved in the execution of UCWU and CWC decisions.

Stakeholders in the area of creating enabling institutional environment are spread throughout various branches of government, and international organizations. Hence, in parallel to the development of individual and organizational capacity, the project has created a National Coordination and Support Groups (NCSG), engaging senior government officials from different ministries of the government. They are learning more about IWRM through the project. Their work will help building policy awareness and facilitating a common understanding of approaches to IWRM among governments sectors, and donors. It also plays a role in monitoring the progress of and contributing to the direction and activities of the project. Building their capacity to understand and meet IWRM needs, thus to adopt changes to the policy and legal framework will provide a foundation for enabling institutional environment. As such it is a high priority target group for capacity development at this level.

In 2008, NCSGs began a series of roundtable discussions for building consensus among government and international actors, and developed work plans to build rapport with other international actors, such as JICA, World Bank, ADB, and USAID.

The project has created extensive working relations with projects and NGOs working in the region on irrigation water management and exchanged trainings and experiences. They have agreed to cooperate in the future and support to establish resource / knowledge sharing hubs in all three main cities in Fergana.

Moreover, the project staff has created an 'informal WUA directors' Networks' in all three countries, in order to facilitate uninhibited knowledge sharing between WUA Directors.

The main academic institutions teaching water & agriculture in all three countries agreed to include project experiences in their curricula for future water managers and also train their students at project sites in Fergana.

## **4. Scope**

### **Definition**

There are many diverse definitions exists for the term "Capacity Development". Most of these official definitions are very broad (See Annexure 4). The IWRM Project follows the definition of 'capacity development' introduced by UNDP. The UNDP has defined the 'capacity building' as

*the creation of an enabling environment with appropriate policy and legal frameworks, institutional development, including community participation (of women in particular), human resources development and strengthening of managerial systems, adding that, UNDP recognizes that capacity building is a long-term, continuing process, in which all stakeholders participate (ministries, local authorities, non-governmental organizations and water user groups, professional associations, academics and others).* Based on this definition the ensuing document looks at capacity development of the project from *individual, organizational and institutional* perspectives. Many uses the term “*Capacity building*” and “*Capacity development*” interchangeably, hence, this document, too.

In the project, capacity development is undertaken as a dynamic process (as shown in Fig. 2). An assessment of capacity and needs, the first stage in the cycle, is carried out in an ensuing section.

Thus capacity development within the IWRM-Fergana project is encompassing several levels. These include the levels of individuals, all of the organizations engaged in “new” water management, horizontal and vertical networks to link actors and organizations, and the broad national and institutional context of the enabling environment.<sup>1</sup>

The scope of activities that is being utilized to build capacity in IWRM includes the following levels:

- For *individual human resources* –
  - the understanding, skills and access to information, knowledge and training that enables them to perform effectively, including technical assistance on activities related to
    - Water management (water use planning, distribution, maintenance of structures, flow measurements, asset management, environmental issues, water conservation, etc.), and
    - Financial management (business planning, budgeting, accounting, calculation and collection of membership and/or service charges, audit);
  - Also, for individuals, capacity building relates to
    - Leadership development, advocacy skills, training/speaking abilities, technical skills, organizing skills, and other areas of personal and professional development.
  
- For *organizational structures* –
  - it relates to
    - Almost all aspect of its work: improved governance, leadership, mission and strategy, administration (including human resources, financial management, and legal matters), program development and implementation, fundraising and income generation, diversity, partnerships and collaboration, evaluation, advocacy and policy change, marketing, positioning, planning, etc.
    - In particular for our target groups,

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<sup>1</sup> Adapted from: FAO, 2004, *Capacity Development*



- the elaboration of management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors, and institutions
- the guiding policies, by laws, agreements enhancing governance, participation, legal awareness, roles, rights, and responsibilities, representation, accountability, dispute resolution, etc;
- Fostering an *enabling institutional environment* that can facilitate capacity development through
  - Providing sound national policies and a legal framework, making legal and regulatory changes to enable organizations, institutions and agencies at all levels and in all sectors to enhance their capacities,
  - A socio-economic context conducive to the development of IWRM
  - Creating a new generation of water experts through academic systems, to move IWRM forward and
  - Creation of general IWRM awareness among the public

### Target Groups

The organizations involved in water management can be categorized in to three groups:

- A. Newly created user /community based organizations (WUG, WUA, UCWU, CWC, CMO, etc)
- B. Existing government water management organizations (directly involved) – (BISA,ISA, Hydro-ameliorative org, MTP, etc) and
- C. Other influencing organizations and agencies (indirectly involved) – Hakimyat, Ministries, banks, IFIs, Universities, Mass media, etc)

*Group A* - Out of these the main target group for capacity development within the project is group A. Thus the main target group A includes: on the tertiary system level - Water Users' Groups and their leaders; on the secondary system level - Water Users' Associations, which incorporate Water Users' Groups; on the main canal level - Union of Canal Water Users, Canal Water Committee, and Canal Management Organization. There is a wide range of functions in governance and management, which is the responsibility of user-based and managed organizations at various levels, including WUGs, WUAs, UWUs and CWCs, and main canal management organizations.

In parallel, similar groups are targeted within selected Transboundary Small River areas, with additional capacity emphasis on holding cross-border dialogues on water management issues.

The WUG and WUA are most critical, as they fill a vacuum in water management left by the dissolution of production cooperatives and provide a vital linkage between farm and main canal or basin management organizations and Irrigation Service Agencies, for implementation of IWRM. Therefore and for many other historical reasons, greater attention should be paid to the newly created community based water management organizations – WUGs & WUAs.

The individuals and organizations concerned in this group are listed in Annexure I with their important roles, responsibilities and functions, for which capacity development is required and specific areas identified during field work are given in Annexure 2.

An interesting situation occurring in IWRM project areas is that in some places several roles listed in Annexure 2 are being performed by the same person. This happens regardless to his/her professional background or training. With this the accountant could act as part-time mirab and vice versa.

A detail on role and functions of Group A is given in Annexure I.

Group B – Among the existing water management organizations (directly involved) are regional Basin Mgt Organizations and Irrigation System Administration, and etc.,. Capacities of government water management organizations are being improved in order to work with ‘new counterparts’ – above user based organizations. These involve mostly an attitudinal change - building trust and believing the capacities of user based organizations. Also, they should provide the necessary support and guidance for new organizations.

*Group C* –The other relevant local organizations (indirectly involved), too need to be reoriented to allow the user based organizations to function independently, without interference and support them to thrive. National level organizations and IFIs have to work with a common approach and a vision in water management through sharing experiences and achievements, and avoid contradictory activities. Moreover, academic institutions have to develop new and future professionals with IWRM awareness. Public awareness plays an important role in the development of a common vision.

The categories of B and C are considered organized/ well-established and well equipped with professional staff and resources compared to category A. Hence, more attention is paid to organizations in Category A and individuals that are identified separately within this group.

The capacity needs of last two target groups is thus to help them create the enabling environment.

## **5. Needs identification**

The needs and actions proposed in this document were identified upon the basis of participatory fieldwork, a review of project outputs, and gap analysis. In early 2009, two field teams separately conducted several focus groups (of around 8-15 participants) discussions and met with the above three categories of target groups of the project from Uzbekistan, the Kyrgyz Republic, and Tajikistan.<sup>2</sup> Focus groups and interviews covered on-going capacity development activities on governance, water management, financial management and other aspects of IWRM, as well as the implementation of the project and ways to improve it. Collected information was reviewed and analysis of project progress reports and other outputs, monitoring and evaluation data, WUA

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<sup>2</sup> These include WUGs, WUAs, Unions of Canal Water Users, Canal Water Committees, Canal Management Organizations, and the Basin Irrigation System Administrations in project areas.

perception survey executed in 2007, and the external review carried out in 2008<sup>3</sup> were used. The data acquired was utilized to identify gaps between existing and expected capacity of the organizations and individuals with which the project is concerned and recommend proposed approaches and actions to address these gaps.

### **Needs of Individuals**

Needs in capacity development for individuals in various governance and management bodies were identified through gap analysis, i.e. identification of the difference between present capacity and the capacity required to perform their tasks and duties. The existing capacity and needs are presented in Annexure 3 at various organizational levels. As shown in the Annexure 3, most needs can be addressed through the continuation and expansion of ongoing capacity building activities. The main gaps in project activities to address the needs identified are in particular aspects of governance and financial management.

The Mirabs and accountants need more training and technical assistance. In focus groups, many of the WUA staff emphasized the need for including these personnel into more capacity development activities.<sup>4</sup>

Some also highlighted the need for training of the Arbitration Commission and Audit Commission.

### **Organizational needs**

The structures of the organizations created in the project are almost fully developed. However, some needs remain at various levels. These are as follows:

- Around 60% of potential WUGs have been created. It remains to form the remainder in order to strengthen more localized governance within WUA service areas, to improve ISF collection, etc.
- WUA Councils are less active. Representation of WUG leaders on WUA Councils may help strengthening Councils. There is a need to continue to integrate them into these bodies.
- Formation of WUAs in some areas is ongoing. There is a need for social mobilization and to resolve issue of formation of WUAs in Tajikistan with the dissolution of production cooperative.
- More attention to the legal status of WUAs is needed when registered with authorities. Some WUAs in Uzbekistan have been registered as a commercial organization. These should be corrected in order to provide tax breaks and other protections afforded to non-

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<sup>3</sup> IWMI and SIC-ICWC, 2008, *Integrated Water Resources Management in the Fergana Valley (IWRM-Fergana), Phase IV: Annual Progress Report (May – December 2008)*; Swiss Agency for Development and Cooperation, 2008, *Report of the External Review of the Integrated Water Resources Management Fergana Valley Project (IWRM-Fergana), Phase III: May 2005 to April 2008*

<sup>4</sup> This was also noted in the 2008 external review. See: Swiss Agency for Development and Cooperation, 2008, *Report of the External Review of the Integrated Water Resources Management Fergana Valley Project (IWRM-Fergana), Phase III: May 2005 to April 2008*, p. 23.

governmental, non-commercial organizations. In other instances, the Formation Agreement was ratified by only a few members.<sup>5</sup>

- UCWU Councils and CWCs have been created, but need further strengthening in order to better represent water user needs in governing main canals and TSRs.
- There is a need for establishing financial sustainability of all IWRM organizations
- There are resource needs (equipment, staff, communication, funds, etc) for IWRM organizations

The functions of target groups within UCWUs, as well as the diversity of members are elaborated in the foregoing analysis of Target Groups. (See Annexure 3 also.)

Initial local external support was needed to ensure the growth of the newly created organizations. Presently most of the external support is given by project SMID teams in all countries, WUA Support Units at district level in Tajikistan and the Kyrgyz Republic, and by basin and province level organizations in Uzbekistan.<sup>6</sup> The staff of base WUAs also provides a limited amount of training to other WUAs. All of these groups require attention up to the present stage of the project. As approaches are consolidated, the project's capacity development activities would taper off to focus more upon increasing the role of the local organizations that will remain in place following the closure of the project, in particular WUA Support Units (possibly with an expanded mandate for IWRM institutions).

### **Gaps in the Enabling Environment**

Governments are still in the process of developing IWRM policies. As IWRM is not well understood by many of the key actors, it will be necessary to increase the knowledge and understanding of what is required in the enabling environment. The needs in this regard are, at the national government level, - to work to facilitate through the NCSG collaboration among governmental bodies and coordination among donors and, at the level of the IWRM organizations, - to improve local knowledge of the legal and regulatory environment and ability to benefit from it. The project is well positioned for these endeavors, given its longstanding implementation and strong training capacity.

The socio-economic enabling environment for IWRM is constrained by rigid state production quotas for crops<sup>7</sup>, limited access to credit and other inputs, and market and transport restrictions. The pursuit of major policy, legal, regulatory reforms in the agricultural and financial sectors is outside the purview and capacity of the project (moreover, this endeavor is already an area of focus for ongoing and planned donor funded projects).

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<sup>5</sup> In some cases, the registration certificate obtained from Ministry of Justice specifies a code of a commercial organization.

The legal implications of having only a few members apply seals to the Formation Agreement are profound. First, if only five farmers signed the Charter, only they are legally empowered to participate in decision-making. In the event of a conflict within the WUA, these members hold an unfair advantage over others. Moreover, if the WUA is forced to engage in any juridical processes, according the law, it is only comprised of as many members as signed the Formation Agreement and Charter. If the juridical process involves liability, debts, or bankruptcy, only five members are legally responsible.

<sup>6</sup> Uzbekistan advisory and monitoring units operate on a largely informal basis, owing to the lack of a formal mandate and organizational structure.

<sup>7</sup> This occurs on a formal basis for cotton and wheat in Uzbekistan and informally in Tajikistan for cotton.

## **6. Filling the gaps...**

### **Addressing individual Needs**

In order to develop capacity among key individuals within target groups, several actions are required. These are presented in Annexure 3, which specifies needs, target groups, and actions. The actions are sequenced at various organizational levels according to priority and timing during a calendar year. The Annexure 3 specifies actions in which only greater awareness is needed and areas in which training and technical assistance is required.

### **Addressing the organizational needs**

Gaps that remain should be filled in the first order of priority. Required organizational measures are as follows:

- Complete WUG formation.
- Integrate WUG leaders into WUA Councils: Following WUG formation, propose inclusion of WUG leaders into Council at General Assembly meetings. Participate in meetings of Council as much as is feasible.
- In entirely new areas (Tajikistan and TSR): Create and train Initiative Groups. SMID teams should assist in social mobilization, prepare documents, and facilitate registration of WUAs with Ministry of Justice.
- Review and, when necessary, correct formation documents and registration (In Uzbekistan WUAs: SMID teams should facilitate re-registration of WUAs with Ministry of Justice. This will entail participation in the General Assembly, as well as addressing a notary public and the local office of the Ministry of Justice.)
- Continue demarcation of hydrographic service areas in WUAs with administrative boundaries and mobilize required support for this among the key stakeholders and decision-makers. It will be necessary to re-organize and re-register WUAs in accordance with the new service area and re-adjusted membership.
- Strengthen the capacity of existing UCWUs and CWCs at all pilot canals and create new UCWUs and CWCs at each corresponding part of pilot TSRs: this will entail conducting social mobilization and participating in general meetings of UCWU and CWC in order to form and ratify their composition, leadership and governing bodies. SMID teams should follow up by participating in meetings of their Boards and/or Councils in order to assess its human resource development needs.
- If the WUA chooses to engage in ancillary activities such as agro-processing, input supply, or marketing in order to generate revenues for its activities, it must create corresponding departments and/or staff positions. However, until a WUA has become fully sustainable and is absolutely certain that this will not jeopardize its taxation status as a non-profit, non-commercial organization, ancillary activities are not recommended. (A WUA should be able to engage in commercial operations such as rental of equipment or other WUA etc. as long as profit generated is used for O&M or upgrading of the infrastructure or office equipment etc. and not put into the pockets of the WUA membership.)

## ***Creating an enabling institutional environment***

In an ideal world, a basic enabling environment will exist prior to the process outlined in Figure 1, as it provides a legal, regulatory, and policy foundation for it. However, such is rarely the case. IWRM-Fergana, like many similar projects, must strengthen the enabling environment in parallel to organizational and human resource development measures.

The development of a policy, legal, and regulatory enabling environment for IWRM is ongoing and will be a long-term endeavor. Although enabling WUA laws and formally mandated structure for WUA support exists in the Kyrgyz Republic and Tajikistan, these have been inadequately specified in Uzbekistan.

For pilot organizations such as UCWUs, and CWCs the policy, legal, and regulatory component of the enabling environment need to be created only after a successful and convincing example has been provided.

Given that the environment is such, the project would continue to work within the pilot areas to improve governance and management skills within WUGs, WUAs, CWCs, and UCWUs that will translate into more effective water management at their various organizational levels.

Achieving the goals in strengthening the enabling environment entails engaging key government actors in the legislative process, as well as coordinating with other donors and IFI in order to combine efforts and/or lend more weight to this endeavor.<sup>8</sup> Coordination will also provide an opportunity to promote the IWRM approach of the project.

As part of its annual work plan NCSG should lead this effort. It is of paramount importance that national leaders of the project take keen interest on NCSG affairs and utilize the project support to forge ahead the IWRM idea within policy and legal framework. This is being accomplished through the following actions:

- Raising awareness and discussion of required actions in roundtables, seminars, or other discussion formats.
- Formal and informal liaison with key actors.
- Site visits to IWRM-Fergana project areas.

Improved collaboration and public participation in policy development is also required. This issue is best addressed through seminars and an annual or semi-annual retreat that would include policymakers, as well as various stakeholders from among the organizations developed by the project. These activities would serve multiple purposes as follows:

- Through education and dialogue concerning IWRM, develop a common understanding and approaches and guidelines for addressing key policy issues.
- Facilitate the establishment of Policy Working Groups in the various countries, to be led by NCSG.

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<sup>8</sup> In this regard, it is important that, as mentioned in the 2008 progress report of the project, NCSGs follow through in negotiating formal cooperation with UNDP in the development of national IWRM plans, WB and ADB projects in Uzbekistan, FAO, ASTEC, etc in Tajikistan, etc.

- Provide an opportunity to assess needs in policy development skills among various actors and address these needs in follow up events.

## **Networks**

Networks provide an excellent means of filling the capacity gaps through communication and comparison among individuals and groups, which can contribute significantly to the diffusion of knowledge and the adoption of new practices. There are vertical networks within IWRM-Fergana from WUG and WUA level (integration of leaders into the WUA Council), UCWU and CWC level (membership of WUA Chairs and Directors) up to NCSG level. Horizontal networks among WUAs, UCWUs, and CWCs are achieved through joint seminars and workshops that promote discussion among participants. At their respective levels UCWUs and CWCs and NCSGs integrate actors from various fields into a mixed network. As the coverage of capacity development activities expands within the pilot areas, the networking activities, i.e. the emphasis upon discussion and sharing of experiences should continue, together with site visits. Within TSRs, networking can also contribute to building rapport and consensus.

As the most longstanding project in IWRM and participatory irrigation management, IWRM-Fergana is well-positioned to facilitate the establishment of a capacity development network at national and regional levels. Such a network would enable key actors to compare methods and experiences, and synthesize lessons. It would also be useful in promoting the IWRM-Fergana approach. NCSGs could play a key role in bringing together actors from various national and international organizations. Many actors (projects, donors, NGOs, etc) are already informally involved in this process through liaison. However, it could be more strengthened through organized activities. Activities could include a combination of seminar and workshop formats (such as workshops conducted in 2008 under IWRM-Fergana auspices involving educational institutions, state O&M authorities, WUAs, and media). Site visits to project areas would also facilitate communication and promotion of the IWRM-Fergana approach.

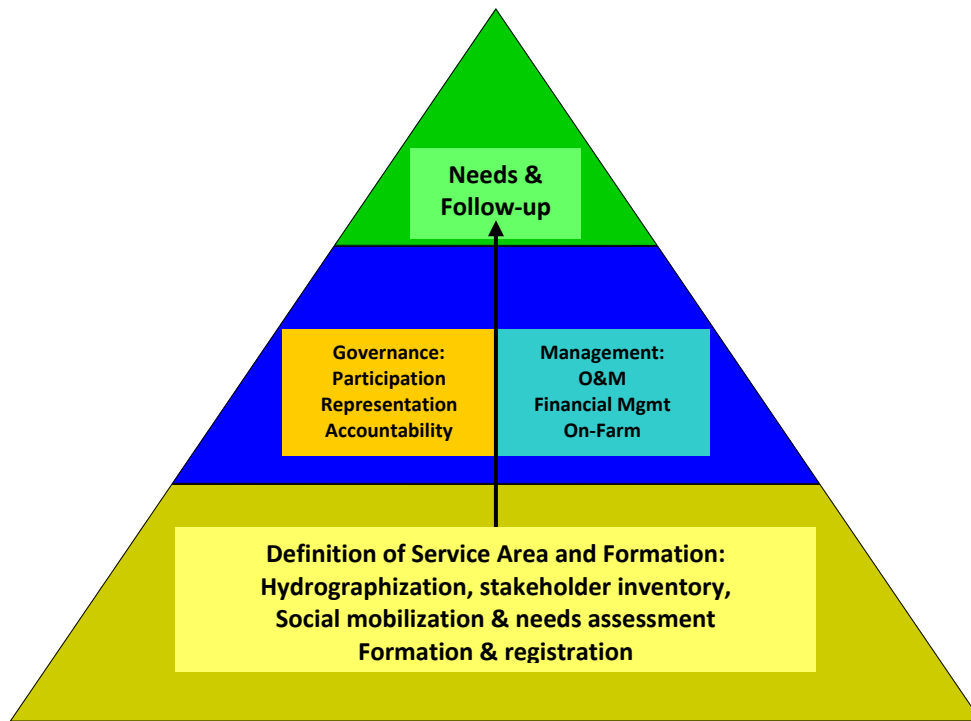
## **Sequencing and duration**

Capacity development activities will achieve greater effect if sequenced properly. Therefore, in the Needs Assessment there were serious discussions on determining the most convenient time for participants to be trained, as well as the duration of training that they consider to be appropriate and feasible.

A generic sequence for organizational and human resource aspects of capacity development is presented in Figure 1 below.

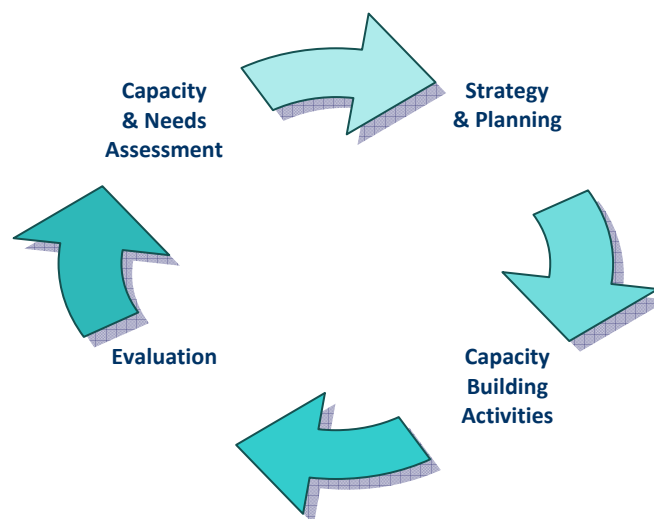
The process begins with primarily organizational measures using a step-wise social mobilization approach (the demarcation of service area according to hydrographic principles, inventory of all water users and water uses, awareness building, consultations, adaptation of constituent documents, founding assembly meeting, formation and registration of the organization), capacity needs assessment, and initial training in IWRM and roles, rights, and responsibilities.

**Figure 1: Recommended Sequencing of Capacity Development Steps**



Within the capacity building cycle depicted in Figure 2, capacity and needs assessment is carried out, and planning completed during this stage.

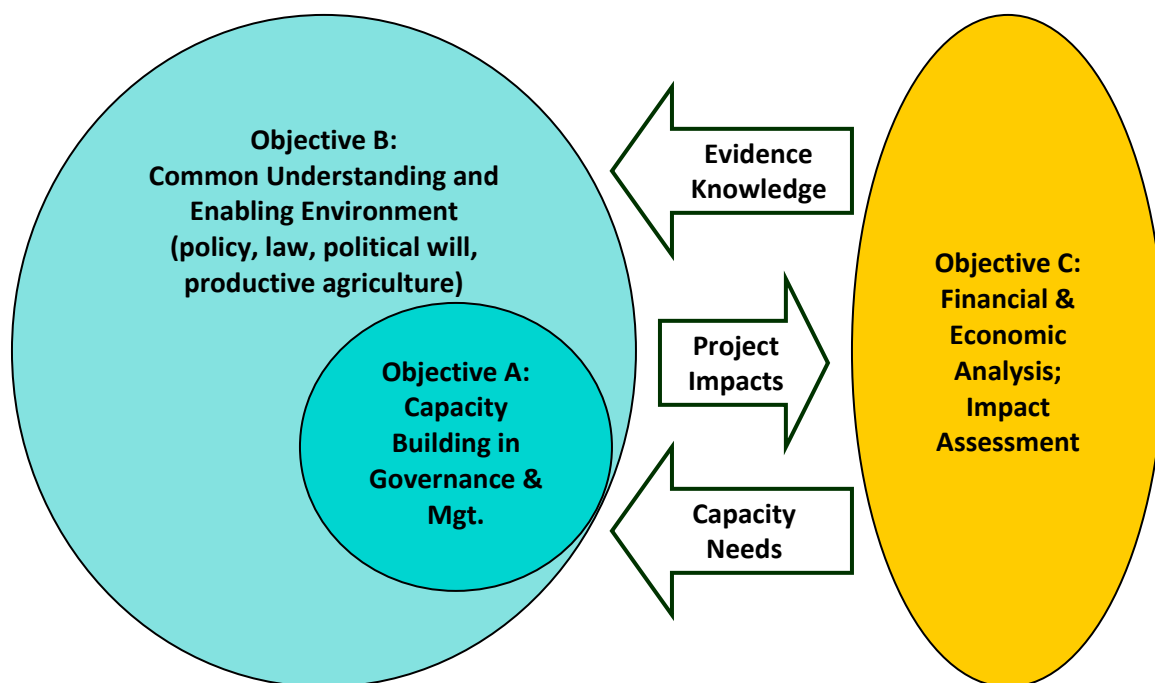
**Fig. 2 The Capacity Development Cycle**





It is important that these initial steps are conducted ahead of implementing training and technical assistance in governance and management functions.<sup>9</sup> During and following this phase, evaluation and needs assessment are undertaken to serve the planning and execution of follow-up capacity development activities as presented in Figure 3.

**Fig. 3 Relationship among Phase IV Project Objectives**



The timing of training and technical assistance accounts for calendar year activities and utilize them to achieve maximum effect. For example, training in water use planning and water measurement takes place in advance of vegetative and/or non-vegetative seasons, while that for business plan creation is immediately precede the formation of the annual plan of the organization. This timing most directly combines training with practical technical assistance actions in the aspect(s) of governance or management upon which training focuses. It is not always possible to implement capacity development activities in this manner, as staff and farmers are preoccupied with their own activities like planting and harvesting cotton, wheat, and other crops, giving them little time for participation. For them, the most convenient time is between the fall harvest of cotton and the commencement of the vegetative irrigation season in March. Training and technical assistance also conducted at a later date during this period, if activities cannot be timed in accordance with the calendar year.

<sup>9</sup> The demarcation of hydrographic boundaries is to “facilitate a process of water distribution and...in turn...a decision-making process and control over the implementation of decisions made.” See: IWMI and SIC-ICWC, 2008, *Integrated Water Resources Management in the Fergana Valley (IWRM-Fergana), Phase IV: Annual Progress Report (May – December 2008)*, p. 38.

In some instances, circumstances dictate the demarcation of hydrographic boundaries *post facto* to the formation of WUAs (in particular, in Uzbekistan the law specifies that WUAs are to be created upon the boundaries of former shirkats, which often do not have hydrographic boundaries).

Training generally proceeds according to a clearly defined schedule. The schedule normally fits with the time frame that is most convenient for the Target Group. For Uzbekistan WUAs, this is after the cotton harvest, which concludes in mid-November, and before the start of the spring growing season and irrigation. Duration of training should also be determined according to the convenience of the trainees.

As mentioned above, training is a long-term process. After the initial training is concluded, it is advisable to conduct follow-up training for specific subjects that were not adequately retained or covered in the initial training. Annual refresher training may also be necessary. In addition, a cycle of initial trainings is also required for new staff and Council and Commission members, based upon the frequency of turnover.

### **Balancing (Modular) Structure**

There is also a need to balance the structure of modules applied in training. The project's training activities to date have focused mostly upon water management and business planning, i.e. they have been primarily technical in nature and focus upon the management side of institutional development. In addition, a module is being developed for asset management. Capacity in governance is being developed primarily through social mobilization activities that emphasize member participation and the roles, rights, and responsibilities of representative internal bodies and management staff.

As noted above, greater capacity is needed in specific governance functions, including decision making, enforcement of rules and accountability, specific procedures and methods of dispute resolution, and awareness of the law, which underpins the internal by-laws of institutions and provides the framework for governance. A manual and accompanying training modules need to be developed in these areas. With regard to the legal and regulatory framework, juridical processes and the extent to which appropriate legal rules can foster institutional development need to be emphasized.

### **Materials**

The IWRM-Fergana project has generated a wealth of guidelines, booklets, bulletins, handouts, etc. In 2008 the project began a process of simplifying manuals and materials in order to make them more accessible to farmers and mirabs. Manuals will be field tested among the target audience in order to assess their value as a training tool and determine the scope of their use. The project will also continue to educate and support WUAs, UWUs, and CWCs (and similar structures at TSR areas) in the generation and dissemination of leaflets and bulletins. Major new topics in institutional and managerial aspects should be tested and carried out in the training centers.

Project embarked on creating visual materials (posters, video clips, etc) for capacity building purposes.

### **Methods**

The best way to build the capacity is to train them (in matters such as operations and maintenance, financial management, legal matters, and on-farm water management). Several preliminary steps are taken before a successful training starts. These include the capacity

identification of the Target Group, the assessment of their training needs, and the selection of the methods that are most appropriate and effective to address those needs. The trainers are to determine the various objectives and goals of the training with relation to each Target Group.

After the rapid needs assessment has identified the most appropriate contents for the training, training modules is modified, based upon available materials. Modules will be based upon various methods. Trainers should choose from training methods in accordance with an *action training strategy* and the *learning capabilities* and *needs* of the training participants.

It is important to adopt an *action*, as opposed to an *academic*, training strategy for the modules. The main difference between these two approaches is that *action training* emphasizes specific, practical skills and problems, while *academic training* usually transmits theory and general content. *Action training* results in the improvement of practical skills that lead to better job performance, while *academic training* assumes that the trainees will apply general content that is presented without further guidance.

Most of the training is focused upon adult staff and members. Adults have specific ways of learning that must be taken into consideration when selecting training methods. Adult learners actually retain more *what is done* (90%), and least, *what is read* (10%). And what is seen and heard about 50%.

Training participants learn more rapidly when they see as well as hear information that is presented. The quickest way for them to learn is when they do something related to this information, as well as see and hear it. The same principle applies to what training participants remember from the training.

The attention span of training participants is usually around 20 minutes. Therefore, several methods of training are applied. These include the following:

- Lectures: These are commonly overused and are often too long for the audience to properly retain the information presented. Lectures should be short (20 minutes), practical in content and combined with visual aids (maps, overhead transparencies, posters, films, models, practical items such as a stream gauge or flume, etc.) and other methods, such as discussion.
- Discussions: These can be interspersed with short lectures (before or after) and utilized to encourage more active participation in the training. Discussion formats include the generation of ideas to solve a problem (“brainstorming”), discussion groups to solve a problem (“buzz groups” and “syndicate method”), question and answer with a panel of lecturers, open forum to discuss a reading that has been provided ahead of time, and unstructured discussion.
- Field Trips: Trainees visit a site to see for themselves a particular set of activities (such as water measurement on a demonstration plot) or consult with others engaged in similar activities and/or training (such as a WUA in a neighboring district). Field trips are properly focused, adequately planned, and not utilized as an excursion for pleasure.
- Role-Playing and Simulations: Participants are given a specific role to play in a real-world situation pertaining to the subject of the training. Role-playing helps participants to gain perspectives towards a specific problem and allows them to experiment with its solution.

- Handouts dealing with key technical or problem issues are recommended.

The methods utilized in training and technical assistance to date should be continued. Lectures should be kept at a minimum. Practical activities and demonstrations should enable observation and “learning by doing,” emphasizing real world examples, problems, and solutions. Group discussions and exercises will encourage participation and exchange of experience, identify more active participants and those who might need encouragement to participate, and assess needs. This is particularly, important with the age and experiences of target individuals.

Proven skills and methods are disseminated to local water and agricultural advisory services (where such exist), as well as research and other educational institutions (through workshops and in the form of easily accessible booklets and leaflets).

The project is creating “WUA Learning Alliances” around base WUAs to disseminate new capacities. Each base WUA has several others around it, as learners.

### **Locations**

It is necessary to conduct most on-the-job training and technical assistance on-site or close-to-action. Classroom training are delivered in locations that are convenient and readily accessible to participants, and in which adequate facilities are available. This has entailed less training in training centers established in the cities of Osh, Fergana, Andijan, and Khojand. While these are the main site for training upper level organizations, the training of the WUAs and especially WUGs, as experience suggests, are more effective if conducted on-site.

### **Resource Persons**

The project will continue to increase and organize local level capacity for training and technical assistance. At present some of these activities are carried out by project staff from Tashkent and SMID teams. Training of SMID teams is presently provided in the water management, business planning, and the tools and methods of the project. The following additional skills and areas would enable SMID staff to further increase their general impact upon those whom they train:

- Training and technical assistance methods in general and those targeted at specific clusters of activity in which trainers specialize;
- Creation of pamphlets, booklets, posters, etc.;
- Needs assessment methods; and
- Monitoring and evaluation of capacity development activities.

In addition to that the following approaches are envisaged to increase the number of local personnel for training and technical assistance:

- Develop thematic clusters of trainers, which will have not only adequate general knowledge to advise as needed within their primary area of operation, but also adequate skills to focus upon specific areas of governance and management (water management and financial management) in other locations, as required.
- Plan the coordination of work with state organizations, including further cooperation with leading academic agricultural institutions. The goal over the long term is to increase their role to deliver the majority of capacity development activities. If this is done, they will be in a position to continue capacity development beyond the life of the project.
- The project has the goal to create in three countries of the Ferghana Valley competitive consultative group of experts consisting of theoreticians and practitioners to disseminate the

project experience and knowledge. Theoreticians mainly consists of experts from leading agricultural academic institutions. Practitioners consist primarily of local staff from project areas.

- Implement refresher training for WUA support staff of state organizations. This was requested by basin authorities in the Kyrgyz Republic.
- Train as trainers the management staff of more developed organizations. This will increase the possibilities for in-field training.

### **Gender Issues**

Women have an especial interest in IWRM, as adequate consideration of multiple water uses can significantly improve their livelihoods. They are represented as a minority within WUAs as holders (or *de facto* managers) of household garden plots and as accountants within the staff of the WUA. The small representation of women within these organizations is due to unequal access to irrigated land (there are few female farm owners) and the fact that within production cooperatives women primarily held administrative jobs. Aside from irrigated agriculture, women are profoundly affected by the accessibility of household water supply, for which they are primarily responsible, and by environmental health, due their childcare responsibilities and the vulnerable nature of their organisms.

Several actions would enhance the role of women in IWRM within the project areas. Most of these are ongoing and simply require continuation and/or expansion. They are listed below:

- Devote especial attention to the interests of garden plot holders. This is required not only with regard to gender considerations, but also for poverty reduction, as kitchen gardens are key to rural livelihoods.
- Integrate women into Arbitration Commissions, as many small scale conflicts concerning water allocation and distribution involve kitchen garden plots.
- In instances where the *de jure* landholder and WUA member has emigrated to find work, permit the *de facto* manager (often the wife) to participate in the General Assembly and other governance bodies.
- Include women into social mobilization activities for WUA formation and hydrographization.
- Increase participation of female accountants in capacity development activities for financial management and asset management.
- Strengthen the role of women in UWU and CWC tasks related to environmental monitoring and decision-making concerning household water supply.

### **Knowledge Management**

The project has generated a great deal of knowledge, which can be disseminated for the benefit of other similar endeavors. This can be done through various actions at several levels, as follows:

- Contribution of outputs to knowledge hubs, such as that run by SIC-ICWC (ca-water info-net) and the UN (WaterWiki.net).
- CD-ROMs of project outputs are compiled regularly by IWMI. These should be actively distributed among ongoing projects and all relevant agencies of government.

They should also include a full set of strategy documents and ready-to-use training plans modules.

- Publication of interactive tools online (such as a budget creation tool or a performance assessment tool) and inclusion of them into CD-ROMs of project outputs as a simple computer program.
- The project is in the process of integrating IWRM into academic curricula in cooperation with the Kyrgyz Agrarian University, the Tajik Agrarian University, Tashkent Institute for Melioration and Irrigation. Uzbekistan also has a broad network of regional agrarian colleges that should be involved in this effort.

## **7. Monitoring and Evaluation**

The project devotes significant effort to monitoring capacity development activities. Two forms are utilized to monitor capacity development activities: 1) a form monitoring the activities conducted for all organizations (date, location, target groups, purpose, follow-up activities, etc.) and 2) a WUA development form listing for individual WUAs the status of activities related to the service area (hydrographic or administrative), the status of SMID activities, and the status of activities designed to strengthen WUAs (training in business plans and water management, creation of WUGs, membership of WUAs in the UWU, water delivery agreements with WUA members, collective action for maintenance of systems, installation of hydroposts, etc.). Although UWUs and CWCs are included into the first of these forms, there is a need to create and utilize a development monitoring form for these organizations.

The evaluation of capacity development activities is focused primarily upon training. Each training course should specify its intended goals before the activity takes place. These goals would specify the results and expected schedule against which the success of the activity can be judged. Participants would be expected to know and accept the goals before attending the course and should agree to report at an appropriate time on the progress. Reporting arrangements can be standardized, providing some flexibility was allowed to accommodate different types of training and other differences.

The project also undertakes a training needs assessment using PRA methods that include all target groups. Feedback sessions follow needs assessment. The results are utilized as the basis for the creation of annual training plans and improving methods and materials. This activity should continue on an annual or seasonal basis.

Given the extended duration of the project, an impact assessment is presently feasible. In this regard, IWMI has developed a strategy Impact Assessment Framework and Design for IWRM-Ferghana Project, which under the Phase-IV is aimed at assessing the activity results and outcomes at different water hierarchy and various focus groups. In addition to internal reporting, a standard reporting format has been developed and is being utilized by project staff when producing activity reports (on field visit, quarterly and annual reports). This enables comprehensive coverage of project interventions and the identification of results and outcomes at all levels.

## 8. Conclusion

For the most part, the foregoing strategy recommends a continuation or expansion of ongoing activities, with minor adjustments. There are a few gaps in the capacity development activities undertaken to date, primarily with regard to developing materials and conducting training in governance and financial management. Most of the recommendations of the strategy have already been incorporated into the project's 2009 Annual Plan of Operations (for a full list of workshops & trainings scheduled and to be provided by IWMI & SIC in 2009 please refer to Annex 1 of the 2009 APO<sup>10</sup>). Also, packaging of all available training materials developed to date on various governance and management aspects of water management is continuously underway to allow external use, further dissemination and impact of project experiences through a variety of channels including people, institutions, organizations, networks and fora produced, established, initiated, participated, consulted, directly trained or in one way or another influenced by our project such as local SMID teams, NCSGs, trained target groups and institutions, a pool of consulting experts consisting of both academics and practitioners, multi-project and multi-donor information exchange hub and fora, focal points in responsible ministries etc. Thus, the project is well positioned to lead endeavors outside project areas to foster a wider enabling environment for IWRM, promote its approach to IWRM, and disseminate the significant amount of knowledge generated. Given all this the project will hopefully be in a position to effectively implement not only *capacity development* of its major target groups and institutions as identified and discussed throughout this document but also a *capacity for development* to generate more sustainable impacts and changes (see the last Annexure 5 for the schematic).

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<sup>10</sup> IWMI and SIC-ICWC, (2009). *The 2009 Annual Plan of Operations*. IWRM-Ferghana Project:Tashkent, Uzbekistan

## Annexure I

### The roles, responsibilities and functions of individuals and organizations of Target Group A<sup>11</sup>

#### 1. General Assembly and Members

The supreme governance organ of the WUA is the General Assembly, which includes all members. The General Assembly provides the "Overall Strategic Guidance" to the WUA Council and the WUA Staff. The General Assembly has the following roles:

- defining main directions of activities of the WUA;
- Adopting and amending the Charter;
- Approving the powers of the Council of the WUA;
- Approving the powers of the Audit commission;
- Electing and removing the Council members;
- Electing the members of the Audit Commission and defining the duration of its activity;
- Electing the members of the Dispute Resolution Commission;
- Ratifying WUA Staff appointments by the WUA Chairman and/or WUA Council;
- Setting the annual fees and charges payable by members and non-members;
- Approving the annual report and accounts;
- Approving the annual budget of the WUA;
- Approving the work plan and the irrigation schedule;
- Establishing and amending internal by-laws and orders;
- Setting the level of any fines payable in case of non-payments, and of breaches of Charter provisions or of other internal rules; and
- Making decisions concerning the reorganisation or liquidation of the WUA, the appointment of a liquidation commission, and approving the interim and final liquidation balances.

#### 2. Water User Groups (WUGs)

WUGs are WUA member groups correspond to a hydrological unit within the WUA's territory (typically a tertiary canal or "uq ariq"). The size of Water User Groups is 5-20 members occupying an area of 300 ha to 1,000 ha, depending upon the area that tertiary canals serve within the WUA's territory. Water User Groups can be either formal or informal. Informal WUGs function best where water users cooperate closely in operations and maintenance on an informal basis, like "*khashar*". If informal cooperation is impossible, WUA members might consider the creation of formal Water User Groups (example: in a settlement) on the basis of a simple charter and appoint a leader to manage affairs within the WUG, as well as to represent at

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<sup>11</sup> To be as comprehensive as possible the list of roles, responsibilities and functions in this Annexure has been generated using IWRM-Ferghana project documents and the ADB publication (Asian Development Bank (2005). *Manuals for Water Users Associations in Uzbekistan*. Volumes 1-5. ADB: Philippines)



the Council or Assembly. Hence, WUG is functioning through its leader. They authorize their leader to represent them at WUA council or elsewhere, they respect his decision and oblige to respect and follow his recommendations, instructions and decisions. They also contribute to maintenance of the canal, which serves them.

### **3. Water User Group Leader**

WUG is led by an elected Leader from the community- the water users. Normally, he is an elder (*'Aksakal'*), who will be responsible for distribution of water among the group, maintaining the small canal and infrastructure on it through "*khashar*" and collecting ISF from users. He is also responsible for representing the water users on all water matters related to them at WUA and higher levels. Therefore, it is encourage him to become a WUA Council member. Usually, his service is acknowledged by a payment in cash or kind by the water users.

### **4. Council**

The WUA Council is typically comprised of few members, who elect a Chairman. The Chairman of the Council is the highest official in the WUA. The WUA Council through a process of appointment by election has the mandate to manage, supervise and monitor the day to day financial and technical activities of the WUA. The responsibilities of the Council are listed below:

- Managing the activities of the WUA in accordance with the Charter;
- Elect a WUA Chairman from the members of the WUA Council;
- Appointing the Director and the Accountant of the WUA staff in accordance with the provisions of the Charter.
- Ensuring that the WUA staff perform in accordance with the Charter and represent the interests of all members; reviewing the activities of the WUA staff on a monthly basis;
- Monitoring financial operations on a monthly or quarterly basis;
- Reviewing and correcting the budget and work plan proposed by the WUA staff;
- Proposing the annual budget, Irrigation Service Fee, and work plan to the General and/or Representative Assembly (which would be drafted by the WUA Director and other WUA staff);
- Reviewing the reports of the Audit Commission.
- Calling general assembly meetings and preparing their agendas; and
- Implementing other issues as assigned by the General and/or Representative Assembly.

Council members must be members of the general (or Representative) Assembly, Audit Commission, Dispute Resolution Commission, or WUA staff. The Council should meet a minimum of once per month.

### **5. Audit Commission**

Each WUA is having an Audit Commission, which is few elected by the General (or Representative) Assembly. The Audit Commission conducts an annual review of all financial records and books of the WUA, as well as of the inventory of WUA assets. The Accountant of the WUA staff must assist the Commission during the audit by disclosing all records and accounts for examination. On the basis of this review, the Audit Commission prepares a report of its conclusions and recommendations, which is then presented to the General Assembly. The

General Assembly or Representative Assembly reviews the report of the Audit Commission and, if necessary, takes appropriate action to correct any problems or irregularities.

### ***6. Dispute Resolution Commission***

In WUAs where water distribution and maintenance duties are inequitable and result in significant conflicts, it is advisable to establish a Dispute Resolution Commission. The primary responsibility of the Dispute Resolution Commission is to serve as an intermediary in disputes concerning the distribution of water irrigation, outflow of drainage water, and maintenance of irrigation and drainage infrastructure. The Commission convenes public hearings of disputes, in which the goal is the exchange of information and the resolution of disputes on the basis of mutual consensus. If consensus cannot be reached between the disputing parties, the Commission reaches a decision, which is binding upon parties, unless a court of law judges decides otherwise.

Dispute Resolution Commission members cannot hold positions in other organs of the WUA.

### ***7. WUA Staff***

The WUA Council appoints the Director and Accountant of the staff, although the General (or Representative) Assembly determines their salary. The WUA staff is the only organ of the WUA that receives a salary. The members of the WUA staff may include engineers, O&M Technicians (mirabs/ditch riders), and (Gate Keepers, an amelioration expert, a head mechanic, drivers, and a guard as required).

The tasks of the WUA Directorate (WUA Director and staff reporting to him) are as follows:

- Hiring, firing, and directing staff (with the exception of the WUA Director and Accountant), which is done by the WUA Council in consultation with the WUA Chairman and/or WUA general (Representative) Assembly;
- Preparing the draft budget and work plan that is proposed to the Council;
- Maintaining a register of members, which is updated on an annual basis;
- Operating and maintaining irrigation and drainage systems;
- Preparing water delivery plans, maintenance and financing plans, contracts for approval by the Council; and
- Managing the finances and assets of the WUA.

### ***8. Members of UCWU and CWC***

Consist of all types of water users of the canal and is representing the user interests at various decision making levels, governance over canal, communication between water users and authorities.

## Annexure 2

### Organizational Levels, Functions, and Target Groups for Capacity Development

Organization	Function	Target Group
<b>WUG</b>	Governance at local level Representation on WUA Council	WUG leaders/Council members
	Water distribution to farms, local dispute resolution, fee collection	WUG leaders/Mirabs
<b>WUA</b>	Social mobilization (hydrographization, water users inventory, awareness building, consultations, constituent documents, founding meeting, registration)	Initiative Groups All members
	Participation and decision-making in governance bodies; concluding and observing agreements with WUA	All members
	Decision-making at General Assembly (ratification of work plans, budgets, staff, re-organization)	All members Council
	Representation of membership and oversight of management body between General Assemblies	Council
	Dispute resolution	Arbitration Commission Council Director and mirabs
	Inspection of infrastructure and planning for maintenance	Director Head Engineer Mirabs
	Maintenance	Director Head Engineer Mirabs
	Creation of annual work plans, water use plans, and distribution schedules; concluding water delivery agreements with members	Director Head Engineer Council Mirabs Accountant
	Water distribution and accounting	Director Head Engineer Mirabs WUG leaders
	Setting service fees	Director Head Engineer Accountant Council
	Budgeting and business plans	Director Head Engineer Accountant Council
	Collection of service fees	Director Accountant Council

<b>Organization</b>	<b>Function</b>	<b>Target Group</b>
	Accounting, taxation, and audit	Accountant Audit Commission
<b>UCWU and CWC</b>	Meet to reach decisions concerning annual plan, budget, setting membership fees, re-organization, ratification.	All members
	Represent membership and oversee work of Board of Directors when full meetings are not in session.	Council
	Discuss issues in water governance and reach decisions concerning actions and monitoring their execution.	Board of Directors Council
	Monitor the execution of decisions	Board of Directors Council
	Raise awareness among water users concerning IWRM and key canal/area water management issues	Board of Directors Council
	Dispute resolution	Arbitration Commission Council
	Setting membership fees	Board of Directors Council
	Collection of service fees	Board of Directors Accountant
	Accounting, taxation, and audit	Accountant Audit Commission
<b>Canal Management Organization</b>	Main canal operations and maintenance and execution of decisions of CWC	Main Canal / Irrigation System Administration
<b>External Support</b>	External advisory support and monitoring	All countries: SMID teams Kyrgyz Republic and Tajikistan: District Water Dept. WUA Support Unit Uzbekistan: Basin Irrigation System Administration / Oblsel'vodkhoz / Hakimiyat Base WUAs
<b>Enabling Environment</b>	Policymaking and legislation, advocacy of approaches to IWRM	Ministries / Administrations / Committees of Agriculture and Water Resources, Justice, Economy and Finance, Health, Nature Protection, Hydrometeorology, and Emergency Situations Cabinet of Ministers Executive Bodies Parliaments NCSG Donors and IFIs

## Annexure 3

### Needs and Recommended Plan of Activities

Capacity	Needs	Target Group	Action	Timing
<b>WUGs</b>				
Leaders consulted are cognizant of their roles, rights, and responsibilities in representing members and distributing water.	Continued strengthening of WUG leaders.	WUG leaders	Social mobilization and advisory services concerning RRR and IWRM	Ongoing, with emphasis upon November-December
Mirabs remain in many instances unaware of water measurement and distribution methods developed under the project. They also lack expertise in dispute resolution.	Expertise in water distribution, hydrometry, and conflict resolution.	WUG leaders Mirabs	Extend training in technical water management and dispute resolution to WUG leaders and mirabs	Prior to implementation of water use plans (January-February and August-September)
<b>WUAs</b>				
<b>Governance</b>				
In WUAs in which SMID activities have been conducted, council and staff understand the organizational structure and RRR, and governance is relatively sound.	Development of understanding of organizational structure and RRR in WUAs in remaining areas.	WUA Council members WUA staff and General Assembly	Develop governance manual and module for training. Implement training in remaining WUAs in pilot areas. SMID technical assistance in preparation for and participation in General Assembly meetings.	Ongoing, with emphasis upon General Assembly meetings (January-February August) and November-December
WUG leaders are not represented in WUA Council in most WUAs.	Integration of WUG leaders into Councils	members WUA staff and General Assembly	Advocate integration of WUG leaders into Council during General Assembly meetings	Ideally prior to General Assembly meetings (January-February, August) or as appropriate
Ability to protect interests of WUA utilizing the legal and regulatory framework of WUAs is low.	Increased knowledge of legal and regulatory framework for	WUA Council members WUA Manager Head	Integrate legal and regulatory issues into training manual and modules for most relevant aspects of	Ongoing, with emphasis upon November-January

<b>Capacity</b>	<b>Needs</b>	<b>Target Group</b>	<b>Action</b>	<b>Timing</b>
	IWRM and juridical process.	Engineer	formation, governance and management. Disseminate materials and copies of laws or citations.	
<i>Staff</i>				
Some WUAs noted that there is a high turnover of line staff, owing to low and/or irregular payment of salaries.	Enhanced financial position of WUAs to enable regular staff salary payments. Expertise of newly acquired staff.	WUA Manager WUA Accountant Newly acquired staff	Step up training in financial management and conduct liaison on behalf of WUAs to acquire support from local authorities. Track staff turnover on a semi-annual basis. Implement refresher training for new staff.	Financial management and refresher training: as noted for needs elsewhere in table. Staff tracking: January and June
<i>Management: O&amp;M</i>				
Most WUA Directors and Head Engineers have received technical water management training and are able to create their own water use plans and water distribution schedules.	Coverage of remaining WUAs	Focus training upon Head Engineer and Mirab (see above under WUGs).	Assess capacity and needs of Managers and Head Engineers for each WUA. Continue classroom and on-the-job training in crop water requirements, water delivery reporting, creation of water use plan, time-based distribution, performance assessment. Continue research into various methods of water distribution and implement where appropriate.	Needs assessment: November-March Training: prior to creation and implementation of vegetative and non-vegetative water use plans Research: ongoing
In many WUAs, Council members and Arbitration Commission members lack a thorough understanding and knowledge of dispute resolution methods and procedures.	Improved knowledge and understanding of dispute resolution (emphasized by Tajikistan WUAs).	WUA Managers WUA Council members WUA Arbitration Commissions Mirabs	Devote portion of governance manual to dispute resolution by means of mutual consensus. Develop training module that is adapted to formal procedures specified in law in individual countries. Implement classroom training,	Prior to implementation of water use plans (January-February and August-September)

<b>Capacity</b>	<b>Needs</b>	<b>Target Group</b>	<b>Action</b>	<b>Timing</b>
			focusing upon Tajikistan and WUAs in Transboundary Small River project areas.	
WUAs do not manage assets well, in part owing to financial position and in part due to lack of expertise.	Plans need to cover all periodic and recurrent maintenance and capital repair needs.	WUA Manager Head Engineer WUA Council members WUA accountant	Continue to develop asset management module and manual (incorporate UWUs and CWUs, if possible; see below). Implement classroom and on-the-job training as WUA financial position improves, emphasizing role of asset management within overall O&M budgeting and planning and the need to update plans on an annual basis.	Prior to creation of annual Business Plan and winter General Assembly meeting (January)
<i>Financial Management</i>				
Many WUAs are able to create own business plans. However, they cover only one year, with inadequate attention to long term needs and the creation of a Reserve Fund for contingencies. ISF amounts/ha or cu.m. are inadequate. ISF collection rates are commonly at around 50-60%, which results in high turnover of staff and insufficient funds for maintenance needs.	Improved expertise in planning that covers long-term needs. Awareness among members concerning the ISF and benefits of a Reserve Fund. Improved financial position of WUA through increased ability to collect ISF.	WUA Manager WUA Council members WUA Accountant	Continue to expand coverage of on-the-job training in business plan development. Emphasize need (in General Assembly, leaflets, etc.) for farmers to be aware of preventive maintenance requirements and need to gradually increase ISF amount and collection rate. Integrate long term business planning into asset management module and training. Emphasize need to create a Reserve Fund as ISF collection rates improve.	Prior to creation of annual Business Plan and winter General Assembly meeting (December)
Audit Commission works poorly in some areas. Some Managers	Improve accuracy of accounting and	WUA Accountant Audit	Create training modules, booklets, and leaflets in accounting	Accounting: ongoing, as feasible

<b>Capacity</b>	<b>Needs</b>	<b>Target Group</b>	<b>Action</b>	<b>Timing</b>
requested training of accountants.	ability to conduct an independent audit.	Commission WUA Council members.	and audit procedures and practices (if possible develop jointly for WUAs, UWUs, and CWUs), with differentiation for national accounting standards of the three countries. Implement classroom training with practical exercises and disseminate materials in workshops and via WUA Managers.	Audit: prior to annual audit (December)
<b><i>UWUs/USWUs &amp; CWCs/SWCs</i></b>				
<b><i>Governance</i></b>				
Board members of UWUs and CWCs are generally aware of organizational structure and RRR. However, not all members have grasped the concept in its entirety.	Knowledge and understanding of organizational structure and RRR in UWUs and CWCs.	All UWU and CWC members.	Develop a manual/ guidebook concerning RRR. Continue social mobilization and workshops concerning RRR and IWRM, with especial emphasis upon new UWU and CWC members.	Ongoing
Right Bank Aravan-Ak Bura and TSR USWUs in nascent stage of development.	Knowledge and understanding of organizational structure and RRR in UWUs/USWUs and CWCs/SWCs. Rapport among members of TSR USWUs within and across TSR countries.	All Right Bank Aravan-Ak Bura and TSR area UWU members. Board members of other UWUs and CWCs.	See previous action. Joint seminar among Right Bank Aravan-Ak Bura and TSR area UWU and other UWUs and CWCs to exchange experience.	Ongoing
Ability to utilize the legal and regulatory framework to protect interests and guide own	Increased knowledge of legal and regulatory	Chairs, Board and/or Council members	Integrate legal and regulatory issues into training manual and modules for most	Ongoing



<b>Capacity</b>	<b>Needs</b>	<b>Target Group</b>	<b>Action</b>	<b>Timing</b>
work is low.	framework for IWRM and juridical process.		relevant aspects of formation, governance and management. Disseminate materials and copies of laws or citations.	
Monitoring and enforcement of UWU and CWC decisions is improving with support from local governments and ministerial branches, but many lack adequate financial resources to support it.	Full support of government. Improved financial position.	Chairs, Board members, Province and district authorities MAWR NCSG	Continue to gain support of state authorities and forge cooperation with state management authorities through roundtable discussions and advocacy for issuance of decrees in support of UWU and CWC decisions. Improve financial position (see below). As financial position improves, develop module and train in monitoring methods.	Roundtable discussions: prior to vegetative and non-vegetative seasons (January-February and August-September) or as appropriate
TSR USWUs and SWCs	Rapport and mutual understanding of issues among members of TSR USWUs and SWCs within and across respective TSR countries.	Boards and Chairs of TSR USWUs and SWCs	Continue to facilitate workshops focusing upon discussion and prioritization of problems and solutions until a consensus has been reached concerning solutions. After consensus if firm, adopt agreement concerning bilateral arrangements and mechanisms for monitoring and enforcement of the agreement.	Prior to vegetative and non-vegetative seasons (January-February and August-September) or as appropriate
<i>Operations and Maintenance</i>				
Most members of UWUs and CWCs do not have adequate knowledge of all of the water use issues related	Training in IWRM A basic knowledge of the integrated		Continue workshops in IWRM and dissemination of IWRM booklet. Develop specific	Ongoing

<b>Capacity</b>	<b>Needs</b>	<b>Target Group</b>	<b>Action</b>	<b>Timing</b>
to IWRM on the main canal, irrigation system, and/or river basin.	management of main canal O&M, environmental health, aquatic ecosystems, municipal water supply, fisheries, and other water uses.		modules for individual basins, accounting for all water uses, on the basis of initial workshop discussions. Implement training.	
<i>Financial Management</i>				
Financial viability of UWU has improved, but remains low (around a 10% collection rate of membership fees), owing to inability of WUAs to pay.	Improved financial position of WUAs.	WUA Director WUA Accountant	Improve financial position of WUAs (see above).	See above under WUA financial management
UWUs and CWCs have developed business plans. However, they are only beginning to undertake financial management, owing to lack of funds heretofore.	Ability to set membership fees, asset management, accounting, and audit.	Director Board of Directors Accountant Audit Commission	Train in workshops using financial management and asset management modules (see above) and disseminate materials.	Prior to creation of Business Plans and audit (December) Accounting: ongoing, as feasible
<i>External Agencies</i>				
SMID teams are able to conduct social mobilization and focus groups and train effectively. Needs assessment, monitoring and group facilitation skills may require some improvement.	Capacity in IWRM, advisory services, training, needs assessment, and monitoring for new staff; needs assessment, and monitoring for existing staff.	SMID teams	Develop a manual and modules for training of SMID teams. Train accordingly, as needed.	Periods when training and TA is infeasible (late March-April cotton planting, June wheat harvest, October cotton harvest)
WUA Support Units: Lack of training and experience in Tajikistan; Staff turnover in Kyrgyz Republic.	Capacity in IWRM, advisory services, training, needs assessment, and monitoring for all units in	WUA Support Unit staff		Periods when training and TA is infeasible (late March-April cotton planting, June wheat harvest, October

<b>Capacity</b>	<b>Needs</b>	<b>Target Group</b>	<b>Action</b>	<b>Timing</b>
	Uzbekistan and Tajikistan; new staff in Kyrgyz Republic.			cotton harvest)
Canal management organizations are increasingly aware of and willing to cooperate with CWCs as joint governance bodies. There are various views concerning the feasibility and manner of implementing joint management in the future.	Continued improvement of awareness and understanding of joint governance with water users. Common vision concerning joint management and interim arrangements for it.	UWUs CWCs CMOs Basin organizations Local governments	Continue with stakeholder meetings and workshops to raise awareness and discuss vision for development of joint governance and management. Utilize as basis for future organizational and human resource development measures.	Ongoing, as feasible

**Annexure 4**  
**Capacity Building definitions**

*“Capacity’ is understood as the ability of people, organizations and society as a whole to manage their affairs successfully. ... ‘Capacity development’ is understood as the process whereby people, organizations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time.”*  
(OECD,[http://www.oecd.org/document/47/0,3343,en\\_21571361\\_34047972\\_39462639\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/47/0,3343,en_21571361_34047972_39462639_1_1_1_1,00.html))

According to CGIAR Challenge Program on Water and Food, *“Capacity-building is an ongoing process by which the abilities of an organization, group, or individual are increased so that they may more effectively formulate and achieve relevant objectives.”*(CGIAR, 2005. Challenge Program on Water and Food: Strategy on Capacity Building)

Another definition for capacity building is as *"activities which strengthen the knowledge, abilities, skills and behaviour of individuals and improve institutional structures and processes such that the organization can efficiently meet its mission and goals in a sustainable way."* (World Customs Organization (2003) *Customs Capacity Building Strategy*. <http://www.wcoomd.org/files/1.%20Public%20files/PDFandDocuments/Capacity%20Building/Cap%20buil%20strat.pdf> )

Ann Philbin defined capacity building as the *"process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in the fast-changing world."* (Ann Philbin, 1996. *Capacity Building in Social Justice Organizations*, Ford Foundation)

World Bank identifies two different aspects: —first of *capacity for development* and then of *capacity development* (or capacity building). (World Bank (2002). *Capacity Building of Public Sector Civil Services Training Institutions Project*. World Bank: Washington)

**Annexure 5. Project's vision of sustaining Capacity Development through effective Capacity for Development**

