Kyrgyz Republic

Ministry of Agriculture and Land Improvement

Department of Water Resources and Land Improvement

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Component 3

PERFORMANCE ASSESSMENT OF 72 WATER USERS' ASSOCIATIONS

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Abbreviations

ADB	Asian Development Bank
CSU	Central WUA Support Unit
Ha	Hectare
I&D	Irrigation and Drainage
ISF	Irrigation Service Fee
M&R	Maintenance and Repair
O&M	Operation and Maintenance
RSU	Raion WUA Support Unit
RVK	District Irrigation Department (*Rayvodkhoz*)
USAID	United States Agency for International Development
UWUA	Union of WUAs
WUA	Union of WUAs
WB	World Bank
WUA	Water Users' Association
WUA SU	WUA Support Unit

MAIN FINDINGS AND RECOMMENDATIONS

Institutional Aspects

Main Finding	Recommendation
Salient Features	
79% of the 72 assessed WUAs was established between 2000 and 2009, whereas 17% of the assessed WUAs were constituted between 1990 and 1999 and 4% between 2010 and 2016.	None
Overall, the 72 assessed WUAs have an average number of 989 individual members, ranging from 206 individual members in Chui Oblast to 1,807 individual members in Batken Oblast.	None
The overall average proportion of female members is 8%, varying from 0% in Naryn Oblast to 13% in Jalalabad Oblast.	None
A total of 19 WUAs (26%) in 5 Oblasts have an average number of 7.5 private legal entities as member and 13 WUAs (18%) in 4 Oblasts have an average number of one state legal entity as member.	None
Overall, 80% of the individual WUA members in the 72 assessed WUAs is Kyrgyz, ranging from 61% in Osh Oblast to 100% in Naryn, whereas 12% is Uzbeki, who are living mainly in the South. In Issyk-Kul and Chui Oblast, respectively 9% and 11% of the individual members in the assessed WUAs are Russian.	None
Overall, 25% of the 72 assessed WUAs have expelled an average number of 12 members for various reasons.	None
Overall, 39% of the assessed WUAs in six Oblasts reported to supply canal water to an overall average number of 98 non-members, ranging from an average number of 32 non-members in Chui Oblast to 168 non-members in Osh Oblast.	None
Overall, the 72 assessed WUAs operate and maintain an average number of 32 on-farm canals, ranging from 22 on-farm canals in Naryn Oblast to 52 on-farm canals in Jalalabad Oblast.	None
The overall average size of the service area of the 72 assessed WUAs is 1,437 ha, varying from 1,050 ha in Osh Oblast to 1,877 ha in Chui Oblast.	None
The overall average number of villages located in the service area of the 72 assessed WUAs is 3.5, ranging from one village in Naryn Oblast to seven villages in Batken Oblast.	None
WUA Charter and Internal Rules	

Main Finding	Recommendation
Except one assessed WUA in Naryn Oblast, all other 71 assessed WUAs have a Charter and adopted internal rules related to the management of the WUA itself and the operation and maintenance (O&M) of the on-farm I&D system.	None
Overall, 80% of the adopted WUAs adopted one or more sanctions to be imposed on water users for violation of internal rules, ranging from 60% of the assessed WUAs in Jalalabad Oblast to 100% in Batken Oblast.	All WUAs should formulate adopt effective penalties and sanctions to be imposed on any water user for violation of the WUA Charter or the internal rules.
General/Representative Assembly	
Overall, 87% of the 72 assessed WUAs have a Representative Assembly, ranging from 59% of the assessed WUAs in Chui Oblast to 100% in Batken and Jalalabad Oblasts.	None
In 44% of the 72 assessed WUAs, the zones within the service areas are based on hydraulic boundaries, whereas village boundaries are used in 58% of the assessed WUAs.	None
The overall average number of representatives is 33, ranging from 27 representatives in Naryn Oblast to 49 representatives in Issyk-Kul Oblast.	None
Overall, the WUA Representative Assemblies have an average of three female representatives (8%), varying from 3% in Issyk-Kul Oblast to 19% in Talas Oblast.	Each WUA should have a number of elected female representatives in the Representative Assembly in accordance with the proportion of female WUA members.
Overall, the General/Representative Assembly in the 72 assessed WUAs had two meetings in 2015.	None
92% of all assessed WUAs had General/ Representative Assembly meetings with the required quorum.	None
Except for one assessed WUA in Batken Oblast, all other 71 assessed WUAs reportedly prepare minutes of all General/Representative Assembly meetings.	None
A few assessed WUAs in three Oblasts do not have a method to consult and inform their members properly before and after each Representative Assembly meeting.	All WUAs must formulate and adopt an appropriate procedure to consult and inform all WUA members before and after each meeting of the Representative Assembly.
WUA Council	
Overall, the Council of the 72 assessed WUAs has an average number of 8 elected members.	None
Most assessed WUAs do not have an elected female member in their Council as the average number of female Council members ranges from none in Naryn Oblast to 0.5 female member in Osh Oblast.	Each WUA should have at least one elected female member in its Council in order to represent the specific interests and needs of female farmers.

Main Finding	Recommendation
A third of the 72 assessed WUAs have adopted the criterion that each village must be represented in the WUA Council, whereas the assessed WUAs in four Oblasts also have specified that each ethnic group must be represented.	None
None of the 72 assessed WUAs have decided that at least one female member or representative should be elected as Council member.	All WUAs must formulate and adopt an internal rule that at least one seat in the WUA Council is reserved for female WUA members.
Overall, 32% of the elected Council members have land in the tail reach of the WUA service area, varying from 10% in Batken Oblast to 57% in Chui Oblast.	Each WUA should formulate and adopt an internal rule that at least 33% of all elected WUA Council members must be from the tail reach of the WUA service area.
All 72 assessed WUAs have an elected Chairman, whereas 41% of the assessed WUAs also have a Deputy Chairman and 37% have elected a Secretary.	All WUAs should formulate and adopt an internal rule that specifies that the WUA Council members must elect a Secretary among themselves together with the tasks and duties of the WUA Secretary.
Overall, 60% of all 72 assessed WUAs have one or more elected Council members, who are also elected members of the *Ayil Okmotu* or working for this local authority.	WUA Law should be amended that members and staff of the *Ayil Okmotu* and any government agency are not eligible to be elected members of the WUA Council in order to avoid conflict of interests and that WUAs are used for political purposes.
Overall, 91% of all 72 assessed WUAs had at least one Council meeting in 2015, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% of the assessed WUAs in the three Southern Oblasts.	All WUAs should formulate and adopt an internal rule that Council meetings must be conducted at least once every quarter.
If the assessed WUAs had Council meetings, they had an average number of 2.5 meetings in 2015.	
Except for one assessed WUA in Batken Oblast, all other 71 assessed WUAs prepare minutes of all Council meetings.	None
<u>Audit Commission</u>	
All 72 assessed WUAs have an Audit Commission with an average number of 3 members.	None
In 2015, the Audit Commission in 87% of all assessed WUAs had an average number of 2 meetings, ranging from 57% of the assessed WUAs in Naryn Oblast to 100% in Batken and Jalalabad Oblasts.	The Audit Commission in all WUAs should have at least one meeting each year to review and approve the Annual Report and financial statements as well as audit all financial and non-financial documents maintained by the WUA.
In 95% of the assessed WUAs having one or more meetings of the Audit Commission, a report was prepared of all conducted meetings.	The Audit Commission in all WUAs should prepare a report of all each meetings, which have to be submitted to the General/Representative Assembly.

Main Finding	Recommendation
Dispute Resolution Commission	
A Dispute Resolution Commission with an average number of 3.5 members have been formed in 90% of all 72 assessed WUAs.	In accordance with the WUA Law, all WUAs should establish a Dispute Resolution Commission.
In 2015, 67% of the assessed WUAs with a Dispute Resolution Commission had an average number of 2 meetings.	None
WUA Directorate	
A Director has been employed in 91% of all 72 assessed WUAs, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% in Batken, Jalalabad and Talas Oblasts.	All WUAs should employ a full-time Director to ensure the day-to-day management of the WUA and the O&M of the on-farm I&D system.
69% of all assessed WUAs have an Accountant, varying from 50% of the assessed WUAs in Talas Oblast to 80% in Batken and Issyk-Kul Oblasts.	All WUA should employ a full- or part-time Accountant to ensure that the financial management of the WUA is carried out properly.
A Hydro-Engineer is employed in 43% of all assessed WUAs, ranging from only 14% of the assessed WUAs in Naryn Oblast to 80% in Batken Oblast.	None
In four Oblasts, 10% to 40% of the assessed WUAs also have a Casher, whereas 6% to 40% of the assessed WUAs in five Oblasts have employed a Collector as well.	None
Almost all assessed WUAs employ an average number of 4 *Murab* for an average period of 5.5 months each year.	None
Office and Assets	
About three-quarter of all assessed WUAs have an office.	All WUAs should have an office in order to have a place to conduct all meetings and training, to store all their documents and equipment, and where farmers can report any problems and obtain information.
A computer and printer is owned by 45% of all assessed WUAs, ranging from 20% of the assessed WUAs in Talas and Naryn Oblasts to 75% in Batken Oblast.	All WUAs should have at least one computer to facilitate its administrative and financial management, including the assessment, billing and collection of ISFs.
One assessed WUA in Issyk-Kul Oblast and two assessed WUAs in Chui Oblast have an internet connection in their office.	To facilitate exchange information between the WUAs and concerned government agencies, including RVK and RSU, all WUA offices should have an internet connection.
A quarter of all assessed WUAs owns machinery and equipment, including a total of 4 tractors and 12 excavators.	None
Machinery is rented by 80% of all 72 assessed WUAs, ranging from 60% of the assessed WUAs in Batken Oblast to 100% in Issyk-Kul Oblast.	None
About a quarter of all 72 assessed WUAs possesses a vehicle, including a total of 17 cars, 2 motorcycles and 1 bicycle.	None

Main Finding	Recommendation
Gender Issues	
Female members or representatives are actively involved in the management of 43% of all assessed WUAs, ranging from only 14% of the assessed WUAs in Naryn Oblast to 60% in Batken Oblast.	Representation of female farmers in the WUA Representative Assembly and Council should be enhanced through raising awareness among the male and female farmers and the provision of gender training to male and female farmers as well as members of the WUA Council. All WUA should formulate and adopt an internal rule that at least one member of the WUA Council should be female to represent the specific needs and interests of female farmers. The formation of a Women's Committee within each WUA should be considered to have a platform where female farmers can exchange information and formulate recommendations towards the WUA General/Representative Assembly and Council.
In about half of the 72 assessed WUAs, female members or representatives reportedly participate actively in the meetings of the General/Representative Assembly.	
The majority of the assessed WUAs (71%) stated that women could be elected as zonal representatives, whereas almost all assessed WUAs (89%) reported that female members or representatives could be elected as member of the WUA Council.	
About a quarter of all 72 assessed WUAs reported to have received training in gender issues. The target groups of the provided gender training were male and female WUA members and/or WUA Council members.	

Administrative Management

Main Finding	Recommendation
All 72 assessed WUAs maintain a Membership Register and 84% of all assessed WUAs have a map of the on-farm I&D system, ranging from 40% of the assessed WUAs in Batken Oblast to 100% in Jalalabad and Talas Oblasts. A register the elected members of the different WUA organs is maintained by 78% of all assessed WUAs, varying from 57% of the assessed WUAs in Naryn Oblast to 100% in Batken and Talas Oblast. Three-quarter of all assessed WUAs have a register to record the bulk water supply at the head of the on-farm I&D system, whereas 58% of all assessed WUAs maintain a register with the water supply requests and actual water supply, ranging from 14% of the assessed WUAs in Naryn Oblast to 100% in Talas Oblast. Register of planted/cultivated crops is maintained by 52% of all 72 assessed WUAs, varying from 14% in Naryn Oblast to 70% in Talas Oblast. An asset register is kept by 44% of all assessed WUAs, ranging from 20% of the assessed WUAs in Batken Oblast to 100% in Talas Oblast, whereas 60% of all assessed WUAs have a transaction and contract register,	All WUA should maintain at least the following non-financial documents: • Membership register; • Register of non-members being supplied with canal water; • Register of elected members of the WUA Council, Audit Commission and Dispute Resolution Commission; • Bulk water supply register; • Water request and supply register; • Planned and actual cultivated crop register; • Asset register; • Minutes of meeting register; • Correspondence register; • Transaction and contract register; and • Map(s) with layout and boundaries of the on-farm I&D system.

Main Finding	Recommendation
varying from none of the assessed WUAs in Batken Oblast to 100% in Talas Oblast.	
In 2015, the non-financial documents were internally audited by the Audit Commission in 82% of all assessed WUAs, ranging from 43% of the assessed WUAs in Naryn Oblast to 92% in Osh Oblast.	The non-financial documents should be internally audited by the Audit Commission at least once every year, so that the Audit Commission could present the main findings, conclusions and recommendations during the (annual) meeting of the General/Representative Assembly.
An external audit of the non-financial documents by the WUA Support Unit was carried out in 45% of all 72 assessed WUAs, varying from 10% in Talas Oblast to 60% in Batken and Jalalabad Oblasts.	The non-financial documents of all WUAs should be externally audited by the WUA Support Unit once a year.

Financial Management

Main Finding	Recommendation
Source of Income	
In all 72 assessed WUAs, the ISF is the main source of income followed by paid fines in 26% of all assessed WUAs, whereas 8% of all assessed WUAs also received a donation/gift.	None
Financial Documents	
A cash book is maintained by 85% of all 72 assessed WUAs, ranging from 57% in Naryn Oblast to 100% in Batken, Jalalabad and Talas Oblasts. A bank book is kept by 57% of all assessed WUAs, varying from 40% in Batken Oblast to 80% in Talas Oblast. A ledger and receipt book is maintained by respectively 87% and 83% of all assessed WUAs. About half of the assessed WUAs have an ISF book, ranging from 30% of the assessed WUAs in Talas Oblast to 76% in Chui Oblast. A record to register all imposed and paid fines is kept by 25% of the assessed WUAs in six Oblasts, varying from 12% in Chui Oblast to 50% in Issyk-Kul Oblast.	All WUAs should maintain at least the following financial documents: • Ledger; • Cash book; • Bank book; • Receipt book; • ISF assessment and collection register; and • Imposed and collected fine register.
Annual Report	
Almost all assessed WUAs prepare an Annual Report and financial statements, usually between December and March.	None
Except for one assessed WUA in Chui Oblast, the Annual Report and financial statements are reviewed and approved by the General/Representative Assembly of all other assessed WUAs. All 72 assessed WUAs submit their Annual Report and financial statements to the Central WUA Support Unit (CSU) for review.	None

Main Finding	Recommendation
In 2015, the Annual Report and financial statements are internally audited by the Audit Commission in 78% of all assessed WUAs, ranging from 14% in Naryn Oblast to 100% in Batken Oblast.	All financial documents should be internally audited by the Audit Commission at least once every year, so that the Audit Commission could present the main findings, conclusions and recommendations during the (annual) meeting of the General/Representative Assembly.
An external audit of the Annual Report and financial statement by the WUA Support Unit is carried out in 53% of all 72 assessed WUAs, varying from none of the assessed WUAs in Talas Oblast to 90% in Issyk-Kul Oblast.	All financial documents of all WUAs should be externally audited by the WUA Support Unit once a year.
Annual Budget	
An Annual Budget is prepared in 89% of all 72 assessed WUAs usually between December and March.	All WUAs should prepare an Annual Budget prior to the start of the financial year.
Bank Account and Reserve Fund	
A bank account has been opened by 45% of all assessed WUAs, ranging from 20% of the assessed WUAs in Batken Oblast to 90% in Talas Oblast.	All WUAs should open a bank account in their own name to avoid the loss/theft of money by limiting the amount of cash money kept in the WUA office.
12% of all assessed WUAs have established a Reserve Fund, varying from none of the assessed WUAs in Batken Oblast to 20% in Talas Oblast.	All WUAs should establish a Reserve Funds to finance emergency repair works, future rehabilitation and replacement of I&D structures and procurement of equipment.
Irrigation Service Fee	
The area-based method for the assessment of the ISF is used in 80% in all assessed WUAs, whereas the volume-based method is used in 29% of all assessed WUAs and a limited number of assessed WUAs also uses crop-based method or number of irrigations.	None
In 2015, the overall average ISF rate for all assessed WUAs was KGS 320/ha, varying from KGS 257/ha in Naryn Oblast to KGS 392/ha in Chui Oblast.	The current ISF rates are rather low and should be (gradually) increased to ensure that each WUA would have sufficient funds to undertake all necessary M&R works in an adequate and timely manner as well as to cover all costs related to the management of the WUA itself, including the employment of all necessary staff.
In about half of all assessed WUAs, an invoice is issued to all farmers specifying the ISF amount to be paid, ranging from none of the assessed WUAs in Batken Oblast to 80% in Talas Oblast.	All WUAs should issue an invoice to each farmer and any other water user specifying the amount of ISF to be paid and when.
In 79% of all 72 assessed WUAs, the farmers pay their ISFs to the Accountant in the WUA office, whereas in about a third of all assessed WUAs, the farmers pay their ISFs to the *Murab* and the ISFs are paid to the Collector in 18% of all assessed WUAs in five Oblasts.	None

Main Finding	Recommendation
In one-third of all assessed WUAs, the farmers have to pay 25% to 70% of the total ISF amount in advance to the WUA, ranging from none of the assessed WUAs in Batken Oblast to 80% in Issyk-Kul Oblast.	In all WUAs, farmers and any other waters should pay at least 25% of the total ISF amount before the start of the irrigation season in order to obtain the right to be supplied with canal water.
A receipt is issued to farmers having paid their ISFs in 95% of all 72 assessed WUAs.	All WUAs should issue a receipt to all farmers and any other water users when they have paid the their ISFs.
In 2015, all farmers fully paid their ISFs in 40% of all 72 assessed WUAs, ranging from 30% of the assessed WUAs in Jalalabad, Issyk-Kul and Talas Oblasts to 59% in Chui Oblast.	None
Overall, the average assessed amount of ISF to be collected by the assessed WUAs in 2015 was KGS 272,106, ranging from KGS 117,418 in Osh Oblast to KGS 706,600 in Batken Oblast. At the end of 2015, an overall average amount of KGS 301,970 was actually collected, which is 111% of the assessed amount. In Osh and Jalalabad Oblasts, the assessed WUAs reported to have collected respectively 250% and 204% of the assessed ISF amount, whereas the ISF recovery rate in the other five Oblasts ranges from 62% in Naryn Oblast to 99% in Chui Oblast.	None
About one-third of all assessed WUAs have adopted one or more sanctions for late and/or non-payment of ISFs, ranging from none of the assessed WUAs in Batken and Naryn Oblasts to 90% in Issyk-Kul Oblast.	All WUAs should formulate and adopt effective penalties and sanctions for the late and non-payment of the ISFs to be strictly imposed on all defaulters.
A limited number of assessed WUAs in Jalalabad, Issyk-Kul, Talas and Chui Oblasts makes attempts to recover outstanding ISFs by submitting a report to the Village Council.	All WUAs should formulate and adopt an internal rule specifying the procedures to be followed to recover any outstanding/non-paid ISFs among all defaulters.
<u>Service Charge</u>	
Service charges (Tiyin 3/m^3) are paid to the RVK/UWUA for the bulk water supply by 59% of all assessed WUAs, ranging from 40% of the assessed WUAs in Talas Oblast to 71% in Chui Oblast.	None
About one-fifth of all assessed WUAs reported to have a debt to the RVK/UWUA, ranging from none of the assessed WUAs in Naryn Oblast to 60% in Batken Oblast.	None
<u>Repayment of 25% Rehabilitation Costs</u>	
In six Oblasts, 10% to 60% of the assessed WUAs have to repay 25% rehabilitation costs and the average repayment rate in four Oblasts ranges from 24% in Talas Oblast to 92% in Osh Oblast.	None

Main Finding	Recommendation
Almost all assessed WUAs having to repay 25% rehabilitation costs have an approved repayment plan, whereas the majority of these assessed WUAs have arrears.	None
Repayment of Technical Credit	
Except in Naryn Oblasts, 10% to 60% of the assessed WUAs in the other six Oblasts have to repay technical credit and the average repayment rate at the end of 2015 was 19% in Issyk-Kul and Chui Oblasts to 100% in Talas Oblast.	None
The large majority of assessed WUAs having to repay technical credit have an approved repayment plan and 50% to 67% reported to have arrears.	None
Training and Technical Support	
During the last 5 years, 70% of all assessed WUAs reported to have received training in administrative and financial management, ranging from 43% of the assessed WUAs in Naryn Oblast to 92% in Osh Oblast.	In accordance with assessed training needs, all WUAs should receive (refresher) training in administrative and financial management once every 3 to 4 years (i.e. after every election of new members for the WUA Council and Audit Commission).
Two-third of all assessed WUAs participated in one or more exchange visits to another WUA and they were conducted between 2012 and 2015.	None
Reportedly, RSU staff have visited 78% of all assessed WUAs in 2015, ranging from 43% of the assessed WUAs in Naryn Oblast to 94% in Chui Oblast. The frequency of RSU visits ranges from weekly for 23% of all assessed WUAs, monthly for 34%, quarterly for 23% and once a year for 23%.	All WUAs should be visited by the RSU staff at least once every quarter.

Operation of On-Farm I&D System

Main Finding	Recommendation
Water Use License	
In Batken Oblast, all assessed WUAs have obtained a water use license between 1998 and 2005 for an unlimited period, whereas 12%, 30%, 54% and 80% of the assessed WUAs in respectively Chui, Issyk-Kul, Osh and Jalalabad Oblasts also have a water use license for 1, 5 and 10 years as well as unlimited period. None of the assessed WUAs in Talas and Naryn Oblasts reported to have a water use license.	In principle, all WUAs should obtain a water use license for their respective on-farm I&D system for a minimum period of 10 years.

Main Finding	Recommendation
Annual Water Distribution Plan and Schedule	
Data on the planned cropping pattern are collected in 91% of all 72 assessed WUAs between February and April.	All WUAs should collect data on the planned cropping pattern in order to be able to assess the water requirements and prepare the water distribution plan and schedule.
An annual water distribution plan and schedule is prepared in 94% of all assessed WUAs usually between January and April.	All WUAs should prepare an annual water distribution plan and schedule for their respective on-farm I&D system prior to the start of the irrigation season.
In 45% of all assessed WUAs, CROPWAT software is used during the preparation of the annual water distribution and schedule, ranging from 23% of the assessed WUAs in Talas Oblast to 100% in Batken Oblast.	The use of CROPWAT software during the preparation of the annual water distribution plan and schedule should be promoted through the provision of training to RSU staff and WUAs.
In 85% of all assessed WUAs, the annual water distribution plan and schedule is approved by the General/ Representative Assembly, varying from 56% of the assessed WUAs in Chui Oblast to 100% in Batken and Jalalabad Oblasts.	The annual water distribution plan and schedule should be reviewed and approved by the General/Representative Assembly in all WUAs.
In 62% of all assessed WUAs, the annual water distribution plan and schedule is submitted to the RVK for review and approval, varying from 40% in Batken Oblast to 90% in Jalalabad Oblast.	None
Annual Water Supply Contract	
Three-quarter of all 72 assessed WUAs signs an annual water supply contract with the RVK/UWUA for the bulk water supply to the head of the on-farm I&D system usually between January and April.	None
Flow Measurement and Recording	
In 94% of all assessed WUAs, the water flow is measured and recorded visually (90%) at the head of the on-farm I&D system, although it is measured electronically in a limited number of assessed WUAs in Chui, Naryn, Jalalabad and Osh Oblasts.	In all WUAs, the water flow at the head of the on-farm I&D system should be measured and recorded at least once every day to be able to assess if the planned/agreed amount of water is diverted into the on-farm I&D system.
In three-quarter of all assessed WUAs, the WUA itself is responsible for measuring and recording the water flow at the head of the of-farm I&D system, varying from 50% of the assessed WUAs in Jalalabad Oblast to 100% in Naryn Oblast.	All WUAs should measure and record the water flow at the head of the on-farm I&D system on a daily basis.
In 57% of all 72 assessed WUAs, the water flow is measured and recorded within the service area of the on-farm I&D system, ranging from 10% of the assessed WUAs in Talas Oblast to 90% in Jalalabad Oblast.	In all WUAs, the water flow should be measured and recorded inside the service area of the on-farm I&D system at least once every day, especially at the head of branch/secondary canals to be able to assess if the available canal water is distributed efficiently and equitably throughout the entire service area.

Main Finding	Recommendation
Annual Water Supply Agreements	
Annual water supply agreements are signed between the WUA and individual farmers in 71% of all assessed WUAs, ranging from 29% of the assessed WUAs in Naryn Oblast to 100% in Batken.	All WUAs should sign an annual water supply agreement with all farmers and any other water users specifying the amount of canal water to be supplied to which field(s) and number of irrigations.
Water Distribution	
In years with sufficient water, 61% of all assessed WUAs use the on-demand system to distribute available canal water among the farmers within the service area of the on-farm I&D system, whereas the rotational water distribution method is used by 52% of all assessed WUAs.	None
In years with water shortage, about one-third of all assessed use the on-demand water distribution method, whereas the rotational water distribution method is used in about two-third of all assessed WUAs.	None
15% of all assessed WUAs in five Oblasts reported that they were unable to distribute available canal water in a timely and equitable manner, mainly due to problems with water stealing by farmers within the service area of the on-farm I&D system, whereas inadequate supply of canal water by the RVK/UWUA is mentioned in two Oblasts.	None
In three-quarter of all assessed WUAs, farmers use furrows to distribute supplied canal water in their fields, whereas micro-basin irrigation is practiced in 55% of all assessed WUAs, basin irrigation method is applied in 25% of all assessed WUAs and a few assessed WUAs in Osh and Chui Oblast also have farmers using sprinkler or drip system.	None
Irrigated Area and Crops	
95% of the planned irrigated area was actually irrigated in 2015 by the assessed WUAs, ranging from 89% in Chui Oblast to 101% in Jalalabad Oblast.	
The most commonly grown irrigated crops grown in the service area of the on-farm I&D systems managed by the assessed WUAs include wheat (87% of all assessed WUAs), potato (80%), maize (66%), vegetables (55%), fodder crops (47%), fruit crops (43%), sunflower (38%), and pulses and beans (35%).	None

Main Finding	Recommendation
Use of Groundwater for Irrigation	
Groundwater is used for irrigation purpose in 15% of the assessed WUAs in five Oblasts and the total area irrigated with groundwater is 1,147 ha by a total number of 983 farmers using 51 installed pumps.	None
Water-Related Disputes	
During the last irrigation season, 54% of all assessed WUAs reported to have an average number of 6 water-related disputes. In 83% of the assessed WUAs with reported disputes, water stealing is the main cause for reported disputes, whereas causing damage to I&D infrastructures is causing disputes in 23% of the assessed WUAs with reported water-related conflicts.	None
During the last irrigation season, water-related disputes between the WUA and one or more water users were reported in 42% of all assessed WUAs: water stealing was the cause of the water-related disputes in 64% of the assessed WUAs with reported conflicts, inadequate water supply was the cause of water-related conflicts in 47% of the assessed WUAs with reported disputes, and insufficient maintenance by the WUA was causing disputes between the WUA and water users in 28% of the assessed WUAs.	None
About a quarter of all assessed WUAs reported to have water-related disputes with the RVK or UWUA: inadequate water supply by the RVK or UWUA is the main reason for a dispute between the WUA and RVK/UWUA followed by insufficient maintenance of the off-farm I&D infrastructure.	None
Communication with RVK	
Almost all assessed WUAs communicate with the RVK and/or UWUA, mainly through meetings and on the phone. About half of all assessed WUAs have daily contact with the RVK and/or UWUA, whereas one-third have weekly communication and 22% of the assessed WUAs have contact once every month.	None
If the assessed WUAs have communication with the RVK and/or UWUA, they mainly discuss the actual weather conditions (73% of all assessed WUAs), water availability (66%), planned water supply (65%) and actual water supply (57%).	None

Maintenance of On-Farm I&D System

Main Finding	Recommendation
Annual Maintenance Plan and Budget	
An annual maintenance inspection is undertaken in 92% of all assessed WUAs, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% in Batken, Jalalabad and Talas Oblasts.	All WUAs should undertake an annual inspection of all on-farm I&D infrastructure in order to identify the need for maintenance and repair works.
In 95% of all assessed WUAs, an annual maintenance plan and budget is prepared between September and October and/or January and April.	All WUAs should prepare an annual maintenance plan and budget based on the results of the annual maintenance inspection (and the approved asset management plan).
In two-third of the assessed WUAs having prepared maintenance plan and budget, the identified M&R works are prioritised, ranging from 40% in Jalalabad Oblast to 100% in Talas Oblast.	All WUAs should carry out a priority ranking of all identified M&R works indicating which M&R works are most urgent and must be undertaken to ensure the efficient operation of the on-farm I&D system during the upcoming irrigation season.
In 57% of the assessed WUAs with prepared maintenance plan and budget, the RVK provided technical support, varying from 42% in Osh Oblast to 70% in Talas Oblast.	
The prepared maintenance plan and budget are approved in 82% of the assessed WUAs, ranging from 60% in Batken Oblast to 100% in Issyk-Kul and Talas Oblasts.	The maintenance plan and budget should be reviewed and approved by the General/ Representative Assembly in all WUAs.
Execution of M&R Works	
The M&R works are usually carried out between January and April, but these works are also undertaken in October by a number of assessed WUAs in Chui Oblast.	None
Almost half of all assessed WUAs received technical support from the RVK during the execution of the M&R works, ranging from 20% of the assessed WUAs in Batken Oblast to 77% in Issyk-Kul Oblast.	None
The *asher* system whereby farmers provide free labour for the cleaning of the on-farm canals is used in 90% of all 72 assessed WUAs and the farmers provide an overall average number of 10 days free of charge, ranging from 2 days in Naryn Oblast to 18 days in Jalalabad Oblast.	None
About half of all assessed WUAs contract (part of) their M&R works out, ranging from none of the assessed WUAs in Naryn Oblast to 70% in Talas Oblast. About three-quarter of the assessed WUAs contracting out their M&R works engages a private contractor, varying from 77% in Chui Oblast to 100% in Batken, Osh and Talas Oblasts.	None

Main Finding	Recommendation
Lack of machinery is the most common reason for contracting out M&R works followed by lack of manpower.	
A Maintenance Register is kept in 90% of all assessed WUAs, ranging from 70% of the assessed WUAs in Jalalabad Oblast to 100% in Batken, Talas and Naryn Oblasts.	All WUAs should have a Maintenance Register, in which all planned and executed M&R works are properly recorded.
Two-third of all 72 assessed WUAs reported that all M&R works were successfully completed at the end of 2015. In about two-third of the assessed WUAs that were unable to complete the M&R works, insufficient budget was the main reason, whereas insufficient machinery was the main reason for not completing the M&R works for 45% of the assessed WUAs unable to undertake all M&R works.	All WUAs should set their ISF rates at a level that allow them to undertake all necessary M&R works before the start of the irrigation season and rent all machinery required to complete all M&R works in time.
Training and Technical Support	
O&M training was provided to 89% of all assessed WUAs between 2009 and 2016, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% in Batken and Talas Oblasts.	Based on the assessed training needs, all WUAs should receive (refresher) O&M training once every 3 to 4 years (i.e. after the election of new WUA Council members) to ensure that the WUA Council members and employed staff have the necessary knowledge and skills required for the O&M of the on-farm I&D system in an effective, adequate and sustainable manner.
Asset Management Plan	
Inventories and asset management plans have been completed in 85% of all assessed WUAs, ranging from 60% of the assessed WUAs in Issyk-Kul Oblast to 100% in Jalalabad Oblast.	None
Rehabilitation of On-Farm I&D System	
About half of all assessed WUAs had their on-farm I&D system partially (39%) rehabilitated between 2001 and 2016 by projects funded by the ADP, USAID and World Bank, ranging from 18% of the assessed WUAs in Chui Oblast to 100% in Batken Oblast.	None
Physical Condition of I&D Infrastructure	
In about half of all assessed WUAs, the physical condition of the intake structure is classified as moderate, whereas 30% as poor and 22% as good.	None
The physical condition of the large majority of on-farm canals, regulation and distribution structures, flow measurement devices and ancillary structures (i.e. road culverts) is considered to be poor or moderate.	None
In 61% of the assessed WUAs with a drainage system, the physical condition of the drains is	None

Main Finding	Recommendation
classified as moderate, 28% as poor and 11% as good.	
Environmental and Health Issues	
About half of all assessed WUAs reported the disposal of solid waste as a problem, ranging from 10% of the assessed WUAs in Talas Oblast to 100% in Issyk-Kul Oblast. Both people from outside and inside the WUA service area are causing this problem.	Where necessary, the WUA Support Unit, RVK and local authorities should assist the concerned WUAs with resolving this problem together with the WUAs.
Disposal of sewage water in the on-farm canals is a reported problem in 17% of all assessed WUAs, mainly caused by towns and/or villages outside their respective service areas.	Where necessary, the WUA Support Unit, RVK and local authorities should assist the concerned WUAs with resolving this problem together with the WUAs.
Only a few assessed WUAs reported a problem with chemical pollution of the water in their on-farm canals caused by farmers and factories/workshops.	Where necessary, the WUA Support Unit, RVK and local authorities should assist the concerned WUAs with resolving this problem together with the WUAs.
About one-third of the assessed WUAs reported waterlogging problems caused by mudslides, heavy rainfall, poor drainage, over-irrigation or high groundwater table.	Where necessary, the WUA Support Unit, RVK and local authorities should assist the concerned WUAs with resolving this problem together with the WUAs.
Soil salinity is reported by a limited number of assessed WUAs in six Oblasts, which is mainly caused by high groundwater table and poor drainage.	Where necessary, the WUA Support Unit should assist the concerned WUAs with resolving this problem together with the WUAs.
In four Oblasts, a limited number of assessed WUAs reported water-borne diseases, mainly /dysentery, caused by poor sanitation followed by the use of canal water for drinking purposes.	Where necessary, the WUA Support Unit and local authorities should assist the concerned WUAs with resolving this problem together with the WUAs.

1 INTRODUCTION

Between the end of March and early May 2016, the performance of 72 Water Users' Associations (WUAs) was assessed through a contracted company by using the following three questionnaires: i) questionnaire on institutional aspects of WUA; ii) questionnaire on administrative and financial management of IWUA; and iii) questionnaire on O&M of on-farm irrigation system. Subsequently, all collected data and information were entered in MS Excel datasheets for further analysis by the same contracted company.

1.1 Number of Assessed WUAs per Oblast

The number of assessed WUAs per Oblast is shown in Table 1-1:

Table 1-1: Number and Location of Assessed WUAs

Name of Oblast	Number of Assessed WUAs
Batken	5
Osh	13
Jalalabad	10
Issyk-Kul	10
Talas	10
Naryn	7
Chui	17
Total	**72**

The 72 assessed WUAs manage a total of 2,566 on-farm canals commanding a total area of 105,880 ha, in which 259 villages are located. A list with the name, location and service area for all 72 assessed WUAs is attached in Annex A.

2 INSTITUTIONAL ASPECTS OF WATER USERS' ASSOCIATIONS

2.1 Establishment and Registration

The years of establishment and registration for the 72 assessed WUAs is presented in Table 2-1:

Table 2-1: Establishment and Registration of WUA

Name of Oblast	Years of Establishment			Years of Registration			Registration Certificate
	1990-99	2000-09	2010-16	1990-99	2000-09	2010-16	
Batken	2	3	0	1	4	0	100%
Osh	4	7	2	3	8	2	92%
Jalalabad	2	8	0	1	8	1	90%
Issyk-Kul	0	10	0	0	10	0	100%
Talas	1	9	0	1	9	0	100%
Naryn	0	6	1	0	6	1	86%
Chui	3	14	0	1	14	2	100%
Total	**12**	**57**	**3**	**7**	**59**	**6**	**96%**
% of Total	**17%**	**79%**	**4%**	**10%**	**82%**	**8%**	

The large majority (79%) of the 72 assessed WUAs was established between 2000 and 2009, whereas 17% of the assessed WUAs were constituted between 1990 and 1999 and 4% between 2010 and 2016. A total of 59 assessed WUAs (82%) were registered between 2000 and 2009 compared with 10% between 1990 and 1999 and 8% between 2010 and 2016. Almost all assessed WUAs (96%) have a registration certificate.

2.2 WUA Members

The average number of WUA members is summarised in Table 2-2:

Table 2-2: Type and Number of WUA Members

Name of Oblast	Type and Average Number of WUA Members					
	Private Legal Entities		State Legal Entities		Individuals	
	# WUAs	Average Number	# WUAs	Average Number	Total	Female (%)
Batken	3	12	0	-	1,807	1%
Osh	3	8	2	1	1,784	5.5%
Jalalabad	6	4	2	1.5	1,369	13%
Issyk-Kul	4	6	2	1	654	10%
Talas	3	7	7	1	545	10%
Naryn	0	-	0	-	905	0%
Chui	0	-	0	-	206	9%
Total	**19**	**7.5**	**13**	**1**	**989**	**8%**

Overall, the 72 assessed WUAs have an average number of 989 individual members, ranging from 206 individual members in Chui Oblast to 1,807 individual members in Batken Oblast. The overall average proportion of female members is 8%, varying from 0% in Naryn Oblast to 13% in Jalalabad Oblast. A total of 19 WUA (26%) in five Oblasts have an average number of 7.5 private legal entities as member and 13 WUAs (18%) in 4 Oblasts have an average number of one state legal entity as member.

2.2.1 Ethnic Composition of Individual WUA Members

The average ethnic composition of the individual WUA members for the 72 assessed WUAs is shown in Table 2-3:

Table 2-3: Ethnic Composition of Individual WUA Members

Name of Oblast	Ethnic Composition of Individual WUA Members (%)					
	Kyrgyz	Uzbeki	Dungan	Russian	Uygur	Others
Batken	74%	26%	0%	0%	0%	0%
Osh	61%	32%	0%	0%	5%	1%
Jalalabad	70%	26%	0%	0%	0%	4%
Issyk-Kul	86%	0%	1%	9%	1%	4%
Talas	98%	0%	0%	0%	0%	2%
Naryn	100%	0%	0%	0%	0%	0%
Chui	74%	1%	9%	11%	0%	5%
Total	**80%**	**12%**	**1%**	**3%**	**1%**	**2%**

Overall, 80% of the individual WUA members in the 72 assessed WUAs is Kyrgyz, ranging from 61% in Osh Oblast to 100% in Naryn, whereas 12% is Uzbeki, who are living mainly in the South. In Issyk-Kul and Chui Oblast, respectively 9% and 11% of the individual members in the assessed WUAs are Russian.

2.2.2 Expulsion of WUA Members

The expulsion of WUA members and the main reasons are presented in Table 2-4:

Table 2-4: Expulsion of Individual WUA Members

Name of Oblast	Expulsion of Individual WUA Members					
	% WUAs	Average Number	Main Reason			
			Non-Cultivation	Non-Payment of ISF	Violation of Rules	Others
Batken	100%	6	40%	60%	20%	20%
Osh	15%	3	0%	50%	100%	0%
Jalalabad	20%	3	50%	0%	0%	50%
Issyk-Kul	30%	82.5	0%	67%	33%	67%
Talas	10%	6	0%	0%	0%	100%
Naryn	0%	-	-	-	-	-
Chui	24%	7	0%	50%	0%	50%
Total	**25%**	**13**	**-**	**-**	**-**	**-**

Overall, 25% of the 72 assessed WUAs have expelled an average number of 12 members for various reasons, including non-cultivation in Batken and Jalalabad Oblasts, non-payment of ISF in four Oblasts, violation of internal rules in three Oblasts and other reasons in five Oblasts.

2.2.3 Supply of Irrigation Water to Non-Members

The proportion of assessed WUAs suppling canal water to non-members for irrigation purposes is shown in Table 2.5:

Table 2-5: Supply of Canal Water to Non-Members

Name of Oblast	Water Supply to Non-Members	
	% WUAs	Average Number
Batken	0%	-
Osh	77%	168
Jalalabad	50%	128
Issyk-Kul	50%	100
Talas	70%	60
Naryn	14%	100
Chui	53%	32
Total	**39%**	**98**

Overall, 39% of the assessed WUAs in six Oblasts reported to supply canal water to an overall average number of 98 non-members, ranging from an average number of 32 non-members in Chui Oblast to 168 non-members in Osh Oblast.


Irrigated field with barley in Issyk-Kul Oblast (left) and onion in Jalalabad Oblast (right)

2.3 WUA Service Area

The average number of on-farm canals managed by the WUA, the average size of the WUA service area and the average number of villages located in the service area of the 72 assessed WUAs are presented in Table 2-6:

Table 2-6: Average Number of On-farm Canals and Average Size of WUA Service Area

Name of Oblast	Average Number of On-Farm Canal per WUA	WUA Service Area	
		Average Size (ha)	Average Number of Villages
Batken	46	1,439	7
Osh	38	1,050	5
Jalalabad	52	1,394	5
Issyk-Kul	42	1,733	3
Talas	23	1,296	2
Naryn	22	1,270	1
Chui	31	1,877	2
Total	**32**	**1,437**	**3.5**

Overall, the 72 assessed WUAs operate and maintain an average number of 32 on-farm canals, ranging from 22 on-farm canals in Naryn Oblast to 52 on-farm canals in Jalalabad Oblast. The overall average size of the service area of the 72 assessed WUAs is 1,437 ha, varying from 1,050 ha in Osh Oblast to 1,877 ha in Chui Oblast. The overall average number of villages located in the service area of the 72 assessed WUAs is 3.5, ranging from one village in Naryn Oblast to seven villages in Batken Oblast.

2.4 WUA Charter and Internal Rules

The presence of the WUA Charter as well as the adoption of internal rules and sanctions in the 72 assessed WUAs are shown in Table 2-7:

Table 2-7: WUA Charter, Internal Rules and Sanctions

Name of Oblast	WUAs with Charter	Adopted Internal Rules		Adopted Sanctions
		WUA Management	O&M of On-farm System	
Batken	100%	100%	100%	100%
Osh	100%	100%	100%	62%
Jalalabad	100%	100%	90%	60%
Issyk-Kul	100%	100%	100%	80%
Talas	100%	100%	100%	90%
Naryn	86%	86%	86%	86%
Chui	100%	100%	100%	82%
Total	**98%**	**98%**	**97%**	**80%**

Except one assessed WUA in Naryn Oblast, all other 71 assessed WUAs have a Charter and adopted internal rules related to the management of the WUA itself and the operation and maintenance (O&M) of the on-farm I&D system. Overall, 80% of the adopted WUAs adopted one or more sanctions to be imposed on water users for violation of internal rules, ranging from 60% of the assessed WUAs in Jalalabad Oblast to 100% in Batken Oblast.

2.5 General/Representative Assembly

2.5.1 Main Aspects of Representative Assembly

The existence and main aspects of the Representative Assembly in the 72 assessed WUAs are summarised in Table 2-8:

Table 2-8: Representative Assembly and Terms of Office

Name of Oblast	Representative Assembly (RA)				Number of Representatives			Terms of Office (Years)
	WUAs with RA	Average Number of Zones	Hydraulic Boundaries	Village Boundaries	Total	Female	% of Total	
Batken	100%	12	40%	60%	36	2	4%	4
Osh	92%	12	24%	76%	30	3	9%	3
Jalalabad	100%	7	20%	90%	32	2	8%	3
Issyk-Kul	80%	7	63%	37%	49	2	3%	3
Talas	90%	17	78%	22%	29	5	19%	2
Naryn	86%	10	50%	50%	27	2	8%	3
Chui	59%	5	30%	70%	31	3	8%	5
Total	**87%**	**10**	**44%**	**58%**	**33**	**3**	**8%**	**3**

Overall, 87% of the 72 assessed WUAs have a Representative Assembly, ranging from 59% of the assessed WUAs in Chui Oblast to 100% in Batken and Jalalabad Oblasts. The overall average number of zones is 10, varying from 5 zones in Chui Oblast to 17 zones in Talas Oblast. In 44% of the 72 assessed WUAs, the zones within the service areas are based on hydraulic boundaries, whereas village boundaries are used in 58% of the assessed WUAs. The overall average number of representatives is 33, ranging from 27 representatives in Naryn Oblast to 49 representatives in Issyk-Kul Oblast. Overall, the WUA Representative Assemblies have an average of three female representatives (8%), varying from 3% in Issyk-Kul Oblast to 19% in Talas Oblast. The average terms of office of the elected representatives varies from 2 to 5 years.

2.5.2 Meetings

The average number of meetings of the General/Representative Assembly as well as the modalities to inform the WUA members or elected representatives about the date, time and location of the next General/Representative Assembly meeting are presented in Table 2-9:

Table 2-9: General/Representative Assembly Meetings

Name of Oblast	Number of Meetings	All Meeting with Quorum	Method to Inform Member/Representatives			
			Verbally (Phone)	Written Invitation	Public Announcement	Other
Batken	1	80%	80%	20%	40%	20%
Osh	2	100%	100%	31%	46%	0%
Jalalabad	2	100%	60%	60%	20%	10%
Issyk-Kul	3	100%	80%	0%	90%	0%
Talas	2	90%	100%	10%	20%	10%
Naryn	2	83%	83%	17%	33%	0%
Chui	2	94%	50%	6%	69%	0%
Total	**2**	**92%**	**79%**	**21%**	**45%**	**6%**

Overall, the General/Representative Assembly in the 72 assessed WUAs had two meetings in 2015, ranging from only one meeting in Batken Oblast to three meetings in Issyk-Kul Oblast. Reportedly, 92% of all assessed WUAs had General/Representative Assembly meetings with the required quorum.

In 79% of the assessed WUAs, the members or elected representatives are informed verbally about the date, time and location of the next General/Representative Assembly meeting, ranging from 50% of the assessed WUAs in Chui Oblast to 100% in Osh and Talas Oblasts. Written invitations are used in 21% of

the assessed WUAs and public announcements in 45% of the assessed WUAs, varying from 20% in Jalalabad and Talas Oblasts to 90% in Issyk-Kul Oblast.

The responsible persons within the 72 assessed WUAs to inform the members or elected representatives about the next meeting of the General/Representative Assembly are shown in Table 2-10:

Table 2-10: Responsible Persons for Informing Members or Representatives

Name of Oblast	Responsible Person(s)				
	WUA Council Chairman	Other WUA Council Members	Director	Accountant	Others
Batken	20%	40%	100%	0%	0%
Osh	46%	7%	85%	0%	14%
Jalalabad	50%	20%	40%	0%	20%
Issyk-Kul	40%	10%	80%	0%	20%
Talas	20%	0%	100%	0%	0%
Naryn	29%	14%	100%	0%	0%
Chui	29%	6%	88%	0%	0%
Total	**33%**	**14%**	**85%**	**0%**	**8%**

In 85% of all 72 assessed WUAs, the Director is responsible for informing WUA members or elected representatives about the next meeting of the General/Representative Assembly, whereas the WUA Council Chairman is (also) responsible in 33% of all assessed WUAs.

2.5.3 Minutes of Meeting

The preparation of minutes of the General/Representative Assembly meetings and the modalities are summarised in Table 2-11:

Table 2-11: Minutes of General/Representative Assembly Meetings

Name of Oblast	Minutes Prepared by WUAs	Responsible Person(s)				
		WUA Council Chairman	Other WUA Council Members	Director	Accountant	Secretary
Batken	80%	20%	20%	40%	40%	20%
Osh	100%	38%	8%	46%	38%	0%
Jalalabad	100%	50%	30%	30%	20%	20%
Issyk-Kul	100%	70%	0%	50%	50%	10%
Talas	100%	0%	0%	30%	30%	40%
Naryn	100%	43%	14%	29%	43%	0%
Chui	100%	0%	0%	53%	24%	24%
Total	**97%**	**32%**	**10%**	**40%**	**35%**	**16%**

Except for one assessed WUA in Batken Oblast, all other 71 assessed WUAs reportedly prepare minutes of all General/Representative Assembly meetings. In 40% of all assessed WUAs, the Director is responsible for preparing the minutes, ranging from 29% of the assessed WUAs in Naryn Oblast to 53% in Chui Oblast. In 35% and 32% of all assessed WUAs, respectively the Accountant and WUA Council Chairman are (also) responsible for preparing the minutes.

2.5.4 Consultation of WUA Members

In case that the assessed WUA has a Representative Assembly, the modalities for consulting and informing the individual WUA members are shown in Table 2-12:

Table 2-12: Consultation of Individual WUA Members

Name of Oblast	Modality for Consulting and Informing WUA Members					
	None	Local Meetings	Notice Board	Written Notices	House Visits	Others
Batken	20%	60%	20%	20%	0%	0%
Osh	0%	38%	38%	23%	15%	7%
Jalalabad	10%	50%	20%	20%	30%	10%
Issyk-Kul	0%	60%	20%	10%	10%	0%
Talas	0%	90%	0%	20%	0%	0%
Naryn	0%	71%	43%	57%	0%	0%
Chui	12%	41%	53%	35%	0%	6%
Total	**6%**	**59%**	**28%**	**26%**	**8%**	**3%**

In 59% of the 72 assessed WUAs, individual WUA members are consulted and informed before and after the Representative Assembly meeting through local meetings at zonal/village level, ranging from 38% of the assessed WUAs in Osh Oblast to 90% in Talas. The notice board and written notices are used in respectively 28% and 26% of all assessed WUAs. A few assessed WUAs in three Oblasts do not have a method to consult and inform their members properly.

Notice board in WUA office in Chui Oblast

2.6 WUA Council

2.6.1 Composition

The composition of the Council for the 72 assessed WUAs is shown in Table 2.13

Table 2-13: Composition of WUA Council

Name of Oblast	Members		Terms of Office (Years)	Criteria for Composition of Council				Members with Land in Tail Reach	
	Total	Female		Adopted	Each Village	Each Ethnic Group	% Women	Number	% of Total
Batken	10	0.4	3	20%	Yes	Yes	No	1	10%
Osh	8	0.5	3	54%	Yes	Yes	No	3	38%
Jalalabad	8	0.2	3	20%	Yes	Yes	No	3	38%
Issyk-Kul	8	0.1	3	40%	Yes	No	No	3	38%
Talas	7	0.0	2	50%	Yes	No	No	2	29%
Naryn	7	0.1	3	29%	Yes	No	No	1	14%
Chui	7	0.4	4	18%	Yes	Yes	No	4	57%
Total	**8**	**0.2**	**3**	**33%**	**-**	**-**	**-**	**2.5**	**32%**

Overall, the Council of the 72 assessed WUAs has an average number of 8 elected members, who are elected for an average period of 3 years. Most assessed WUAs do not have an elected female member in their Council as the average number of female Council members ranges from none in Naryn Oblast to 0.5 female member in Osh Oblast.

A third of the 72 assessed WUAs have adopted the criterion that each village must be represented in the WUA Council, whereas the assessed WUAs in four Oblasts also have specified that each ethnic group must be represented. None of the 72 assessed WUAs have decided that at least one female member or representative should be elected as Council member.

Overall, 32% of the elected Council members have land in the tail reach of the WUA service area, varying from 10% in Batken Oblast to 57% in Chui Oblast.

2.6.2 Office Bearers

The elected office bearers and the year of the last election are presented in Table 2-14:

Table 2-14: Office Bearers and Last Election

Name of Oblast	Elected Office Bearers (% WUAs)				Year of Last Election
	Chairman	Deputy Chairman	Secretary	Treasurer	
Batken	100%	40%	60%	60%	2014-16
Osh	100%	46%	69%	38%	2011-16
Jalalabad	100%	40%	10%	20%	2014-16
Issyk-Kul	100%	50%	40%	0%	2014-16
Talas	100%	0%	10%	0%	2015-16
Naryn	100%	57%	14%	0%	2013-16
Chui	100%	53%	53%	6%	2010-16
Total	**100%**	**41%**	**37%**	**18%**	**-**

All 72 assessed WUAs have an elected Chairman, whereas 41% of the assessed WUAs also have a Deputy Chairman and 37% have elected a Secretary. A Treasurer has also been elected by a significant number of assessed WUAs in the three Southern Oblasts. In almost all assessed WUAs, the last elections were conducted during the last two to three years.

2.6.3 Linkages with *Ayil Okmotu*

The linkage between the *Ayil Okmotu* and the assessed WUAs is presented in Table 2-15:

Table 2-15: Linkage between *Ayil Okmotu* and WUA

Name of Oblast	WUAs with Linkage	WUA Council Member			
		Chairman	Deputy Chairman	Secretary	Other WUA Council Members
Batken	60%	100%	67%	0%	33%
Osh	69%	78%	22%	33%	44%
Jalalabad	70%	43%	14%	0%	57%
Issyk-Kul	60%	67%	0%	0%	33%
Talas	70%	0%	0%	14%	86%
Naryn	57%	25%	0%	25%	50%
Chui	35%	50%	0%	0%	50%
Total	**60%**	**52%**	**15%**	**10%**	**50%**

Overall, 60% of all 72 assessed WUAs have one or more elected Council members, who are also elected members of the *Ayil Okmotu* or working for this local authority. In Chui Oblast, about a third of the assessed WUAs have one or more elected Council members with links with the *Ayil Okmotu* compared with 70% of the assessed WUAs in Jalalabad and Talas Oblasts. In about half of the assessed WUA Council having a linkage with the *Ayil Okmotu*, the Chairman and/or other WUA Council members are linked with the *Ayil Okmotu*, varying from 0% in Talas Oblast to 100% in Batken Oblast.

2.6.4 Meetings

The average number of WUA Council meetings in 2015 and the method of informing the elected members about the date, time and location of the next meeting are summarised in Table 2-16:

Table 2-16: WUA Council Meetings

Name of Oblast	WUAs with Council Meeting	Number of Meetings	Method to Inform Elected Members		
			Verbally (Phone)	Written Invitation	Public Announcement
Batken	100%	3	100%	20%	20%
Osh	100%	3	100%	46%	38%
Jalalabad	100%	2	80%	50%	20%
Issyk-Kul	90%	3	90%	0%	70%
Talas	90%	3	100%	0%	10%
Naryn	71%	2	86%	29%	0%
Chui	88%	4	76%	18%	29%
Total	**91%**	**2.5**	**90%**	**23%**	**27%**

Overall, 91% of all 72 assessed WUAs had at least one Council meeting in 2015, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% of the assessed WUAs in the three Southern Oblasts. If the assessed WUAs had Council meetings, they had an average number of 2.5 meetings in 2015. In 90% of the assessed WUAs, the elected Council members are informed verbally about the next Council meetings, whereas 23% of the assessed WUAs in five Oblasts (also) use written invitation. Public announcements are used by 27% of all assessed WUAs in six Oblasts, varying from 10% of the assessed WUAs in Talas Oblast to 70% in Issyk-Kul Oblast.

The responsible persons within the 72 assessed WUAs to inform the elected members about the next meeting of the WUA Council are shown in Table 2-17:

Table 2-17: Responsible Persons for Informing WUA Council Members

Name of Oblast	Responsible Person(s)				
	WUA Council Chairman	Other WUA Council Members	Director	Accountant	Others
Batken	20%	0%	100%	0%	0%
Osh	54%	0%	92%	0%	0%
Jalalabad	70%	0%	30%	0%	10%
Issyk-Kul	50%	0%	60%	0%	10%
Talas	90%	0%	20%	0%	0%
Naryn	43%	0%	71%	0%	14%
Chui	29%	0%	76%	0%	12%
Total	**51%**	**0%**	**64%**	**0%**	**7%**

In 64% of all 72 assessed WUAs, the Director is responsible to inform all WUA Council members about the date, time and location of the next Council meeting, ranging from 20% of the assessed WUAs in Talas Oblast to 100% in Batken Oblast. The WUA Council Chairman is the responsible person in 51% of the assessed WUAs, varying from 20% of the assessed WUAs in Batken Oblast to 90% in Talas Oblast.

2.6.5 Minutes of Meetings

The preparation of minutes of the WUA Council meetings and the modalities are summarised in Table 2-18:

Table 2-18: Minutes of WUA Council Meetings

Name of Oblast	Minutes Prepared by WUAs	Responsible Person(s)				
		WUA Council Chairman	Other WUA Council Members	Director	Accountant	Others
Batken	80%	25%	0%	100%	50%	0%
Osh	100%	38%	8%	38%	38%	23%
Jalalabad	100%	60%	20%	40%	10%	10%
Issyk-Kul	100%	60%	0%	50%	50%	0%
Talas	100%	70%	0%	20%	20%	20%
Naryn	100%	20%	0%	43%	43%	14%
Chui	100%	24%	0%	35%	35%	18%
Total	**97%**	**42%**	**4%**	**47%**	**35%**	**12%**

Except for one assessed WUA in Batken Oblast, all other 71 assessed WUAs prepare minutes of all Council meetings. In 47% of all assessed WUAs, the Director is responsible for preparing the minutes, varying from 20% of the assessed WUAs in Talas Oblast to 100% in Batken Oblast. The WUA Council Chairman is responsible for the preparation of the minutes in 42% of all assessed WUAs, ranging from 20% in Naryn Oblast to 70% in Talas Oblast. In 35% of all assessed WUAs, the minutes are prepared by the Accountant.

2.6.6 Information Dissemination among WUA Members

The modalities for informing the individual WUA members about the decisions made by the WUA Council are shown in Table 2-19:

Table 2-19: Information Dissemination among Individual WUA Members

Name of Oblast	Modality for Informing WUA Members				
	None	Local Meetings	Notice Board	Written Notices	Others
Batken	0%	80%	0%	20%	20%
Osh	0%	23%	31%	46%	23%
Jalalabad	10%	40%	30%	10%	20%
Issyk-Kul	0%	60%	40%	10%	20%
Talas	0%	80%	20%	10%	10%
Naryn	0%	71%	71%	14%	0%
Chui	0%	47%	35%	24%	0%
Total	**1%**	**57%**	**32%**	**18%**	**13%**

In 57% of the 72 assessed WUAs, individual WUA members are informed about decisions made by the WUA Council through local meetings at zonal/village level, ranging from 23% of the assessed WUAs in Osh Oblast to 80% in Talas and Batken Oblasts. The notice board and written notices are used in respectively 32% and 18% of all assessed WUAs. Only one WUA in Jalalabad Oblast does not have a method to inform its members properly.

2.7 Audit Commission

The average number of elected members of the Audit Commission and their terms of office as well as the average number of meetings in 2015 are shown in Table 2-20:

Table 2-20: Audit Commission

Name of Oblast	Elected Members		Meetings in 2015		
	Number	Terms of Office (Years)	Conducted	Average Number	Report Prepared
Batken	3	4	100%	2	80%
Osh	4	3	92%	2	83%
Jalalabad	4	3	100%	2	100%
Issyk-Kul	3	3	80%	3	100%
Talas	3	3	90%	2	100%
Naryn	3	3	57%	2	100%
Chui	3	3	88%	2	100%
Total	**3**	**3**	**87%**	**2**	**95%**

All 72 assessed WUAs have an Audit Commission with an average number of 3 members, who are elected for an average period of 3 years. In 2015, the Audit Commission in 87% of all assessed WUAs had an average number of 2 meetings, ranging from 57% of the assessed WUAs in Naryn Oblast to 100% in Batken and Jalalabad Oblasts. In 95% of the assessed WUAs having one or more meetings of the Audit Commission, a report was prepared of all conducted meetings.

2.8 Dispute Resolution Commission

The existence of a Dispute Resolution Commission, the average number of elected members of the Dispute Resolution Commission and their terms of office as well as the average number of meetings in 2015 are shown in Table 2-21:

Table 2-21: Dispute Resolution Commission

Name of Oblast	Dispute Resolution Commission Formed	Elected Members		Meetings in 2015		
		Number	Terms of Office (Years)	Conducted	Number	Report Prepared
Batken	100%	3	4	80%	3	50%
Osh	85%	4	3	91%	4	78%
Jalalabad	100%	4	3	70%	2	100%
Issyk-Kul	100%	4	3	60%	2	100%
Talas	100%	3	3	90%	3	100%
Naryn	57%	4	3	50%	2	100%
Chui	86%	3	3	31%	1	75%
Total	**90%**	**3.5**	**3**	**67%**	**2**	**86%**

A Dispute Resolution Commission with an average number of 3.5 members have been formed in 90% of all 72 assessed WUAs. In 2015, 67% of the assessed WUAs with a Dispute Resolution Commission had an average number of 2 meetings, varying from 31% of the assessed WUAs in Chui Oblast to 91% in Osh Oblast. A report of each meeting was prepared in 86% of the assessed WUAs having a Dispute Resolution Commission.


Director in WUA office in Osh Oblast (left) and Accountant in WUA office in Chui Oblast

2.9 Directorate

The composition of the WUA Directorate is presented in Table 2-22:

Table 2-22: Composition of WUA Directorate

Name of Oblast	Members of WUA Directorate						
	Director	Deputy Director	Accountant	Casher	Hydro-Engineer	Collector	Other
Batken	100%	0%	80%	40%	80%	40%	40%
Osh	92%	23%	69%	15%	46%	31%	46%
Jalalabad	100%	0%	60%	10%	30%	20%	60%
Issyk-Kul	90%	0%	80%	0%	70%	0%	60%
Talas	100%	0%	50%	0%	30%	0%	100%
Naryn	71%	0%	71%	0%	14%	14%	73%
Chui	82%	12%	76%	18%	41%	6%	65%
Total	**91%**	**7%**	**69%**	**11%**	**43%**	**13%**	**61%**

A Director has been employed in 91% of all 72 assessed WUAs, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% in Batken, Jalalabad and Talas Oblasts, whereas 69% of all assessed WUAs have an Accountant, varying from 50% of the assessed WUAs in Talas Oblast to 80% in Batken and Issyk-Kul Oblasts. A Hydro-Engineer is employed in 43% of all assessed WUAs, ranging from only 14% of the assessed WUAs in Naryn Oblast to 80% in Batken Oblast. In four Oblasts, 10% to 40% of the assessed WUAs also have a Casher, whereas 6% to 40% of the assessed WUAs in five Oblasts have employed a Collector as well.

2.10 Murab

The average number of employed *Murab* (Water Master) together with average number of months employed per year and their main responsibilities are summarised in Table 2-23:

Table 2-23: *Murab*

Name of Oblast	*Murab*			Responsibilities		
	Employed	Number	Months	Operation	Maintenance	ISF Collection
Batken	100%	5	5	100%	100%	20%
Osh	85%	4	6	100%	9%	45%
Jalalabad	100%	3	5	90%	40%	80%
Issyk-Kul	100%	4	6	100%	10%	10%
Talas	100%	4	6	100%	10%	60%
Naryn	100%	4	6	71%	71%	14%
Chui	94%	3	5	82%	29%	29%
Total	**97%**	**4**	**5.5**	**92%**	**38%**	**37%**

Almost all assessed WUAs employ an average number of 4 *Murab* for an average period of 5.5 months each year. In 92% of the assessed WUAs, the *Murab* is responsible for the operation of the on-farm I&D system, whereas maintenance of the on-farm I&D infrastructure is the responsibility of the *Murab* in 38% of the assessed WUAs, ranging from only 9% in Osh Oblast to 100% in Batken Oblast. The collection of irrigation service fees (ISFs) is also the responsibility of the *Murab* in 37% of all assessed WUAs, varying from 10% in Issyk-Kul Oblast to 80% in Jalalabad Oblast.

2.11 WUA Office

The existence of a WUA office and how the WUA obtained the building is shown in Table 2-24:

Table 2-24: WUA Office

Name of Oblast	Existence of WUA Office	Modality for Obtaining Building				
		Purchased	Inherited	Rented	Free Use	Other
Batken	80%	0%	25%	0%	75%	0%
Osh	92%	8%	0%	42%	58%	0%
Jalalabad	60%	0%	0%	17%	83%	0%
Issyk-Kul	80%	13%	0%	13%	75%	0%
Talas	50%	0%	0%	80%	20%	0%
Naryn	71%	0%	20%	0%	80%	0%
Chui	71%	0%	8%	42%	58%	0%
Total	**72%**	**3%**	**8%**	**26%**	**64%**	**0%**

About three-quarter of all assessed WUAs have an office and 64% of the assessed WUAs with an office can use their office for free, whereas 26% of the assessed WUAs in five Oblasts rent an office, ranging

from 13% in Issyk-Kul Oblast to 80% in Talas Oblast. A few WUAs in three Oblasts have inherited their office from the dissolved collective farm.


WUA office in Jalalabad Oblast (left) and Chui Oblast (right)

2.12 Office Furniture and Equipment

The ownership of office furniture and equipment among the 72 assessed WUAs is summarised in Table 2-25:

Table 2-25: Office Furniture and Equipment

Name of Oblast	Owned by WUAs	Type of Office Furniture and Equipment				
		Chairs and Tables	Filing Cabinet	Safe	Computer & Printer	Photocopier
Batken	80%	100%	100%	75%	75%	50%
Osh	85%	100%	81%	36%	45%	18%
Jalalabad	60%	50%	83%	17%	50%	0%
Issyk-Kul	80%	100%	88%	50%	63%	25%
Talas	50%	100%	20%	20%	20%	0%
Naryn	71%	80%	100%	40%	20%	0%
Chui	59%	100%	80%	50%	40%	0%
Total	**69%**	**90%**	**79%**	**41%**	**45%**	**13%**

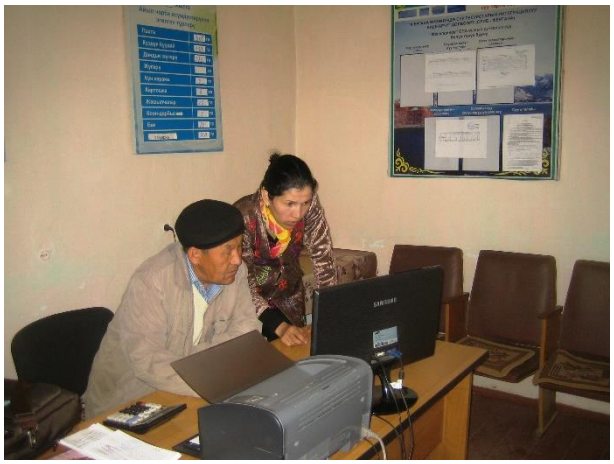
About two-third of all assessed WUAs own office furniture and equipment. Chairs and tables are owned by 90% of all assessed WUAs, whereas 79% possesses a filing cabinet and 41% has a safe. A computer and printer is owned by 45% of all assessed WUAs, ranging from 20% of the assessed WUAs in Talas and Naryn Oblasts to 75% in Batken Oblast. A photocopier is owned by 18%, 25% to 50% of the assessed WUAs in Osh, Issyk-Kul and Batken Oblasts respectively.

The modalities for obtaining the office furniture and equipment among the assessed WUAs is presented in Table 2-26:

Table 2-26: Modality for Obtaining Office Furniture and Equipment

Name of Oblast	Modality for Obtaining Office Furniture and Equipment				
	Inherited	Purchased	Gift	Technical Credit	Other
Batken	25%	0%	75%	75%	0%
Osh	0%	0%	73%	9%	9%
Jalalabad	17%	34%	50%	17%	0%
Issyk-Kul	13%	38%	0%	50%	0%
Talas	0%	60%	40%	0%	20%
Naryn	40%	20%	0%	60%	0%
Chui	60%	0%	0%	10%	30%
Total	**22%**	**22%**	**34%**	**32%**	**8%**

About a third of the assessed WUAs with office furniture and equipment received them as a gift, whereas 32% of the assessed WUAs in five Oblasts used a technical credit, 22% inherited and another 22% purchased the office furniture and equipment with own funds.



Computer and printer in WUA office in Osh Oblast

2.12.1 Internet Connection

One assessed WUA in Issyk-Kul Oblast and two assessed WUAs in Chui Oblast have an internet connection in their office.

2.13 Machinery and Equipment

The number of machinery and equipment owned by the 72 assessed WUAs is presented in Table 2-27:

Table 2-27: Machinery and Equipment

Name of Oblast	Owned by WUAs	Type and Number of Machinery and Equipment					Modality		
		Tractor	Excavator	Bulldozer (Loader)	Truck	Other(s)	Purchased	Gift	Technical Credit
Batken	40%	2	0	0	0	0	0%	0%	100%
Osh	15%	1	1	0	0	0	0%	0%	100%
Jalalabad	30%	0	3	0	0	0	0%	0%	100%
Issyk-Kul	30%	0	3	0	0	0	33%	33%	67%
Talas	20%	0	2	0	0	0	50%	0%	100%
Naryn	43%	1	3	0	0	0	0%	0%	100%
Chui	0%	-	-	-	-	-	-	-	-
Total	**25%**	**4**	**12**	**0**	**0**	**0**	**14%**	**6%**	**95%**

A quarter of all assessed WUAs owns machinery and equipment, including a total of 4 tractors and 12 excavators. Most of the machinery and equipment was purchased with a technical credit provided by one of the World Bank-funded projects, whereas a few assessed WUAs in Issyk-Kul and Talas Oblast used their own funds.

The physical condition of most machinery and equipment owned by the assessed WUAs varies from good, mediocre to poor.

2.13.1 Rental of Machinery

The rental of machinery by the 72 assessed WUAs and the amount of money spent on renting machinery in 2015 are summarised in Table 2-28:

Table 2-28: Rental of Machinery in 2015

Name of Oblast	Rental of Machinery in 2015	Average Expenditure on Machinery Rental (KGS)			
		Tractor	Excavator	Truck	Other
Batken	60%	71,250	47,667	21,567	0
Osh	85%	6,750	74,830	21,600	0
Jalalabad	80%	99,140	145,429	0	12,000
Issyk-Kul	100%	6,500	22,367	7,500	20,367
Talas	90%	25,400	26,000	14,833	24,330
Naryn	86%	9,200	96,000	0	0
Chui	59%	41,300	54,710	8,600	23,000
Total	**80%**	**37,077**	**66,715**	**10,586**	**11,385**

Machinery is rented by 80% of all 72 assessed WUAs, ranging from 60% of the assessed WUAs in Batken Oblast to 100% in Issyk-Kul Oblast. On average, these assessed WUAs spent about KGS 37,000 on renting a tractor, KGS 66,715 for an excavator, KGS 10,586 for a truck and KGS 11,385 for other equipment.

2.14 Vehicles

The ownership of vehicles among the 72 assessed WUAs is shown in Table 2-29:
:

Table 2-29: Vehicles

Name of Oblast	Owned by WUAs	Type and Number of Vehicle			Modality			
		Car	Motorcycle	Bicycle	Purchased	Rented/ Leased	Gift	Technical Credit
Batken	40%	2	0	0	0%	50%	0%	50%
Osh	38%	3	2	0	0%	20%	40%	40%
Jalalabad	20%	2	0	0	0%	0%	50%	50%
Issyk-Kul	50%	5	0	0	0%	0%	0%	100%
Talas	10%	1	0	0	100%	0%	0%	0%
Naryn	14%	1	0	0	0%	0%	0%	0%
Chui	18%	3	0	1	33%	0%	0%	67%
Total	**27%**	**17**	**2**	**1**	**19%**	**10%**	**13%**	**44%**

About a quarter of all 72 assessed WUAs possesses a vehicle, including a total of 17 cars, 2 motorcycles and 1 bicycle. Almost half of the owned vehicles is obtained through a technical credit by the assessed WUAs in five Oblasts, whereas one-fifth is purchased with own funds, 10% is rented and 13% is a gift.

2.15 Gender Issues

2.15.1 Active Participation in WUA Management

The participation of female members or representatives in the management of the 72 assessed WUAs and the main reasons for no or limited participation of female members or representatives are summarised in Table 2-30:

Table 2-30: Participation of Female Member or Representatives in WUA Management

Name of Oblast	WUAs with Active Participation	Reason for Lack of Participation				
		Not Involved in Irrigation	Lack of Knowledge	Not Interested	No Time	Decisions by Men
Batken	60%	Yes	No	No	Yes	No
Osh	46%	Yes	Yes	Yes	Yes	Yes
Jalalabad	50%	Yes	Yes	Yes	Yes	Yes
Issyk-Kul	50%	No	No	Yes	Yes	Yes
Talas	30%	No	No	Yes	Yes	Yes
Naryn	14%	Yes	Yes	Yes	Yes	No
Chui	53%	Yes	Yes	Yes	Yes	Yes
Total	**43%**	**-**	**-**	**-**	**-**	**-**

Reportedly, female members or representatives are actively involved in the management of 43% of all assessed WUAs, ranging from only 14% of the assessed WUAs in Naryn Oblast to 60% in Batken Oblast. Lack of time is the most quoted reason for the low participation of female members or representatives followed by lack of interest, no involvement in irrigation, decisions are made by men and lack of knowledge.

2.15.2 Active Participation of WUA General/Representative Assembly

The participation of female members or representatives in the General/Representative Assembly of the 72 assessed WUAs and the main reasons for no or limited participation of female representatives are summarised in Table 2-31:

Table 2-31: Participation of Female Members or Representatives in WUA Assembly

Name of Oblast	WUAs with Active Participation	Reason for Lack of Participation				
		Socio-Cultural Barriers	No Interest	No Awareness	Not Accepted	No Confidence
Batken	40%	No	Yes	Yes	No	Yes
Osh	62%	No	Yes	Yes	No	No
Jalalabad	20%	Yes	Yes	No	Yes	Yes
Issyk-Kul	70%	No	Yes	Yes	No	No
Talas	40%	No	Yes	Yes	Yes	No
Naryn	29%	Yes	Yes	Yes	No	No
Chui	65%	No	Yes	Yes	No	Yes
Total	**47%**	**-**	**-**	**-**	**-**	**-**

In about half of the 72 assessed WUAs, female members or representatives reportedly participate actively in the meetings of the General/Representative Assembly. Lack of interest and lack of awareness are the most mentioned reasons for low participation by female members or representatives followed by lack of confidence, socio-cultural barriers and no acceptance among men.

Raising awareness and provision of gender training are mentioned as most effective interventions to improve the participation of female members and representatives followed by the formation of Women's Committee within each WUA. However, a significant number of respondents also mentioned that nothing can be done to enhance the participation of women in the affairs of the WUA.

2.15.3 Election of Women as Zonal Representatives and Council Members

The majority of the assessed WUAs (71%) stated that women could be elected as zonal representatives, whereas almost all assessed WUAs (89%) reported that female members or representatives could be elected as member of the WUA Council. Socio-cultural barriers and lack of interest are the most common reasons mentioned that women are not elected for these positions within the WUAs. Raising awareness and the provision of gender training is needed to have more women being elected as zonal representatives and WUA Council members.

2.15.4 Gender Training

The proportion of assessed WUAs having received gender training during the last 5 years is shown in Table 2-32:

Table 2-32: Gender Training

Name of Oblast	Training Provided to WUA	Year	Target Group			Training Provider			
			Male Member	Female Members	WUA Council Members	WUA SU	Other Government Staff	Project Staff	NGO
Batken	0%	-	-	-	-	-	-	-	-
Osh	31%	2013-15	Yes	Yes	Yes	No	Yes	Yes	No
Jalalabad	10%	2016	Yes	No	Yes	No	No	Yes	No
Issyk-Kul	50%	2014-15	No	Yes	Yes	Yes	No	Yes	Yes
Talas	30%	2008-15	Yes	Yes	No	Yes	Yes	No	No
Naryn	0%	-	-	-	-	-	-	-	-
Chui	65%	2014-16	Yes	Yes	Yes	Yes	No	No	No
Total	**27%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

About a quarter of all 72 assessed WUAs reported to have received training in gender issues, mainly between 2013 and 2016. The target groups of the provided gender training were male and female WUA members and/or WUA Council members. The gender training was provided by WUA Support Unit staff in three Oblasts, other government staff in two Oblasts and project staff in three Oblasts, whereas a number of assessed WUAs in Issyk-Kul also received gender training from an NGO.

3 ADMINISTRATIVE MANAGEMENT OF WATER USERS' ASSOCIATIONS

3.1 Non-Financial Documents

The non-financial documents maintained by the 72 assessed WUAs are summarised in Table 3-1:

Table 3-1: Non-Financial Documents

Name of Oblast	Non-Financial Documents							
	Register of Members	Register of Non-Members	Register of Elected Organ Members	Map	Register of Bulk Water Supply	Register of Water Supply Requests and Supply	Register of Planted Crops	Register of Corres-pondence
Batken	100%	0%	100%	40%	80%	40%	60%	60%
Osh	100%	23%	62%	77%	77%	69%	62%	77%
Jalalabad	100%	40%	80%	100%	70%	30%	50%	40%
Issyk-Kul	100%	30%	70%	90%	70%	70%	40%	60%
Talas	100%	30%	100%	100%	70%	100%	70%	100%
Naryn	100%	14%	57%	86%	71%	14%	14%	71%
Chui	100%	24%	76%	94%	88%	82%	71%	76%
Total	**100%**	**23%**	**78%**	**84%**	**75%**	**58%**	**52%**	**69%**

Name of Oblast	Non-Financial Documents				
	Register of Minutes of Meetings	Register of Transactions and Contracts	Asset Register	Visitors Book	Others
Batken	60%	0%	40%	20%	0%
Osh	92%	77%	23%	54%	0%
Jalalabad	60%	50%	30%	40%	0%
Issyk-Kul	60%	50%	30%	40%	0%
Talas	100%	90%	100%	100%	0%
Naryn	86%	71%	29%	43%	0%
Chui	94%	82%	59%	59%	0%
Total	**79%**	**60%**	**44%**	**51%**	**0%**

All 72 assessed WUAs maintain a Membership Register and 84% of all assessed WUAs have a map of the on-farm I&D system, ranging from 40% of the assessed WUAs in Batken Oblast to 100% in Jalalabad and Talas Oblasts. A register the elected members of the different WUA organs is maintained by 78% of all assessed WUAs, varying from 57% of the assessed WUAs in Naryn Oblast to 100% in Batken and Talas Oblast. Three-quarter of all assessed WUAs have a register to record the bulk water supply at the head of the on-farm I&D system, whereas 58% of all assessed WUAs maintain a register with the water supply requests and actual water supply, ranging from 14% of the assessed WUAs in Naryn Oblast to 100% in Talas Oblast. Register of planted/cultivated crops is maintained by 52% of all 72 assessed WUAs, varying from 14% in Naryn Oblast to 70% in Talas Oblast. An asset register is kept by 44% of all assessed WUAs, ranging from 20% of the assessed WUAs in Batken Oblast to 100% in Talas Oblast, whereas 60% of all assessed WUAs have a transaction and contract register, varying from none of the assessed WUAs in Batken Oblast to 100% in Talas Oblast.

The persons within the 72 assessed WUAs responsible for maintaining the non-financial documents are presented in Table 3-2:

Table 3-2: Responsibility for Maintenance of Non-Financial Documents

Name of Oblast	Responsible Persons for Maintenance of Non-Financial Documents				
	WUA Council Chairman	Other WUA Council Members	Director	Accountant	Other Employed Staff
Batken	0%	0%	80%	100%	0%
Osh	38%	8%	62%	62%	0%
Jalalabad	10%	0%	60%	50%	0%
Issyk-Kul	40%	0%	80%	70%	0%
Talas	10%	0%	80%	30%	0%
Naryn	14%	0%	43%	100%	0%
Chui	12%	0%	41%	65%	0%
Total	**18%**	**1%**	**64%**	**68%**	**0%**

In about two-third of the 72 assessed WUAs, the non-financial documents are maintained by the Director and/or Accountant, whereas the WUA Council Chairman is (also) involved in 18% of all assessed WUAs, ranging from 0% in Batken Oblast to 40% in Issyk-Kul Oblast.

Map of on-farm I&D system in WUA office in Chui Oblast (left) and Jalalabad Oblast (right)

3.2 Internal and External Audit

The execution of an internal and external audit of the non-financial documents maintained by the 72 assessed WUAs is shown in Table 3-3:

Table 3-3: Internal and External Audit of Non-Financial Documents

Name of Oblast	Internal Audit		External Audit	
	Executed by Audit Commission	All Non-Financial Documents Approved	Executed by WUA SU	All Non-Financial Documents Approved
Batken	80%	100%	60%	100%
Osh	92%	75%	46%	33%
Jalalabad	90%	89%	60%	67%
Issyk-Kul	90%	89%	50%	80%
Talas	90%	33%	10%	0%
Naryn	43%	100%	29%	100%
Chui	88%	93%	59%	80%
Total	**82%**	**83%**	**45%**	**66%**

In 2015, the non-financial documents were internally audited by the Audit Commission in 82% of all assessed WUAs, ranging from 43% of the assessed WUAs in Naryn Oblast to 92% in Osh Oblast. In 83% of the WUAs with the non-financial documents internally audited, the Audit Commission approved them.

An external audit of the non-financial documents by the WUA Support Unit was carried out in 45% of all 72 assessed WUAs, varying from 10% in Talas Oblast to 60% in Batken and Jalalabad Oblasts. The WUA Support Units approved the non-financial documents for 66% of the externally audited WUAs, varying from 0% in Talas Oblast to 100% in Batken and Naryn Oblasts.

4 FINANCIAL MANAGEMENT OF WATER USERS' ASSOCIATIONS

4.1 Sources of Income

The main sources of income for the 72 assessed WUAs are presented in Table 4-1:

Table 4-1: Main Sources of Income

Name of Oblast	Main Sources of Income				
	ISFs Paid by WUAs	Fines	Bank Interest	Donation/ Gift	Other
Batken	100%	40%	0%	20%	0%
Osh	100%	8%	0%	23%	0%
Jalalabad	100%	10%	0%	0%	0%
Issyk-Kul	100%	60%	0%	10%	0%
Talas	100%	30%	0%	0%	0%
Naryn	100%	14%	0%	0%	0%
Chui	100%	18%	6%	6%	0%
Total	**100%**	**26%**	**1%**	**8%**	**0%**

In all 72 assessed WUAs, the ISF is the main source of income followed by paid fines in 26% of all assessed WUAs, whereas 8% of all assessed WUAs also received a donation/gift.

4.2 Financial Documents

The financial documents maintained by the 72 assessed WUAs are presented in Table 4-2:

Table 4-2: Financial Documents

Name of Oblast	Financial Documents					
	Cash Book	Bank Book	Ledger	Receipt Book	ISF Book	Fines Record
Batken	100%	40%	100%	100%	60%	20%
Osh	85%	46%	100%	85%	46%	31%
Jalalabad	100%	50%	80%	70%	40%	0%
Issyk-Kul	60%	70%	100%	90%	60%	50%
Talas	100%	80%	80%	80%	30%	30%
Naryn	57%	57%	71%	71%	71%	29%
Chui	94%	59%	76%	82%	76%	12%
Total	**85%**	**57%**	**87%**	**83%**	**55%**	**25%**

A cash book is maintained by 85% of all 72 assessed WUAs, ranging from 57% in Naryn Oblast to 100% in Batken, Jalalabad and Talas Oblasts. A bank book is kept by 57% of all assessed WUAs, varying from 40% in Batken Oblast to 80% in Talas Oblast. A ledger and receipt book is maintained by respectively 87% and 83% of all assessed WUAs. About half of the assessed WUAs have an ISF book, ranging from 30% of the assessed WUAs in Talas Oblast to 76% in Chui Oblast. A record to register all imposed and paid fines is kept by 25% of the assessed WUAs in six Oblasts, varying from 12% in Chui Oblast to 50% in Issyk-Kul Oblast.

The persons within the 72 assessed WUAs responsible for maintaining the financial documents are presented in Table 4-3:

Table 4-3: Responsibility for Maintenance of Financial Documents

Name of Oblast	Responsible Persons for Maintenance of Financial Documents				
	WUA Council Chairman	Other WUA Council Members	Director	Accountant	Other Employed Staff
Batken	0%	0%	80%	100%	0%
Osh	8%	8%	85%	85%	0%
Jalalabad	10%	0%	70%	70%	0%
Issyk-Kul	10%	0%	80%	90%	0%
Talas	0%	0%	60%	60%	0%
Naryn	14%	0%	29%	100%	0%
Chui	0%	0%	29%	76%	0%
Total	**6%**	**1%**	**62%**	**83%**	**0%**

The Accountant is responsible for maintaining the financial documents in 83% of all assessed WUAs, ranging from 60% of the assessed WUAs in Talas Oblast to 100% in Batken and Naryn Oblasts. In 62% of all assessed WUAs, the Director is (also) responsible for keeping the financial records, varying from 29% of the assessed WUAs in Naryn and Chui Oblasts to 85% in Osh Oblast. In a limited number of assessed WUAs in four Oblasts, the WUA Council Chairman is also involved in maintaining the financial documents.

4.3 Annual Report and Financial Statements

The preparation of the Annual Report and financial statements at the end of each financial year is shown in Table 4-4:

Table 4-4: Annual Report and Financial Statements

Name of Oblast	Documents Prepared by WUAs	Month(s)	Responsible Persons				
			WUA Council Chairman	Other WUA Council Members	Director	Accountant	Other Employed Staff
Batken	100%	Jan-Mar	0%	0%	60%	100%	0%
Osh	100%	Dec-Mar	15%	0%	77%	92%	0%
Jalalabad	100%	Nov-Mar	30%	0%	50%	70%	0%
Issyk-Kul	100%	Oct-Mar	10%	10%	90%	60%	0%
Talas	100%	Jan-Mar	0%	0%	60%	50%	0%
Naryn	86%	Oct-Feb	14%	0%	57%	71%	0%
Chui	88%	Dec-Mar	0%	0%	35%	65%	0%
Total	**96%**	**-**	**10%**	**1%**	**61%**	**73%**	**0%**

Almost all assessed WUAs prepare an Annual Report and financial statements, usually between December and March. In 73% of all assessed WUAs, the Accountant is responsible for preparing the Annual Report and financial statements, varying from 50% of the assessed WUAs in Talas Oblast to 100% in Batken Oblast. In 61% of all assessed WUAs, the Director is (also) responsible, ranging from 35% in Chui Oblast to 90% in Issyk-Kul Oblast. The WUA Council Chairman is involved in preparing these documents in a limited number of assessed WUAs in four Oblasts.

The approval of the prepared Annual Report and financial statements is presented in Table 4-5:
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Table 4-5: Approval of Annual Report and Financial Statements

Name of Oblast	Approval by Assembly	Submitted to RVK	Submitted to CSU
Batken	100%	100%	100%
Osh	100%	77%	100%
Jalalabad	100%	40%	100%
Issyk-Kul	100%	60%	100%
Talas	100%	20%	100%
Naryn	100%	86%	100%
Chui	94%	53%	100%
Total	**99%**	**62%**	**100%**

Except for one assessed WUA in Chui Oblast, the Annual Report and financial statements are reviewed and approved by the General/Representative Assembly of all other assessed WUAs. All 72 assessed WUAs submit their Annual Report and financial statements to the Central WUA Support Unit (CSU) for review, whereas these documents are also submitted to the RVK by 62% of all assessed WUAs, ranging from 20% in Talas Oblast to 100% in Batken Oblast.

The execution of an internal and external audit of the Annual Report and financial statements prepared by the 72 assessed WUAs is shown in Table 4-6:

Table 4-6: Internal and External Audit of Annual Report and Financial Statement

Name of Oblast	Internal Audit		External Audit	
	Executed by Audit Commission	Annual Report Approved	Executed by WUA SU	Annual Report Approved
Batken	100%	100%	80%	100%
Osh	85%	82%	85%	82%
Jalalabad	90%	89%	60%	80%
Issyk-Kul	90%	100%	90%	89%
Talas	90%	100%	0%	-
Naryn	14%	100%	14%	100%
Chui	76%	87%	41%	86%
Total	**78%**	**94%**	**53%**	**90%**

In 2015, the Annual Report and financial statements are internally audited by the Audit Commission in 78% of all assessed WUAs, ranging from 14% in Naryn Oblast to 100% in Batken Oblast. In most cases, the Audit Commission approves the Annual Report and financial statements. An external audit of the Annual Report and financial statement by the WUA Support Unit is carried out in 53% of all 72 assessed WUAs, varying from none of the assessed WUAs in Talas Oblast to 90% in Issyk-Kul Oblast. The WUA Support Unit approved the Annual Report and financial statements of 90% of the WUAs that submitted these documents.

4.4 Annual Budget

The preparation of the Annual Budget for 2015 is shown in Table 4-7:

Table 4-7: Annual Budget

Name of Oblast	Annual Budget Prepared by WUAs	Month(s)	Responsible Persons				
			WUA Council Chairman	Other WUA Council Members	Director	Accountant	Other Employed Staff
Batken	80%	Jan-Feb	0%	0%	80%	80%	0%
Osh	92%	Dec-Feb	31%	0%	77%	69%	0%
Jalalabad	100%	Dec-Mar	30%	10%	60%	80%	0%
Issyk-Kul	100%	Dec-Mar	30%	0%	60%	80%	0%
Talas	90%	Jan-Apr	0%	0%	50%	50%	0%
Naryn	71%	Oct-Feb	0%	0%	43%	71%	0%
Chui	88%	Dec-Mar	0%	0%	41%	59%	0%
Total	**89%**	**-**	**13%**	**1%**	**59%**	**70%**	**0%**

An Annual Budget is prepared in 89% of all 72 assessed WUAs usually between December and March. In 70% of all assessed WUAs, the Accountant is responsible for preparing the Annual Budget, ranging from 50% of the assessed WUAs in Talas Oblast to 80% in Batken, Jalalabad and Issyk-Kul Oblasts. The Director is (also) responsible for the preparation of the Annual Budget in 59% of all assessed WUAs, varying from 41% in Chui Oblast to 80% in Batken Oblast. The WUA Council Chairman is involved in preparing the Annual Budget in a limited number of assessed WUAs in three Oblasts.

The average budget and actual expenditures for the 72 assessed WUAs in 2015 are summarised in Table 4-8:

Table 4-8: Average Budget and Actual Expenditures in 2015 (KGS)

Name of Oblast	Total			Average % of Total Expenditures					
	Average Budget	Average Expenditure	% of Budget	Salaries	Mainte-nance	Service Charge	Repay-ment	WUA Manage-ment	Tax & Social Fund
Batken	1,353,885	1,044,19	77%	22%	14%	24%	8%	1%	7%
Osh	1,124,734	781,996	70%	32%	9%	30%	3%	2%	5%
Jalalabad	670,081	516,615	77%	29%	18%	30%	12%	3%	27%
Issyk-Kul	499,275	379,818	76%	35%	18%	21%	8%	2%	6%
Talas	299,593	245,654	82%	46%	25%	15%	9%	2%	11%
Naryn	509,457	506,483	99%	25%	7%	30%	5%	3%	5%
Chui	378,627	304,951	81%	37%	13%	55%	24%	3%	11%
Total	**785,093**	**583,666**	**74%**	**32%**	**15%**	**29%**	**10%**	**2%**	**10%**

In 2015, the overall average budget of all assessed WUAs was KGS 785,093, ranging from KGS 299,593 in Talas Oblast to KGS 1,353,885 in Batken Oblast. The overall average actual expenditure was KGS 583,666, which is equivalent to 74% of the planned budget for 2015, varying from 70% in Osh Oblast to 99% in Naryn Oblast.

Overall, an average of 32% of the actual expenditures was spent on salaries, varying from 22% in Batken Oblast to 46% in Talas Oblast. The overall average expenditures on maintenance was 15%, ranging from 7% in Naryn Oblast to 25% in Talas Oblast. The payment of service charges to RVKs or UWUAs was 29% for all assessed WUAs, varying from 15% in Talas Oblast to 55% in Chui Oblast. The overall average amount of the actual expenditures spent on the repayment of 25% rehabilitation costs and/or technical credit was 10%, ranging from 3% in Osh Oblast to 24% in Chui Oblast. Only 2% of the actual expenditures was spent

on costs related to WUA management, whereas the payment of tax and contributions to the Social Fund was 10% of the actual expenditures, varying from 5% in Osh and Naryn Oblasts to 27% in Jalalabad Oblast.

4.5 Bank Account and Reserve Fund

The number of assessed WUAs having a bank account and a Reserve Fund is presented in Table 4-9:

Table 4-9: Bank Account and Reserve Fund

Name of Oblast	Bank Account		Reserve Fund			
	Opened by WUAs	Average Amount (KGS)	Formed	Source	Average Amount (KGS)	Purpose
Batken	20%	1,000	0%	-	-	-
Osh	26%	2,526	15%	ISF	22,500	Emergency
Jalalabad	30%	600	10%	ISF	3,000	Procurement
Issyk-Kul	60%	20,383	10%	ISF	1,000	Rehabilitation
Talas	90%	2,681	20%	Fines, rent	8,250	Emergency
Naryn	43%	8,667	14%	Fines	3,000	Rehabilitation
Chui	47%	13,318	13%	ISF	7.098	Repair, rehabilitation
Total	**45%**	**7,796**	**12%**	**-**	**7,475**	**-**

A bank account has been opened by 45% of all assessed WUAs, ranging from 20% of the assessed WUAs in Batken Oblast to 90% in Talas Oblast. The average amount deposited in the WUA bank accounts is KGS 7,796 by the end of 2015, varying from an average amount of KGS 600 in Jalalabad Oblast to KGS 20,383 in Issyk-Kul Oblast. Only 12% of all assessed WUAs have established a Reserve Fund, varying from none of the assessed WUAs in Batken Oblast to 20% in Talas Oblast, and the overall average deposited amount is KGS 7,475, ranging from KGS 1,000 in Issyk-Kul Oblast to KGS 22,500 in Osh Oblast. The collected ISFs are the source of income for the Reserve Fund in four Oblasts, fines in two Oblasts and income from renting out machinery in Talas Oblast. The main purpose of the Reserve Fund is emergency repair in two Oblasts, rehabilitation in three Oblasts, regular repair in one Oblast and procurement in one Oblast.

4.6 Irrigation Service Fee

4.6.1 ISF Assessment Methods and ISF Rate

The method used to calculate the ISF to be paid by the farmers as well as the current ISF rate are shown in Table 4-10:

Table 4-10: ISF Assessment Method and ISF Rate

Name of Oblast	Assessment Method				ISF Rate in 2015 (KGS/ha)	Month
	Area-Based	Crop-Based	Irrigations	Volume		
Batken	100%	20%	0%	0%	314	Nov-Mar
Osh	85%	0%	0%	31%	336	Dec-Mar
Jalalabad	60%	30%	20%	60%	326	Aug-Mar
Issyk-Kul	100%	0%	0%	10%	286	Nov-Apr
Talas	60%	0%	10%	30%	329	Feb-Mar
Naryn	86%	14%	0%	14%	257	Mar-Apr
Chui	71%	18%	6%	53%	392	Feb-Apr
Total	**80%**	**12%**	**5%**	**29%**	**320**	**-**

The area-based method for the assessment of the ISF is used in 80% in all assessed WUAs, ranging from 60% of the assessed WUAs in Jalalabad and Talas Oblasts to 100% in Batken and Issyk-Kul Oblasts. The volume-based method is used in 29% of all assessed WUAs, varying from none of the assessed WUAs in Batken Oblast to 60% in Jalalabad Oblast. A limited number of assessed WUAs also uses crop-based method or number of irrigations.

In 2015, the overall average ISF rate for all assessed WUAs was KGS 320/ha, varying from KGS 257/ha in Naryn Oblast to KGS 392/ha in Chui Oblast. The ISF rate usually is fixed between November and April.

4.6.2 ISF Assessment

The responsibility for assessing the ISF amount to be paid by the farmers is shown in Table 4-11:

Table 4-11: ISF Assessment

Name of Oblast	Responsible Persons for ISF Assessment				
	WUA Council Chairman	**Other WUA Council Members**	**Director**	**Accountant**	***Murab***
Batken	20%	20%	80%	80%	20%
Osh	23%	0%	77%	38%	23%
Jalalabad	20%	20%	100%	50%	30%
Issyk-Kul	60%	10%	60%	50%	0%
Talas	70%	10%	100%	40%	30%
Naryn	0%	0%	71%	71%	14%
Chui	18%	6%	65%	53%	0%
Total	**30%**	**9%**	**79%**	**55%**	**17%**

In 79% of all assessed WUAs, the Director is responsible for assessing the ISF rate, ranging from 60% of the assessed WUAs in Issyk-Kul Oblast to 100% in Jalalabad and Talas Oblasts. The Accountant is (also) responsible for assessing the ISF rate in 55% of all assessed WUAs, varying from 38% of the assessed WUAs in Osh Oblast to 80% in Batken Oblast. In about one-third of all assessed WUAs in five Oblasts, the WUA Council Chairman is (also) involved in assessing the ISF rates, whereas the *Murab* is responsible in 17% of all assessed WUAs in five Oblasts.

4.6.3 ISF Invoice

The responsibility for issuing ISF invoices to the farmers is shown in Table 4-12:

Table 4-12: ISF Invoice

Name of Oblast	Invoice Issued by WUAs	Responsible Persons for ISF Invoice				
		WUA Council Chairman	Other WUA Council Members	Director	Accountant	*Murab*
Batken	0%	-	-	-	-	-
Osh	54%	0%	0%	14%	100%	14%
Jalalabad	70%	0%	0%	0%	100%	13%
Issyk-Kul	70%	0%	0%	14%	100%	0%
Talas	80%	0%	0%	38%	63%	0%
Naryn	14%	0%	0%	0%	100%	0%
Chui	47%	13%	0%	25%	63%	13%
Total	**49%**	**2%**	**0%**	**13%**	**75%**	**6%**

In about half of all assessed WUAs, an invoice is issued to all farmers specifying the ISF amount to be paid, ranging from none of the assessed WUAs in Batken Oblast to 80% in Talas Oblast. In three-quarter of the assessed WUAs issuing an invoice, the Accountant is responsible for preparing this document, varying from 63% of the assessed WUAs in Talas and Chui Oblasts to 100% in Osh, Jalalabad, Issyk-Kul and Naryn Oblasts. The Directors is involved in preparing the ISF invoices in a limited number of assessed WUAs in four Oblasts.

4.6.4 Payment of ISF

The method for the payment of the ISFs is presented in Table 4-13:

Table 4-13: Payment of ISF

Name of Oblast	Method of ISF Payment						Advance Payment	
	Represen-tatives	WUA Council Chairman	Other WUA Council Members	WUA Office	Collector	*Murab*	Paid	Average %
Batken	20%	20%	0%	40%	60%	60%	0%	-
Osh	8%	8%	8%	69%	23%	62%	54%	29%
Jalalabad	0%	0%	0%	60%	20%	60%	20%	38%
Issyk-Kul	0%	0%	0%	100%	0%	20%	80%	38%
Talas	0%	0%	0%	100%	0%	10%	20%	25%
Naryn	0%	0%	0%	100%	14%	29%	14%	70%
Chui	0%	0%	6%	82%	6%	6%	41%	63%
Total	**4%**	**4%**	**2%**	**79%**	**18%**	**35%**	**33%**	**-**

In 79% of all 72 assessed WUAs, the farmers pay their ISFs to the Accountant in the WUA office, varying from 40% of the assessed WUAs in Batken Oblast to 100% in Issyk-Kul, Talas and Naryn Oblasts. In about a third of all assessed WUAs, the farmers pay their ISFs to the *Murab*, ranging from 6% of the assessed WUAs in Chui Oblast to 62% in Osh Oblast. The ISFs are paid to the Collector in 18% of all assessed WUAs in five Oblasts, varying from 6% of the assessed WUAs in Chui Oblast to 60% in Batken Oblast.

In one-third of all assessed WUAs, the farmers have to pay 25% to 70% of the total ISF amount in advance to the WUA, ranging from none of the assessed WUAs in Batken Oblast to 80% in Issyk-Kul Oblast.

4.6.5 Issue of Receipts

The responsibility for issuing a receipt to each farmer having paid his/her ISF is shown in Table 4-14:

Table 4-14: Issue of Receipt

Name of Oblast	Receipt Issued by WUAs	Responsible Persons for Issue of Receipt						
		WUA Council Chairman	Other WUA Council Members	Director	Accountant	Casher	Collector	*Murab*
Batken	100%	0%	0%	80%	100%	20%	0%	20%
Osh	92%	17%	0%	25%	100%	17%	0%	8%
Jalalabad	100%	0%	0%	10%	80%	10%	20%	10%
Issyk-Kul	100%	0%	0%	20%	100%	0%	0%	0%
Talas	80%	0%	0%	38%	63%	0%	0%	0%
Naryn	100%	0%	0%	0%	100%	14%	0%	0%
Chui	94%	0%	0%	19%	88%	19%	0%	0%
Total	**95%**	**2%**	**0%**	**27%**	**90%**	**11%**	**3%**	**5%**

A receipt is issued to farmers having paid their ISFs in 95% of all 72 assessed WUAs and the Accountant is responsible for preparing and issuing the receipt in 90% of all assessed WUAs, ranging from 63% of the assessed WUAs in Talas Oblast to 100% in Batken, Osh, Issyk-Kul and Naryn Oblasts. The issue of receipts is the responsibility of the Director in 27% of all assessed WUAs in six Oblasts, varying from 10% in Jalalabad Oblast to 80% in Batken Oblast.

4.6.6 Collection of ISFs

The actual collection of the ISFs is presented in Table 4-15:

Table 4-15: Collection of ISFs

Name of Oblast	Payment of Full ISF		ISF Collection			Payment in Kind	
	% WUAs	% of Farmers	Assessed Amount (KGS)	Collected Amount (KGS)	% of Assessed Amount	% WUA	% Farmers
Batken	40%	60%	706,600	561,153	79%	20%	50%
Osh	31%	67%	117,418	294,024	250%	23%	27%
Jalalabad	30%	77%	164,600	336,210	204%	20%	25%
Issyk-Kul	30%	71%	358,023	295,799	83%	10%	10%
Talas	30%	60%	365,000	265,900	73%	20%	22%
Naryn	57%	58%	208,771	129,986	62%	0%	-
Chui	59%	72%	311,559	307,343	99%	6%	30%
Total	**40%**	**66%**	**272,106**	**301,970**	**111%**	**14%**	**23%**

In 2015, all farmers fully paid their ISFs in 40% of all 72 assessed WUAs, ranging from 30% of the assessed WUAs in Jalalabad, Issyk-Kul and Talas Oblasts to 59% in Chui Oblast. In the assessed WUAs where not all farmers paid their full ISFs, an overall average of 66% of all farmers paid their ISFs fully, varying from 58% in Naryn Oblast to 77% in Jalalabad Oblast.

Overall, the average assessed amount of ISF to be collected by the assessed WUAs in 2015 was KGS 272,106, ranging from KGS 117,418 in Osh Oblast to KGS 706,600 in Batken Oblast. At the end of 2015, an overall average amount of KGS 301,970 was actually collected, which is 111% of the assessed amount. In Osh and Jalalabad Oblasts, the assessed WUAs reported to have collected respectively 250% and 204% of

the assessed ISF amount, whereas the ISF recovery rate in the other five Oblasts ranges from 62% in Naryn Oblast to 99% in Chui Oblast.

In 6% to 23% of the assessed WUAs in six Oblasts, 10% of the farmers in Issyk-Kul Oblast to 50% in Batken Oblast reportedly paid their ISFs in kind.

4.6.7 Sanctions

The sanctions for late and non-payment of ISFs adopted by the assessed WUAs are presented in Table 4-16:

Table 4-16: Sanctions for Late and Non-Payment of ISF

Name of Oblast	Sanctions Adopted by WUAs	Adopted Sanctions				Sanctions Imposed
		Fine	Interest	No Water	Aksakal Court	
Batken	0%	-	-	-	-	-
Osh	31%	Yes	No	Yes	No	Limited
Jalalabad	40%	No	No	Yes	No	Limited
Issyk-Kul	90%	Yes	Yes	Yes	No	Fully
Talas	30%	Yes	Yes	Yes	No	Fully
Naryn	0%	-	-	-	-	-
Chui	35%	Yes	No	Yes	No	Fully
Total	**32%**	**-**	**-**	**-**	**-**	**-**

About one-third of all assessed WUAs have adopted one or more sanctions for late and/or non-payment of ISFs, ranging from none of the assessed WUAs in Batken and Naryn Oblasts to 90% in Issyk-Kul Oblast. Fines and cessation of water supply are the most common sanctions adopted by the assessed WUAs. If sanctions have been imposed in 2015, the assessed WUAs in Issyk-Kul, Talas and Chui Oblasts stated that they have imposed the adopted sanctions on all defaulters, whereas it was done partially in Osh and Jalalabad Oblast.

4.6.8 Recovery of Outstanding ISFs

A limited number of assessed WUAs in Jalalabad, Issyk-Kul, Talas and Chui Oblasts makes attempts to recover outstanding ISFs by submitting a report to the Village Council.

4.7 Payment of Service Charge

The payment of service charges to the RVK/UWUA for the bulk water supply to the head of the on-farm I&D system is presented in Table 4-17:

Table 4-17: Payment of Service Charges to RVK/UWUA

Name of Oblast	Payment of Service Charge				Debt to RVK/UWUA	
	Paid by WUAs	Level (Tiyin/m^3)	Amount 2015 (KGS)	Instalments	% WUAs	Average Amount (KGS)
Batken	60%	3	253,667	3	60%	118,183
Osh	69%	3	128,407	5	38%	104,631
Jalalabad	60%	3	156,551	9	10%	35,500
Issyk-Kul	70%	3	62,232	4	10%	20,000
Talas	40%	3	64,250	3	20%	12,000
Naryn	43%	3	26,616	2	0%	-
Chui	71%	3	143,230	2	18%	24,933
Total	**59%**	**3**	**119,279**	**4**	**22%**	**52,541**

Service charges (Tiyin 3/m^3) are paid to the RVK/UWUA for the bulk water supply by 59% of all assessed WUAs, ranging from 40% of the assessed WUAs in Talas Oblast to 71% in Chui Oblast. The overall average amount paid as service charge in 2015 was KGS 119,279 usually in 4 instalments.

About one-fifth of all assessed WUAs reported to have a debt to the RVK/UWUA, ranging from none of the assessed WUAs in Naryn Oblast to 60% in Batken Oblast. The overall average debt at the end of 2015 was KGS 52,541, varying from KGS 12,000 in Talas Oblast to KGS 118,183 in Batken Oblast.

4.8 Repayment of Debts

4.8.1 Repayment of 25% Rehabilitation Costs

The repayment of 25% rehabilitation costs by the 72 assessed WUAs is summarised in Table 4-18:

Table 4-18: Repayment of 25% Rehabilitation Costs

Name of Oblast	Repayment of 25% Rehabilitation Costs					
	% WUAs	Average Amount (KGS)	Average Repaid Amount (KGS)	% of Total Amount	Approved Repayment Plan	Arrears
Batken	60%	604,513	415,483	69%	67%	67%
Osh	23%	697,917	639,583	92%	100%	33%
Jalalabad	10%	n/a	n/a	-	100%	100%
Issyk-Kul	10%	n/a	n/a	-	100%	100%
Talas	20%	2,510,609	606,660	24%	100%	100%
Naryn	0%	-	-	-	-	-
Chui	24%	1,491,830	673,330	45%	100%	75%

In six Oblasts, 10% to 60% of the assessed WUAs have to repay 25% rehabilitation costs and the average repayment rate in four Oblasts ranges from 24% in Talas Oblast to 92% in Osh Oblast. Almost all assessed WUAs having to repay 25% rehabilitation costs have an approved repayment plan, whereas the majority of these assessed WUAs have arrears.

4.8.2 Repayment of Technical Credit

The repayment of technical credit by the 72 assessed WUAs is summarised in Table 4-19:

Table 4-19: Repayment of Technical Credit

Name of Oblast	Repayment of Technical Credit					
	% WUAs	Total Amount (KGS)	Repaid Amount (KGS)	% of Total Amount	Approved Repayment Plan	Arrears
Batken	60%	551,513	335,667	61%	67%	67%
Osh	46%	185,458	85,458	46%	67%	50%
Jalalabad	20%	7,500	6,600	88%	100%	0%
Issyk-Kul	50%	195,069	37,393	19%	80%	60%
Talas	10%	20,000	20,000	100%	0%	0%
Naryn	0%	-	-	-	-	-
Chui	12%	187,500	35,000	19%	100%	50%

Except in Naryn Oblasts, 10% to 60% of the assessed WUAs in the other six Oblasts have to repay technical credit and the average repayment rate at the end of 2015 was 19% in Issyk-Kul and Chui Oblasts to 100% in Talas Oblast. The large majority of assessed WUAs having to repay technical credit have an approved repayment plan and 50% to 67% reported to have arrears.

4.9 Training and Technical Support

4.9.1 Provision of Training in Administrative and Financial Management

The provision of training in administrative and financial management to the 72 assessed WUAs and the training providers are shown in Table 4-20:

Table 4-20: Training in Administrative and Financial Management

Name of Oblast	Training Provided to WUAs	Training Provider				Years
		WUA SU	Other Government Staff	Project Staff	NGO	
Batken	80%	25%	25%	50%	0%	2015
Osh	92%	42%	25%	33%	17%	2013-16
Jalalabad	50%	80%	0%	20%	0%	2011-16
Issyk-Kul	70%	100%	0%	14%	0%	2015-16
Talas	70%	100%	0%	0%	0%	2015
Naryn	43%	67%	0%	33%	0%	2013-15
Chui	82%	93%	0%	7%	0%	2013-16
Total	**70%**	**72%**	**7%**	**22%**	**2%**	**-**

During the last 5 years, 70% of all assessed WUAs reported to have received training in administrative and financial management, ranging from 43% of the assessed WUAs in Naryn Oblast to 92% in Osh Oblast. About three-quarter of the assessed WUAs having received training were trained by the WUA Support Unit, varying from 25% of the assessed WUAs in Batken Oblast to 100% in Issyk-Kul and Talas Oblasts. Project staff provided training in administrative and financial management to 22% of the assessed WUAs having received training, ranging from none of the assessed WUAs in Talas Oblast to 50% in Batken Oblast.

The training target groups for the provided training in administrative and financial management are shown in Table 4-21:

Table 4-21: Target Groups for Training in Administrative and Financial Management

Name of Oblast	Target Group for Training in Administrative and Financial Management			
	WUA Member/ Representatives	WUA Council Chairman	Other WUA Council Members	Audit Commission
Batken	75%	25%	50%	25%
Osh	50%	75%	42%	67%
Jalalabad	80%	80%	80%	60%
Issyk-Kul	43%	43%	14%	14%
Talas	14%	29%	0%	14%
Naryn	33%	67%	33%	0%
Chui	29%	21%	0%	7%
Total	**46%**	**49%**	**31%**	**27%**

Name of Oblast	Target Group for Training in Administrative and Financial Management					Exchange Visit
	Dispute Resolution Commission	Director	Accountant	Hydro-Engineer	*Murab*	
Batken	25%	75%	75%	25%	25%	80%
Osh	17%	92%	83%	17%	58%	69%
Jalalabad	60%	60%	60%	20%	80%	60%
Issyk-Kul	14%	86%	57%	0%	86%	80%
Talas	0%	100%	57%	0%	71%	60%
Naryn	0%	100%	100%	0%	100%	57%
Chui	7%	79%	50%	0%	21%	59%
Total	**18%**	**85%**	**69%**	**9%**	**63%**	**66%**

In 85% of all 72 assessed WUAs, the Director received training in administrative and financial management, ranging from 60% of the assessed WUAs in Jalalabad Oblast to 100% in Talas and Naryn Oblasts. The Accountant was trained in 69% of all assessed WUAs, varying from 50% of the assessed WUAs in Chui Oblast to 100% in Naryn Oblast. In about two-third of all assessed WUAs, the *Murab* reportedly received training in administrative and financial management as well, ranging from 21% of the assessed WUAs in Chui Oblast to 100% in Naryn Oblast. In about half of all assessed WUAs, the WUA Council Chairman was also trained, varying from 21% in Chui Oblast to 80% in Jalalabad Oblast, whereas WUA members/representatives were also targeted in 46% of all assessed WUAs, ranging from 14% in Talas Oblast to 80% in Jalalabad Oblast. The Audit Commission members received training in administrative and financial management in 27% of all assessed WUAs, varying from none of the assessed WUAs in Naryn Oblast to 67% in Osh Oblast. In about one-third of all assessed WUAs, other WUA Council members received training as well, ranging from none of the assessed WUAs in Talas and Chui Oblasts to 80% in Jalalabad Oblast. Almost all assessed WUAs having received training were satisfied with the provided training in administrative and financial management.

4.9.2 Exchange Visits

Two-third of all assessed WUAs participated in one or more exchange visits to another WUA and they were conducted between 2012 and 2015.

4.9.3 Visits by RSU Staff

The frequency of visits by RSU staff and the purpose of their visits are summarised in Table 4-22:

Table 4-22: Visits by RSU Staff

Name of Oblast	Visited WUAs	Frequency of Visits			
		Yearly	Quarterly	Monthly	Weekly
Batken	80%	25%	50%	25%	0%
Osh	77%	10%	50%	10%	30%
Jalalabad	70%	43%	0%	43%	14%
Issyk-Kul	90%	11%	11%	66%	11%
Talas	90%	0%	0%	55%	44%
Naryn	43%	33%	33%	33%	33%
Chui	94%	38%	19%	6%	31%
Total	**78%**	**23%**	**23%**	**34%**	**23%**

Name of Oblast	Purpose of RSU Visits						
	Training	Data Collection	Inspection	Audit	Dispute Resolution	Assembly Meeting	Election
Batken	75%	0%	75%	25%	0%	0%	0%
Osh	60%	80%	60%	40%	20%	60%	50%
Jalalabad	71%	43%	57%	29%	57%	43%	14%
Issyk-Kul	22%	100%	33%	22%	33%	22%	11%
Talas	100%	55%	0%	0%	22%	55%	0%
Naryn	100%	33%	33%	0%	33%	33%	0%
Chui	38%	31%	56%	19%	38%	31%	0%
Total	**67%**	**49%**	**45%**	**19%**	**29%**	**35%**	**11%**

Reportedly, RSU staff have visited 78% of all assessed WUAs in 2015, ranging from 43% of the assessed WUAs in Naryn Oblast to 94% in Chui Oblast. The frequency of RSU visits ranges from weekly for 23% of all assessed WUAs, monthly for 34%, quarterly for 23% and once a year for 23%.

In two-third of the assessed WUAs having been visited by the RSU staff, the provision of training was the reason for the visit, ranging from 22% of the assessed WUAs in Issyk-Kul Oblast to 100% in Talas and Naryn Oblasts. Data collection was the reason for RSU staff visits in 49% of the assessed WUAs, ranging from none of the assessed WUAs in Batken Oblast to 100% in Issyk-Kul Oblast. RSU staff visited 45% of the assessed WUAs to conduct inspections, varying from none of the assessed WUAs in Talas Oblast to 75% in Batken Oblast. Participation in meetings of the General/Representative Assembly was a reason for RSU staff to visit 35% of the assessed WUAs, ranging from none of the assessed WUAs in Batken Oblast to 60% in Osh Oblast. RSU staff visited 29% of the assessed WUAs for dispute resolution, varying from none of the assessed WUAs in Batken Oblast to 57% in Jalalabad Oblast.

Almost all assessed WUAs that were visited in 2015 are satisfied with the visits conducted by the RSU staff.

5 OPERATION OF ON-FARM IRRIGATION AND DRAINAGE SYSTEM

5.1 Water Use License

The proportion of assessed WUAs having obtained a water use license is shown in Table 5-1:

Table 5-1: Water Use License

Name of Oblast	Obtained by WUAs	Year	Duration (Years)
Batken	100%	1998-2005	Unlimited
Osh	54%	1993-2003	1, 10, unlimited
Jalalabad	80%	2000-2016	1, unlimited
Issyk-Kul	30%	2002-2008	5, unlimited
Talas	0%	-	-
Naryn	0%	-	-
Chui	12%	2003	10

In Batken Oblast, all assessed WUAs have obtained a water use license between 1998 and 2005 for an unlimited period, whereas 12%, 30%, 54% and 80% of the assessed WUAs in respectively Chui, Issyk-Kul, Osh and Jalalabad Oblasts also have a water use license for 1, 5 and 10 years as well as unlimited period. None of the assessed WUAs in Talas and Naryn Oblasts reported to have a water use license.

5.2 Collection of Data for Planned Cropping Pattern

The collection of data related to the planned cropping patterns among the assessed WUAs is shown in Table 5-2:

Table 5-2: Collection of Planned Cropping Pattern Data

Name of Oblast	Data Collected by WUAs	Month	Responsible Person					
			Represen-tatives	WUA Council	Director	Hydro-Engineer	*Murab*	Others
Batken	100%	Feb-Mar	0%	0%	100%	0%	100%	20%
Osh	100%	Feb-Mar	15%	0%	85%	23%	77%	22%
Jalalabad	100%	Feb-Apr	20%	20%	70%	20%	40%	0%
Issyk-Kul	80%	Feb-Mar	40%	10%	60%	40%	40%	0%
Talas	80%	Mar-Apr	13%	0%	88%	0%	27%	0%
Naryn	86%	Feb-Apr	33%	0%	50%	33%	83%	0%
Chui	94%	Feb-Mar	0%	19%	81%	0%	6%	6%
Total	**91%**	**-**	**17%**	**7%**	**76%**	**17%**	**53%**	**7%**

Data on the planned cropping pattern are collected in 91% of all 72 assessed WUAs between February and April. In three-quarter of all assessed WUAs, the Director is responsible for collecting these data, ranging from 50% of the assessed WUAs in Naryn Oblast to 100% in Batken Oblast. The *Murab* are responsible for collecting planned cropping data is 53% of all assessed WUAs, varying from 6% of the assessed WUAs in Chui Oblast to 100% in Batken Oblast.

5.3 Annual Water Distribution Plan and Schedule

The modalities for the preparation and approval of the annual water distribution plan and schedule for the 72 assessed WUAs are presented in Table 5-3:

Table 5-3: Annual Water Distribution Plan and Schedule

Name of Oblast	Prepared by WUAs	Month	Responsible Person					Use of CROPWAT	Approval	
			WUA Council	Director	Hydro-Engineer	*Murab*	Other		Assembly	RVK
Batken	100%	Jan-Mar	40%	100%	40%	20%	20%	100%	100%	40%
Osh	100%	Jan-Apr	8%	92%	46%	38%	0%	54%	85%	77%
Jalalabad	100%	Jan-Mar	30%	80%	40%	50%	0%	40%	100%	90%
Issyk-Kul	90%	Mar-Apr	11%	56%	67%	22%	0%	33%	91%	45%
Talas	90%	Mar	0%	100%	0%	23%	0%	23%	78%	45%
Naryn	86%	Feb-Mar	0%	83%	17%	67%	0%	33%	83%	83%
Chui	94%	Jan-Mar	19%	75%	25%	25%	0%	31%	56%	56%
Total	**94%**	**-**	**15%**	**84%**	**34%**	**36%**	**3%**	**45%**	**85%**	**62%**

An annual water distribution plan and schedule is prepared in 94% of all assessed WUAs usually between January and April. In 84% of all assessed WUAs, the Director is responsible for preparing the annual water distribution plan and schedule, ranging from 56% of the assessed WUAs in Issyk-Kul Oblast to 100% in Batken and Talas Oblasts. In one-third of all assessed WUAs, the Hydro-Engineer and/or *Murab* is responsible, although it varies considerably between the Oblasts.

In 45% of all assessed WUAs, CROPWAT software is used during the preparation of the annual water distribution and schedule, ranging from 23% of the assessed WUAs in Talas Oblast to 100% in Batken Oblast.

In 85% of all assessed WUAs, the annual water distribution plan and schedule is approved by the General/ Representative Assembly, varying from 56% of the assessed WUAs in Chui Oblast to 100% in Batken and Jalalabad Oblasts. In 62% of all assessed WUAs, the annual water distribution plan and schedule is submitted to the RVK for review and approval, varying from 40% in Batken Oblast to 90% in Jalalabad Oblast.

5.4 Annual Water Supply Contracts

The preparation and signing of annual water supply contracts are shown in Table 5-4:

Table 5-4: Annual Water Supply Contracts

Name of Oblast	Annual Water Supply Contract between WUA and RVK		
	Signed	Month	Supply of Agreed Amount of Water
Batken	80%	Jan-Mar	80%
Osh	85%	Jan-Mar	83%
Jalalabad	100%	Jan-Mar	70%
Issyk-Kul	90%	Jan-Mar	78%
Talas	40%	Feb-Mar	75%
Naryn	29%	Mar-Apr	100%
Chui	100%	Feb-Apr	76%
Total	**75%**	**-**	**80%**

Three-quarter of all 72 assessed WUAs signs an annual water supply contract with the RVK/UWUA for the bulk water supply to the head of the on-farm I&D system usually between January and April, varying from 40% of the assessed WUAs in Talas Oblast to 100% in Jalalabad and Chui Oblasts. The large majority (80%) of the assessed WUAs signing annual water supply contract reported that the agreed amount of canal

water is supplied by the RVK/UWUA, varying from 70% of the assessed WUAs in Jalalabad Oblast to 100% in Naryn Oblast.

5.5 Flow Measurement and Recording

5.5.1 Head of On-Farm System

The modalities for measuring and recording the water flow at the head of the on-farm system are presented Table 5-5:

Table 5-5: Flow Measurement and Recording at Head of On-farm System

Name of Oblast	Measured	Method		Responsible			Frequency			
		Visual	Electronic	RVK	UWUA	WUA	Daily	2-3 per Week	Weekly	Monthly
Batken	100%	100%	0%	60%	40%	80%	80%	20%	0%	0%
Osh	85%	92%	8%	58%	8%	75%	58%	25%	17%	0%
Jalalabad	100%	80%	20%	60%	10%	50%	70%	0%	10%	10%
Issyk-Kul	90%	100%	0%	55%	11%	67%	55%	44%	0%	0%
Talas	100%	100%	0%	20%	0%	90%	90%	0%	0%	10%
Naryn	86%	83%	17%	0%	0%	100%	67%	0%	33%	0%
Chui	94%	75%	25%	44%	0%	56%	69%	13%	0%	19%
Total	**94%**	**90%**	**10%**	**42%**	**9%**	**74%**	**70%**	**15%**	**9%**	**6%**

In 94% of all assessed WUAs, the water flow is measured and recorded visually (90%) at the head of the on-farm I&D system, although it is measured electronically in a limited number of assessed WUAs in Chui, Naryn, Jalalabad and Osh Oblasts. In three-quarter of all assessed WUAs, the WUA itself is responsible for measuring and recording the water flow at the head of the of-farm I&D system, varying from 50% of the assessed WUAs in Jalalabad Oblast to 100% in Naryn Oblast. In 42% of the assessed WUAs, the RVK is measuring and recording the water flow at the head of the on-farm I&D system, ranging from none of the assessed WUAs in Naryn Oblast to 60% in Batken and Jalalabad Oblasts. In 70% of the assessed WUAs, the water flow is measured and recorded daily, varying from 55% of the assessed WUAs in Issyk-Kul Oblast to 90% in Talas Oblast. In almost all assessed WUAs, the recorded water flow data are published.


Flow measurement device along on-farm canal in Chui Oblast (left) and Issyk-Kul Oblast (right)

5.5.2 Inside Service Area of On-farm System

The modalities for measuring and recording the water flow inside the on-farm system are presented Table 5-6:

Table 5-6: Flow Measurement and Recording Inside On-farm System

Name of Oblast	Measured	Average Number of Locations	Method		Responsible			Frequency		
			Visual	Electronic	RVK	UWUA	WUA	Daily	Weekly	Monthly
Batken	40%	6	50%	50%	50%	0%	100%	100%	0%	0%
Osh	85%	4	91%	9%	27%	27%	73%	73%	27%	0%
Jalalabad	90%	4	78%	22%	33%	33%	67%	55%	22%	22%
Issyk-Kul	30%	4	100%	0%	0%	0%	100%	100%	0%	0%
Talas	10%	2	100%	0%	0%	0%	100%	100%	0%	0%
Naryn	71%	3	80%	20%	0%	0%	100%	60%	40%	0%
Chui	71%	5	67%	33%	0%	0%	100%	100%	0%	0%
Total	**57%**	**3.5**	**81%**	**18%**	**16%**	**9%**	**91%**	**84%**	**11%**	**3%**

In 57% of all 72 assessed WUAs, the water flow is measured and recorded within the service area of the on-farm I&D system, ranging from 10% of the assessed WUAs in Talas Oblast to 90% in Jalalabad Oblast. The average number of locations where the water flow is measured and recording within the on-farm I&D system is five, varying from two locations in Talas Oblast to six sites in Batken Oblast. In most cases, the water flow is measured visually inside the on-farm I&D system, although electronic measurement can be found in a number of assessed WUAs in Batken, Osh, Jalalabad, Naryn and Chui Oblasts. In 91% of the assessed WUAs, the WUA itself is responsible for measuring and recording the water flow within the on-farm I&D system, whereas the RVK is involved in a number of assessed WUAs in the three Southern Oblasts. In 84% of the WUAs measuring the water flow inside the on-farm I&D system, flow measurement is carried out daily. The recorded flow measurement data are published in almost all assessed WUAs having measured water flows inside their respective on-farm I&D systems.

5.6 Annual Water Supply Agreement

The modalities for the preparation and signing of annual water supply agreement between the assessed WUAs and farmers are presented in Table 5-7:

Table 5-7: Annual Water Supply Agreement between WUA and Farmers

Name of Oblast	Prepared by WUAs	Month	Responsible Person				
			WUA Council Chairman	Director	Hydro-Engineer	*Murab*	Other
Batken	100%	Jan-Mar	10%	100%	0%	0%	0%
Osh	77%	Jan-Apr	0%	100%	20%	0%	0%
Jalalabad	90%	Feb-May	55%	88%	11%	67%	0%
Issyk-Kul	60%	Feb-May	17%	67%	33%	33%	0%
Talas	50%	Mar-Apr	0%	100%	0%	0%	0%
Naryn	29%	Mar-Apr	0%	100%	50%	50%	0%
Chui	88%	Feb-May	7%	100%	20%	27%	0%
Total	**71%**	**-**	**13%**	**94%**	**19%**	**25%**	**0%**

Annual water supply agreements are signed between the WUA and individual farmers in 71% of all assessed WUAs, ranging from 29% of the assessed WUAs in Naryn Oblast to 100% in Batken. These agreements are usually signed between January and May and the Directors is responsible for preparing them in 94% of all assessed WUAs, whereas the *Murab* and the Hydro-Engineer are involved in respectively 25% and 19% of the assessed WUAs having annual water supply agreements.

5.7 Water Distribution

5.7.1 Water Distribution Methods

The used methods for distributing canal water in years with sufficient water and water shortage within the on-farm I&D system are summarised in Table 5-8:

Table 5-8: Water Distribution

Name of Oblast	Years with Sufficient Water			Years with Water Shortage		
	On Demand	Proportional	Rotational	On Demand	Proportional	Rotational
Batken	100%	0%	0%	20%	40%	80%
Osh	85%	23%	38%	46%	15%	46%
Jalalabad	90%	0%	50%	50%	0%	60%
Issyk-Kul	0%	0%	100%	0%	10%	90%
Talas	70%	20%	40%	70%	0%	60%
Naryn	29%	14%	71%	29%	14%	57%
Chui	53%	6%	65%	24%	6%	82%
Total	**61%**	**9%**	**52%**	**34%**	**12%**	**68%**

In years with sufficient water, 61% of all assessed WUAs use the on-demand system to distribute available canal water among the farmers within the service area of the on-farm I&D system, ranging from none of the assessed WUAs in Issyk-Kul Oblast to 100% in Batken Oblast. The rotational water distribution method is used by 52% of all assessed WUAs, varying from none of the assessed WUAs in Batken Oblast to 100% in Issyk-Kul Oblast.


Distribution structures on on-farm canal in Chui Oblast

In years with water shortage, about one-third of all assessed use the on-demand water distribution method, ranging from none of the assessed WUAs in Issyk-Kul Oblast to 70% in Talas Oblast. The rotational water distribution method is used in about two-third of all assessed WUAs, varying from 46% of the assessed WUAs in Osh Oblast to 90% in Issyk-Kul Oblast.

5.7.2 Organisation and Supervision of Water Distribution

The responsible persons for organising and supervising the water distribution within the on-farm canal system are shown in Table 5-9:

Table 5-9: Organisation and Supervision of Water Distribution

Name of Oblast	Responsible Person				
	WUA Council Chairman	Other WUA Council Members	Director	Hydro-Engineer	*Murab*
Batken	20%	20%	100%	40%	0%
Osh	0%	0%	92%	23%	8%
Jalalabad	20%	10%	80%	50%	70%
Issyk-Kul	0%	0%	60%	70%	50%
Talas	0%	0%	80%	10%	40%
Naryn	0%	14%	43%	29%	86%
Chui	6%	0%	65%	24%	29%
Total	**7%**	**6%**	**74%**	**35%**	**40%**

In 74% of all assessed WUAs, the Director is responsible for organising and supervising the water distribution within the service area of the on-farm I&D system, ranging from 43% of the assessed WUAs in Naryn Oblast to 100% in Batken Oblast. The *Murab* is (co-)responsible for the organisation and supervision of the water distribution in 40% of all assessed WUAs, varying from none of the assessed WUAs in Batken Oblast to 86% in Naryn Oblast. In one-third of all assessed WUAs, the Hydro-Engineer is (co-)responsible for the distribution of available canal water, ranging from 10% of the assessed WUAs in Talas Oblast to 70% in Issyk-Kul Oblast.

5.7.3 Timely and Equitable Distribution of Canal Water

The proportion of assessed WUAs having distributed available canal water in a timely and equitable manner is shown in Table 5-10:

Table 5-10: Time and Equitable Water Distribution

Name of Oblast	Equitable Distribution by WUAs	Reasons for Non-Equitable Water Distribution						
		Inadequate Supply by RVK/UWUA	Seepage Losses	Canal Breaches	Non-Functional Control & Distribution Structures	Poor Operation	Water Stealing	Others
Batken	80%	No	No	No	No	No	Yes	No
Osh	69%	Yes	No	No	No	No	Yes	No
Jalalabad	80%	No	No	No	No	No	Yes	No
Issyk-Kul	80%	No	No	No	No	No	Yes	No
Talas	100%	-	-	-	-	-	-	-
Naryn	100%	-	-	-	-	-	-	-
Chui	88%	Yes	No	No	No	No	Yes	No
Total	**85%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Only 15% of all assessed WUAs in five Oblasts reported that they were unable to distribute available canal water in a timely and equitable manner, mainly due to problems with water stealing by farmers within

the service area of the on-farm I&D system, whereas inadequate supply of canal water by the RVK/UWUA is mentioned in two Oblasts.

5.7.4 In-Field Irrigation Methods

The most common irrigation methods used by the farmers to irrigate their fields are summarised in Table 5-11:

Table 5-11: In-Field Irrigation Methods

Name of Oblast	In-Field Irrigation Methods				
	Basin	Furrow	Micro-Basin	Sprinkler	Drip
Batken	20%	100%	20%	0%	0%
Osh	8%	85%	23%	8%	15%
Jalalabad	20%	100%	20%	0%	0%
Issyk-Kul	20%	40%	80%	0%	0%
Talas	50%	100%	100%	0%	0%
Naryn	29%	14%	100%	0%	0%
Chui	35%	94%	47%	6%	12%
Total	**26%**	**76%**	**55%**	**2%**	**4%**

In three-quarter of all assessed WUAs, farmers use furrows to distribute supplied canal water in their fields, ranging from 14% of the assessed WUAs in Naryn Oblast to 100% in Batken, Jalalabad and Talas Oblasts. Micro-basin irrigation is practiced in 55% of all assessed WUAs, varying from 20% of the assessed WUAs in Batken and Jalalabad Oblasts to 100% in Talas and Naryn Oblasts. In a quarter of all assessed WUAs, basin irrigation method is applied, ranging from 8% of the assessed WUAs in Osh Oblast to 50% in Talas Oblast. A few assessed WUAs in Osh and Chui Oblast also have farmers using sprinkler or drip system.

Field with micro-basin (left) and furrow irrigation (right) in Jalalabad Oblast

5.8 Planned and Actually Irrigated Area

The average planned and actually irrigated area for the 72 assessed WUAs in 2015 is presented in Table 5-12:

Table 5-12: Average Planned and Actually Irrigated Area

Name of Oblast	Average Irrigated Area (ha)		
	Planned	Actual	% of Planned
Batken	1,455	1,455	100%
Osh	1,167	1,155	99%
Jalalabad	1,317	1,335	101%
Issyk-Kul	1,722	1,554	90%
Talas	1,052	1,052	100%
Naryn	1,530	1,531	100%
Chui	1,575	1,396	89%
Total	**1,408**	**1,343**	**95%**

Reportedly, 95% of the planned irrigated area was actually irrigated in 2015 by the assessed WUAs, ranging from 89% in Chui Oblast to 101% in Jalalabad Oblast.

5.8.1 Use of Groundwater for Irrigation

The use of groundwater for irrigation purpose in the on-farm I&D systems managed by the assessed WUAs is presented in Table 5-13:

Table 5-13: Use of Groundwater for Irrigation

Name of Oblast	Use of Groundwater for Irrigation			
	Used	Total Area (ha)	Total Number of Pumps	Total Number of Farmers
Batken	20%	166	9	300
Osh	15%	493	11	250
Jalalabad	10%	100	2	120
Issyk-Kul	10%	125	7	60
Talas	0%	-	-	-
Naryn	14%	160	6	15
Chui	24%	103	16	238
Total	**15%**	**1,147**	**51**	**983**

Groundwater is used for irrigation purpose in 15% of the assessed WUAs in five Oblasts and the total area irrigated with groundwater is 1,147 ha by a total number of 983 farmers using 51 installed pumps.

5.9 Irrigated Crops

The main irrigated crops grown within the service areas of the 72 assessed WUAs are presented in Table 5-14:

Table 5-14: Main Irrigated Crops

Name of Oblast	Main Irrigated Crops								
	Fodder	Wheat	Maize	Barley	Sugar beet	Cotton	Potato	Sun-flower	Pulses/ Beans
Batken	100%	100%	100%	0%	0%	20%	100%	60%	60%
Osh	38%	92%	92%	31%	8%	69%	85%	62%	23%
Jalalabad	40%	60%	100%	30%	10%	40%	70%	70%	10%
Issyk-Kul	20%	100%	0%	10%	0%	0%	90%	10%	40%
Talas	30%	80%	80%	20%	30%	10%	80%	30%	90%
Naryn	29%	86%	0%	0%	0%	0%	100%	0%	14%
Chui	71%	88%	88%	18%	65%	0%	35%	35%	6%
Total	**47%**	**87%**	**66%**	**16%**	**16%**	**20%**	**80%**	**38%**	**35%**

Name of Oblast	Main Irrigated Crops		
	Vegetables	Fruits	Others
Batken	100%	100%	20%
Osh	77%	62%	47%
Jalalabad	60%	30%	20%
Issyk-Kul	50%	20%	60%
Talas	30%	30%	30%
Naryn	14%	14%	43%
Chui	53%	47%	24%
Total	**55%**	**43%**	**35%**

The most commonly grown irrigated crops grown in the service area of the on-farm I&D systems managed by the assessed WUAs include wheat (87% of all assessed WUAs), potato (80%), maize (66%), vegetables (55%), fodder crops (47%), fruit crops (43%), sunflower (38%), and pulses and beans (35%).


Field with potato in Naryn Oblast (left) and orchard with apple trees in Issyk-Kul Oblast (right)

5.10 Water-Related Disputes

5.10.1 Water-Related Disputes between Water Users

The existence of water-related disputes between water users within the service areas of the 72 assessed WUAs and their main causes are shown in Table 5-15:

Table 5-15: Water-Related Disputes between Water Users

Name of Oblast	WUAs with Reported Disputes	Average Number of Reported Disputes	Main Cause				
			Water Stealing	Damage to I&D Structure	Causing Damage to Crops	Not Respecting Water Schedule	Others
Batken	100%	5	80%	20%	20%	20%	0%
Osh	54%	6	100%	43%	0%	0%	0%
Jalalabad	60%	9	83%	33%	17%	33%	0%
Issyk-Kul	60%	6	17%	17%	0%	0%	67%
Talas	50%	4	100%	0%	0%	0%	0%
Naryn	29%	7	100%	0%	0%	0%	0%
Chui	24%	8	100%	50%	0%	50%	0%
Total	**54%**	**6**	**83%**	**23%**	**5%**	**15%**	**10%**

During the last irrigation season, 54% of all assessed WUAs reported to have an average number of 6 water-related disputes, ranging from 24% of the assessed WUAs in Chui Oblast to 100% in Batken Oblast. In 83% of the assessed WUAs with reported disputes, water stealing is the main cause for reported disputes, varying from 17% of the assessed WUAs in Issyk-Kul Oblast to 100% in Osh, Talas, Naryn and Chui Oblasts. Causing damage to I&D infrastructures is causing disputes in 23% of the assessed WUAs with reported water-related conflicts, varying from none of the assessed WUAs in Talas and Naryn Oblasts to 50% in Chui Oblast.

The persons and institutions responsible for resolving water-related disputes between water users within the service areas of the 72 assessed WUAs are summarised in Table 5-16:

Table 5-16: Responsible Persons and Institutions for Dispute Resolution

Name of Oblast	Responsible Institution and Person					
	Dispute Resolution Commission	Represen-tatives	WUA Council Chairman	Other WUA Council Members	Director	*Murab*
Batken	100%	80%	20%	0%	40%	0%
Osh	14%	29%	43%	14%	71%	86%
Jalalabad	50%	17%	33%	0%	67%	67%
Issyk-Kul	50%	17%	50%	0%	33%	33%
Talas	60%	0%	0%	0%	80%	40%
Naryn	0%	50%	0%	0%	50%	100%
Chui	25%	25%	25%	50%	100%	50%
Total	**43%**	**31%**	**24%**	**9%**	**63%**	**54%**

In 63% of the assessed WUAs with reported water-related disputes, the Director is responsible to resolve any conflicts reported to the WUA, ranging from 33% in Issyk-Kul Oblast to 100% in Chui Oblast. The *Murab* is (also) involved in conflict resolution in 54% of the assessed WUAs with reported disputes, varying from none of the assessed WUAs in Batken Oblast to 100% in Naryn Oblast. In 43% of the assessed WUAs with reported disputes, the Dispute Resolution Commission is responsible for resolving any reported water-related conflicts, ranging from none of the assessed WUAs in Naryn Oblast to 100% in Batken Oblast. In a quarter of the assessed WUAs with reported conflicts, the WUA Council Chairman is (jointly) responsible for dispute resolution. Reportedly, all reported water-related disputes were successfully resolved by the concerned assessed WUAs.

5.10.2 Water-Related Disputes between WUA and Water Users

The existence of water-related disputes between the WUA and water users and their main causes are shown in Table 5-17:

Table 5-17: Water-Related Disputes between WUA and Water Users

Name of Oblast	WUAs with Reported Disputes	Average Number of Reported Disputes	Main Cause				
			Inadequate Water Supply	Insufficient Maintenance	Water Stealing	Damage to I&D Structure	Damage to Crops
Batken	100%	4	100%	60%	60%	20%	40%
Osh	54%	4	13%	13%	63%	25%	0%
Jalalabad	50%	7	80%	20%	60%	0%	0%
Issyk-Kul	60%	4	50%	50%	50%	0%	0%
Talas	30%	3	33%	0%	67%	0%	0%
Naryn	29%	7	50%	50%	50%	0%	0%
Chui	12%	8	0%	0%	100%	0%	0%
Total	**42%**		**47%**	**28%**	**64%**	**6%**	**6%**

During the last irrigation season, water-related disputes between the WUA and one or more water users were reported in 42% of all assessed WUAs, ranging from 12% in Chui Oblast to 100% in Batken Oblast. Water stealing was the cause of the water-related disputes in 64% of the assessed WUAs with reported conflicts, varying from 50% in Issyk-Kul and Naryn Oblasts and 100% in Chui Oblast. Inadequate water supply was the cause of water-related conflicts in 47% of the assessed WUAs with reported disputes, varying from none of the assessed WUAs in Chui Oblast to 100% in Batken Oblast. Insufficient maintenance by the WUA was causing disputes between the WUA and water users in 28% of the assessed WUAs.

The persons and institutions responsible for resolving water-related disputes between the WUA and water users are presented in Table 5-18:

Table 5-18: Responsible Persons and Institutions for Dispute Resolution

Name of Oblast	Responsible Institution and Person					
	Dispute Resolution Commission	Represen-tatives	WUA Council Chairman	Other WUA Council Members	Director	*Murab*
Batken	60%	80%	0%	0%	100%	40%
Osh	29%	29%	29%	0%	86%	86%
Jalalabad	60%	0%	20%	0%	60%	60%
Issyk-Kul	50%	0%	20%	0%	40%	40%
Talas	33%	0%	0%	0%	100%	33%
Naryn	50%	100%	0%	50%	50%	50%
Chui	0%	0%	0%	0%	100%	50%
Total	**40%**	**30%**	**10%**	**7%**	**77%**	**51%**

In three-quarter of the assessed WUAs with reported disputes between the WUA and water users, the Director is responsible for resolving the conflict, ranging from 40% in Issyk-Kul Oblast to 100% in Batken, Talas and Chui Oblasts. The Dispute Resolution Commission is responsible for resolving these conflicts in 40% of the assessed WUAs, whereas the *Murab* is involved in 51% of the assessed WUAs and the elected representatives in 30%.

5.10.3 Water-Related Dispute between WUA and RVK/UWUA

The existence of water-related disputes between the WUA and RVK/UWUA and their main causes are shown in Table 5-19:

Table 5-19: Water-Related Disputes between WUA and RVK/UWUA

Name of Oblast	WUAs with Reported Disputes	Main Cause				
		Inadequate Water Supply	Insufficient Maintenance	Water Stealing	Damage to I&D Structure	Dame to Crop
Batken	60%	Yes	Yes	Yes	Yes	Yes
Osh	23%	Yes	Yes	No	No	No
Jalalabad	30%	No	Yes	No	Yes	No
Issyk-Kul	30%	Yes	No	No	No	No
Talas	10%	Yes	No	No	No	No
Naryn	0%	-	-	-	-	-
Chui	35%	Yes	Yes	Yes	No	No
Total	**27%**	**-**	**-**	**-**	**-**	**-**

About a quarter of all assessed WUAs reported to have water-related disputes with the RVK or UWUA, ranging from none of the assessed WUAs in Naryn Oblast to 60% in Batken. Inadequate water supply by the RVK or UWUA is the main reason for a dispute between the WUA and RVK/UWUA followed by insufficient maintenance of the off-farm I&D infrastructure.

The persons and institutions responsible for resolving water-related disputes between the WUA and RVK/UWUA are presented in Table 5-20:

Table 5-20: Responsible Persons and Institutions for Dispute Resolution

Name of Oblast	Responsible Institution and Person							
	Dispute Resolution Commission	RVK	UWUA	Village Elders	*Akim*	Village Council	Police	Court
Batken	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Osh	No	No	Yes	Yes	Yes	Yes	Yes	No
Jalalabad	No	Yes	Yes	No	Yes	Yes	No	No
Issyk-Kul	No	No	Yes	No	Yes	Yes	No	No
Talas	No	No	Yes	No	No	No	No	No
Naryn	-	-	-	-	-	-	-	-
Chui	Yes	Yes	No	No	Yes	No	No	No

In case of a dispute between the WUA and the RVK/UWUA, the UWUA, *Akim* and Village Council are commonly considered to be the responsible institution/person to resolve such dispute.

5.11 Communication between WUA and RVK/UWUA

The level of communication between the 72 assessed WUAs and the concerned RVKs/UWUAs as well as the method of communication are shown in Table 5-21:
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Table 5-21: Frequency and Method of Communication between WUA and RVK/UWUA

Name of Oblast	Communication	Method			Frequency			
		Meeting	Phone	Other	Daily	Weekly	Monthly	Quarterly
Batken	100%	100%	100%	0%	60%	40%	40%	20%
Osh	100%	100%	85%	0%	31%	77%	16%	0%
Jalalabad	100%	90%	70%	0%	60%	40%	0%	0%
Issyk-Kul	90%	72%	72%	0%	88%	12%	0%	0%
Talas	90%	67%	11%	0%	33%	33%	33%	0%
Naryn	100%	86%	71%	0%	14%	14%	43%	29%
Chui	100%	47%	88%	0%	41%	18%	24%	6%
Total	**97%**	**80%**	**71%**	**0%**	**47%**	**33%**	**22%**	**8%**

Almost all assessed WUAs communicate with the RVK and/or UWUA, mainly through meetings and on the phone. About half of all assessed WUAs have daily contact with the RVK and/or UWUA, whereas one-third have weekly communication and 22% of the assessed WUAs have contact once every month.

The main topics discussed during the communication between the assessed WUAs and the concerned RVK/UWUA are summarised in Table 5-22:

Table 5-22: Main Topics during Communication between WUA and RVK

Name of Oblast	Main Topics					
	Water Availability	Planned Water Supply	Actual Water Supply	Weather	Problems with Off-Farm System	Payment of Service Charges
Batken	100%	100%	60%	100%	0%	40%
Osh	92%	77%	62%	54%	8%	23%
Jalalabad	50%	90%	70%	80%	30%	50%
Issyk-Kul	50%	40%	50%	70%	0%	0%
Talas	50%	20%	40%	40%	0%	20%
Naryn	57%	71%	71%	100%	0%	0%
Chui	65%	59%	47%	65%	6%	29%
Total	**66%**	**65%**	**57%**	**73%**	**6%**	**23%**

If the assessed WUAs have communication with the RVK and/or UWUA, they mainly discuss the actual weather conditions (73% of all assessed WUAs), water availability (66%), planned water supply (65%) and actual water supply (57%).

6 MAINTENANCE OF ON-FARM IRRIGATION AND DRAINAGE SYSTEM

6.1 Annual Maintenance Inspection

The modalities related to the annual maintenance inspection of the on-farm I&D system by the 72 assessed WUAs are presented in Table 6-1:

Table 6-1: Annual Maintenance Inspection

Name of Oblast	Executed	Month	Responsible Person				
			WUA Council Chairman	Other WUA Council Members	Director	Hydro-Engineer	*Murab*
Batken	100%	Feb	60%	20%	100%	80%	60%
Osh	92%	Sep, Jan-Apr	8%	8%	100%	42%	75%
Jalalabad	100%	Oct, Jan-Apr	30%	0%	80%	30%	50%
Issyk-Kul	92%	Oct, Jan-Apr	11%	0%	67%	67%	0%
Talas	100%	Sep-Oct, Jan-Apr	0%	0%	100%	0%	10%
Naryn	71%	Oct, Feb-Apr	0%	20%	80%	40%	80%
Chui	88%	Oct, Mar-Apr	13%	7%	80%	27%	13%
Total	**92%**	**-**	**17%**	**8%**	**87%**	**41%**	**41%**

An annual maintenance inspection is undertaken in 92% of all assessed WUAs, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% in Batken, Jalalabad and Talas Oblasts. The maintenance inspections are conducted either in September and October and/or between January and April. In 87% of the WUAs having conducted annual maintenance inspection, the Director is responsible for conducting the inspection of all on-farm I&D infrastructure, varying from 67% in Issyk-Kul Oblast to 100% in Batken, Osh and Talas Oblasts. The Hydro-Engineer and *Murab* are (also) responsible for conducting the annual maintenance inspections in 41% of the assessed WUAs having carried out this activity.

6.2 Annual Maintenance Plan and Budget

The modalities related to the preparation of the annual maintenance plan and budget for the on-farm I&D system are shown in Table 6-2:

Table 6-2: Annual Maintenance Plan and Budget

Name of Oblast	Prepared	Month	Responsible Person					
			WUA Council Chairman	Other WUA Council Members	Director	Hydro-Engineer	*Murab*	Accountant
Batken	100%	Jan-Mar	20%	0%	80%	80%	0%	80%
Osh	92%	Sep-Oct, Jan-Mar	8%	8%	100%	25%	50%	67%
Jalalabad	100%	Jan-Apr	40%	20%	80%	40%	20%	40%
Issyk-Kul	90%	Jan-Mar	55%	0%	66%	55%	0%	77%
Talas	100%	Feb-Apr	20%	0%	100%	0%	10%	30%
Naryn	86%	Feb-Mar	0%	0%	86%	33%	33%	67%
Chui	94%	Sep-Oct, Jan-Apr	13%	13%	88%	25%	7%	13%
Total	**95%**	**-**	**22%**	**6%**	**86%**	**37%**	**17%**	**53%**

In 95% of all assessed WUAs, an annual maintenance plan and budget is prepared between September and October and/or January and April. The Director is responsible for preparing the maintenance plan and budget in 86% of the assessed WUAs, ranging from 66% in Issyk-Kul Oblast to 100% in Osh and Talas Oblasts. In 53% of the assessed WUAs preparing the maintenance and budget, the Accountant is (also) involved, varying from 13% in Chui Oblast to 80% in Batken Oblast. In 37% of the assessed WUAs having a maintenance plan and budget, the Hydro-Engineer is (also) responsible.

The priority ranking of maintenance and repair (M&R) works, support from RVK and approval of the annual maintenance plan and budget are presented in Table 6-3:

Table 6-3: Priority Ranking of M&R works and Approval of Maintenance Plan and Budget

Name of Oblast	Priority Ranking of M&R Works	Support from RVK	Approval by Assembly
Batken	60%	60%	60%
Osh	75%	42%	75%
Jalalabad	40%	50%	80%
Issyk-Kul	55%	66%	100%
Talas	100%	70%	100%
Naryn	67%	67%	83%
Chui	75%	44%	75%
Total	**67%**	**57%**	**82%**

In two-third of the assessed WUAs having prepared maintenance plan and budget, the identified M&R works are prioritised, ranging from 40% in Jalalabad Oblast to 100% in Talas Oblast. In 57% of the assessed WUAs with prepared maintenance plan and budget, the RVK provided technical support, varying from 42% in Osh Oblast to 70% in Talas Oblast. The prepared maintenance plan and budget are approved in 82% of the assessed WUAs, ranging from 60% in Batken Oblast to 100% in Issyk-Kul and Talas Oblasts.

6.3 Execution of M&R Works

The modalities for the execution of the M&R works within the service area of the 72 assessed WUAs are summarised in Table 6-4:

Table 6-4: Execution of M&R Works

Name of Oblast	Month	Responsible Person					Support from RVK
		WUA Council Chairman	Other WUA Council Members	Director	Hydro-Engineer	*Murab*	
Batken	Feb-Mar	20%	0%	100%	100%	60%	20%
Osh	Jan-Apr	15%	15%	92%	46%	46%	38%
Jalalabad	Jan-Apr	50%	30%	70%	60%	40%	50%
Issyk-Kul	Feb-Apr	33%	0%	77%	55%	33%	77%
Talas	Mar-Apr	0%	0%	100%	0%	10%	40%
Naryn	Feb-Apr	0%	14%	57%	43%	86%	57%
Chui	Oct, Feb-Apr	12%	0%	82%	18%	6%	41%
Total	**-**	**19%**	**8%**	**83%**	**55%**	**40%**	**46%**

The M&R works are usually carried out between January and April, but these works are also undertaken in October by a number of assessed WUAs in Chui Oblast. In 83% of all assessed WUAs, the Director is responsible for organising and supervising the execution of the M&R works, ranging from 57% of the

assessed WUAs in Naryn Oblast to 100% in Batken and Talas Oblasts. The Hydro-Engineer is (jointly) responsible for executing the M&R works in 55% of all assessed WUAs, varying from none of the assessed WUAs in Talas Oblast to 100% in Batken Oblast. In 40% of all assessed WUAs, the *Murab* is also involved, ranging from only 6% in Chui Oblast to 86% in Naryn Oblast.

Almost half of all assessed WUAs received technical support from the RVK during the execution of the M&R works, ranging from 20% of the assessed WUAs in Batken Oblast to 77% in Issyk-Kul Oblast.

6.3.1 Use of *Asher* System

The use of the *asher* system for the cleaning of the on-farm canals by the assessed WUAs is shown in Table 6-5:

Table 6-5: Use of *Asher* System for Canal Cleaning

Name of Oblast	Use of *Asher* System			Daily Salary of Hired Labourers (KGS)
	Used by WUAs	Average Number of Days	Payment (KGS/day)	
Batken	100%	6	300	n/a
Osh	85%	8	240	240
Jalalabad	70%	18	No	n/a
Issyk-Kul	100%	15	267	267
Talas	100%	8	200	200
Naryn	100%	2	367	367
Chui	76%	12	n/a	n/a
Total	**90%**	**10**	**-**	**-**

The *asher* system whereby farmers provide free labour for the cleaning of the on-farm canals is used in 90% of all 72 assessed WUAs and the farmers provide an overall average number of 10 days free of charge, ranging from 2 days in Naryn Oblast to 18 days in Jalalabad Oblast. If a farmer is unable or unwilling to provide free labour, (s)he has to pay an average amount of KGS 200 to KGS 367, which is equivalent to the daily salary of hired labour.

6.3.2 Contracting Out of M&R Works

The contracting out of the execution of M&R works by the assessed WUAs together with the main reasons are presented in Table 6-6:

Table 6-6: Contracting Out of Execution of M&R Works

Name of Oblast	Contracted Out	Contracted Party			Reason		
		RVK	Private Contractor	Other	Lack of Machinery	Lack of Manpower	Technically Complicated
Batken	40%	0%	100%	0%	100%	100%	50%
Osh	62%	8%	100%	0%	100%	17%	8%
Jalalabad	60%	33%	83%	0%	83%	50%	17%
Issyk-Kul	50%	20%	80%	0%	100%	20%	40%
Talas	70%	29%	100%	0%	100%	43%	71%
Naryn	0%	-	-	-	-	-	-
Chui	52%	22%	77%	0%	88%	44%	11%
Total	**48%**	**16%**	**77%**	**0%**	**82%**	**39%**	**28%**

About half of all assessed WUAs contract (part of) their M&R works out, ranging from none of the assessed WUAs in Naryn Oblast to 70% in Talas Oblast. About three-quarter of the assessed WUAs contracting out their M&R works engages a private contractor, varying from 77% in Chui Oblast to 100% in Batken, Osh and Talas Oblasts. Lack of machinery is the most common reason for contracting out M&R works followed by lack of manpower.

6.3.3 Maintenance Register

The proportion of assessed WUAs having a Maintenance Register is presented in Table 6-7:

Table 6-7: Maintenance Register

Name of Oblast	Maintained by WUAs	Responsible Person				
		WUA Council Chairman	Other WUA Council Members	Director	Hydro-Engineer	*Murab*
Batken	100%	0%	0%	100%	0%	0%
Osh	85%	8%	0%	100%	0%	0%
Jalalabad	70%	14%	0%	100%	0%	14%
Issyk-Kul	90%	11%	0%	88%	0%	0%
Talas	100%	10%	0%	90%	0%	0%
Naryn	100%	29%	0%	71%	0%	0%
Chui	88%	0%	0%	93%	13%	7%
Total	**90%**	**10%**	**0%**	**92%**	**2%**	**3%**

A Maintenance Register is kept in 90% of all assessed WUAs, ranging from 70% of the assessed WUAs in Jalalabad Oblast to 100% in Batken, Talas and Naryn Oblasts. In 92% of the assessed WUAs with a Maintenance Register, the Director is responsible for maintaining this document, varying from 71% in Naryn Oblast to 100% in the three Southern Oblasts.

6.3.4 Completion of M&R Works in 2015

The completion of the planned M&R works by the assessed WUAs in 2015 is shown in Table 6-8:

Table 6-8: Completion of M&R Works in 2015

Name of Oblast	Completed	Reason for Non-Completion			Average Maintenance Expenditure (KGS)
		Insufficient Manpower	Insufficient Budget	Insufficient Machinery	
Batken	80%	0%	100%	0%	93,988
Osh	62%	0%	100%	40%	140,168
Jalalabad	50%	0%	40%	80%	85,540
Issyk-Kul	20%	0%	38%	50%	75,333
Talas	100%	-	-	-	147,600
Naryn	57%	0%	67%	33%	24,429
Chui	100%	-	-	-	44,088
Total	**67%**	**0%**	**69%**	**45%**	**87,307**

Two-third of all 72 assessed WUAs reported that all M&R works were successfully completed at the end of 2015, ranging from 20% of the assessed WUAs in Issyk-Kul Oblast to 100% in Talas and Chui Oblasts. In about two-third of the assessed WUAs that were unable to complete the M&R works, insufficient budget was the main reason, varying from 38% in Issyk-Kul to 100% in Batken and Osh Oblasts. Insufficient

machinery was the main reason for not completing the M&R works for 45% of the assessed WUAs unable to undertake all M&R works.

The overall average maintenance expenditure for all assessed WUAs in 2015 was KGS 87,307, ranging from KGS 24,429 in Naryn Oblast to KGS 147,600 in Talas Oblast.

6.4 Training in O&M of On-farm I&D System

The provision of training in O&M of the on-farm I&D system to the 72 assessed WUAs is shown in Table 6-9:

Table 6-9: Provision of O&M Training

Name of Oblast	Provided	Training Provider					Year
		WUA SU	Other Government Staff	Project Staff	NGO	Other(s)	
Batken	100%	60%	20%	20%	0%	0%	2014-15
Osh	77%	70%	0%	20%	10%	10%	2009-15
Jalalabad	90%	77%	22%	0%	11%	11%	2011-16
Issyk-Kul	90%	88%	0%	11%	0%	22%	2010-15
Talas	100%	90%	0%	10%	0%	10%	2013-15
Naryn	71%	100%	0%	0%	0%	0%	2015-16
Chui	94%	94%	13%	0%	0%	7%	2014-16
Total	**89%**	**83%**	**8%**	**9%**	**3%**	**9%**	**-**

O&M training was provided to 89% of all assessed WUAs between 2009 and 2016, ranging from 71% of the assessed WUAs in Naryn Oblast to 100% in Batken and Talas Oblasts. In 83% of the assessed WUAs having received O&M training, the WUA Support Unit was the training provider, varying from 60% in Batken Oblast to 100% in Naryn Oblast.

The target groups of the provided O&M training are presented in Table 6-10:

Table 6-10: Target Groups for O&M Training

Name of Oblast	Target Group for O&M Training					
	WUA Members	WUA Representatives	WUA Council	Director	Hydro-Engineer	*Murab*
Batken	40%	40%	20%	40%	20%	40%
Osh	40%	10%	30%	90%	60%	50%
Jalalabad	22%	11%	22%	77%	44%	44%
Issyk-Kul	55%	44%	33%	100%	44%	22%
Talas	0%	10%	0%	90%	0%	70%
Naryn	0%	20%	20%	100%	0%	40%
Chui	38%	0%	0%	56%	0%	19%
Total	**28%**	**19%**	**18%**	**79%**	**24%**	**41%**

In the assessed WUAs having received O&M training, the Director was the target group in 79% of the assessed WUAs, ranging from 40% in Batken Oblast to 100% in Issyk-Kul and Naryn Oblasts, whereas the *Murab*, WUA members and Hydro-Engineer were trained in respectively 41%, 28% and 24% of the assessed WUAs.

6.5 Inventories and Asset Management Plan

The execution of inventories and preparation of asset management plan for the 72 assessed WUAs are shown in Table 6-11:

Table 6-11: Inventories and Asset Management Plan

Name of Oblast	Completed	Responsible						Approved by Assembly
		WUA Council Chairman	Other WUA Council Members	Director	Hydro-Engineer	Accountant	*Murab*	
Batken	80%	25%	0%	100%	75%	0%	0%	100%
Osh	92%	50%	17%	92%	33%	42%	33%	75%
Jalalabad	100%	70%	30%	60%	40%	20%	40%	90%
Issyk-Kul	60%	67%	17%	83%	50%	0%	17%	100%
Talas	90%	55%	0%	88%	0%	11%	11%	100%
Naryn	86%	17%	17%	100%	17%	0%	33%	83%
Chui	88%	27%	7%	80%	13%	13%	13%	93%
Total	**85%**	**44%**	**13%**	**86%**	**33%**	**12%**	**21%**	**92%**

Inventories and asset management plans have been completed in 85% of all assessed WUAs, ranging from 60% of the assessed WUAs in Issyk-Kul Oblast to 100% in Jalalabad Oblast. In 86% of the assessed WUAs with an asset management plan, the Director is responsible for this exercise, varying from 60% in Jalalabad Oblast to 100% in Batken and Naryn Oblasts. The WUA Council Chairman and Hydro-Engineer are (also) involved in the preparation of the asset management plan in respectively 44% and 33% of the assessed WUAs. The prepared asset management plans are approved by the General/Representative Assembly in 92% of the assessed WUAs, ranging from 75% in Osh Oblast to 100% in Batken, Issyk-Kul and Talas Oblasts.

Rehabilitation of on-farm canal in Jalalabad Oblast

6.6 Rehabilitation of On-farm I&D System

The rehabilitation of any on-farm I&D infrastructure within the service area of the 72 assessed WUAs is summarised in Table 6-12:

Table 6-12: Rehabilitation of On-farm I&D System

Name of Oblast	Rehabilitated	Project				Years	Average Scope
		ADB	USAID	WB	Other		
Batken	100%	Yes	Yes	Yes	No	2001-16	26%
Osh	54%	Yes	Yes	Yes	No	2008-16	41%
Jalalabad	70%	Yes	No	Yes	No	2006-16	50%
Issyk-Kul	50%	Yes	No	Yes	No	2010-14	38%
Talas	30%	No	No	Yes	No	2007-16	30%
Naryn	43%	Yes	No	Yes	No	2005-15	43%
Chui	18%	Yes	Yes	No	No	2005-08	47%
Total	**52%**	**-**	**-**	**-**	**-**	**-**	**39%**

About half of all assessed WUAs had their on-farm I&D system partially (39%) rehabilitated between 2001 and 2016 by projects funded by the ADP, USAID and World Bank, ranging from 18% of the assessed WUAs in Chui Oblast to 100% in Batken Oblast.

6.7 Physical Condition of On-farm I&D Infrastructure

The overall physical condition of the on-farm I&D structures is summarised in Table 6-13:

Table 6-13: Physical Condition of On-farm I&D Structures

Name of Oblast	Intake Structure			Canals			Regulation and Distribution Structures		
	Poor	Moderate	Good	Poor	Moderate	Good	Poor	Moderate	Good
Batken	0%	20%	80%	15	21	7	27	114	40
Osh	23%	46%	31%	40	76	29	39	69	36
Jalalabad	20%	70%	10%	16	33	11	19	13	15
Issyk-Kul	50%	50%	0%	37	40	4	71	272	1
Talas	10%	90%	0%	5	31	0	13	39	4
Naryn	86%	0%	14%	21	5	0	31	2	0
Chui	24%	68%	18%	20	44	1	26	41	14
Total	**30%**	**49%**	**22%**	**154**	**250**	**52**	**226**	**550**	**110**

Name of Oblast	Flow Measurement Devices			Ancillary Structures			Drainage System		
	Poor	Moderate	Good	Poor	Moderate	Good	Poor	Moderate	Good
Batken	12	7	0	4	104	0	100%	0%	0%
Osh	0	66	18	175	36	56	9%	82%	9%
Jalalabad	21	17	10	20	19	9	0%	86%	14%
Issyk-Kul	8	88	0	39	141	0	60%	20%	20%
Talas	6	23	0	5	32	5	17%	66%	17%
Naryn	8	0	0	25	0	15	0%	100%	0%
Chui	18	60	10	24	32	48	10%	70%	20%
Total	**73**	**261**	**38**	**292**	**364**	**133**	**28%**	**61%**	**11%**

In about half of all assessed WUAs, the physical condition of the intake structure is classified as moderate, whereas 30% as poor and 22% as good. The physical condition of the large majority of on-farm canals, regulation and distribution structures, flow measurement devices and ancillary structures (i.e. road culverts) is considered to be poor or moderate. In 61% of the assessed WUAs with a drainage system, the physical condition of the drains is classified as moderate, 28% as poor and 11% as good.


On-farm canal in poor condition in Chui Oblast (left) and in good condition in Jalalabad Oblast (right)

6.8 Environmental and Health Issues

6.8.1 Disposal of Solid Waste

The reported problem with the disposal of solid waste in the service area of the 72 assessed WUAs and any mitigation measures undertaken are presented in Table 6-14:

Table 6-14: Disposal of Solid Waste

Name of Oblast	Disposal of Solid Waste	Caused by			WUA Measure	Government Measure
		Outside People	Inside People	Others		
Batken	40%	100%	100%	0%	50%	0%
Osh	46%	67%	67%	0%	67%	33%
Jalalabad	50%	0%	80%	20%	40%	40%
Issyk-Kul	100%	40%	60%	0%	80%	70%
Talas	10%	100%	0%	0%	100%	0%
Naryn	71%	60%	80%	0%	60%	20%
Chui	53%	75%	75%	0%	88%	25%
Total	**53%**	**63%**	**66%**	**3%**	**69%**	**27%**

About half of all assessed WUAs reported the disposal of solid waste as a problem, ranging from 10% of the assessed WUAs in Talas Oblast to 100% in Issyk-Kul Oblast. Both people from outside and inside the WUA service area are causing this problem. About two-third of the assessed WUAs have taken measures to address this problem, whereas the Government took action in 27% of the assessed WUAs with this problem.

6.8.2 Disposal of Sewage Water

The reported problem with the disposal of sewage water in the on-farm canals managed by the 72 assessed WUAs and any mitigation measures undertaken are presented in Table 6-15:

Table 6-15: Disposal of Sewage Water

Name of Oblast	Disposal of Sewage Water	Caused by			WUA Measure	Government Measure
		Outside Towns/ Villages	Inside Towns/ Villages	Others		
Batken	20%	100%	100%	0%	100%	0%
Osh	15%	50%	100%	0%	50%	50%
Jalalabad	30%	67%	0%	33%	33%	33%
Issyk-Kul	30%	67%	33%	33%	67%	67%
Talas	10%	100%	0%	0%	100%	0%
Naryn	0%	-	-	-	-	-
Chui	12%	100%	0%	0%	100%	100%
Total	**17%**	**81%**	**39%**	**11%**	**75%**	**42%**

Disposal of sewage water in the on-farm canals is a reported problem in 17% of all assessed WUAs, mainly caused by towns and/or villages outside their respective service areas. Three-quarter of the assessed WUAs with this problem reported to have taken measures and the government undertook action in 42% of the concerned assessed WUAs.

6.8.3 Chemical Pollution of Canal Water

Only a few assessed WUAs reported a problem with chemical pollution of the water in their on-farm canals caused by farmers and factories/workshops.

6.8.4 Waterlogging

The reported problem of waterlogging within the service area of the 72 assessed WUAs and any mitigation measures undertaken are shown in Table 6-16:

Table 6-16: Waterlogging

Name of Oblast	Waterlogging	% Area	Caused by				WUA Measure	Government Measure
			High GW	Over-Irrigation	Poor Drainage	Others		
Batken	20%	80%	No	No	Yes	No	No	No
Osh	69%	20%	No	Yes	Yes	No	No	No
Jalalabad	40%	33%	Yes	No	No	No	Yes	Yes
Issyk-Kul	30%	22%	No	No	No	Yes	No	Yes
Talas	20%	6%	No	No	No	Yes	Yes	Yes
Naryn	14%	20%	No	No	No	Yes	Yes	Yes
Chui	12%	15%	Yes	Yes	Yes	No	Yes	No
Total	**29%**	**28%**	**-**	**-**	**-**	**-**	**-**	**-**

About one-third of the assessed WUAs reported waterlogging problems caused by mudslides, heavy rainfall, poor drainage, over-irrigation or high groundwater table. A number of assessed WUAs in four Oblasts with this problem have taken measures to resolve it, whereas the government in four Oblast also took actions to address this problem.

6.8.5 Soil Salinity

Soil salinity is reported by a limited number of assessed WUAs in six Oblasts, which is mainly caused by high groundwater table and poor drainage. Most assessed WUAs with soil salinity problem have taken measures to address this issue and the government also undertook action in a few assessed WUAs.

6.8.6 Water-Borne Diseases

The incidence of waterborne diseases reported in the service area of the 72 assessed WUAs is presented in Table 6-17:

Table 6-17: Water-Borne Diseases

Name of Oblast	Reported by WUAs	Type of Water-Borne Diseases	Caused by				WUA Measure	Government Measure
			No Safe Water	Poor Sanitation	Poor Drainage	Use of Canal Water for Drinking		
Batken	0%	-	-	-	-	-	-	-
Osh	15%	Typhoid, Dysentery, Parasites	No	Yes	Yes	Yes	Yes	Yes
Jalalabad	40%	Dysentery, Parasites	Yes	Yes	No	Yes	Yes	Yes
Issyk-Kul	10%	Skin diseases	No	Yes	No	No	Yes	Yes
Talas	0%	-	-	-	-	-	-	-
Naryn	0%	-	-	-	-	-	-	-
Chui	6%	Dysentery	No	Yes	No	No	No	No

In four Oblasts, a limited number of assessed WUAs reported water-borne diseases, mainly dysentery, caused by poor sanitation followed by the use of canal water for drinking purposes. In three Oblasts, the assessed WUAs with reported water-borne diseases as well as the government have taken measures to address this problem, including chlorination of drinking water.

ANNEX A: LIST WITH NAME, LOCATION AND SERVICE AREA OF ASSESSED WATER USERS' ASSOCIATIONS

No	Name of WUA	Raion	WUA Service Area		
			Number of On-Farm Canals	Area (ha)	Number of Villages
Batken					
1	Zardelek-Batken	Batken	80	2,150	2
2	Tort-Gul-Tolkunu	Batken	36	1,376	10
3	Ak-Suu-Khalmion	Batken	77	3,080	13
4	Ak-Bulak-Dyikan	Kyzyl-Kiya city	16	41	5
5	Omur-Suu	Lyailyak	21	550	5
	Sub-Total		**230**	**7,197**	**35**
Osh					
1	Sary-Kol	Alai	11	33	4
2	Tebat	Aravan	11	300	5
3	Movyi-Dariya	Aravan	101	1,622	13
4	Kashka-Suu	Aravai	27	1,780	5
5	Jalaldinov	Kara-Suu	70	1,240	2
6	Shark UVAM	Kara-Suu	45	1,156	5
7	Uch-Alysh	Kara-Suu	8	570	4
8	Abror	Kara-Suu	25	641	7
9	Muyan	Kara-Suu	27	693	4
10	Kydyrsha-Suu	Kara-Suu	75	1,229	7
11	Gezart	Nookat	53	2,185	4
12	Jyide-Aryk	Nookat	26	644	6
13	Karool-Dostuk	Uzgen	10	1,557	3
	Sub-Total		**489**	**13,650**	**69**
Jalalabad					
1	Sarcha	Ala-Buka	25	1,454	4
2	Kerben-Suu	Aksy	69	2,496	7
3	Jergetal-Suu	Aksy	39	592	1
4	Obi-Khaet	Bazar-Korgon	60	1,308	2
5	Karacha-Suu	Bazar-Korgon	21	269	1
6	Noshken-Suu	Nooken	14	937	2
7	Jany-Aryk-Suu	Nooken	51	1,694	7
8	Shaimerden-Suu	Suzak	28	1,300	3
9	Myrok-Suu	Suzak	66	1,750	7
10	Changet-Sai	Suzak	145	2,141	19
	Sub-Total		**518**	**13,941**	**53**
Issyk-Kul					
1	Kalmak-Aryk	Ak-Suu	63	1,693	4
2	Byiyk-Jer	Ak-Suu	43	2,930	5
3	Jolgolot-Suu	Ak-Suu	20	1,300	3
4	Shatyly	Jety-Oguz	100	2,800	3
5	Shybaga	Jety-Oguz	22	1,563	2
6	Kara-Oi	Issyk-Kul	40	1,358	1
7	Ortotokoi-Suu	Issyk-Kul	23	225	1
8	Mol-Tushum	Ton	19	1,322	3
9	Kainar	Ton	17	517	3
10	Suttu-Bulak	Issyk-Kul	74	3,618	2
	Sub-Total		**421**	**17,326**	**27**
Talas					
1	Danbagar	Talas	3	200	1
2	Chyrkanak-4	Talas	7	1,145	5
3	Kok-Oi-3	Talas	90	2,481	4
4	Danbagar-Too	Talas	9	503	1
5	Ashyrbek-Suu	Talas	2	150	1
6	Barky-Aryk	Bakai-Ata	42	1,700	2
7	Karagatty	Bakai-Ata	16	1,780	2
8	Suuluu-Maymak-2	Kara-Buura	18	1,428	2
9	Kyrkyroo-Suu	Kara-Buura	12	2,413	1
10	Bereke-C	Manas	28	1,161	3
	Sub-Total		**227**	**12,961**	**22**
Naryn					
1	Ala-Buga2002	Ak-Talaa	33	826	1
2	Chon-Acha	At-Bashy	8	200	1
3	Kol-Suu	Jumgal	26	1,334	1
4	Sandyk	Jungal	9	701	2
5	Jainakov Asanbek	Kochkor	47	3,796	2
6	Raiymbek-Baba	Kochkor	5	817	1
7	Kyzyl-Zoo-Dostuk	Naryn	24	1,215	1
	Sub-Total		**152**	**8,889**	**9**
Chui					
1	Milyanfan	Issyk-Ata	35	1,200	1
2	Uzun-Kyr	Issyk-Ata	39	1,970	3
3	Bel-Bulak	Issyk-Ata	35	3,600	3
4	Sretenka	Moskva	54	4,765	3
5	Shorgo	Sokuluk	27	2,735	3
6	Sokuluk-1	Sokuluk	24	1,562	3
7	Kara-Kolmo	Sokuluk	30	1,630	3
8	Umetaly	Kemin	49	2,150	3
9	Sarbos	Kemin	54	1,920	3
10	El-Suu	Panfilov	14	2,336	1
11	Lyucerna	Panfilov	14	970	1
12	Martт-2001	Jaiyl	30	2,200	1
13	SSB	Jayil	8	1,136	2
14	Omur-Bulak	Alamedin	18	773	6
15	Vasilevka	Alamedin	45	1,800	4
16	Burana-Kara-Oi	Chuy	21	454	3
17	Tash-Mazar	Panfilov	32	715	1
	Sub-Total		**529**	**31,916**	**44**
Total			**2,566**	**105,880**	**259**