IWRM in Action through Establishing Effective Groups of Water Users

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Land reforms in Central Asia resulted in fragmentation of agricultural lands. A great deal of new private farms arises instead of large collective farms i.e. many small water users arise on the place of one former large water user. Thus, real life demands a transition of current water governance towards more effective hydro-geographical or basin methods of economic management. In addition, the efficiency of water use under new conditions depends to a large extent on water users themselves, from the point of view of both governing water delivery and maintaining their irrigation and drainage systems (Pinkhasov et al., 2005).

Reforms in each Central Asian country have own specific character from the point of view of both their progress rates and concomitants. Nevertheless, it is possible to notice some similar problems in establishing WUAs over the whole region. First of all, WUAs were established and continue to be established mostly according to governmental directives i.e. according to a command "top-down." Therefore, water users think about WUAs not as about their own consumer association but as about a new body, which simply collects money independently of the fact that water was delivered or not. As a matter of fact, WUAs are and have to be the organizations of water users. Unfortunately, at present, because of objective and subjective reasons, a WUA, not always, can represent and defend the interests of its water users. In turn, water users, not always, understand for what a WUA is needed and its role. Therefore, there arises an institutional gap between water users and WUAs resulting in a number of problems under water distribution and distortion of IWRM principles. However, there is a solution of these problems. First of all, this is the creation of link in the form of water users groups that can effectively improve relations between water users and WUAs and facilitate the participation of water users in water distribution, WUA governance, and improving operating conditions of irrigation and drainage systems, and finally in water resources management at higher levels.

Practical aspects of establishing water users groups (WUGs)

From time to time, water shortage arises in tail parts of the secondary and tertiary irrigation canals. In such cases, water users try to solve this problem according to the principle: "do-it-yourself". They attempt to receive water with the help of their friends-irrigators or to undertake other illegal actions. In fact, when such situations arise quite often, conflicts between water users are unavoidable; and they do not trust each other and don't understand that water is their common resource, and therefore such problems should be jointly settled. For example, the WUA "Japalak" (Osh Province, the Republic of Kyrgyzstan) unites about 5000 water users and covers a total irrigated area of 2010 ha. An average size of their plots amounts to 40 sotoks or 0.4 hectare. It is impossible to conceive what huge organizational costs will be incurred by the WUA "Japalak" if the agreement on irrigated water delivery will be signed with each water user. Moreover, equitable water distribution among all water users and effective water management become an unrealistic task for limited WUA personnel. Therefore, establishing of WUGs for effective water resources management and for facilitation of governing WUAs is proposed. Establishing of WUGs within a WUA provides the following advantages:

- Improving the water distribution process;
- On-farm irrigation canals (tertiary and lower level) is maintain in the operational status;

- Decreasing, or eliminating at all, of conflicts between water users;
- Improving of activity of WUA, since water users themselves become responsible for the operational status of on-farm irrigation network;
- Water users control the process of water distribution;
- A confidence among water users is strengthened;
- Water users specify the rules for water distribution that are understandable and adapted to local conditions;
- Decisions are jointly and democratically made;
- A leader selected by a WUG can represent their interests in a WUA through its Council or General Meeting; and
- Issues of agricultural practice (pest control, tillage, land leveling, crop rotation etc.) can be collectively solved in a more effective manner.

Therefore, when there are many water users, both small and large, on tertiary and lower level canals, water distribution should be established in such a manner that can satisfy everybody. This is possible only following the principles of fairness and co-operation.

An establishment of water users groups (WUGs), which will directly participate in water management and distribution, is the best solution of water distribution problem. At the same time, WUGs can act on a voluntary basis as a community unit without a formal registration. It is necessary to note that there are problem-free canals regarding water distribution. There, water users have developed own rules and entrust water distribution to experienced irrigators (mirabs) and foremen respected by local inhabitants. On such sites, WUGs are not necessary because they can complicate, and even frustrate, existing procedures of water distribution.

The process of establishing water users groups (WUGs)

A social mobilization is a series of measures that creates the public platform based on the mutual dialogue when each subsequent action depends on results of previous one. Achieved results are studied and taken into consideration under developing next actions in the form of appropriate adjustments [26]. First of all, a chief of WUA should be interested in establishing WUGs. To establish effective WUGs, this chief has to have leadership qualities because he/she should explain advantages of WUGs to people and persuade them to create water users groups. In other words, the chief of WUA will play a role of initiator and facilitator of this process. If the chief of WUA has not sufficient time for this activity he/she can hire employees who after appropriate instruction and training regarding the approaches of establishing WUGs based on hydrogeographical principles will be able to implement this mission. In particular, farmer, who has leadership qualities, a respected aksakal (elder) or person who knows local conditions and has ability for persuasion can become such a facilitator. There is not the need at all to attract water professionals for activity as social facilitators. Above all, such persons should have knowledge of agriculture and desire to work properly. Two or three persons are enough to form a mobile group that could implement the required information-preparatory works and create the enabling environment for initiatives of water users in establishing own WUG. Such an activity consists in a series of steps necessary for creating required conditions.

The first step: to specify problematic areas for establishing WUGs within the WUA territory. Activity should be started in those areas where water users conflict each other especially frequently in the course of water distribution. When a facilitator is not acquainted with local conditions a schematic map of the area serviced by the WUA for developing an action plan of establishing WUGs needs to be plotted with assistance of a chief or specialists of the WUA. Irrigation canals and off-takes where water shortage and conflicts between water users take place should be pointed on this map. As a rule, WUGs are established on tertiary canals.

The second step: field inspection of target canals and off-takes in the area selected for establishing WUGs. During the field inspection the following aspects should be carefully surveyed: i) the technical state of off-takes (as well as availability of a design water intake or "do-it-himself" structure, or absence of any structure), ii) a situation around off-takes including a layout of fields, crop pattern, and conditions of irrigation canal's channel (for example, erosion of side-slopes, overgrowing with aquatic and semi-aquatic plants, steep gradients etc.). It is preferable to conduct field inspections during water applications and critical periods for water distribution. In the course of field inspections, a facilitator will pass through those sites, where farmers, rural wage earners or tenants are working, meeting with local inhabitants to discuss relevant issues. As far as possible, he should represent himself and get to know local direct or indirect water users. This can be useful under discussing the matters of establishing WUGs with water users and for creating confidential relations.

The third step: initial meetings with water users and identification of active leaders. In the course of field inspections, a facilitator meets with water users and explains to them the objectives of establishing WUGs. He/she asks them about existing problems and their reasons (conflicts related to water distribution, water shortage, interference of water management organizations etc.). A facilitator should get to know water users' opinions about their WUA, the extent of their acquaintance with specialists of the WUA, and their proposals for how to settle existing problems. At the same time, it is necessary to ask them how neighbor water users solved similar problems. If a facilitator feels a lack of interest in this discussion he has to ask with whom else these issues can be discussed or who can be recommended as the most active and competent water user. People being interested in improving a water management practice or experienced farmers who rationally use their water resources and receive good crop yields can be always found among water users. Any water user can point out them. After a few meeting, a facilitator can decide who may be included into a so-called group of initiators. WUA specialists, community leaders (aksakals of local communities, chiefs of local administrations etc.) can be also included into this group. The group of initiators has to organize the meetings of water users united by one off-take.

The fourth step: the meeting with all water users. This meeting should be held on date and in place suitable for water users. A facilitator himself can hold this meeting, but it is advisable to attract additional assistants from among other facilitators or local activists and farmers-leaders specified during preliminary acquaintance. Why? Because somebody has to govern the meeting; and it is preferable to select for this role a respected local inhabitant or water user who is a good public speaker. At the same time, somebody should record all the most important details of the discussion. It is necessary to use small school blackboards (if available) or big paper sheets to record and demonstrate key general decisions and proposals of water users. First of all, water users have to tell about actual water distribution related to their off-takes and technical state of irrigation and drainage networks, as well as relations between agricultural water users and other consumers. After specifying the existing problems related to water distribution (all this information should be recorded and demonstrated on small school blackboards or big paper sheets), it is necessary to ask water users what ways do they see to solve these problems? Those proposals which coincide with the concept of WUGs, as well as similar opinions presented by different participants of this meeting, have to be recorded and demonstrated on school blackboards or paper sheets for all. During the meeting, it is easy to specify the most active water users as the potential leaders of WUGs; at the same time, water users can inform on their lessons learnt from solving the problems, and a facilitator, based on this information, should only link them with the idea of establishing WUGs and then gradually come towards the targets of a WUG. At that, a facilitator has to tell about advantages, objectives and the need in establishing WUGs. In the course of his presentation of WUGs' objectives, experienced farmers can exemplify their approaches for improving crop productivity based on rational irrigation. At the end of the meeting, it is necessary to specify a date of the next meeting for setting up WUGs and selecting their leaders.

The fifth step: the meeting for establishing a WUG. This meeting should be held according to agreements reached at the previous meeting. WUA specialists needed to be invited to this meeting in order to learn the experience of establishing WUGs and in the future to be able to establish WUGs on another irrigation module.

During the meeting, the active participants should have an opportunity to tell about their lessons and to confirm the possibility to provide high and sustainable crop yields under effective use of irrigation water. Experienced farmers can give examples of positive effects of applying an optimal irrigation schedule, stressing that both water deficit and over-irrigation are harmful for crops. Participants of the meeting should also mention water management problems, and how they can be solved based on activity of WUGs. A decision on establishing WUGs and electing its leader from among active water users is made based on the findings of discussion. It is not obligatory that a leader of the WUG should be an irrigator, former foreman or experienced farmer, but he/she has to be a respected person among water users and community people. He/she must have leadership qualities in order to organize water users for joint actions to solve common issues - maintaining their off-take in operating conditions and ensuring equitable water distribution. Water users can also discuss the matter of provision of incentives for a WUG leader. Figure 4.15 shows the dynamics of establishing WUGs on the pilot irrigation canals where more than 40% of WUGs were established based on the community initiative under participating water users.



Figure 4.15 Trends of Establishing WUGs on Pilot Canals

A Water Users Group can tackle the following issues:

• Timely water diversion in the head of their lateral (both on tertiary canals and lower level canals where farmers have small irrigated plots and on secondary canals where there are mainly large water users);

- Distribution of water diverted among water users based on the principles of fairness and publicity;
- Collection of information on their lateral to facilitate activity the Water Users Association under drafting the water use plans;
- Involvement of all water users in the water management process including collective works aimed at cleaning and repairing their laterals, as well as regulators;
- If necessary, drawing up of an agreement between the WUG and WUA covering irrigation water supply;
- Problem-solving of agricultural practice and water allocation jointly;
- Collection of applications for irrigation water supply (for their lateral) and submitting an aggregated application to the WUA Administration;
- Close co-operation with WUA specialists, participation at the meetings held by the WUA, business contacts with their representatives in the WUA Council to discuss current problems on their laterals;
- Drafting the water rotation schedule under active participation and close co-operation of all water users, as well as providing transparency of planning and implementing the schedule based on the participatory approach; and
- Assistance to a WUA in collecting of fees for water services from own water users.

Participation of WUGs in the process of water governance in the frame of the WUA

A top priority task for WUA specialists is water allocation at the tertiary and lower level of irrigation canals. Water users needed to be involved in water distribution on these canals through establishing WUGs.

When water users have small irrigated plots, it is rational to transfer their powers related to water distribution to WUG leaders (based on the general authority or the written agreement of water users located on this lateral) [27]. In addition, this simplifies signing the agreement on irrigation water supply between the WUA and water users, since such agreements will be signed with authorized leaders, who enjoy water users' confidence within the group, rather than with individual water users.

Thus, a leader who, on behalf of water users, participates in the processes of water resources planning, management and distribution at the level of WUA, its administration, Council, and general meeting is elected in each WUG. Water users, by the democratic way and according to their own free will, transfer their powers for representing their interest in water management. At that, a WUG leader will be responsible for collection of information required for drawing up the plans of water use (crop patterns and areas under crops in the command area of a lateral, its technical state, including data on an efficiency factor), as well as collection, aggregating, and submitting of applications on behalf of water users, drafting and implementing the schedules of water distribution and rotation, and signing the agreement on irrigation water supply with a WUA.

During the growing season, a WUG leader collects applications of own water users and, after their generalization, submits the aggregated application to the WUA Administration. WUA specialists, based on the aggregated application from a WUG, revise own plan of water use. A WUG leader, based on collected applications and consent of all water users, drafts the water distribution schedule for their lateral.

Thus, the WUA (its irrigators) delivers water up to the head of tertiary canals i.e. to the border of a certain WUG. Then, within the WUG, its leader distributes water according to the schedule agreed by all appropriate water users.

Supporting the initiatives of water users groups

The IWRM-Fergana Project has supported WUG initiatives related to the construction of hydrometric posts at the most problematic sites, promoting their participation in water resources management at the WUA level. Key indicators of selecting sites for construction of hydrometric posts were the following: activeness of water users, existence of established WUG, and close relations between the WUG and WUA. For this purpose, the project procured construction materials (cement and metalwares); however, most of costs were covered by WUGs in the form of labor force and local construction materials (sand, rocks). A Working Commission consisting of water users has selected 20 WUGs (10 on the KBC and 10 on the AAC), using transparent and fair procedures and based on the criteria that meet the requirements of water users. The chief achievements were the following: an increased will of the WUAs to mobilize own financial and labor resources for step-by-step rehabilitation of social mobilization; enhanced role, prestige, and confidence to WUA among water users; intensification of social mobilization; enhanced management responsiveness; intention of WUAs to establish new WUGs on the problematic sites; and, finally, improving of water distribution.