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Water Users Association Support Project (WUASP)¹

Integrated Water Resources Management in Ferghana Valley project (IWRM-FV)²

**An Approach to Water User Associations in Tajikistan
(Draft)**

November, 2009

¹ Project WUASP is implemented by Winrock International funded by USAID

² Project IWRM-FV is implemented by consortium of IWMI & SIC, ICWC and funded by SDC

Abbreviations

ADB	Asian Development Bank
AO	Association Organizers
CMO	Canal Management Organization
CP	Communities Programme
DWMO	District Water Management Organization
FAO	Food and Agriculture Organization of the United Nations
ICWC	Interstate Commission for Water Coordination
IMT	Irrigation management turnover
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
IWRM-FV	Integrated Water Resources Management in Ferghana Valley Project
MoWRLR	Ministry of Water Resources and Land Reclamation
MoA	Ministry of Agriculture
NGO	Non-Governmental Organization
O&M	Operations and Maintenance
PIM	Participatory irrigation management
PC	Public Communities
SIC ICWC	Scientific-Information Center, Interstate Commission for Water Coordination
SDC	Swiss Agency for Development and Cooperation
SMID	Social Mobilization & Institutional Development team
TA	Technical Assistance
UCWU	Union of Canal Water Users
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
UWU	Union of Water Users
VAT	Value Added Tax
WUASP	Water User Association Support Program
WUA	Water User Association
WUG	Water User Groups

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1. Introduction: Current situation with regard to water use in Republic of Tajikistan

Tajikistan is not the first country to find itself in a situation where sufficient funds were not available to operate and maintain its irrigation system, thus causing deterioration and declining production. Numerous other countries around the world have faced the same problems. Their general approach was to devolve responsibility for a large portion of the system to the end users themselves, the farmers. And many of these countries have had considerable success.

Success has come through developing viable, functioning and sustainable water user organizations (WUA) to operate and maintain on-farm irrigation system. This does not mean that the 'government' turns over the system one day and walks away. There remains a significant role for the government during a transition period as the WUAs learn how to manage. And governments will always have a role managing major parts of the systems.

Agricultural land in Tajikistan covers about 4.6 million hectares (ha), with 741,200 ha of irrigated area.³ The establishment of the Water User Associations in Tajikistan started in the 1990s following the implementation of the first phase of Land Reforms in 1998-2000. One of the main purposes of creating WUAs is to operate, maintain & use on-farm irrigation system with the purpose of on-time, adequate & reliable water supply to its water users. To date, around 200 WUAs have been established with area coverage of 193, 862 ha, supported by local and central governments, local communities, and I/NGOs through a series of projects on water management that have either finished implementation and/or on-going.

Among such projects are USAID's Water User Association Support Program (2004-2010) & SDC's IWRM-FV project (2001-2010) which devoted all its efforts to develop an approach to organizing WUAs that have a high probability to be sustainable.

One of the tasks of the Government of Tajikistan for the future is to create up to 300 WUAs with total area coverage of 350 thousand ha⁴. For the sustainable functioning of new WUAs, there is a need to create & achieve a general common approach in creation & development of WUAs in the Republic.

This presentation documents the WUASP's & SDC's WUA & CMO development approach that could be adopted as a model by the Tajikistan Government for future WUA development in the irrigation sector. If this approach is closely followed as hereby outlined and external factors addressed, i.e. policy changes, market liberalization, legal aspects and etc., then the chances of continued success are high.

But, let us be clear. No matter how good an approach may be, how good it is carried out, nor how good a WUA might be developed, the Government of Tajikistan, at all levels and at all times, must be fully committed to and support the WUA concept. It must provide necessary guidance and advice and assist the WUAs to grow into their new role and responsibilities. However, if such commitment is not forthcoming, then the WUAs will not be successful and Tajikistan will continue on the road of declining agriculture and deteriorating economic conditions for its people.

³KasWag AgriConsulting Worldwide Project 7F-00351.06.14. 2008

⁴Data from Second WUA Coordination Meeting, August 11, 2009, Dushanbe, Tajikistan

2. Legal basis on creation & organization of WUA activity in Tajikistan

A water users' association (WUA) needs a clear understanding of the law for three fundamental reasons. First, knowledge of the law is very important in the creation of a WUA's charter and internal regulations. Second, awareness and proper application of the law by WUA officers and staff will promote good governance and management in a WUA. Third, knowledge of the law is crucial in the event that it becomes necessary for a WUA to take recourse to the courts.

Today, there is a legal basis for WUA operation in Tajikistan, in particular:

- “Water Users Association” Law of the Republic of Tajikistan # 387 from November 8, 2006 which regulates legal basis of creation, activity & management of WUAs as non-commercial organization with the aim of operation & maintenance of irrigation system for serving in the interest of water users.
- The Water Code of Tajikistan, accepted in 2000, expanded the legal basis of creation of WUA, the regulatory relationships among WMO and WUAs, created the opportunity of transfer the rights on management of WUA as the separate water management organization.
- The Civil Code of Republic of Tajikistan – regulates the order of creation non-governmental public organizations. Mostly WUAs are created in the framework of this code.
- Regulation of Government of Tajikistan #281 from June 25, 1996 on “Assertion of Regulation on order of fee collection for water delivery service to water users from state water management systems” – regulates the economic relationships between water management organizations and water users.

In general, there is a strong legal basis for creation and organization of WUAs and their activities. However, today there are number of problems with regard to implementations of laws in the places, organization, operation and sustainability of WUAs in the Republic.

3. Problems of WUA functioning in Tajikistan:

Technical aspects:

- WUAs are frequently created without hydraulic boundaries in mind;
- The ownership issue for on-farm irrigation and drainage networks.
State property cannot be handed over to any non-government and legal entities at no cost. However, it should be underlined that former kolkhoz on-farm irrigation and drainage networks have never been government property. They rather were kolkhoz-cooperative property. Following restructuring of the kolkhozes, in accordance with decree of the Government of Tajikistan (#522, 1996), they should have been transferred to respective ministries, but due to lack of financial means for operation and maintenance the Ministry of Water Resources could not accept the infrastructure.
- Poor conditions of on-farm irrigation infrastructure. One of the main responsibilities of WUAs is to ensure efficient use of water and land resources. However, without adequate water measuring systems it is hard to ensure economic water use. Despite the fact that legislation considers volumetric water measurement system, most of the water measurement systems today are degraded, and therefore proper measurement is in question. It is therefore necessary to rehabilitate the water measurement systems and facilities.
- Low knowledge levels & capacity of WUA specialists in running WUA business.
- Absence of material-technical resource base in WUAs;

Institutional aspects:

- Low level of ISF collection.
Financial stability/viability of WUAs remains a main issue. As the financial sustainability of a WUA directly depends on financial stability of its farmer-members, it is difficult to expect financial viability at this stage of the overall reform process.
- Not perfect direct agreements/contracts on water delivery between WUAs & Water management organizations, and between WUA and water users where should be taken into consideration the interest of all sides.
- Majority of WUAs don't know how to properly operate water management organizations, the separation of functions of governance & management inside the WUAs, such as WUA Councils & Directorate work.
- The issue of methodology for taxation of collected fees by WUAs still remains unclear: in some places VAT is requested on all fees, in other places from those fees that are transferred to district state organization for water management, and vice versa. In this regard, more training and information campaign must be carried out for the WUA members with participation of the local tax agency representatives.
- Barter transactions;

4. Recommendations or Approach for development of WUAs in Tajikistan

Objective

The first major step that Tajikistan must take toward developing organizations is to decide if that is the correct way to go or not. If it is, then a very clear and overriding objective of what a WUA is expected to achieve must be stated. For example, is a WUA to be just a 'collection agency' for the government? Is it just a way for government to put the burden of operation and maintenance on the farmers without adequate support? (To form a WUA and then walk away without providing for some system rehabilitation will never work. Along with the organizing process, the government has a duty to see that some rehabilitation works are done—it should arrange with donors for the necessary funding. However, unless the main objective is to enhance farmers' abilities to operation and maintenance a system that will benefit them (and society in general) then the WUA approach to solving the irrigation system problems will likely fail.

4.1.1. WUA Organizing Process

After having decided to organize and develop WUAs, established major objectives, and acquired government commitment and support, then one can think about the organizing process itself.

There are various ways to go about the organizing process and many variants have been tried in the past. Each country, situation, culture, etc. influences how one goes about organizing that will best achieve the objective. A cavalier, unplanned attitude to organizing is unlikely to work, and with a quick and haphazard approach one can not expect the organizations to be effective and sustainable. There have been instances where major donors organized WUAs in only a few days through meeting with one or two influential farmers and local government officials in which someone was appointed to 'be in charge'. These WUAs did not work and will never work. To have any hope of success organizing must be done in a well planned manner.

A Water Users Association (WUA) is a non-profit organization that is initiated¹, and managed by the group of water users along one or more hydrological sub-systems (distributory¹ canals which are the higher level than a watercourse) regardless of the type of farms involved. By water users we mean the ordinary cultivators of land, individual members of lease-holding farms or production cooperatives in condition of Tajikistan, owners of private and dehkan farms, owners of home garden plots, etc. These are the potential members of the WUA, who pool financial, material, technical and human resources for the operation and maintenance of the irrigation and drainage system within their jurisdiction for the benefit of all the members.

How Can a WUA be Formed, Developed, and Sustained?

Successful WUAs typically pass through the following three stages in the course of their development: (1) formation, (2) transition and empowerment or strengthening, and (3) sustainability.

Formation. This stage covers the preliminary tasks required to create a WUA and to enable it to begin its activities. During this stage, the water users decide to establish a WUA following the steps that are discussed in detail in this document. The new WUA then registers itself, opens a bank account, and signs a management transfer agreement with the local state irrigation authority. Water users pay an initial membership fee to the association.

Transition and Empowerment or Strengthening. This stage covers the development and strengthening of the WUA's capability to accomplish its operations and maintenance tasks. During this stage, the members of the new WUA become more and more knowledgeable about their rights and duties, and they learn to exercise them democratically. The staff of the WUA Management Team has been hired and is being paid regularly. A long-term training program for WUA staff and association members has been initiated. The WUA is able to prepare a long-term operations and maintenance plan. It is able to gradually increase the irrigation service fee to cover expenses and to pay for charges by outside agencies. The percentage of association members who are dutifully paying the irrigation service fee is growing. In practice, most WUAs remain in this phase for several years before becoming self-sustaining.

Sustainability. This is the stage when the WUA has become viable both organizationally and financially: All of its internal governing and management bodies have been constituted and have become fully accountable to the WUA membership. The members of the WUA management staff have become fully competent in handling their responsibilities. All WUA members are now regularly paying the irrigation service fee. The WUA is able to undertake regular preventive maintenance for its facilities and equipment. Once a WUA becomes self-sustaining, it is ready to join other WUAs in a federation or Union of Water Users.

4.1.2. Concept of the Organizing Approach

There must be an ‘Organizing Approach’ that ensures success and is agreed upon by all involved. The approach must be appropriate for the place and situation for which it is to be used and it must be one that is ‘doable’. An approach that has been tried in Tajikistan and has had significant success is discussed in this section and is recommended as a model to be followed in the future.

WUA organizing efforts should be pursued through the concept of ‘Community Organizing’ or ‘Social Mobilization & Institutional Development’ (SMID). This is a method to organize farmers into vibrant, aware, positively critical and self-reliant WUA in order to develop their capacity to actively participate in development projects and enhance their ability to be sustainable. This helps change farmers’ attitudes so that they are motivated to do things themselves collectively instead of depending on government or other private institutional help. Basic features of the Community Organizing or SMID approach are:

- Process oriented; focused on a step-by-step activity through which participation evolves from the outset of the project up to monitoring and evaluation;
- Quality over quantity; a process that does not resort to short cuts. Though various steps are involved, it ensures that the pace of the community is considered in relation to the project. Project interventions can only be implemented successfully if people are responsive and receptive—this takes time;
- Evocative; develop mechanisms so that people’s voices are heard; that encourages bottom-up innovations rather than top-down dictated approaches;
- Popular; to promote local knowledge, culture and traditions and provide a venue for people to freely express themselves;
- Pro-Poor; since they are the victims of systemic and structural problems of society, and in Tajikistan the poor are mainly in the rural areas. Empowerment is about uplifting the lives of the poor;
- Innovative; to extend beyond the confines of traditional paradigms. Communities are dynamic habitats and approaches evolve based on emerging needs.

Employing this ‘Community Organizing’ concept in organizing rural communities lays the foundation upon which rural communities can work together to significantly improve their livelihoods as well as contribute to the nation’s economic growth.

4.1.3. Community Organizing Principles

The overall ‘Community Organizing’ concept is rooted in some basic organizing principles. Organizing farmers into viable and sustainable groups capable of operating and managing their irrigation systems cannot be done using a ‘one-size-fits-all’ approach. Each country and even areas within a country may require adapting/modifying some particular aspects of the process however, there are basic organizing principles that must be followed:

- Organizing must be a ‘bottom-up’ approach—and all that that implies—not dictated from above;
- People act on the basis of their own felt needs and self-interest
- People must have a common goal and know their rights and responsibilities;
- Start from small and concrete needs and work toward more complex and bigger issues;
- People must have a voice in decisions that will affect them;
- People learn more through experience;
- The organizing process must empower the capacity of people to collectively define, analyze, think and act creatively to solve their problems;
- The process must be open, transparent, fair, honest and democratic;
- WUA organizational structure must include checks and balances—not a ‘one-man show’;

- The WUA must be based on a specific hydrological unit or water system. If necessary, the WUA's organizers must make an effort to reconfigure this unit based on the prevailing farm structure in the locality.
- The WUA must be formed and developed with the fullest possible participation and involvement of its prospective members. It should mobilize their support and make full use of their deep familiarity with the existing irrigation and drainage system in the locality.
- Members should have access to relevant information.

4.1.4. Community Organizing Methods

These organizing principles, based on an overall concept, are put into practice through three basic methods:

- **Integration into the Community:** The field level organizer or social mobilizer must immerse himself or herself in the community to know and understand the culture, economy, history, rhythms and lifestyles of the people. This is achieved when the people no longer perceive the organizer as an outsider but as a member of their own community—when he or she is accepted as "one with them"—and has their trust and confidence;
- **Groundwork:** A system of communication where the organizer engages as many persons in the community as possible, motivating them to do something about problems and issues which they have identified.
- **Action-Reflection-Action;** the organizing process involves a progressive cycle of action-reflection-action. Farmers develop into leaders and members capable of acting on problems and issues that confront them by analyzing courses of actions to take to resolve particular issues, reflect on previous activities and outcomes as to lessons learned, and then plan their next actions to take in the process of solving their problems.

Through use of these methods in the organizing process, the farmers gain specific skills in problem-solving and develop in the leaders and members a confidence in their capability to act collectively to resolve problems as individuals as well as an organization.

Who Should do the Organizing:

Having identified the need to organize rural communities into viable groups to solve their irrigation problems developed a concept and method to effectively do the organization, the question naturally arises; who should do the organizing? Should it be the government, local/international NGOs, donors, a combination of these or some other arrangements?

Arguments for and against can be made for any particular group/organization to do organizing work. At this point and likely for some time to come, the Tajik Government will most likely have to rely on donors to provide funding for any significant organizational efforts. However, the government itself is not the right organization to do actual organizing work. It does not have funds or trained staff, and by organizing WUAs to essentially take over many areas of responsibility of the agency itself, leads to a conflict of interest however established WUA support Unit could actively contribute to the process of organizing WUAs. Thus, it is best that the agency not be directly involved in organizing works itself. Major donors (such as ADB and World Bank) are also not appropriate, it is difficult for them to make a real commitment to organizing efforts since their focus—and greatest strength—is to implement major rehabilitation works.

Tajikistan now has a small group of people with experience in organizing that could form the core of a local NGO that is most suited to extensive WUA organizing efforts. To ensure that organizing works are undertaken according to a proven approach and methods, the irrigation department must insist that all donors either strictly follow an approved approach or, and probably the best way, is to engage a competent local NGO to undertake actual organizing works.

An ideal arrangement would be for major donors to fund system rehabilitation (with WUAs undertaking works at their system level) and a competent local NGO doing the organizing.

In any case, individuals who will do the actual organizing are known as an ‘Association Organizer’ (AO) or SMID team. They must be carefully selected and appropriate training provided (if necessary) before they start organizing activities.

4.2. Formation of WUA

WUA can be established by taking the following steps:

1. The Initiative Group

The first step in forming a WUA is identifying and gathering a group of people who are interested in the idea and who stand to directly benefit from it. They are the ones who will eventually form the Initiative Group. An Initiative Group has to be informal in character. Its potential members should preferably be persons who can rightfully become members of the WUA. This means that they are water users in actual possession of the right to utilize agricultural land in the locality.

2. Hydrological Units and Their Appropriate Size

In consultation with local authorities, the Initiative Group has to clearly establish the area, boundaries, and size of the hydrological unit to be served by the proposed WUA. This must be done before formally collecting baseline data within this area and before consulting with water users within the proposed hydrological unit.

An area must not be too small or too large. If it’s too small the number of farmers may not be able to generate sufficient resources to meet the needs of the WUA. If the area is too large it may be beyond the capabilities of the farmers to operate and maintain. For larger areas a number of WUAs can be organized into an UWU or Federation or Union of Water User Associations that would have the needed capabilities required for operation and management at this level.

3. Familiarization Meetings

After determining the hydrological unit that it will serve, the Initiative Group has to build the trust and confidence of the farmers and other water users in that unit. It can start with introductory meetings on the objectives, functions, and organizational structure of the proposed WUA. The formation process of the proposed WUA and the responsibilities of WUA members, particularly the payment of the irrigation service fee, must be emphasized in those meetings.

4. Information and Awareness Campaign

An information and awareness campaign about the proposed WUA has to be undertaken alongside the familiarization meetings. This campaign should clearly explain what WUAs are and what they aim to do. It should strongly emphasize the potential benefits that members can derive from organizing one

5. Representative election Meetings for Watercourses level Water Users Groups (WUGs) and for the Representative / General Assembly

The AO or SMID mobilizers with active involvement of local people should conduct a series of meetings at watercourse level. Meeting dates, times and venues should be fixed in such a way that suits water users. For example, several water users might like to hold meetings in the evening to let their routine work not suffer. AOs or SMID mobilizers should widely publicize the selection meeting to provide equal opportunity for all eligible water users to come forward for representation. In this regard, announcements in the village two to three days ahead of the meetings and written messages to all water users would be highly useful. The mobilizers should try to ensure maximum participation. If the participation is less than the set criteria (about 50-60% of all water users), the selection meeting

should be re-scheduled. Water users present in the meeting should that they advertise and publicize the meeting better to trying to ensure better participation. announce the schedule of the next meeting on the spot by consensus, and then the mobilizers make sure

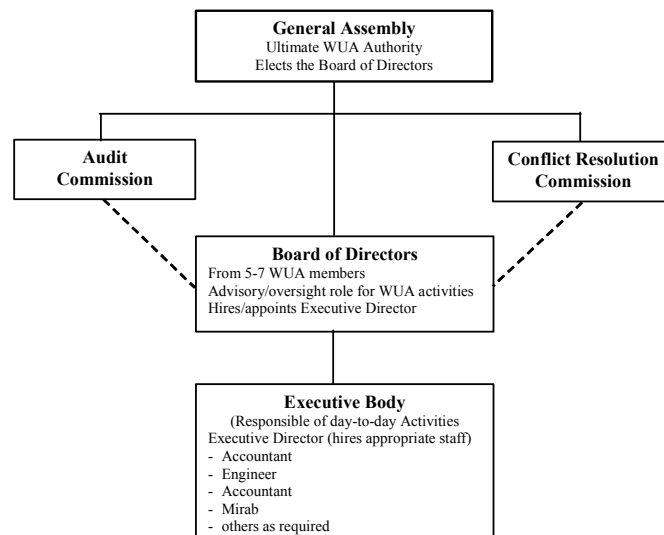
6. Meetings of the Representative Assembly & Selection of WUA Board, Chairperson of WUA, and Dispute and Revision Commission Members:

Formal WUA Organization

Final and formal organization of the WUA takes place after a culmination of a series of confidence building activities described above that are designed to gradually mold the farmers into a cohesive group to give them a sense of collective power and confidence in learning from each other's motivation and conviction. This process generally takes several months depending on size of the area, season, number of farmers, social complexity, etc.

Two very critical and important outcomes of the organizing process are “bylaws” (charter) and the “organizational structure”. If these two concepts are not thoroughly understood and supported by all members then sustainability will be unlikely.

- Bylaws: Organizations need rules of operation—bylaws—they are the heart of the organization. Bylaws are developed by a volunteer group of farmers who are knowledgeable, interested, dedicated, and from the potential WUA area. A ‘sample’ bylaw is used only to illustrate major points; it is not a prepared document ready for signature. Bylaws must be adapted for the particular concerns, conditions and situations of each WUA. At various times during bylaw development, the group meets formally and informally with all farmers to discuss issues and seek ideas and suggestions. This process usually takes about one month. The bylaws must be approved and adopted at the general assembly meeting;
- Organizational Structure: The organizational structure must reflect the governance and management aspects of the organization. Specific responsibilities and duties are defined in a democratic manner within a system of checks and balances to ensure the organization does not become a ‘one-man’ show and that all activities, particularly financial, are conducted transparently and are open and available to all members. The diagram below shows the organizational structure that has been successfully used in Tajikistan—and in general it should not be changed.



General Assembly Meeting

For the sake of clarity and since the initial General Assembly meeting is the culmination of the organizing process, major issues that must be made decided and approved in the meeting are noted here:

- All major issues will be decided ONLY by secret balloting;
- Members and/or representatives must first decide if they want to establish a WUA. If they do, then they may vote on an official name for the WUA;
- The bylaws and structure are presented for any final comments and/or minor changes; they are then voted on for approval or not;

- Members then vote to elect the Board of Directors; this step must be done through “SECRET BALLOT”—NO exceptions. *(It should be stressed here that NO SALARY or other compensation will be paid, or promise to be paid, to any elected official or WUA member(s) by any donor and/or implementing agency for any reason);*
- The bylaws generally indicate how the Chairman of the Board is determined; sometimes it is by secret ballot and other times by elected members of the board themselves;
- It is up to the Board of Directors to decide on a Director for Executive Body, however, sometimes this is decided by the General Assembly, generally the Director does not have to be a WUA member;
- The permanent Audit and Conflict Commissions are elected;
- A membership fee is discussed and approved;
- Usually an ad hoc committee is decided on to follow-up with membership fee collection and preparing documents for registration with the appropriate government agency;
- After the initial General Assembly meeting, General Assembly meetings are held at least once a year or as otherwise noted in the bylaws.

7. Adopting the Normative Charter, By-laws, and other documents for registration and applying for registration

After the WUA formation meeting is conducted successfully, the WUA has to register with the Ministry of Justice so it can become a juridical entity. The WUA will acquire legal standing as a nongovernment, nonprofit organization only after it is duly registered. Prior to registration, the WUA has to create its own official seal, as this and any other symbol of the WUA also need to be registered with the Ministry of Justice. Upon official registration with the Tajikistan government the WUA is then a legal entity, free to operate and carry out its affairs according to Tajikistan law.

8. Negotiation and Ratification of the Management Transfer Agreement

Even if a WUA has already been established, it can begin to function only after it has already signed a Management Transfer Agreement with the Irrigation System Administration. This agreement stipulates the WUA’s property rights and its operating and maintenance responsibilities.

A Management Transfer Agreement specifies the following:

- Property rights to the area as well as to the irrigation and drainage system being transferred to the WUA;
- Transfer to the WUA of the irrigation and drainage infrastructure along with any existing operating and maintenance equipment;
- Terms of transfer for the irrigation system;
- Rights and obligations of the Ministry of Melioration and Water Resources of Tajikistan (MMWR) ;
- Rights and obligations of the WUA; and
- Terms of termination of the Management Transfer Agreement.

9. Negotiation and Signing of Contracts with the MMWR

Once a WUA is registered and signs a Management Transfer Agreement, it has to negotiate an initial agreement with the Irrigation System Administration for the bulk water supply to be provided by the latter. The WUA Council/Board chairman has the authority to negotiate this agreement in consultation with the WUA manager and the membership. The agreement has to clearly define the responsibilities of both parties as well as those of any outside authorities involved.

4.3. Transition and Empowerment or Strengthening

WUA Skills Development

Skill development of WUA members is one of the most important aspects of the organizational process and begins during the organizing phase through training and direct involvement in all aspects of the process, and this development will be a continuous process throughout the life of the WUA. Skill development comes mainly through training and capacity building activities, following some of the training and activities that should be carried out both during and after WUA formation.

WUA Training

Various types of training must be provided at appropriate times during and after WUA formation, including, but not limited to;

Organizational Leadership training, including gender	Conflict resolution
Conducting internal audits	How to conduct meetings
Planning and reporting	Financial management
Grants management	Water use plan and irrigation scheduling
Calculation of irrigation service fees	System maintenance plan/Water measurement
Tax and taxation	Budgeting and reporting
Record keeping	Cross-visits to other WUAs
Agro-technologies (both water and agriculture)	Marketing
Economics	Business planning, asset management &etc,

The implementing agency should provide relevant information regarding such things as:

WUA law	Water and land codes
Relevant decrees	Agro-technical information
Other sources of community assistance	etc,

Community-Wide Training

In addition to training focused solely on WUA activities, training/information should be provided to address community-wide needs and identified issues, this particularly applies to village women and children, and may include:

- School training or festivals focused on: clean water, prevention of pollution, what is a WUA, etc;
- Introduction of IWRM institutions into curriculum of education institutions;
- Food preservation and drying;
- Micro credit;
- Small business opportunities;
- Etc.

Improvement of technical base of WUAs.

In order to properly functioning WUAs should consider improvement or renovation their on-farm irrigation infrastructure. Specifically, construction new water measurement devices, rehabilitation of irrigation schemes, computers and etc.

Capacity Building

Capacity building is a continuous and on-going activity for the WUAs. It is part of the intensive development phase to instill in members a desire to continue to improve their capabilities to operate and manage their WUA. If they are successful they will not only benefit directly but will attract attention of other organizations that can assist them in any number of other areas of need.

In addition to training to enhance skills development and capacity building, WUA members should participate in as many other activities as possible, staff of the implementing agency/SMID team or AO should assist them when needed to ensure they are on-track. There should be follow-up activities to advise and assist with particular issues, for new WUAs this should be over a season or two as they go through a learning process on operating and managing their WUA. One of the best activities to help build capabilities is for the WUAs to be responsible for and carry out the majority of rehabilitation works, at least at the WUA level of the system. They would;

- Identify and prioritize works to be done, and then in a General Assembly meeting vote to approve the works;
- Select/appoint a 'Works Committee' to supervise and be responsible for implementing the works;
- WUAs would be required to contribute at least 20% as cost share for construction works;
- All works to be done would be the responsibility of the WUAs, of course with guidance from the implementing agency;

- Procure equipment that may be required.

WUAs will enhance their management skills through developing internal budgets, seasonal plans, irrigation schedules, etc. for their organizations. They are be responsible to make agreements with the irrigation department regarding water delivery, collect fees, both for the government as well as for WUA operations, prepare required government reports, etc. At both the individual and WUA level they should keep seasonal detailed records for each crop they plant, such as; cost of all inputs, labor, harvesting, selling prices, etc. so they could calculate their profits (or losses).

Monitoring, Evaluation, and Feedback

From time to time the WUAs should, with maybe some outside assistance, perform a ‘self-evaluation’ to help them determine any short comings in their operations and develop a plan and course of action to resolve them. They would also identify any particular needs for training in specific areas that would enhance their effectiveness.

A WUA has to institute a monitoring, evaluation, and feedback system that (1) can effectively track and analyze its performance both annually and over the long term, (2) enable it to inform its members regularly about this performance, and (3) keep itself abreast of developments in the external environment.

Union of WUAs or Federation of WUAs

In many parts of the world, a Union or federation is eventually formed by the various WUAs & other stakeholders that obtain water from the same main canals. Such a federation or UWU has the same organizational structure as that of the WUA itself. It has a corresponding representative assembly, council, audit commission, dispute resolution commission, and management team. In Tajikistan, in particular, Union of Water users are intended to eventually take over the role of the governing body of irrigation system administrations and to work directly with the main canal administrations if Government decides to transfer the ownership to water users. However, today it is recommended in the first instance create Union of Water Users that will jointly involved into the Governance of main canals. Some larger systems may require that the irrigation department and a Federation of WUAs jointly manage the system for some time to give the Federation time to become fully able to operate and maintain the entire system.

To restate again the fact that it is not the intent to ultimately have the end users (farmers) operate and maintain the entire irrigation system (basically they cannot). The irrigation department will continue to have a major role in system management & water users (stakeholders) will play major role in governance.

5. Conclusions:

Sustainability: introduction key IWRM principles into WUA & main canal levels:

Although sustainability is an intended outcome there is no guarantee that any one WUA will achieve this. There are too many external factors that can negatively affect sustainability. However, the experience of IWRM-FV & WUASP projects on introduction IWRM principles in WUA & CMO creation brings to more sustainable operation, they are following:

- Hydrographization - transfer from administrative-territorial to the hydrographic basin principle of Water Mgt;
- Public participation in water governance;
- CMO Water mgt taking into account the interests of all the interested sectors (agriculture, ecology, industry, drinking water supply and etc.);
- Accounting all types of water sources in water management (surface, ground, return water

sources) taking into consideration climatic peculiarities;

- Close coordination of water use and all participating organizations horizontally - amongst the sectors and vertically - by hierarchical levels of water use;
- Information sharing, transparency of the water management system;
- Economic and financial stability.

An organization may achieve sustainability depending on ‘internal’ as well as ‘external’ factors. An organization that is well organized, well run by capable, dedicated staff and has full support of its members, can within itself be sustainable. However, even a ‘perfect’ organization cannot be sustainable if external forces act against their interests. *(To reiterate, as demonstrated by a number examples, that the very first step toward sustainability—creating a ‘good’ organization—cannot really be successfully accomplished by major international donors, such as the ADB and World Bank.)*

In Tajikistan, at least at present, external factors are limiting the effectiveness of WUAs (severely in some cases) and if these conditions continue WUAs will have a difficult time to operate effectively never mind attaining sustainability. Three major areas of concern include:

- There is continual interference in WUA internal affairs from local authorities side, always a threat from local authorities hanging over the heads of WUA officials, along with various other systemic institutional problems;
- Government support is absolutely essential if sustainability in any degree is to be achieved. As noted above, local governments and/or ministry officials should have no direct role in the organizational process. They should, however, be informed about activities, invited to attend meetings/training, etc. and kept informed as to progress and achievements. The real role of the Tajikistan Government, at all levels and at all times, is to be fully committed to support the WUA concept & major role will play WUA support Unit created at Ministry of Melioration & Water Resources of Tajikistan. It must provide the necessary guidance and advice, assist the WUAs to grow into their new role, and in general, be a facilitator of the WUAs—not a hindrance;
- Sustainability presumes members can make a sufficient profit in order to pay the WUA for operation and management of the irrigation system. In Tajikistan, the external factors that negatively affect this includes almost everything associated with crop production; lack of access to quantity, quality, timely and reasonably priced inputs; lack of effective extension services; lack of a marketing service; lack of sufficient and appropriate machinery, lack of credit, issues of farm debt, land use, etc, etc.

Without fundamental and systemic change in these external factors WUAs in Tajikistan face a dim and difficult future.

There are other external factors that may in the short not really affect sustainability of WUAs, but are nevertheless vital for long term success of both WUAs and Tajikistan agriculture. Major ones include:

- Laws have a wide-ranging affect in the agricultural sector; tax laws, land and water codes, WUA law implementation, etc;
- Nation-wide water and irrigation strategies;
- Restructuring of the irrigation department, to meet future Tajikistan irrigation/agricultural needs;
- Sufficient funding to rehabilitate the irrigation/drainage system.

However, if the government is sincerely interested and committed to developing WUAs, organizational efforts can proceed without waiting for these external factors to be in place.

- 1) Adapted from more than 5 years experience organizing, training farmers and assisting directly 39 Water User Associations in Southwestern Khatlan and districts near Dushanbe. William Bell and WUASP staff, September 2009.)
- 2) Document has been based on published IWRM-FV project reports, guidelines & manuals.

REFERENCE:

- 1) “WUA Law of Republic Tajikistan” 2006.
- 2) Proceedings of the Coordination Meeting “Water User Associations in Irrigation and Water Management in Tajikistan” organized by FAO of the UN, June 01, 2009 & August 11, 2009, Dushanbe, Tajikistan;
- 3) WUA formation & development guidebook, ADB, August, 2006.
- 4) “Social Mobilization & Institutional Development Strategy” and “How to create WUA”, IWRM-FV project, IWMI-Central Asia Subregional Office, 2002.
- 5) “Business Planning” Guidebook, IWRM-FV (phase III), O.Anarbekov (IWMI) & M. Pinkhasov (SIC, ICWC), 2007.