

MAIN RESULTS
of “Water Users Associations” Activity
under “IWRM-Fergana” Project
for 2002–2007

Objectives and results achieved in pilot WUAs during Phase II

Objectives	WUAs in zone of pilot canals in Fergana Valley		
	“Zhapalak”	“Akbarabad”	“Zarafshan”
Improve water accounting in WUA	v	v	v
Create a production basis for WUA	-	partly	-
Improve water use planning	v	v	v
Introduce advanced methods for water distribution in WUA canals	v	v	v
Improve water use	v	v	v
Ensure steady functioning of WUA by:			
- searching for additional financing sources	v	searched	-
- raising awareness of water users	v	v	v
- identifying incentives for WUA employees	-	-	-
- improving WUA’s reporting and control system	v	v	v

Legal aspects

Recommendations and proposals for improvement of the current legislation were developed on the basis of pilot objects maintenance:

1. *Allotted irrigated lands for farmers should be formalized in legislation by the right to water.*
2. *“Water market” should be formed of saved water within WUA.*
3. *A responsibility for violation of water use not only for water users, but also for water management organizations should be stipulated in the legislation.*
4. *A right to transfer of inter-farm irrigation network and the whole on-farm collector-drainage network to WUA for use should be stipulated.*
5. *Preferential taxation and crediting for WUA should be provided.*

The results of the work were the subject discussed at the scientific-practical conference organized by the Agrarian Committee at the Oliy Majlis of the Republic of Uzbekistan together with the USAID.

Recommendations for realization of favorable legislation in establishment and functioning of WUAs in Uzbekistan, Tajikistan and Kyrgyzstan were developed.

The mentioned recommendations formed a basis for the Laws on water users associations adopted in Tajikistan and prepared in Uzbekistan.

The developed recommendations for solving the problems related to the establishment and functioning of water users associations in the Republic of Uzbekistan were submitted to the Legislative Chamber of the Oliy Majlis of Uzbekistan, the Cabinet of Ministers of Uzbekistan and the Ministry of Agriculture and Water Resources of Uzbekistan.

Appropriate mechanisms for dispute settlement were developed and considered:

- possible conflicts between WUA and water users, between WUA and water management organizations (WMO) were considered;

- the existing mechanisms for settlement of disputes and conflicts in the current regulatory legal acts in the Fergana Valley countries were analyzed;
- recommendations for establishment of courts of elders in local authorities were given;
- mechanisms for settlement of water disputes were proposed;
- recommendations for prevention of disputes and conflicts between water users, between water users and WUA, between WUA and WMO were given.

“Guideline on IWRM at WUA level” was developed.

It includes:

- an approach and a strategy for social mobilization in establishment of WUA;
- a scheme of mutual obligations between WUA and water users;
- organizational and economic measures in establishment and functioning of WUA;
- land reclamation service for water users;
- disputes related to water relationships and a mechanism for their settlement;
- an analysis of technical and economic indices of WUA;
- organization of mutual payments between WUA and water users; and
- a system of reporting and control in WUA.

The “Guideline” was disseminated among WUA personnel and water users, considered in all the Ministries of Agriculture and Water Resources in the Fergana Valley countries, which then approved it.

The Ministry of Agriculture and Water Resources of Uzbekistan recommended the “Guideline” for office use in all WUAs established in the republic.

Technical aspects

Water accounting inside WUA, including training

The list of the water-measuring equipment manufactured and installed for pilot WUAs using funds of “IWRM-Fergana” Project

No.	Name of pilot WUA	Types of water-measuring facilities				Total (unit)	Gauging rods (unit)	Gauging platforms (unit)
		CW, TW (unit)	SF (unit)	FC, CF (unit)	SN (unit)			
1	Akbarabad	3	27	36	-	66	86	30
2	Zarafshan	-	20	1	5	26	43	9
3	Zhapalak	56	12	60	-	118	124	32

Note: CW - Chipolletti weir; FC - fixed channel;
 TW - Thomson weir; CF - calibrated flume;
 SF - SANIIRI flume; SN - SANIIRI nozzles.

Additional requirement for water-measuring facilities for newly established private and dekhkan farms as for 31 December 2007 amounted to:

- 118 units for WUA “Akbarabad”;
- 43 units for WUA “Zarafshan”;

Recommendations for water accounting in newly established WUAs were developed in terms of investigated demonstration canals (DC) in newly established WUAs. The followings were studied: availability of water-accounting facilities and regulating gates in WUA canals, availability of outlets in a canal for servicing farms, availability of water-accounting facilities on the farms and so on.

The investigation of WUA demonstration canals showed that their heads are mainly equipped with water-measuring facilities and regulating gates. However, their outlets to private farms are only partially equipped with the mentioned facilities. For example, only 117 or 29% of 398 outlets from demonstration canals to private farms are equipped with gauging stations, of which only 96 have regulating gates.

Training of hydrometrists and hydraulic engineers of WUAs in the use of a water use accounting system in newly established WUAs was organized directly at local level, in form of practical trainings.

During the trainings at local level, under the guidance of the project consultant in hydrometry, specialists of WUAs inspected canal heads, prepared a site to install a gauging station, and selected type of water-measuring facility. Water-measuring facilities were constructed, mounted and equipped according to the standards.

Technological aspects

An alternative system for water distribution considering requirements of water use organization for small farms – “Method for daily water use planning at WUA level” – was proposed.

The following problems are solved by using this method:

- water supply to users, regardless of their magnitude;
- equitable water distribution among users according to crop irrigation schedule;
- avoidance of infringement of canal tail users’ rights to water;
- reduction of non-productive water uses in WUA irrigation network and thereafter improvement of irrigation network efficiency;
- involvement of water users in development and implementation of water use plan.

The method is aimed at:

- requirements for water use planning (hydromodule zoning, crop irrigation schedule);
- techniques for water supply to water users outlets (continuous current or concentrated current);
- establishment of water user groups (WUG) on growing homogenous crops;
- water supply to users according to their requests.

Project WUA Activity is disseminating the accumulated experience in even and equitable water distribution among water users in newly organized WUAs, and actual water supply to pilot WUAs is in the field of vision of the project executors.

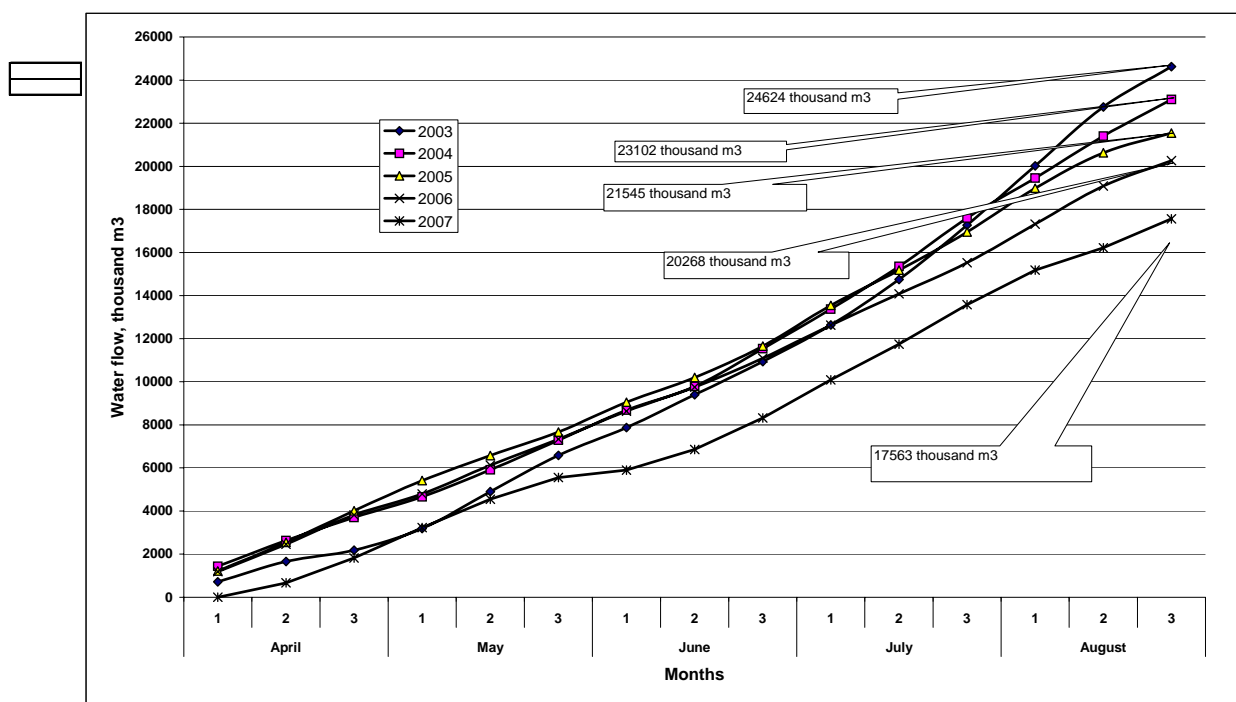


Fig. 1. Dynamics of actual water availability in canals of WUA “Akbarabad”, in progressive total for growing season in 2003– 2007 (thousand m³)

As it is seen from Fig. 1, the dynamics of actual water availability in canals of WUA “Akbarabad” in progressive total for growing season in 2003–2007 have a tendency to decline. The water availability in WUA canals for growing season amounted to 24.6 million m³ in 2003 (beginning of WUA establishment), while it was 23.1, 21.5, 20.3 and 17.6 million m³ in the last years 2004, 2005, 2006 and 2007 respectively, which is a positive factor under the conditions of water use from SFC given regulating canal capacity, formation and use of low-mineralized collector-drainage water.

A system for water use monitoring was created. It fixes as follow:

- use of all kinds of waters on farms;
- water availability for WUA, its canals and water users;
- operative communication between WUA and WMO, between WUA and water users;
- even water distribution among water users;
- stable water supply by WMO for WUA.

The monitoring system in WUA makes it possible to operatively correct water supply dates and volumes for farms in their water supply schedules.

Table 2

Assessment of water availability in water user outlets located at the tail of canals and collectors of WUA “Akbarabad” for growing season of 2007

WUA canals and collectors	Crop	Average water availability for WUG at the head of WUA DC (%)	Average water availability for WUG at the tail of WUA DC (%)	Ratio of water availability for WUG at the tail of DC to that at the head of DC (%)
Akbarabad 1 and 2	Cotton	107	130	121
	Wheat	82	96	117
	Vegetables	37	42	114
	Orchards	74	77	104

WUA canals and collectors	Crop	Average water availability for WUG at the head of WUA DC (%)	Average water availability for WUG at the tail of WUA DC (%)	Ratio of water availability for WUG at the tail of DC to that at the head of DC (%)
RP - 1	Cotton	130	132	102
	Wheat	91	96	105
	Vegetables	78	64	82
	Orchards	105	97	92
RP - 2	Cotton	116	93	80
	Wheat	87	90	103
Gandabulak	Cotton	87	91	105
	Wheat	122	118	97
	Vegetables	63	63	100
	Orchards	84	80	95
Okkuduk	Cotton	111	98	88
	Wheat	115	104	90

The method changes the approach to assessment of water availability for WU, i.e. the assessment is shown not through ten-day indicators, but through the results of carried out irrigations. This enables to fairly assess and interlink water availability for farms and activities of WUA and WMO.

The monitoring system was also introduced into newly established WUAs along South Fergana (SFC) and Khojibakirgan (KBC) Canals through training WUA specialists to organize monitoring and use the method for daily water use planning and analysis.

By 2007, 62 WUAs functioned along SFC.

Because of the considerable scope of work in all WUAs organized along SFC, the project executors selected one WUA with one demonstration canal in each district of Fergana and Andijan provinces to analyze water use in WUA.

Mobilizers provided methodical assistance to the personnel of newly established WUAs in SFC and KBC zones in making up a daily water use plan, in terms of demonstration canal

Table 3

Assessment of water availability in water user outlets located at the tail of WUA demonstration canals in SFC zone for growing season of 2007

Name of WUA	Name of demonstration canal (DC)	Crop	Average water availability for WUG at the head of WUA DC (%)	Average water availability for WUG at the tail of WUA DC (%)	Ratio of water availability for WUG at the tail of DC to that at the head of DC (%)
Ismailov	K – 11	Cotton	101	102	101
		Wheat	114	94	83
		Orchards	91	109	120
Mashal	Kommunizm	Cotton	74	68	92
		Wheat	89	72	81
		Orchards	109	113	104
Omad Zilol	Guliston	Cotton	90	87	97
		Wheat	91	100	110
Povulgon Obi Khayot	Isokov – 2	Cotton	72	91	126
		Wheat	94	101	107

The data in Tables 2 and 3 show that since daily water use planning has been introduced along demonstration canals in SFC zone, there is almost no infringement of canal tail users' rights to water.

The implementation of the "Method for daily water use planning at WUA level" in established and functioning WUAs along SFC and KhBC as well as of the water use monitoring system made it possible to reduce conflicts related to water use between water users and WUA, between WUA and canal, and between farms.

In 2007, Project WUA Activity together with specialists from WUAs established along SFC and KhBC carried out **water use analysis**.

The materials of the WUA water use analysis characterize:

- planned water withdrawal for all irrigation sources per ten-day period, in progressive total for growing season;
- ratio of actual water supply to planned water supply;
- ratio of actual irrigated area to planned irrigated area.

For all WUAs, reasons for actual deviation from the plan were identified in time and measures to eliminate them were taken.

It is seen from the data in Table 4 that the percentage of water withdrawal from **additional WUA sources** per district varies within great limits – from 10% (Kuva district) to 32% (Bulakbashi district), and they irrigated from 9% to 32% of the irrigated area in the districts.

Table 4

Water withdrawal and per hectare-irrigations for WUA in districts located along SFC, from different water sources

No.	Districts	Total irrigated area (ha)	Total water withdrawal for growing season (M m3)	Including (%)		Total per hectare-irrigations	Including (%)	
				from SFC	from additional source		from SFC	from addit. source
1	Khujaabad	3450	25,35	85	15	15419	84	16
2	Bulakbashi	8630	59,27	68	32	39522	68	32
3	Markhamat	18624	116,3	87	13	43209	91	9
4	Kuva	22037	204,4	90	10	121065	89	11
5	Tashlak	9855	54,2	82	18	41781	87	13
6	Akhunbabayev	4258	40,55	87	13	23660	90	10
7	Altiaryk	5763	49,32	86	14	29640	86	14

Table 5 shows that only 4 WUA of 46 SFC WUAs do not have additional water sources, 54 % of WUA receive water from additional water sources within 1 - 20 % of total water withdrawal for WUA during the growing season. 37 % of WUAs have water withdrawal from additional water sources within 21-40 %.

Table 5

Assurance of WUA water withdrawals from additional sources

Total WUA	WUA water availability due to other sources, In %%				
	0	1 – 10	11 – 20	21 – 30	30 – 40
46	4	13	12	6	11

SFC water infrastructure is unique and has complicated characteristic. **SFC** serves as the one reliable water source for three districts in Andijan province: Khodjaabad, Bulakboshi and Markhamat. Thus, during the growing season the limit allotted for SFC is redistributed between three canals SFC, Savay and Kyrgyzaryk to increase water availability of canal command irrigated lands.

During acute periods SFC is needed in recharge when supplying water to 4 districts in Fergana province. Besides, in order to improve water availability of SFC command irrigated areas water is used from Isfaramsai, Shakhimardansai, IDN, wells of vertical drainage and Kurgantepa and Karkidon reservoirs, which are regulating storages for Fergana part of SFC.

Tables 4 and 5 show that Andijan and Fergana parts of SFC have large internal reserves, which allow improving water availability of irrigated lands due to additional sources. There is a need to study and specify character of water resources formation for IWRM in Fergana and Adijan provinces.

Inter-district water rotation was introduced in pilot KhBC area due to acute water deficit between two districts. Water rotation period is 6 days. B.Gafurov district takes water for three days and the other three days are for Dj. Rasulev district. The same order was adopted within Dj. Rasulev district, where 1.5 days water rotations were set between WUAs and farms.

Depending on water requirements a water distribution schedule is prepared for dekhkan farms. At the same time firstly water is supplied to irrigated lands needed greatly in irrigation. When irrigating no water users know: for what area will supplied water volume be enough.

In 2007 efforts were made to adapt daily water distribution under introduced inter-district water rotation.

Water users were divided into two groups. The first group receives water for the first three days of water rotation and the second group uses the last three days.

Daily water discharges of each group were calculated separately and correction coefficient of supplied water per 1 ha was defined for each water rotation cycle through ratio of allotted canal water volume to required daily water volume. Daily water rotation schedule was corrected by calculated coefficient. Corrected daily schedule was a basis for water use monitoring inside WUA.

Table 6

Water supply indices between Ak-Kalya canal head and tail

№№ S.n.	Outlets	Irrigated area, ha	Water supply indices, thousand m ³		Average water availability, in %	Ratio of tail water availability to head one, in %%
			Planned	Actual		
I. Canal head						(41 / 44) * 100 = 93,2
1	Yarmagz	16,1	165	58	35	
2	Khudgif-1	14,6	153	64	42	
3	B. Khamdamov	60	734	300	41	
4	Yarmagz-2	50,7	525	274	52	
	Иrоро	141,4	157,7	696	44,,0	
II. Canal tail						
1	Sugd -1	16	187	81	43	
2	Somon-1	46	575	266	46	
3	Sugd-2	25	332	123	37	
4	Sugd -3	40	463	164	35	
	Total	127	1557	634	41,0	

Table 6 showed that as a whole water availability of farms in Ak-Kalya canal outlets was within 27 - 52%. However, water availability of tail farms is 93,2 % of head ones. Besides, water resources from Syrdarya by water lifting as well as some water released from irrigated fields were used to improve water availability of farms served by Ak-Kalya canal.

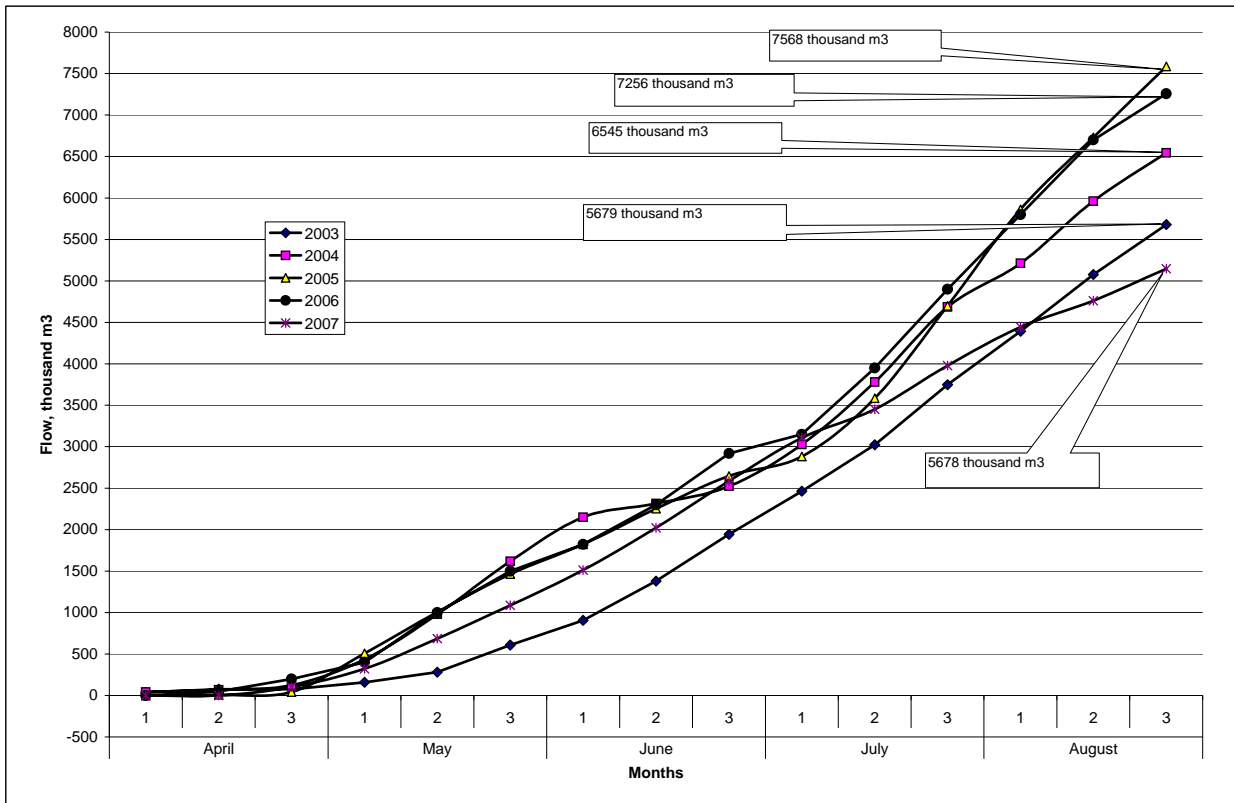


Fig. 2. Dynamics of actual water availability for WUA «Zarafshan» by progressive total for the growing season 2003 – 2007, thousand m³

When water source is KhBC, pilot WUA «Zarafshan» has no regulating storage and water supply to WUA depends mainly on climatic conditions around the canal. When WUA did not get full planned water use volume (15,0 – 16,5 million m³ depending on composition of grown crops), a positive factor for WUA «Zarafshan» should be relative water supply increase achieved during 2003-2006 with 5679 thousand m³ (2003) up to 7568 thousand m³ (2005) and 7256 thousand m³ (2006), although in 2007 actual water supply volume was reduced up to 5678 thousand m³ (Fig.2.) due to acute water shortage.

Conclusions and suggestions for water use in WUA

1. Daily water use and its correction in WUA according to submitted water applications showed its high effectiveness.
Water supply timeliness, water availability of water user and WUA activity for the growing season can be assessed according to data on daily water distribution.
Regular monitoring allows revealing defects in water use in time and taking necessary arrangements.
2. Daily water use planning enabling to organize effective water distribution and reduce water losses in WUA canals. In 2007 daily water use planning applied in WUA «Akbarabad» enabled to increase service factor of WUA canals from 0,66 up to 0,78.
3. Assessment of water availability in water user outlets located at the tail of canals showed that daily water use planning enabled to address the problem related to water availability of water users in canal tail.
4. Proposed order for linkage of water resources management between SFC and WUA demonstrated its high effectiveness. At the beginning of each decade WUA were informed on water supply to WUA canals based on given water-related situation in SFC.
5. During low-water 2006 – 2007 when water resources were limited in SFC area, arrangements on collector-drainage water use in WUAs were taken. It allowed improving WUA water availability by 25 – 30 % on average.
6. Project «IWRM–Fergana» recommended using a new methodology on water use planning for existing WUAs. However, all existing WUAs use old methodology on decade planning in record

keeping as they are receptors of former collective farms and state farms. The whole normative documentation for WUA record keeping should be prepared on the basis of daily water use planning and submitted to MAWR of Uzbekistan for introducing into record keeping of water management structures.

7. Water management relationships should be established between WUA and canals and WMO according to the order developed by SIC ICWC. Such order provides for informing WUAs on forthcoming water supply in timely manner based on given canal water-related situation.

Addressing problems related to land reclamation, drainage and collector-drainage water use in WUA

Project developed criteria for assessing irrigated land state and technical condition of drainage systems at WUA level.

Required information on irrigated land state and technical condition of drainage systems is provided with list of organizations having necessary information for assessment and analysis.

Organization of land reclamation measures and operation and maintenance (O&M) activities for drainage systems was reviewed.

Plan of land reclamation measures with expected results was prepared for pilot WUA «Akbarabad» for long-term and short-term periods.

There was defined a range of resolvable issues of Provincial Hydrogeologomeliorative Expedition (PHGME), WUA and farmers and respectively their responsibility for collector-drainage network (CDN) operation.

«Recommendations on safe collector drainage water use for irrigation in WUA» were developed.

“Manual on addressing land reclamation problems in WUA” was prepared.

The above mentioned «Recommendations» and manual were reviewed and approved by MAWR of Uzbekistan and up-scaled in provinces of the Republic of Uzbekistan.

Economic aspects of WUA Activity

WUA Activity elaborated «**Guideline on business-planning for WUA**» for WUA development and sustainable functioning. WUA goals and objectives, current state of its infrastructure, summary of starting-up and active business, particular features of marketing analysis and strategic planning and effectiveness criteria for arrangements in WUA were reflected in it.

The followings were reflected in «Guideline»:

- Goals and objectives of WUA business-plan;
- Summary structure of starting-up and active business in WUA;
- Short-term and long-term programs in WUA business plan;
- Particular features of marketing analysis in WUA business plan;
- Particular features of strategic planning in WUA;
- Accounting of planned costly arrangements in business plan and their linkage with annual fees of WUA members;
- Cost-effectiveness of repair and reconstruction works in WUA;
- Effectiveness criteria for investment-related arrangements;
- Business plan models by the example of pilot WUAs «Akbarabad» and «Zhapalak».

WUA Activity is developing «Guideline on business-planning in WUA» as well as analyzing technical and economic indices of created and functioning WUAs in Uzbekistan, Tajikistan and Kyrgyzstan.

Dynamics of technical and economic indices for farms – WUA «Akbarabad» water users in pilot SFC area in Uzbekistan

For 2003 – 2006

№№ S.n.	Indices	SFC area			
		Years			
		2003	2004	2005	2006
I	Serviced irrigated area, ha	2820	2820	2830,8	2830,8
II	Unit indices per 1 ha, \$/ha				
1	Actual water withdrawal volume, thousand m ³ /ha	8,7	8,2	7,6	7,5
2	Actual water supply volume, thousand m ³ /ha	6,9	6,8	7,0	6,9
3	Value of agricultural production (crop production), \$/ha	528,3 ^{*)}	578,2 ^{*)}	683,5 ^{*)}	700 ^{*)}
4	Raw cotton yields, centner/ha	28,7	27,2	31,6	32
5	Costs of agricultural production (crop production), \$/ha	479,7	529,8	595,2	593
	Including: - actual costs, WUA, \$/ha	3,2	3,3	4,3	6,7
6	Profit from agricultural production (crop production), \$/ha	48,6 ^{*)}	48,4	88,3	107
III	WUA costs in % of crop production profit	6,6	6,8	4,9	6,3

Rate of national currency against USD:

In 2003 1 \$ = 977 soum (Uzbekistan)

In 2004 1 \$ = 1060 soum,

In 2005 1 \$ = 1165 soum

In 2006 1 \$ = 1240 soum

Note:

*) – at farm level

Dynamics of technical and economic indices for farms – WUA «Zarafshan» water users in KhBC area in Tajikistan

For 2003 – 2006

№№ S.n.	Indices	KhBC area			
		Years			
		2003	2004	2005	2006
I	Serviced irrigated area, ha	1050	1050	1050	1050
II	Unit indices per 1 ha, \$/ha				
1	Actual water withdrawal volume, thousand m ³ /ha	5,4	6,2	7,2	8,3
2	Actual water supply volume, thousand m ³ /ha	4,8	5,2	5,8	7,3
3	Value of agricultural production (crop production), \$/ha	599,2	525,1	610,4	554,3
4	Raw cotton yields, centner/ha	19,3	22,8	23,2	23,4
5	Costs of agricultural production (crop production), \$/ha	391,8	492,2	503,5	527,1
	Including: - actual costs for WUA, \$/ha	3,5	2,13	3,43	4,49
6	Profit from agricultural production (crop production), \$/ha	207,4	32,9	106,8	27,2
III	WUA costs in % of crop production profit	1,7	6,5	3,2	16,5

Rate of national currency against USD:

1 \$ = 3,12 somoni (Tajikistan)

According to technical and economic indices for WUA «Zarafshan» it should be said that as a whole there is a positive trends of yield increase for main product – raw cotton from 19,3 centner/ha in 2003 up to 22,28 – 23,4 centner/ha in the last 2004 – 2006.

However, price reduction for ginned cotton provided in exchange impacts on agricultural production profitability (crop production).

**Dynamics of technical and economic indices for farms – WUA water users
in pilot AAC area in Kyrgyzstan
for 2002 – 2006**

№ № S.n.	Indices	AAC area				
		WUA «Zhany Aryk»				
		2002	2003	2004	2005	2006
I	Serviced irrigated area, ha	1006	1006	1006	1006	1390
II	Unit indices per 1 ha, \$/ha					
1	Actual water supply volume, thousand m ³ /ha	11,3	11,1	7,3	9,9	7,0
2	Value of agricultural production (crop production), \$/ha	552	604,7	683	614,6	586,6
3	Costs of agricultural production (crop production), \$/ha	219	239,5	282	312,2	298,1
	Including: - Actual costs, WUA, \$/ha	1,95	2,14	2,44	8,95	2,83
4	Profit from agricultural production (crop production), \$/ha	333	365,2	401	302,4	288,5
III	WUA costs in % of crop production profit	0,6	0,6	0,7	2,95	1,0

Rate of national currency against USD:
1 \$ = 43 som (Kyrgyzstan) in 2002 – 2004
1 \$ = 41 som in 2005

Note:
^{*)} - 156 ha are bogs and not related to irrigated lands and used as rangelands

According to technical and economic indices for agricultural production in WUA «Zhany Aryk» farms for the last 2005 and 2006 there was some reduction of agricultural production (crop production) profit from 401 \$/ha in 2004 up to 302,4 – 288,5 \$/ha in 2005 and 2006. Instability of prices at market also impacted on this fact.

WUA Activity prepared the following guidelines, manuals and recommendations:

1. Guideline on integrated water resources management at WUA level.
2. Guideline on preparation of business plans for WUA
3. Guideline on irrigation water distribution at WUA level
4. Manual on water use monitoring at WUA
5. Manual on planning and execution of repair and reconstruction works in WUA
6. Manual on water accounting in WUA
7. Manual on addressing land reclamation problems in WUA.
8. Recommendations on safe drainage water use for irrigation.

MAWR of Uzbekistan reviewed prepared guidelines, manuals and recommendations and recommended them for practical use in created and functioning WUAs not only in Fergana Valley but within the whole republic.

Training

Trainings were held at four points of Fergana Valley (Sogd province, Tajikistan, Fergana and Andijan provinces, Uzbekistan, Osh province, Kyrgyzstan). Experiences of pilot WUAs «Akbarabad» and «Zarafshan» were disseminated to more than 76 WUAs created along SFC, KhBC and AAC.

Directors and specialists of WUAs, WMOs and farms-water users took part in trainings and were trained in different activity directions.

During Project Phase III (2005 – 2007) about 1500 persons were trained. There were leaders and specialists among them from three states of Fergana Valley.

Difficulties and problems faced by WUA Activity when implementing Project objectives:

1. Water specialists from newly established WUAs along SFC and KhBC have low educational attainment. It requires great efforts to up-scale results of pilot WUAs to newly established ones.
2. Canal outlets in newly established WUAs along KhBC and SFC, where there are many water users, are provided with water accounting facilities and regulating gates only by 30 %. It does not allow distributing water in qualitative way between small water users and leads to conflict situations when using water.
3. It is required to regulate operational and economic relationships between WUAs and homestead lands (it is required to assign responsible persons in makhallyas or rural administrations to assure water delivery and distribution between owners of homestead lands, to establish legal framework for concluding agreements between makhallya and WUAs, to revise water delivery norms into homestead lands taking into account real grown crops).
4. «Methodology on daily water use planning and monitoring at WUA level» proposed by SIC IWC should be introduced on-site everywhere by MAWR efforts and its structures instead of decade water use planning and monitoring traditionally used in WUAs.
5. There is a need in program of state support for WUAs regarding:
 1. Rehabilitation of onfarm irrigation and collector-drainage network;
 2. Creation of material and technical basis for WUA;
 3. Assurance of lax crediting for WUA;
 4. Establishment of WUA Support Units for various created and functioning WUAs in basin and provincial structures under MAWR, in particular, for installing water accounting facilities in WUAs, training WUA staff, providing WUAs with various guidelines and manuals, etc.;
6. It is required to force adoption of Act on WUAs in Uzbekistan taking into account comments and suggestions provided by SIC ICWC.

**WUA Activity Leader
Under «IWRM-Fergana» Project**

M.A. Pinkhasov