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# USAID FAMILY FARMING PROGRAM FOR TAJIKISTAN

ANNUAL REPORT: YEAR FOUR

OCTOBER 2013 – SEPTEMBER 2014



**OCTOBER 30, 2014**

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# USAID FAMILY FARMING PROGRAM FOR TAJIKISTAN

**ANNUAL REPORT: YEAR FOUR**

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<b>Program Title:</b>	<b>USAID Family Farming Program for Tajikistan</b>
<b>Sponsoring USAID Office:</b>	<b>Economic Growth Office</b>
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Cover Photo: US Ambassador Elliot and Bokhtar District Chairman Gafori Jabbor cut ribbon at *Navbahor-1* WUA office opening ceremony on August 21, 2014. This office was one of 21 funded by the project and built by the Water Users Association members during Year 4.

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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# ABBREVIATIONS

ADLE	Agricultural Development and Livestock Enhancement
ALRI	Agency for Land Reclamation and Irrigation
CO	USAID Contracting Officer
COR	USAID Contracting Officer's Representative
FTF	Feed the Future
FFP	Family Farming Program
Ha	Hectares
IWM	Irrigation Water Management
M&E	Monitoring and Evaluation
MEO	USAID Mission Environmental Officer
MEWR	Ministry of Energy and Water Resources
MLRWR	Ministry of Land Reclamation and Water Resources
NGO	Nongovernmental Organization
NEHEGE	Nutrition Enhancement Home Economics and Gender Equity
PAMP II	Second Public Employment for Sustainable Agriculture and Water Resources Management Project—World Bank
PEO	Program Environmental Officer
PMEP	Performance Management and Evaluation Plan
RFP	Request for Proposal
STTA	Short-Term Technical Advisor/Assistance
TJS	Tajikistan Somoni
TOT	Training of Trainers
USAID	United States Agency for International Development
USD	United States Dollar
WFP	World Food Programme
WUA	Water Users Association

# EXECUTIVE SUMMARY

Tajikistan is the poorest country in Central Asia, with 49% of its rural population living below the poverty line.<sup>1</sup> Approximately 73% of the country's population of 8.2 million lives in rural areas, where paid jobs are scarce and the average amount of arable land held per person is 0.11 hectares.<sup>2</sup> While 46.5% of the overall population is employed in agriculture, productivity in the sector is low and represents only 21% of national GDP.<sup>3</sup>

Despite rising food prices, the food security situation in Tajikistan has generally improved in recent years, largely due to high levels of remittances from Tajiks working abroad in Russia. However, the fall in the value of the Russian ruble in 2014 has put downward pressure on these incomes. Food security remains a significant concern, as in November of 2012 22% of households remained severely or moderately food insecure.<sup>4</sup> The significance of the food security concern is made all the more clear by the 2012 Tajikistan Demographic and Health Survey which indicated that 26% of children below the age of 5 were stunted, 10 percent were wasted, and 12 percent were underweight. Khatlon had the highest prevalence of wasting and underweight children—which were 11% and 14% respectively.

Tajikistan is a focus country under the U.S. Government's Feed the Future (FTF) initiative. FTF's objective in Tajikistan is to reduce poverty through improved nutrition and inclusive agricultural growth in twelve target districts in the Khatlon province. The USAID Tajikistan Family Farming Program (FFP) directly supports this objective and seeks to improve agricultural productivity and the enabling environment by focusing on the provision of water for agricultural production. FFP's efforts have largely focused on providing support to Water Users Associations (WUAs) in order to improve their ability to manage irrigation water resources. FFP's work in organizing and strengthening WUAs of southwestern Khatlon, as well as work in rehabilitating irrigation infrastructure, will directly impact the availability of irrigation water, thereby boosting agricultural production. Increased production will enhance the availability of food as well as producer incomes, which will in turn improve food security and promote inclusive agricultural growth in the targeted districts. FFP's work in improving household economics, disseminating agricultural production guides, and supporting irrigation water management policy reform also support the project's primary objective of improving agricultural production and access to food.

The following report presents the major activities, challenges, and accomplishments of the Family Farming Program in Year 4, from October 1, 2013 to September 30, 2014. As of September 30, 2014, FFP met life of project targets for number of WUAs established, hectares under improved management practices, hectares rehabilitated, improvements in intra-village irrigation, and number of households benefiting directly from project interventions.

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<sup>1</sup> World Bank Data, 2013.

<sup>2</sup> Ibid.

<sup>3</sup> World Bank Group: Tajikistan Partnership Program Snapshot; October 2014  
<http://www.worldbank.org/content/dam/Worldbank/document/Tajikistan-Snapshot.pdf>

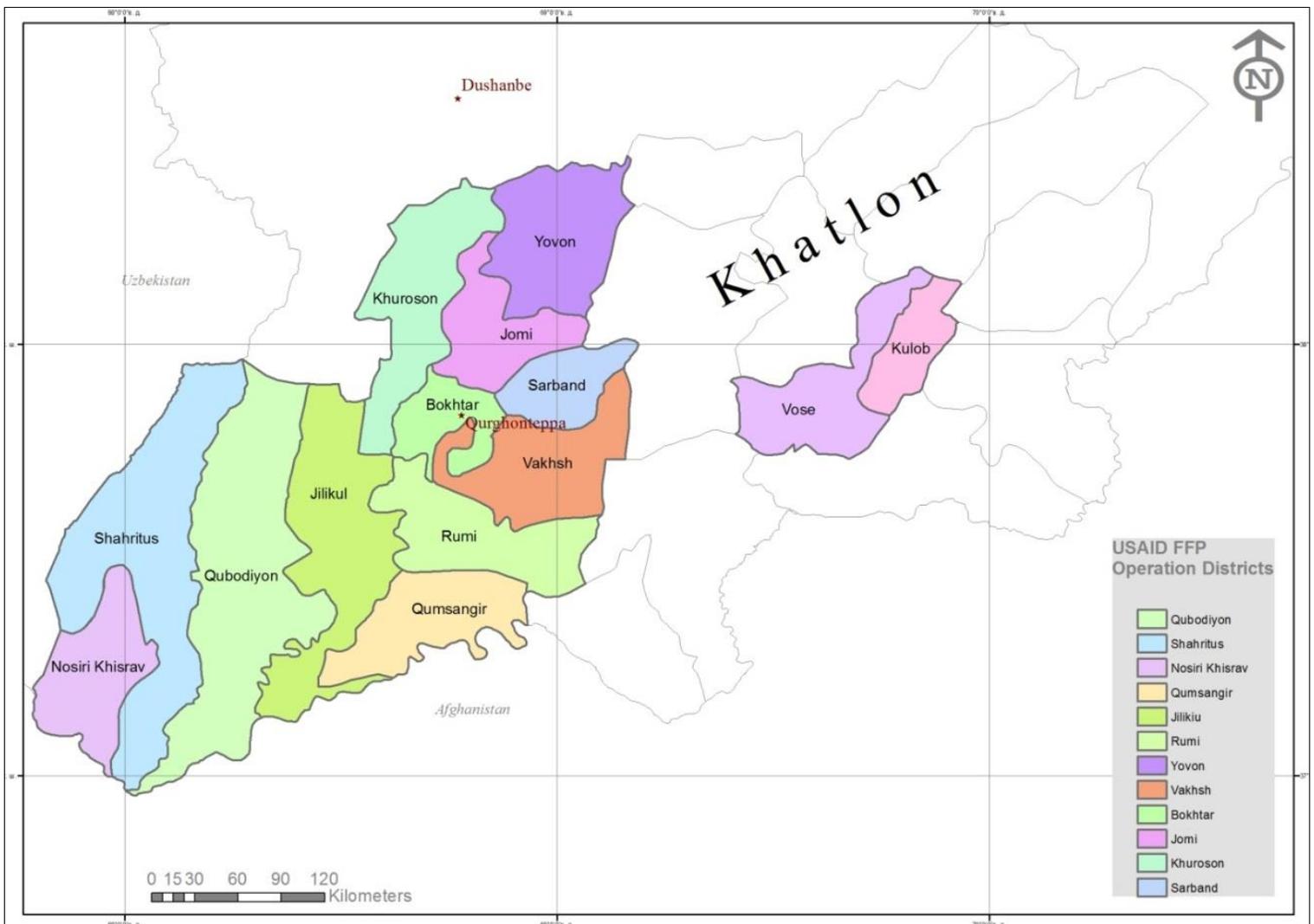
<sup>4</sup> World Food Program: Tajikistan Food Security Monitoring System Bulletin; December 2012.  
<http://documents.wfp.org/stellent/groups/public/documents/ena/wfp254783.pdf>

Per the revised SOW in the August 2013 contract modification, FFP completed all required deliverables related to Activities 2 and 3 during Year 4.

A new contract modification signed in July 2014 extended FFP's period of performance by five additional months to February 27, 2015 and increased its total estimated cost by \$429,400.00. The extension period will enable WUAs to complete rehabilitation and construction projects under FFP grants that were delayed during Year 4 due to weather conditions by extending grants implementation through December 27, 2014.

FFP also added new activities related to WUA capacity development and to irrigation policy reform. The added WUA capacity building activities focus on strengthening the networks between WUAs and Federations in order to increase water provision for agricultural production and improve intra-village water access. The additional support for irrigation policy reform will enable FFP to develop a national strategy for WUA development and conduct WUA legal and regulatory analysis and recommended updates. These changes in activities are reflected in the Year 5 Activity M&E Plan, where the targets for seven FFP indicators have been revised and eight indicators will not be measured during the additional months of activity.

**Figure 1: GEOGRAPHIC FOCUS OF FFP**



## SUMMARY OF CUMULATIVE ACCOMPLISHMENTS FOR YEAR 4

### Irrigation Water Management (IWM)

- Organized and registered 23 new WUAs and strengthened 4 WUAs formed under WUASP, thereby achieving project target of 56 new WUAs established and a total of 60 WUAs created and/or strengthened. The project continued to support the 33 WUAs it established in previous years.
- Oversaw the construction of 13 WUA offices and initiated construction of an additional 31.
- Increased WUA membership collection rates to target of 60%.
- Awarded a total of 71 grants to 33 WUAs and disbursed a total of \$2,040,130 in grant funds to support irrigation infrastructure rehabilitation and WUA office construction.
- Repaired/installed 968 water control gates, dredged 84,920 meters of drainage systems, and cleaned 50,220 meters of irrigation canals.
- Met and exceeded project target of 90,000 hectares under improved water management practices. During Year 4, the project improved 46,924 hectares for a total project result of 122,992<sup>5</sup>.
- Met and exceeded project target of 65,000 hectares under improved/rehabilitated irrigation. During Year 4, the project placed 55,198 hectares under improved/rehabilitated irrigation, for a cumulative result of 67,642 hectares.
- Delivered 538 capacity building training sessions leaders and members of 60 WUAs on a variety of topics, including leadership skills development, grants management, financial management, irrigation system maintenance and management, and conflict resolution.
- Completed baseline and end-line capacity assessments of 60 WUAs using the WUA-CAT tool. The results showed that all six groups of WUAs tested reached the targeted 10% increase in capacity improvement.
- Completed the follow-up intra-village irrigation assessment and rehabilitation activity which increased frequency and supply of irrigation water in 10<sup>6</sup> targeted villages.
- Met and exceeded targeted 100,000 households benefiting directly from US Government interventions. During Year 4, the project benefited 49,016 households for a cumulative project result of 148,396<sup>7</sup>.

### Agricultural Development and Livestock Enhancement (ADLE)

- Completed and received USAID approval of 14 crop and animal production guides, thereby concluding all activities under the ADLE component.

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<sup>5</sup> The project overall total of 122,992 ha, includes hectares where activities supported by the ADLE are included. For only activities under IWM, the project total is 122,653 hectares.

<sup>6</sup> Though FFP targeted 10 villages, in one of the intervention locations, two villages are very close to each other. So, 11 villages are recognized, locally, as benefitting from the intervention activities.

<sup>7</sup> This includes 20,940 households benefited in previous years by ADLE activities. Under IWM, the total households benefited are 127,456.

### **Nutrition Enhancement, Home Economics, and Gender Equity (NEHEGE)**

- Completed and received USAID approval of the following deliverables: “Household Finance Guide,” “Recipes for a Health (and Balanced) Diet and Food Diversity,” “Food Preservation and Storage Guide,” and Household Garden Poster.” With the approval of these materials, FFP concluded all activities under the NEHEGE component.

### **Policy Reform and Advocacy**

- In support of irrigation sector reform, produced a stakeholder-involved legal analysis of the WUA Law and drafted a revised version of the law to include suggested changes.
- Completed five advanced guides to support ongoing WUA development and their role in sector reform.
- Developed with extensive stakeholder involvement, a “roadmap” of recommendations for WUA development to be used by government stakeholders during the ongoing process of irrigation policy reform in Tajikistan.

## **PROGRESS IN COORDINATION WITH HOST GOVERNMENT, OTHER DONORS, USAID-FUNDED PROJECTS**

- Worked with and supported WUA creation efforts of the World Bank PAMP II project.
- Involved recently reorganized Ministry of Energy and Water Resources and Agency for Land Reclamation and Irrigation in analysis of WUA law, and advanced guides for improved WUA creation and development.
- Provided new agricultural resource materials (extension guides) and household nutrition and budgeting materials to other USAID-funded projects (Farmer Advisory Services in Tajikistan Program (FAST) and Maternal and Child health projects) and partners.
- Provided advice and draft advanced guides to Swiss Agency for Development and Cooperation Integrated Water Resource Management Project, as well as organized national level exchange meeting for WUAs from all Tajik provinces.

## **SUMMARY OF ADMINISTRATIVE, STAFFING, AND TECHNICAL CHALLENGES IN YEAR 4**

- Two key personnel—the Grants Manager and IWM Coordinator—resigned and were rapidly and effectively replaced.
- Other leadership staff, including the Operations Manager and M&E Manager, also left the project and were effectively replaced.
- Unfavorable weather conditions (dry fall which extended canal operations and heavy snowfall in February 2014) delayed rehabilitation work.
- Decisions by Tax Committee continue to prevent proper registration of WUA federations, impacting progress on both grant and policy activities.
- Tajik Government has moved slowly to create river sub-basin coordination councils, preventing interaction with WUAs or WUA federations.

# 1. IRRIGATION WATER MANAGEMENT (IWM)

## ACHIEVEMENTS

FFP's work in creating new WUAs and strengthening existing ones, combined with its support for rehabilitating and improving irrigation infrastructure in Khatlon, will help to improve overall irrigation water management in Tajikistan. Given that WUAs are the focal point of irrigation sector reform in Tajikistan, FFP's work in its IWM and policy components is making valuable contributions towards improving both agricultural productivity and food security.

During the reporting year FFP's IWM team succeeded in organizing and registering 23 new WUAs and creating four new WUA federations, FFP has now met its life of project targets of 60 WUAs created and/or strengthened and four WUA federations created.<sup>8</sup> All 60 WUAs created/strengthened by the project now have their leadership structures in place and are actively providing irrigation water management services to their constituents. Assessment by the newly created WUA-CAT tool reinforces the quality of capacity development achieved. In addition to meeting the project target for WUAs created/strengthened, FFP made significant progress in improving WUA irrigation infrastructure. Over the course of the past twelve months, FFP oversaw the completion of 21 WUA offices and initiated construction of an additional 30. These achievements directly support the project's objective of improving water provision for agricultural production through WUAs. A total of \$2,040,130 in grant funds was dispersed during Year 4, bringing the LOP disbursement total to \$2,908,061. A total of \$593,968 remains available to grant.

## ACTIVITIES

### ACTIVITY 1.1 WATER USERS ASSOCIATIONS CREATED AND STRENGTHENED

#### 1.1.1 Organize and create new WUAs

FFP helped organize and register 23 WUAs, thereby meeting the cumulative project target of 56 newly-established WUAs. All WUAs organized under FFP have now completed their registration with the tax authorities, have assembled both their boards of directors and general assemblies, and are now actively providing irrigation water management services to their members. When accounting for the four WUAs formed under the WUASP project that were strengthened by FFP, the project has now created/strengthened a total of 60 WUAs, covering an area of 122,653<sup>9</sup> hectares of land in the Khatlon region.

All WUAs organized by FFP subsequently received training to strengthen their capacity in a variety of areas, including organizational leadership, financial management, and irrigation

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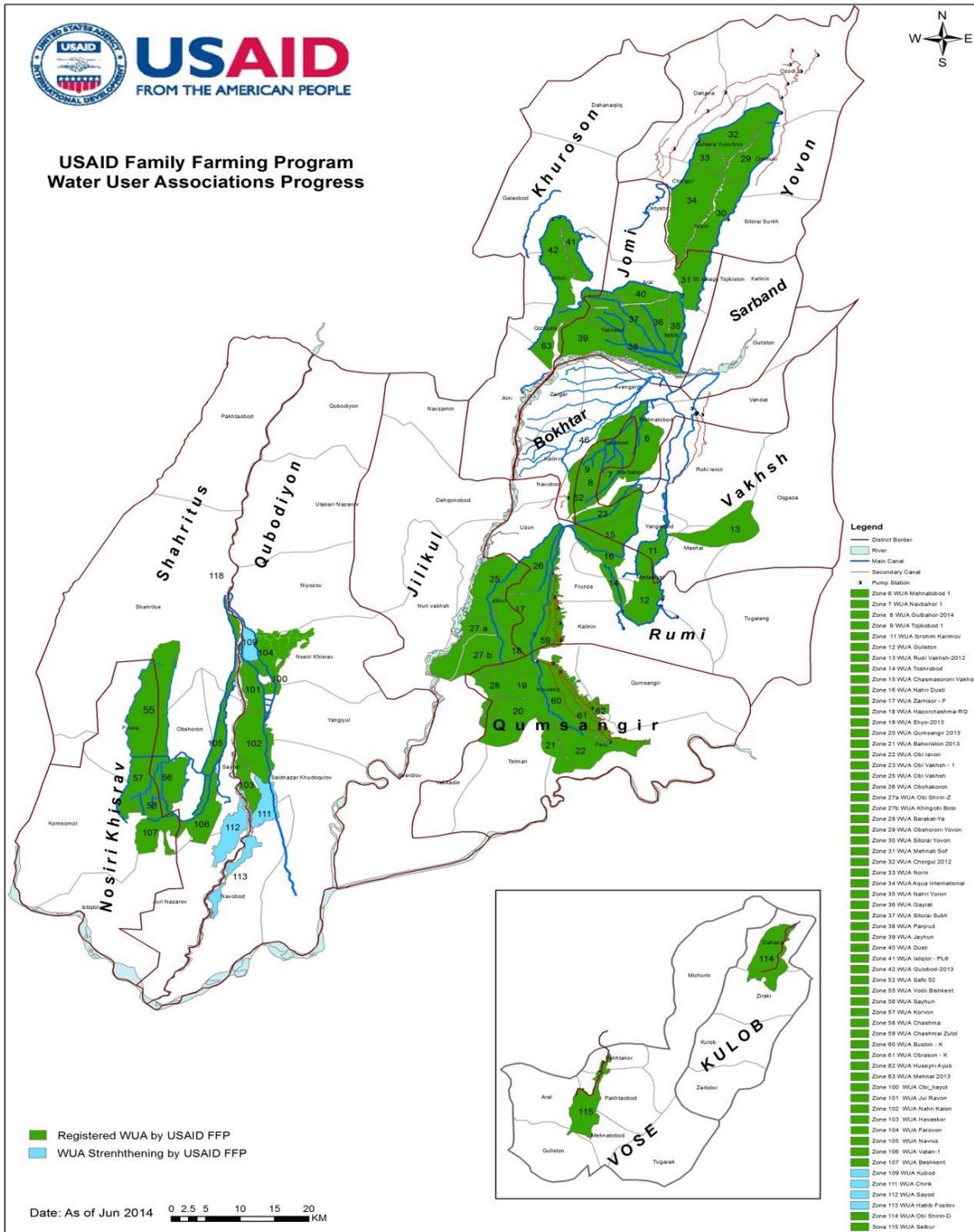
<sup>8</sup> FFP created and registered a total of 56 new WUAs and implemented strengthening activities with 4 WUAs previously organized under the WUASP project.

<sup>9</sup> The project overall total of 122,992 ha, includes hectares where activities supported by the ADLE are included.

system management and maintenance. These activities are detailed under Activity 1.1.3 below.

Figure 2 below provides a map of WUAs organized by FFP in Khatlon, and Figure 2 shows a detailed timeline of WUA development under the entire life of project to date.

Figure 2: WUA DEVELOPMENT STATUS IN KHATLON OBLAST



**Table 1: INSTITUTIONAL DEVELOPMENT TIMELINE**

No.	Name of WUA	Location / District	Date FFP Entered in Community	Date of WUA Registration	Status of Office Opening Ceremony
1	Obi Shirin-D	Kulob	14-Nov-11	22-Feb-12	Done 24-April-12
2	Selbur	Vose	21-Nov-11	23-Mar-12	25-April-12
3	Obi hayot	Qubodiyon	15-Dec-11	26-Feb-12	N/a (From WUASP)
4	Juyi Ravon	Qubodiyon	12-Jul-11	27-Oct-11	23-Jul-13
5	Nahrikalon	Qubodiyon	12-Jul-11	27-Oct-11	7-Dec-12
6	Havaskor	Qubodiyon	29-Nov-11	27-Mar-12	4-Feb-13
7	Farovon	Qubodiyon	17-Apr-12	6-Aug-12	TBD
8	Navruz	Shahritus	18-Nov-11	28-Mar-12	19-Mar-13
9	Vatan-1	Shahritus	28-Jan-13	5-Jul-13	TBD
10	Beshkent	N.Khusrav	28-Sep-12	22-Jan-13	12-Oct-13
11	Vodii Bishkent	N.Khusrav	2-Jul-13	21-Nov-13	TBD
12	Sayhun	N.Khusrav	7-Oct-13	7-Apr-14	No office construction planned.
13	Korvon	N.Khusrav	11-Nov-13	17-Mar-14	No office construction planned,
14	Chashma	N.Khusrav	28-Jan-14	17-April-14	No office construction planned.
15	Obchakoron	J. Rumi	17-Apr-12	11-Aug-12	18 Sept-14
16	Nahri-dusti	J. Rumi	13-Aug-12	14-Feb-13	TBD
17	Zarnisor-F	J. Rumi	27-Avg-12	7-Mar-13	04-Sept-14
18	Hazorchashma-RQ	J.Rumi	28-Jan-13	13-Jul-13	TBD
19	ChashmaiZulol	J.Rumi	10-Jun-13	29-Oct-13	TBD
20	Guliston S	J.Rumi	1-Jul-13	19-Nov-13	No office construction planned.
21	Toshrobod	J.Rumi	5-Aug-13	13-Dec-13	TBD
22	Chashmasoroni Vakhsh	Vakhsh	17-Apr-12	3-Aug-12	18-Jun-14
23	Obi Vakhsh-1	Vakhsh	17-Apr-12	3-Aug-12	TBD
24	Tojikobod 1	Vakhsh	15-Apr-13	17-Sep-13	TBD
25	Ibrohim Karimov	Vakhsh	15-Apr-13	Reregistration: 16-Aug-13	TBD

No.	Name of WUA	Location / District	Date FFP Entered in Community	Date of WUA Registration	Status of Office Opening Ceremony
26	Rudi Vakhsh – 2012	Vakhsh	1-Apr-13	Re-registration: 9-Jul-13	TBD
27	Safo – 52	Vakhsh	15-Apr-13	30-Jul-13	TBD
28	Mehnatobod-1	Bokhtar	23-Sep-13	Reregistration: 23-Jan-14	No office construction planned.
29	Navbahor 1	Vakhsh, Bokhtar	5-Aug-13	Reregistration: 6-Dec-13	21-Aug-14
30	Gulbahor- 2014	Bokhtar	1-Sep-13	27-Dec-13	21-Aug-14
31	Obi Vakhsh	Jilikul	13-Aug-12	Reregistration: 7-Mar-13	TBD
32	Obi shirin-Z	Jilikul	16-Jan-13	Reregistration: 31-May-13	TBD
33	Khingovi Bolo	Jilikul	16-Jan-13	Reregistration: 13-Jun-13	TBD
34	Nahri Yoron	Jomi	7-Nov-12	27-Apr-13	TBD
35	Ghayrat	Jomi	7-Nov-12	Reregistration: 27-Feb-13	14-Jan-14
36	Sitorai Subh	Jomi	7-Nov-12	5-Mar-13	24-Oct-13
37	Panjrud	Jomi	27-Mar-13	5-Aug-13	TBD
38	Jayhun	Jomi, Khuroson	27-Mar-13	31-Jul-13	TBD
39	Dusti-2013	Jomi	27-Mar-13	7-Aug-13	TBD
40	Istiqlof - PL6	Khuroson	1-Aug-13	Reregistration: 5-Dec-2013	28-Aug-14
41	Gulobod-2013	Khuroson	1-Aug-13	24-Dec-13	05-Aug-14
42	Mehnat 2013	Khuroson	1-Aug-13	Reregistration: 17-Dec-2013	05-Aug-14
43	Ehyo-2013	Qumsangir	28-Jan-13	17-Jul-13	TBD
44	Qumsangir-2013	Qumsangir	14-Jan-13	28-Jun-13	TBD
45	Bahoriston – 2013	Qumsangir	4-Feb-13	31-May-13	04-Sept-14
46	Obi Ravon	Qumsangir	4-Feb-13	Reregistration: 23-May-13	5-Aug-14
47	Barakat-Ya	Qumsangir	8-Jul-13	28-Nov-13	TBD
48	Buston – K	Qumsangir	10-Jun-13	1-Nov-13	TBD
49	Obrason-K	Qumsangir	10-Jun-13	22-Nov-13	TBD
50	Husen – Ayub	Qumsangir	10-Jun-13	22-Nov-13	TBD
51	Obshoroni Yovon	Yovon	19-Nov-13	30-Feb-14	TBD

No.	Name of WUA	Location / District	Date FFP Entered in Community	Date of WUA Registration	Status of Office Opening Ceremony
52	Sitorai Yovon	Yovon	19-Nov-13	25-Feb-14	TBD
53	Mehnati Sof	A.Jomi	19-Dec-13	30-Mar-14	TBD
54	Chorgul-2012	Yovon	19-Nov-13	30-Feb-14	TBD
55	Norin	Yovon	23-Dec-13	15-Apr-14	TBD
56	Aqua international	Yovon	19-Dec-13	30-Mar-14	TBD
57	Chirik	Qubodiyon	30-Mar-14	28-Apr-14	<b>Not applicable.</b> These WUAs were created by the WUASP project and strengthened under FFP. Since they already had offices they were not slated for office construction under FFP.
58	Qubod	Qubodiyon	30-Mar-14	15- Apr-14	
59	H. Fozlov	Qubodiyon	30-Mar-14	22-Apr-14	
60	Sayod	Qubodiyon	30-Mar-14	7-Apr-14	

### **1.1.2 Assess institutional capacity of WUAs**

FFP's M&E team developed the WUA-CAT tool in July and August of 2013 with support from the IWM team as well as an STTA M&E Specialist. The purpose of the WUA-CAT was twofold: 1) to provide a means by which FFP or any external project could measure the change in organizational capacity of the targeted communities' WUAs, and 2) to provide WUAs with a robust method of self-assessment that gauges their institutional capacity and informs plans for ongoing institutional development. The WUA-CAT uses a simple 1-4 scoring system to assess organizational capacity in nine key areas. These scores are then aggregated in order to produce an overall score for each individual WUA.

During project year 4, the M&E team in coordination with the Institutional Development Officer tested the WUA-CAT tool in the field. Between September 2013 and May 2014, FFP collected baseline data using the WUA-CAT tool on all 60 WUAs created or strengthened by the project. The team then used the tool to collect endline data between July 2014 and September 2014. The 60 WUAs assessed were disaggregated by registration date into six groups in order to compare those of similar institutional ages. In this report, the last group was further disaggregated between newly created and WUASP created, ultimately resulting in seven institutional age groups (this will be reflected in the Year 5 M&E Plan, while still reported as six groups in the Year 4 Results Table).

Each WUA institutional age group met the 10% targeted improvement from the baseline WUA-CAT score. The endline assessment revealed that the average change in overall score exceeded the 10% target--and ranged from 13.6% to as high as 57.9%. More specifically, the results demonstrated positive progress in all nine areas of organizational capacity assessed by the WUA-CAT tool. When administering the endline assessment, the M&E team discussed results with WUA members in order to get their feedback and discuss next steps. FFP's M&E team noted that WUA members demonstrated a clear sense of ownership of the assessment process and were very eager to continue using the WUA-CAT tool for ongoing self-assessment and capacity improvement. The fact that the assessment showed positive change in organizational capacity and WUAs proved to be invested in the process highly suggests that FFP's institutional development efforts will have an enduring impact on WUAs' ability to exercise progressively greater leadership in irrigation water management.

For a more detailed explanation of the WUA-CAT's methodology and findings, please see the full report in Annex 9.

### **1.1.3 Strengthen WUAs based on identified needs**

During the course of the year, all 60 WUAs working with FFP participated in a mixture of formal and informal trainings. FFP delivered a total of 538 training sessions to 2,538 individuals. Formal trainings consisted of a standardized five-part curriculum developed by FFP that covered key areas of organizational development. In addition, WUAs received formal trainings in grants management, access to credit, and irrigation management. WUAs also participated in a series of informal trainings that covered such topics as WUA bylaws, the role of WUA federations, and legal issues pertaining to WUAs. Annex 10 includes a full detailed list of all trainings and capacity building delivered by FFP throughout the reporting year.

#### **Standard Five-Part Curriculum**

In December 2013, FFP's M&E team presented the results of the baseline WUA-CAT assessments to the IWM team. Based on the results of these assessments, as well as consultations with several WUAs, FFP's IWM team identified three priority areas for WUA capacity development: financial management; understanding of how tax regulations affect WUAs and WUA members; and management of irrigation water and infrastructure. In response, FFP developed a five-part curriculum that responded to these priority areas, as well as incorporated other important elements of organizational capacity. The five parts of the curriculum include the following: 1) Leadership Skills; 2) Auditing; 3) Financial Management; 4) Conflict Management; and 5) Irrigation System Maintenance and Management. As an initial step to providing these trainings to WUAs, FFP's Institutional Development Specialists conducted internal Training of Trainer (ToT) sessions during the first quarter with its team of Association Organizers in order to ensure effective delivery of the institutional development and technical skills training.

Throughout the course of the reporting year WUAs participated in trainings covering the different curriculum modules. As of September 30, 2014, all 60 WUAs have completed all five parts of the FFP-developed curriculum.

#### **Grants Training**

During the reporting year FFP delivered 23 training sessions to 57 members of 30 WUAs (as well as one WUA federation) on grants management. The trainings were an essential complement to the irrigation infrastructure rehabilitation activities under the project given that FFP WUAs completed the infrastructure work themselves using grant funds. Grants management trainings delivered by FFP covered topics such as the types of grants, the application and evaluation process, the grants implementation process, and compliance.

#### **Irrigation Management Training**

In the area of irrigation management, STTA Irrigation Water Management Specialist Dr. Mohan Reddy developed and delivered a two-part training on "Improved Field Level Irrigation Management" and "Computer-Aided Design of Water Flow Measurement Structures." These trainings were delivered in June to 129 WUA technical staff (representing all 60 FFP WUAs), and were also attended by representatives from the *vodkhoz* (district-level water management agency) and ALRI. These training sessions were organized in close collaboration with ALRI, and FFP coordinated media coverage via the local TV channel "*Shabakai Avval*". As a follow-up step to developing and conducting the trainings, Dr. Reddy finalized a draft curriculum on irrigation management which was submitted for review and approval. This curriculum will provide a tangible resource to be used by WUAs for managing and maintaining irrigation systems in their areas.

During the trainings, Dr. Reddy made some valuable observations that should be taken into account for follow-up to the trainings. First, he noted during the "Improved Field Level Irrigation Management" training that many farmers had limited knowledge of irrigation management practices, and hence the 22-page manual created to go with the course was overly detailed. He suggested creating a revised version of the course manual with more simplified language and improved graphics to be circulated among all FFP farmers.

During the training on "Computer-Aided Design of Flow Measurement Structures," the Head of the Department of Land Improvement and Irrigation requested additional training for *vodkhoz*

and WUA engineers on preparing water use and distribution plans. Such training would be very useful for improving water management at the main canal and WUA levels, particularly after the flow measurement structures are installed on the main canals. Dr. Reddy has experience in this area and previously developed an Excel-based template for preparing WUA water use and distribution plans in Azerbaijan. This template could be revised and adjusted to the context of Tajikistan by ALRI.

#### **Access to Credit**

In July 2014, FFP coordinated eight trainings focusing on access to credit for family farms in four districts of Khatlon. Attendees of the trainings included WUA members and women’s saving groups, and the purpose of the trainings was to create a stronger linkage between WUA members and credit providers in their region. By improving access to credit, WUA members will have a greater capacity to procure inputs needed for enhancing production, and thereby help mitigate food insecurity. A total of 85 men and 12 women attended the trainings.

#### **1.1.4 Implement irrigation system rehabilitation activities**

Throughout the reporting year, FFP grants continued to support WUAs, as well as one WUA federation, in rehabilitating irrigation infrastructure in the targeted areas. Grant funds were used by WUAs to clean irrigation and drainage canals, install water gates, and construct new WUA offices. Many of the WUAs made strong progress in implementing rehabilitation activities and did so while achieving cost-sharing participation from association members.

Over the course of the year, FFP grant funds were used to install a total of 968 water gates; dredge 84,920 meters of drainage canal; clean 50,220 meters of irrigation canal; and complete the construction of 14 offices. Table 2 below shows cumulative progress towards the life of project targets for irrigation infrastructure rehabilitation and office construction. Annex 7 provides a detailed breakdown of grant funds disbursed during the reporting year and includes cumulative totals for grants disbursed under the entire life of project.

**Table 2: IRRIGATION SYSTEM REHABILITATION CUMULATIVE PROGRESS**

<b>ACTIVITY</b>	<b>COMPLETED YR 4</b>	<b>COMPLETED TO DATE</b>	<b>TARGET</b>	<b>% COMPLETE</b>
<b>Water Gate Installation</b>	968 gates	1,123 gates	1,259 gates	89%
<b>Drainage Canal Cleaning</b>	84,920 meters	142,420 meters	154,720 meters	92%
<b>Irrigation Canal Cleaning</b>	50,220 meters	62,120 meters	63,120 meters	98%
<b>WUA Office Construction</b>	13 offices	20 offices	51 offices	39%

The World Bank has sought to leverage FFP’s progress in irrigation rehabilitation and as such has indicated that WUAs with a track record of active membership and engaged leadership will be highly competitive for supplemental funding under the PAMP II project. PAMP II focuses on sustainable agriculture and water resource management, and has worked closely with FFP in the area of WUA development and strengthening (described in more detail under Activity 1.2). While FFP has realized significant achievements in rehabilitating irrigation infrastructure, the additional PAMP II funds would be of great benefit and could support WUAs with additional infrastructure development as well as technical assistance and training.

### 1.1.5 Create and strengthen WUA federations

While in the early stages of development in Tajikistan, WUA federations will play an important role in what is intended to be an integrated water management system. Federations are a key component in this system and are the institutional mechanism by which WUAs coordinate joint management of water resources. Federations will also serve as the means by which WUAs interact with the basin-level water management agencies that are yet to be created by the Government.

During the year, FFP organized and finalized the boundaries for four new WUA federations, thereby meeting the life of project target for this activity. The process of organizing the federations began by holding meetings with WUAs and other stakeholders to discuss the role of WUA federations, their structure, and the services they can provide to member WUAs. The four federations were ultimately organized based on the boundaries of the four major canal systems in Khatlon. Table 3 below briefly highlights the organization and composition of each federation; Table 4 details the organizational development timeline for federations during Year 4; and Figure 3 shows a map of the four WUA federations and their respective member WUAs in Khatlon.

The four federations, consisting of the General Assembly and Board of Directors, have all established leadership structures and begun holding meetings. All four federations are also pursuing registration with the Tax Committee, but have met obstacles during the process. The Tax Committee rejected their registrations, arguing that there is no provision under the law for federations as a type of organizational structure. This contradicts precedent, as there is already a registered WUA federation in Khatlon and another in Sughd Province, as well as other federations outside of the agricultural sector. FFP's IWM Manager is working with officials at MEWR and ALRI to appeal this ruling and the Tax Committee's response is pending. FFP is also pursuing alternative means to registering federations, such as in the form of a union or association. Additionally, amendments to the WUA law recommended by FFP better defines the role of the WUA federations and thereby support them in attaining formal legal status.

**Table 3: WUA FEDERATIONS ORGANIZED BY FFP**

FEDERATION	DETAILS
<b>Qumsangir</b>	Comprised of 12 WUAs along the Qumsangir canal that runs across the Vakhsh, Rumi, and Qumsangir districts.
<b>Jilikul</b>	Comprised of 5 WUAs along the Jilikul canal that runs across Vakhsh, Rumi, Jilikul, and Qumsangir districts.
<b>Yovon</b>	Comprised of 6 WUAs along the central canal in Yovon district.
<b>Jomi</b>	Comprised of 6 WUAs along the Shurobod canal in A. Jomi district.

**Table 4: WUA FEDERATION INSTITUTIONAL DEVELOPMENT TIMELINE THROUGH SEPTEMBER 2014**

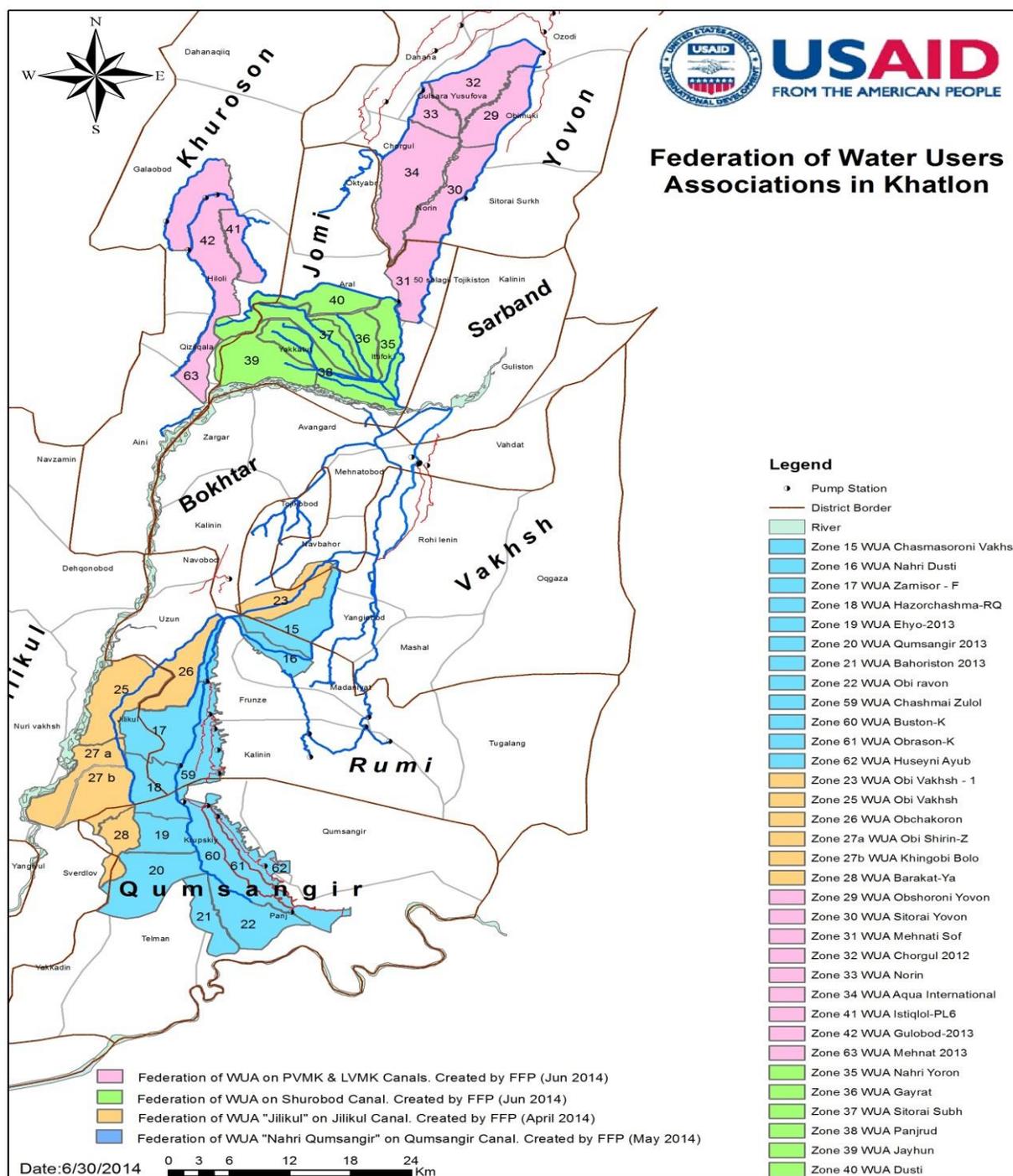
	DISTRICT	2014										TOTAL	FFP	FFP & WB	
		D	J	F	M	A	M	J	J	A	S				
1	Qabodiyon	1											1	1	
2	Qumsangir					1							1	1	
3	Jilikul					1							1	1	1
4	Jomi						1						1	1	1
5	Yavon							1					1	1	1
	<b>TOTAL</b>	<b>1</b>				<b>2</b>	<b>1</b>	<b>1</b>					<b>5</b>	<b>5</b>	<b>3</b>

- 3** = Districts overlap with World Bank PAMP II project
- 4** = Created
- 1** = Strengthening In Progress

In addition to training and organizing the four new federations, the IWM team also delivered a variety of capacity building trainings to the Sarob WUA federation. The Sarob federation existed prior to FFP and is composed of eight WUAs in Qubodiyon. Specific training topics included leadership skills development, financial management, and grants management. During the reporting year, the Sarob Federation also received grant funds to support the cleaning of drainage canals in four of its eight member WUAs. As with individual WUAs, by applying for and managing awarded grant funds the Sarob federation is increasing its financial management capacity.

In addition to the above-mentioned federation organizing and capacity building activities, FFP coordinated a one-week cross-*Oblast* visit in Sughd in April 2014. This exchange brought together representatives from the four new WUA federations in Khatlon, representatives from the Istikol WUA federation in Sughd, and one representative from ALRI. The week's activities focused on exchanging best practices regarding the roles of WUAs and WUA federations, and also discussed the role of basin-level coordination councils. Coordination councils are another component of the envisioned system of integrated irrigation water management in Tajikistan and at present their role is not clearly defined or legally established. The Sughd province is currently the only region in Tajikistan where an operating informal coordination council has been created. The official status and clear terms of reference of the Sughd coordination council still have not been formalized. This council currently functions as a forum where WUA representatives and the water agency exchange information and discuss annual irrigation water planning. Despite the nascent state of the Sughd coordination council, the April 2014 cross-site visit provided a valuable opportunity for WUA representatives from Khatlon to hear from counterparts in Sughd on the role of their coordination council and to begin envisioning how basin-level structures could be developed in Khatlon.

**Figure 3: WUA FEDERATIONS ORGANIZED IN KHATLON**



**ACTIVITY 1.2 PREPARATION FOR SCALED-UP WUA DEVELOPMENT**

To support the Government of Tajikistan and USAID in continuing WUA expansion, FFP developed a strategy and cost-effective model for facilitating the expansion of WUAs nationwide. Given the critical importance of WUAs in irrigation sector reform and the number of

WUA development models that have proven to be unsustainable, it is essential that future organizing efforts use an approach that has been tested and proven effective.

By end of the reporting year, FFP finalized and submitted to USAID its “Guide for Establishing Strong Water Users Associations in Tajikistan.” This guide lays out a clear methodology for WUA development and capacity building, and discusses lessons learned and best practices. Once approved for dissemination, the guide will be made available to all stakeholders involved in WUA development, including WUA leaders, ALRI, MEWR, donors, and NGOs. The guide will support scaled-up WUA development by serving as resource for the proven methodology supported by USAID for ongoing WUA development in the future.

### **1.2.1 Assess successful WUA models and identify low-cost alternatives that maximize reliance on local partners**

To assess successful WUA development models, FFP created the WUA-CAT tool to measure institutional development progress. After assessing multiple models of WUA capacity formation and development, FFP concluded that partnering with World Bank’s local NGO model (used by GASFP’s PAMP II project) represented the most cost-effective way to test new WUA development. As a result, FFP introduced the method to the World Bank’s NGOs through a staggered ToT program, who will in turn use this model for creating and strengthening WUAs. The program was staggered over time, so that the trainers could practice what they learned at the pace of their grassroots efforts for WUA development in the field.

### **1.2.2 Analyze WUA development requirements**

During the year STTA Policy Advisor Douglas Vermillion assessed the lessons learned and best practices gleaned from WUA development experiences on the FFP and WUASP projects. Topics covered in the assessment include selection of WUA sites, recruitment and training of WUA organizers, and how to approach meetings with local government officials. Based on his assessment, Mr. Vermillion prepared a recommended set of 15 steps for organizing and strengthening WUAs that takes into account current and anticipated irrigation sector reform. Mr. Vermillion’s assessment, entitled “Guide for Establishing Strong Water Users Associations in Tajikistan,” was submitted to USAID for review and approval in July 2014.

### **1.2.3 Pilot a WUA model through a local institution**

To test the model of having local organizations develop sustainable WUAs, FFP trained six NGOs selected by the World Bank PAMP II project on FFP’s organizational model (with adaptations based on recommendations from the analysis conducted in Activity 1.2.1). From these six NGOs, the World Bank selected the three best to continue. FFP staff then conducted ToT sessions for NGO trainers and assisted with curricula development. The training materials (see also 1.2.4) were finalized by the middle of May 2014 and shared across the PAMP II program NGOs. Training costs related to this activity were covered by the World Bank.

As of June 30, 2014, FFP provided 30 days of training to NGOs selected by World Bank PAMP II. In total, 20 Association Organizers from these six organizations have been trained in one or more of the 11 capacity building modules facilitated by FFP, thus completing FFP’s commitment to the PAMP II project. See Table 15 below for details on all PAMP II ToT sessions completed to date, including those begun during Year 3.

**Table 5: COMPLETED TOT TRAININGS FOR WB PAMP II NGOS**

No	Training Topic	Days	Training Dates	# of participants	Comments
1	Introduction meeting to discuss preparation and logistics	N/A	Aug. 05, 2013	10 including PIU/PMUU staff (10 NGO members +2)	USAID, WB, PMU, FFP field experts and NGOs
2	Developing WUAs by using the Community Organization Model (4 days -ToT and 1 day - Cross Visit)	5	Aug. 12-16, 2013		1 day Cross site visit to FWUA "Sarob" in Qubodiyon district (August 14, 2013)
3	Participate in the integration and social assessment of the irrigation systems in service area. Formal and informal meetings and trainings, individual and group meetings and interviews (in FFP project zones).	12	Aug. 19-30, 2013		The team will be grouped into three smaller teams and each will join FFP WUA Organizers to practically learn WUA organizational steps.
4	"Organizational and leadership skills Development for WUA leaders" (OLD). Module I-IV (Part I)	5	Sept. 2-6, 2013		
5	Presentations (small test to identify best suited NGOs to continue with field activities for WB projects)	1	Sept. 10, 2013	10 NGO members	Venue and panel will be agreed closer to the date
6	NGOs start Integration and WUA establishment process in new WUA potential zones by WB project	N/A	September 11-30, 2013	8 NGO members	WUA General Assembly Meeting; Selection of Board of director, budget, staff hired, technical plans and etc.
7	"Organizational and leadership skills Development for WUA leaders" (OLD). Module V (Part II) - "Communication"	2	December 4-5, 2013		Participated in the General Assembly Meeting of WUA "Toshrobd" in J.Rumi district by FFP project; Selection of Board of director, budget, staff hired, technical plans and etc. (12/5/13, t:14:00-16:00)
8	"Financial Management and activities in WUA" (Part I&II)	2	April 14-15, 2014		All FFP committed TOT training were finalized to WB, local NGO by May 15, 2014
9	"Audit" training	1	April 28, 2014		
10	"Maintenance and operating plan of the irrigation system"	1	May 05, 2014		
11	"Conflict management and resolution plan"	1	May 12, 2014		
TOTAL:		30		20	Several individuals attended multiple sessions

#### **1.2.4 Develop and finalize instructional modules**

During the reporting period FFP developed and completed a “Guide for Strong WUA Development in Tajikistan.” The framework and approach of the guide’s curriculum included five modules which mirror the training that FFP provides to new WUAs, as well as training/reference materials on the basic principles of WUA organization, guidelines for the organizing process, and training materials for Association Organizers. This guide has been submitted to USAID for approval. Once approved and finalized, the guide will be submitted to ALRI with the intent that it will serve as the standardized methodology for WUA development.

### **ACTIVITY 1.3 RIVER-BASIN AND NATIONAL WUA REPRESENTATION**

#### **1.3.1 Assess the WUA functions needed at river basin and national-level and identify models**

In the late fall of 2013, the Government of Tajikistan issued a mandate ordering the Ministry of Land Reclamation and Water to be divided into two new national-level agencies: one tasked with operational management of irrigation water management (Agency for Land Maintenance and Irrigation, or ALRI), and a second tasked with regulatory responsibilities (the Ministry of Energy and Water Resources, or MEWR). The latter was designated as the central body responsible for overall water and energy policy and regulation.

While the creation of the MEWR and ALRI shows promise for ongoing irrigation sector reform, the reality has been that their organizational mandates are still unclear and adequate resources have not been released in order to properly fund them. The institutional mandates of the two bodies do not clearly lay out the creation or funding of basin level coordination councils, and no operational departments or units related to WUAs have been established under either the MEWR or ALRI. While the former Ministry of Land Reclamation and Water Resources had a WUA Support Unit with branch offices at oblast and district levels, it is not clear how these offices will be used going forward, or what they are capable of. Consultative support to WUAs and district offices for land reclamation and irrigation is included in the list ALRI’s functions, but it is not well defined. The reformed ALRI field units are also not organized by sub-basin, and remain organized by district administrative boundaries, thereby creating further confusion as to when basin level structures will be created. FFP continues to monitor the development of basin level structures, and will interact with them when possible.

#### **1.3.2 Support the establishment of coordination councils**

FFP intends to assist the five WUA federations engaged by the project to understand the activities and responsibilities of future basin-level organizations (i.e., coordination councils) during the extension period. However, this will depend on the Government’s efforts in establishing such units. Since federations will be the largest consumers of water nationally, FFP expects that they will need to play an important role in the future basin-level coordination councils. However, the responsibilities of coordination councils need to be agreed upon, as it seems most of organizations (ALRI, WUA federations, and others) are discussing their potential role while no practical structure has been defined by the MEWR. The creation of coordination councils has been identified as a priority under water sector reform in Tajikistan and the ultimate creation of these bodies appears to be the responsibility of MEWR.

FFP organized a joint field visit with representatives from ALRI, local Tajik TV stations, and USAID/Tajikistan to two districts (N. Khusrav and Shahrituz) to publicize the success of the USAID program. During the field visits, the USAID representative and FFP management met with both districts' government chairmen to present the FFP progress and give an overview on USAID programming in Khatlon Oblast. Highlighting the progress made by federations and WUAs should promote their participation in the future coordination councils.

## **ACTIVITY 1.4 INTRA-VILLAGE WATER ACCESS**

To address intra-village water access issues, FFP selected 10 villages with scarce water irrigation and provided small grants for the rehabilitation of village irrigation systems. FFP focused on proven, effective activities that have addressed the shortcomings in water management through appropriate organizations and procedures, along with limited system rehabilitation that has improved identified problems. The project also accompanied the grant-making with baseline and endline assessments to determine progress towards indicators, impact of work, and lessons learned.

### **1.4.1 Identify villages with irrigation difficulties and investigate the severity of the issue**

FFP originally identified 32 villages serviced by eight WUAs as study subjects in an intra-village water access assessment in August 2013. From this group of 32, FFP selected 10 priority villages that would receive grants for rehabilitation and improvement of water irrigation infrastructure. These villages were selected based on FFP's long experience in the region and for the capacity to inexpensively correct the source of water limitation. Additionally, given the series of tasks involved in pilot testing this activity and measuring the change in irrigation coverage, it made sense to select an area where FFP and WUAs had been operating the longest. Table 6 below provides some basic information on the 10 villages, including number of households and the types of land found in each one<sup>10</sup>.

Within these 10 villages, FFP conducted a random survey of households in September/October 2013 to gather data on water access issues. The results of the assessment revealed that the major intra-village irrigation problem was a lack of working water gates in critical locations. Functioning water gates are required for properly managing water flows, as without them too much water goes to some parts of the system and not enough to others. The survey results indicated that 43% of respondents rated the supply of irrigation water in their village as poor or very poor. WUAs were widely recognized by respondents (75%) as the main managers of irrigation water in their villages.

After the completion of the intervention activities, FFP surveyed households in the ten villages in July 2014 to understand the impact of its interventions. The results of the assessment showed that 67.5% of respondents perceived a favorable change in water supply over the previous year. The full report on this intra-village water assessment can be found in Annex 8.

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<sup>10</sup> One village is locally recognized as two different villages, so while FFP measures its interventions as targeting 10 villages, it measures 11 villages as being impacted

**Table 6: PROFILE OF VILLAGES ASSISTED BY INTRA-VILLAGE IRRIGATION IMPROVEMENT**

#	Number of Households	Total number of beneficiaries (village population)	Kitchen garden	Presidential land (hectares)	Dehkan Farms
1	400	2200	40	21	70
2	230	1140	60	25	210
3	200	1200	33	10	56
4	756	6684	142	65	130
5	240	1600	63	23	96
6	680	3500	80	117	180
7	610	3000	67	N/a	200
8	200	1100	41	36	90
9	100	550	15	25	80
10	130	689	22	N/a	27
TOTAL	3,546	21,663	563	322	1,139

**1.4.2 Conduct detailed site assessment to determine how to rehabilitate systems most in need of repair**

FFP’s Intra-Village Engineer provided the site designs and cost estimations for the rehabilitations to the Grants team in order to create a properly designed fixed obligation grant. FFP determined it was most efficient to have the grant overseen and held by the Sarob WUA federation both for administrative efficiency as well as to strengthen the federation as an institution.

**1.4.3 Engage community in system rehabilitation**

Public awareness of the need for this project has been increased as a result of individual and group meetings with communities. The communities found this activity very useful and they were actively involved in the assessment process and intra-village rehabilitation works. In addition, along with the community leaders, some of the village inhabitants took active part in technical feasibility study of the intra-village irrigation pilot projects and a same time on rehabilitation works which has been finalized by end of July 2014.

The intra-village irrigation infrastructure rehabilitation activities focused on installing and fully rehabilitating water control gates. Working through WUA Federation Sarob, the eight member WUAs installed 22 water distribution gates, rehabilitated 6 gates which were out of service, rehabilitated three aqueducts, constructed one water distribution structure and fully restored one pump station. Implementation of this project resulted in improvement of irrigation for more than 2,000 hectares of lands. Total number of this project’s beneficiaries is more than 22,000 people. This activity improved the irrigation condition of over 4,150 households.

FFP disbursed a fixed obligation grant for \$20,287 and an in-kind donation of water control gates valued at \$20,927. The rehabilitation works were completed in all 10 target villages by

end of July 2014. The detailed grant progress report about the technical implementation of the projects is attached as Annex 7. In addition to final technical, financial, and narrative grant reports, the Sarob WUA federation also compiled before and after photos to illustrate the impact of the rehabilitation work, which can be seen in the Intra-Village Irrigation Report in Annex 8.

## **MEETINGS WITHIN COMMUNITIES SUPPORTING WUA DEVELOPMENT PROCESS AND LOCAL GOVERNMENT AND AGENCIES**

Keeping all members of WUA members abreast of information is critical to establishing a well-functioning WUA. This year formal and informal meetings, including Core Groups, Bylaw Committees, Water Users Groups (sub-groups of a WUA), General Assembly Meeting, and meetings with local government representatives (a large number of face to face interactions were required<sup>11</sup>). These non-structured meetings before, during, and after formal WUA formation are important to widen understanding among stakeholders. These meetings covered topics ranging from public awareness about WUAs, roles and responsibilities of WUAs and WUA members, advantages of WUAs, structure of the organization, geographic boundaries of associations (organized along hydraulic boundaries), and the importance of open, democratic and accountable processes. Through this extensive interaction, potential members have increased their knowledge of WUAs, and were important to organize the WUAs this year. Table 7 below provides a detailed breakdown of these different meetings, as well as the number of attendees disaggregated by gender.

During the year FFP coordinated site visits for several ALRI staff to meet with WUA members. This is important that this Agency understand how WUA operate and be able to support them too. These visitors attended certain WUA general assembly meetings and explained changes of government of Tajikistan concerning water sector reform.

FFP's IWM team staff met with district government officials and other local authorities throughout the year to create and maintain good relationships that will increase the sustainability of program activities. Having been re-informed of FFP's objective and of the progress of various WUA activities, officials from the Jamoat and District levels cooperated and supported the program significantly. FFP had meetings with 409 local officials (not unique individuals) at the Oblast, District, Jamoat, Village, and Vodkhoz levels to promote the importance of WUAs in irrigation water management. Major officials included the Deputy Minister of the MEWR, Oblast Deputy Chairman, Oblast Head of Water Department, Chairmen of Khuroson, A. Jomi, Vakhsh, Rumi, Jillikul, Qumsangir, Qubodiyon, N. Khusrav, and their deputies as well as with the heads of the water departments of these districts and the Chairmen of Jamoats in eight districts. Several meetings were held with World Bank representatives, local NGOs, and the Deputy Director of ALRI. A national working group has been established by the MEWR which met three times with FFP staff for technical support.

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<sup>11</sup> Since the WUA creation and development process necessitates multiple visits with community leaders, or local officials, many people were met, multiple times.

A joint field visit was arranged with the representative of ALRI, Tajik state TV and USAID to two districts (N. Khusrav and Shahrituz) of Khatlon Oblast to publicize the success of the USAID program. During the field visits the USAID representative and FFP management had meetings with both districts' chairman of Hukumat in order to discuss FFP successes and USAID programming in Khatlon Oblast.

FFP's IWM Manager had meetings with the World Bank team on the MOU which was signed by USAID and WB. Specifically, they discussed the integration of FFP-created WUAs into the World Bank's activities after the end of FFP, as well as the transfer of WUA inventory lists operating in the World Bank's target areas. In addition, a meeting was held with the World Bank PAMP II project team to discuss the potential support areas for FFP-created WUAs with later funding from the World Bank.

**Table 7: ATTENDEE<sup>12</sup> DATA FROM YEAR 4 MEETINGS**

№	Activity	1st Quarter (Oct-Dec 2013)				2nd Quarter (Jan-Mar 2014)				3rd Quarter (Apr-Jun 2014)				4th Quarter (July-Sept. 2014)				Y4 TOTAL (Oct 13-Sept. 14)			
		#	M	F	Total	#	M	F	Total	#	M	F	Total	#	M	F	Total	#	M	F	Total
1	Individual meetings (Individual meetings with farmers and head of mahallas. To familiarize with communities people and discuss what is WUA and what are water sector reform, laws and project activities in Tajikistan)	0	2,098	102	<b>2,200</b>	0	1,981	90	<b>2,071</b>	0	1,312	43	<b>1,355</b>		219	3	<b>222</b>	0	5,610	238	<b>5,848</b>
2	Group meetings: (With all farmers to know the land areas and organize and small group to get more quantitative information's and sides reviews)	79	506	66	<b>572</b>	69	460	15	<b>475</b>	70	449	40	<b>489</b>	20	149	5	<b>154</b>	238	1,564	126	<b>1,690</b>
3	Meeting with local authorities: (To explain objectives of FFP project-funded by UASID and what are implementation plan at district level hukumat, jamoat and Vatkhoz before	0	1,480	64	<b>1,544</b>	0	1,894	104	<b>1,998</b>	0	1,493	55	<b>1,548</b>		190	5	<b>195</b>	0	5,057	228	<b>5,285</b>

<sup>12</sup> Notes, these are attendees not unique individuals. Since the WUA creation and development process necessitates multiple visits with community leaders, or local officials, many people were met, multiple times.

	end of the project)																				
4	Bylaw committee meetings (To elect representatives of communities or leaders for by law committee, who will work with project WUA organizer on the developing the draft by law of WUA in a month)	30	276	2	278	47	532	17	549	11	144	0	144				0	88	952	19	971
5	Informal meetings (To organize meetings in sub zone depends on the needs of issues a raised)	80	1,244	46	1,290	66	1,252	22	1,274	15	232	2	234				0	161	2,728	70	2,798
6	General Assembly meetings. (Meeting of representatives of WUA members based on sub groups, this group will compose of 21 or 23 farmers based on sizes of WUA areas)	9	193	7	200	10	207	5	212	5	86	0	86				0	24	486	12	498
7	Special General Meetings. (For any needs any issues on newly formed WUA)	1	13	1	14	11	206	10	216	34	582	7	589	6	84	5	89	52	885	23	908
8	Meeting of the WUA board (Monthly meetings on the implementation of WUA project, strategy on	0	0	0	0	2	10	0	10	5	46	10	56	21	125	3	128	28	181	13	194

	director level/project management level)																				
9	Opening Ceremony (Officially opening of the office of newly facilitated WUA as official event )	2	79	18	97	1	68	17	85	1	32	10	42	8	372	107	479	12	551	152	703
10	Cross visits (To use existing WUA to demonstrate to newly organized WUAs management, where and what stages other WUAs are managing their activities and cooperating with local hukumats, what are the challenges has been faced)	2	53	0	53	5	101	3	104	3	32	0	32	1	12	2	14	11	198	5	203
11	Presentations (WUA organizers, after 2.5 months will have status of progress presentation at FFP level what has been achieved how procedures of WUA formation went, what are the challenges has been faced and what are lesson learned)	8	119	1	120	5	61	0	61	6	40	0	40	1	4	2	6	20	224	3	227
<b>TOTAL:</b>		<b>211</b>	<b>6,061</b>	<b>307</b>	<b>6,368</b>	<b>216</b>	<b>6,772</b>	<b>283</b>	<b>7,055</b>	<b>150</b>	<b>4,448</b>	<b>167</b>	<b>4,615</b>	<b>57</b>	<b>1,155</b>	<b>132</b>	<b>1,287</b>	<b>634</b>	<b>18,436</b>	<b>889</b>	<b>19,325</b>



## CONSTRAINTS

The activities conducted during Year 4 were critical to meeting ambitious project goals. While FFP met its life of project target for WUAs created/strengthened, the project encountered challenges in implementing infrastructure rehabilitation activities. Due to weather factors, water remained in canals for longer than expected, thus causing delays in the installation of water gates for some WUAs. Other challenges related to the local institutional environment, as some WUAs experienced difficulty in getting approvals for office construction from local authorities and WUA Federations' registration status is not being recognized by the Tax Committee.

With respect to the ongoing development of WUA federations, it is worth mentioning that since some WUAs are still involved in their own formative processes, they have not had sufficient time to complete the "organizational maturation" necessary to become fully engaged members of federations. This is most apparent in Yovon district where WUA organizational maturation is ongoing. Ideally, a new WUA should operate for two full irrigation seasons before being ready to fully participate in a federation. Additionally, the planting season and rehabilitation work can affect the farmers' and/or WUA members' availability for participation in federation meetings. There is also a lack of sufficient legislative guidance for WUA federation development. It is positive to note that in response to some of these challenges WUA members have become more discerning about electing representatives who will be willing to devote adequate time to the work of the WUA and its respective federation.

The issue of water service fee collection by WUAs, and the overall legal environment within which WUAs operate, are another set of constraints worth mentioning. The specific requirements of fee collection and the role of WUAs in the process are still not clear to officials the government water department. WUAs have no clear authority under the law to sanction non-payers, and there is no established or regulated schedule for fee collection. Some local authorities demand collection on a nearly daily basis, while others request it at longer intervals. The intense pressure placed by some local authorities on WUAs to collect fees has been seen to cause "volunteer fatigue" among association members as well as attrition of elected leaders.

FFP's IWM team sought to address concern relating to fee collection by meeting with various local government authorities and WUA leaders to identify possible solutions. One potential solution discussed would be for the local governments to pass back to WUAs a certain percentage (between 20% and 30%) of the total service fees collected. This money would provide an incentive for WUAs to collect the water service fees and could be reinvested in the WUA on things like ongoing infrastructure maintenance and rehabilitation. FFP is attempting to address these issues through activities under its policy component, and is in the process of submitting recommended changes to the 2006 WUA Law to the MEWR (see Activity 4). In addition to this, FFP developed a draft "Guide for Annual Water Service Contracts between the Basin Water Supply Agency and Water Users Associations." This document discusses a variety of issues relating to fee collection and importantly argues that WUAs should pay based on actual water usage. This guide will be presented in Year Five to ALRI for further endorsement and use.

## **PLANS FOR REMAINING PERIOD OF PERFORMANCE**

As mentioned in the activity descriptions above, all targets related to organizing WUAs and WUA federations were met in Year 4. Remaining activities under the IWM component for Year 5 consist of further infrastructure improvements and capacity building work, and specifically include the following:

- Implement remaining grants activities to WUAs for infrastructure rehabilitation and WUA office construction;
- Continue supporting the four FFP WUA federations in pursuing registration;
- Procure a wheeled excavator which will be transferred via a grant in kind to the member WUAs of the Jilikul WUA federation;
- Conduct capacity assessments of the 4 WUA federations using the WUA-CAT tool;
- Provide training to WUAs on the advanced policy guides which were developed by FFP;
- Provide training to WUA management on basic computer and internet skills to further improve their administrative capacity;
- Support a cross-border exchange for Afghan officials to meet with and learn from WUAs in Tajikistan.
- Finalize a WUA-CAT user guide which can to be used as a stand-alone resource by external stakeholders; and
- Using the WUA-CAT tool, assess the change in organizational capacity of WUA's created/strengthened under the PAMP II project in order to empirically test the replicability of FFP's approach to WUA creation/development.

# 2. AGRICULTURAL DEVELOPMENT AND LIVESTOCK ENHANCEMENT (ADLE)

## ACHIEVEMENTS

As mentioned in the introduction, per the contract modification executed in August 2013, all ADLE activities were phased out in 2014. The remaining ADLE activities completed during the reporting period were the publication of 14 extension materials on crop and livestock production. These materials capture on-farm experience from the early years of the project and provide a substantial source of practical training materials.

## ACTIVITIES

### 2.1 Preparation of ADLE crop and animal production guides

The 14 crop and animal production guides listed below were finalized and Tajik versions and approved by USAID during the reporting period. They were disseminated to FTF partners, in particular those doing agricultural extension.

**Table 8: ADLE CROP MANUALS AND ANIMAL PRODUCTION GUIDES**

#	Subject/Crop	Tajik Title / Номи зироат	Style
<b>Crop Productivity</b>			
1	Technology of Tomato	Самаранокии иктисодии парвариши помидор	Handout
2	Technology of Beans	Самаранокии иктисодии парвариши луби	Brochure
3	Technology of Sunflower for Oil	Самаранокии иктисодии парвариши офтобпараст барои равган	Brochure
4	Aerobic Compost Making	Ташкил кардани компост бо рохи азобики	Brochure
5	Soil Testing	Тартиби гирифтани намунаи хок барои ташхис	Handout
6	Technology of Small Tunnel for Seedling (1mx10m)	Технологияи парвариши ниhoли сабзавот дар гармхонаи хурд (1X10)	Handout
7	Technology of Vegetable Seedling Preparation (tomato, cabbage, cauliflower, eggplant, sweet pepper, onion, broccoli)	Парвари ниhoлхои сабзавот (помидор, карам, гулкарам, боимчон, каламфури ширин, пиёз, браколли)	Handout
8	GH Management	Самаранокии иктисодии идоракунии гармхона	Handout
9	Technology of Pumpkin	Самаранокии иктисодии парвариши каду	Handout
10	Technology of Cucumber	Самаранокии иктисодии парвариши бодиринг	Handout
11	Technology of Fodder Beet	Самаранокии иктисодии парвариши лаблабуи хуроки чорво	Handout

#	Subject/Crop	Tajik Title / Номи зироат	Style
<b>Livestock Productivity</b>			
12	Technology of Maize Silage making	Технологияи истехсол ва захира намудани силоси чуворимакка	Handout
13	Veterinary First Aid	Кумаки якуминдараҷаи таъҷилии бойтори	Handout
14	Technology of Milk Processing	Технологияи истехсол ва коркарди шир	Handout

# 3. NUTRITION ENHANCEMENT/ HOUSEHOLD ECONOMICS/ GENDER EQUITY (NEHEGE)

## ACHIEVEMENTS

As mentioned in the introduction, per the contract modification executed in August 2013 all NEHEGE activities were phased out in 2014. Remaining NEHEGE activities completed during the reporting period included the completion of instructional materials related to household economics.

## ACTIVITIES

### 3.1 Develop Technical and Instructional Materials

The four instructional materials listed below (in Tajik language only) were finalized and submitted to USAID. After receiving USAID approval, these materials were shared with USAID implementing partners, as well as with the Ministry of Health and other relevant institutions.

**Table 9: HOUSEHOLD NUTRITION AND ECONOMICS GUIDES AND POSTER MATERIALS**

#	Title	Description and Dissemination
1	Household Finance Guide	This publication offers guidance smallholder production financing and financial planning. Electronic and 70 hard copies were printed to be delivered to WUA during trainings.
2	Household Garden Poster	The poster encourages diversifying household gardens with ten nutritious crops (i.e., carrot, sweet pepper, broccoli, pumpkin, cabbage, cauliflower, dill, eggplant, spinach, and red beets). Electronic and 20 hard copies were printed and delivered to FTF partners and Ministry of Health.
3	Recipes for a Healthy and Balanced Diet	The book provides instructions and illustrations of five new and 12 existing recipes. These recipes focus on complementary feeding for children under five as well as pregnant and lactating women. Electronic and 20 hard copies were printed and delivered to FTF partners and Ministry of Health.
4	Food Preservation and Storage Guide	The guide provides technical instruction on preserving and storing fruits and vegetables for winter. Electronic and 20 hard copies were printed and delivered to FTF partners and Ministry of Health.

# 4. POLICY REFORM

## ACHIEVEMENTS

WUAs are being formed by FFP in order to create a network of effective and sustainable organizations which will be able to operate and maintain the country's irrigation system—a system for which maintenance has been severely neglected over the past twenty years and for which there is no clear operating system. The agrarian and irrigation sectors are undergoing reforms which will, if properly designed, address these problems and improve both farm productivity and food security. FFP's policy component seeks to support this reform process in such a way that ensures effective participation of WUAs and WUA federations in irrigation water management going forward.

During the reporting year, FFP produced a significant number of policy documents. These are intended to serve as ongoing resources to WUAs, the Government, and other water sector stakeholders, as well as provide clear recommendations on amending the existing WUA law.

## ACTIVITIES

### 4.1 Develop a National Strategy for WUA Development

During the reporting period FFP had two STTA policy advisors provide support for assembling a national strategy for WUA development. Policy Advisor Max Goldensohn provided an analysis that offered inputs for a WUA policy development roadmap, as well as identified constraints to pursuing a national strategy for WUA development.

Irrigation Policy Specialist Douglas Vermillion developed several documents (listed in Table 10) intended to further advance a national WUA development strategy and ensure that WUA engagement is incorporated in the ongoing agrarian/irrigation water management reforms being undertaken by the Government of Tajikistan. Drawing on Mr. Goldensohn's assessment, Mr. Vermillion drafted a set of principles and priority actions that the Government of Tajikistan should take into account when developing/reforming policies related to irrigation water management. Mr. Vermillion also prepared four advanced guides to be used by WUAs to strengthen their organizational development as well as their technical capacity for managing irrigation water resources. Lastly, Mr. Vermillion prepared a guide for government, donors, and other projects that outlines the process of establishing and developing effective WUAs. These documents are being finalized and translated into Tajik for distribution to external stakeholders. Collectively, these materials offer a practical set of resources and tools that will assist WUAs in their institutional development, as well as offer clear guidance to the Government on how to ensure that WUAs are properly engaged in irrigation water management.

As part of preparing these guides and recommendations, the project reached out to many stakeholders for feedback and input. Table 11 provides an overview of stakeholder participation in the development of these documents.

**Table 10: FFP PUBLICATIONS RELATED TO WUAS**

Title Date	Primary Audience
Guide For Contents Of The By-Laws For A Water Users Association. USAID Family Farming Program for Tajikistan. July 1, 2014. Douglas Vermillion.	WUAs
Guide For Preparing An Irrigation Asset And Management Transfer Agreement In Tajikistan. USAID Family Farming Program for Tajikistan. July 1, 2014. Douglas Vermillion.	WUAs, Agency for Land Reclamation and Irrigation
Guide for an Irrigation Service Plan Prepared by a Water Users Association for Its Members. USAID Family Farming Program for Tajikistan. July 1, 2014. Douglas Vermillion.	WUAs
Guide for Annual Water Service Contracts between the Basin Water Supply Agency and a Water Users Association. USAID Family Farming Program for Tajikistan. July 1, 2014. Douglas Vermillion.	WUAs & Agency for Land Reclamation and Irrigation
Guide for Establishing Strong Water Users Associations in Tajikistan. USAID Family Farming Program for Tajikistan. July 1, 2014. Douglas Vermillion, Asoev Saidali, Sharif Sharipov, Ekaterina Zavrazhina, Sheroz Bakiev, and James Campbell.	Tajikistan Government, Donors, Projects, Evaluators and WUA leaders
Recommendations for a Statement of Principles and Priority Actions for Irrigation and Drainage in the Republic of Tajikistan. USAID Family Farming Program for Tajikistan. September 11, 2014. Douglas Vermillion.	Tajikistan Government, Donors, Projects, Evaluators

## Table 11: STAKEHOLDER PARTICIPATION IN WUA SUPPORT DOCUMENTS AND WUA LAW REFORM

### Date: February 6, 2014

Types of Participants, number: Representatives of Water Users Associations and WUA organizer/institutional development team of USAID Family Farming Program. Nine participants took part in this consultation, excluding the FFP representatives.

#### Documents Discussed:

- Draft guide for By-laws for the Water Users Association
- Draft guide for Charter of the Water Users Association
- Draft guide for Preparing an Irrigation Management Transfer Agreement
- Review of the legal framework for water user associations in Tajikistan

### Date: February 7, 2014

Types of Participants, number: Representatives of Water Users Associations, Federations of Water Users Associations of Qubodiyon district and WUA organizer/institutional development team of USAID Family Farming Program. Twelve participants took part in this consultation, excluding the USAID FFP representatives.

#### Documents Discussed:

- Draft guide for By-laws for the Water Users Association
- Draft guide for Charter of the Water Users Association
- Draft guide for Preparing an Irrigation Management Transfer Agreement
- Review of the legal framework for water user associations in Tajikistan

### Date: February 18 – 19, 2014

Types of Participants, number: Representatives of Ministry of energy and water resources, Agency for land reclamation and irrigation under Government of Tajikistan, Ministry of Justice, Fergana Valley Project Management Unit under Ministry of energy and water resources and USAID Family Farming Program. Seven participants took part in this working group meeting, excluding the USAID FFP representatives.

#### Documents Discussed:

- Draft guide Policy on Irrigation and Drainage for the Republic of Tajikistan
- Review of the legal framework for water user associations in Tajikistan
- Draft guide for Preparing an Irrigation Management Transfer Agreement
- Draft guide for By-laws for the Water Users Association
- Draft guide for Charter of the Water Users Association
- Glossary of Terms for Participatory Irrigation and Drainage in Tajikistan
- Draft Concept note on Roles and Functions of a Regulatory Unit for Irrigation and Water Users Associations within the Ministry of Energy and Water Resources
- Draft Guidelines for Irrigation Service Standards for Needs-based Budgeting and Payment

### Date: February 21, 2014

Types of Participants, number: Representatives of Agency for land reclamation and irrigation (national, oblast and district levels) and Water Users Associations and WUA organizer/institutional development team of USAID Family Farming Program. Eleven participants took part in this consultation, excluding the USAID FFP representatives.

#### Documents Discussed:

- Draft guide for By-laws for the Water Users Association
- Draft guide for Charter of the Water Users Association
- Draft guide for Preparing an Irrigation Management Transfer Agreement
- Review of the legal framework for water user associations in Tajikistan

### Date: February 26 - 27, 2014

Types of Participants, number: Over 60 participants took part in this conference, excluding the USAID FFP representatives. Representatives of the following organizations and agencies took part in the conference:

- Ministry of Energy and water resources of Tajikistan
- Ministry of Justice of Tajikistan
- Agency for land reclamation and irrigation under Government of Tajikistan
- Environmental Protection Committee under Government of Tajikistan
- Fergana Valley Project Management Unit under Ministry of energy and water resources of Tajikistan
- Water Users Associations and Federations of WUAs from Khatlon, Soghd and GBAO
- Public organizations working in irrigation sector in Tajikistan
- TV “Jahonnamo” and Radio “Sadoi Dushanbe”
- US Embassy in Tajikistan
- United Nations Development Program
- USAID Tajikistan

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- Swiss Cooperation Office in Tajikistan
  - Representation of European Union in Tajikistan
  - Deutsche Welthungerhilfe e.V. – Tajikistan
  - Oxfam GB
  - Mission East
  - USAID Farmer Advisory Services in Tajikistan/University of Illinois
  - International Secretariat for Water
  - Helvetas Swiss Inter cooperation, IWRM Project
  - USAID Family Farming Program
  - International consultant, hired by the USAID Family Farming Program
  - An independent local consultant working in water sector
- 

Documents Discussed:

- Draft guide for By-laws for the Water Users Association
- Draft guide for Charter of the Water Users Association
- Draft guide for Preparing an Irrigation Management Transfer Agreement
- Draft guide for an Irrigation Service Plan to be Prepared by a Water Users Association for its Members
- Draft Guidelines for Irrigation Service Standards for Needs-based Budgeting and Payment
- Water Users Association-Capacity Assessment Tool
- Review of the legal framework for water users associations in Tajikistan

**Date: March 18, 2014**

Types of Participants, number: Representatives of Agency for Land Maintenance and Irrigation (national, oblast and district levels), Water Users Associations, Federation of WUAs “Sarob” and WUA organizer/institutional development team of USAID Family Farming Program. Eighteen participants took part in this consultation, excluding the USAID FFP representatives.

Documents Discussed:

- Draft guide for Preparing an Irrigation Management Transfer Agreement
- Draft guide Policy on Irrigation and Drainage for the Republic of Tajikistan

**Date: March 19, 2014**

Types of Participant Agency for Land Maintenance and Irrigation (national, oblast and district levels) and Water Users Associations and WUA organizer/institutional development team of USAID Family Farming Program. Twelve participants took part in this consultation, excluding the USAID FFP representatives.

Documents Discussed:

- Draft guide for Preparing an Irrigation Management Transfer Agreement
- Draft guide Policy on Irrigation and Drainage for the Republic of Tajikistan

**Date: March 20, 2014**

Types of Participants, number: Representatives of Agency for land reclamation and irrigation under Government of Tajikistan, Ministry of Justice, Fergana Valley Project Management Unit under Ministry of energy and water resources and USAID Family Farming Program. Seven participants took part in this working group meeting, excluding the USAID FFP representatives.

Documents Discussed:

- Draft guide for Preparing an Irrigation Management Transfer Agreement
  - Draft guide Policy on Irrigation and Drainage for the Republic of Tajikistan
- 

#### **4.2 Conduct WUA Legal and Regulatory Analysis and Recommend Updates**

During the reporting period FFP engaged two STTAs who provided inputs and recommendations for updating the 2006 WUA Law.

In the second quarter, Douglas Vermillion moderated meetings with stakeholders as well as working groups with the MEWR to discuss revisions of the 2006 WUA Law. Table 11 above provides detailed information on these consultative meetings. In the third quarter, Mr. Vermillion completed a report on updating and improving the 2006 WUA Law that incorporated feedback from the stakeholder meetings and working groups.

During the third and fourth quarters, Legal Advisor Stephen Hodgson prepared a detailed review and analysis of the 2006 WUA Law that included recommendations for amending the law, as well as a marked up version of the WUA law to incorporate recommended changes to the law. Mr. Hodgson’s “Review of the Legal Framework for Water Users Associations in Tajikistan” was translated into Tajik and is being reviewed by the MEWR. This document will be finalized in the first quarter of Year 5 through consultative meetings with the ministry.

Table 12 summarizes FFP progress towards WUA development policy milestones.

**Table 12: PROGRESS ON POLICY AND STRATEGY MILESTONES**

Stage	Policy/Strategy Development Milestone	Weight	Score
<b>Stage 1</b> Policy/Strategy Initiated	Donors groups propose that legislation is needed, or needs to be revised, on the issue defining and/or improving WUA and WUA federations’ role in reformed water sector.	10	10
	Road-map drafted, further studies/research is conducted on the issue, and draft strategy is developed.	10	10
<b>Stage 2</b> Draft Policy/Strategy Improved with Public Input	Draft strategy circulated for comment to the Government of Tajikistan and donor group (DCC).	10	10
	Civil society organizations (including WUA federations and Basin Coordination Councils, if they are created) formally review the draft reform strategy.	10	10
	Open forums are held on the new WUA Strategy at coordination councils and/or at WUA federation meetings.	10	10
	WUA federations and/or Basin Coordination Councils share their analysis of draft policy/strategy and submit questions and recommendations to the MLRWR and other policy makers.	10	0
	WUA federations and/or coordination councils advocate for policy/strategy to officially recognize WUA federations’ role in irrigation system co-management and in expanded river basin approach to integrated water resource management.	10	0
<b>Stage 3</b> Policy/Strategy Finalized and Adopted	WUA Policy Issues, including proposed revision to the WUA Law are areas introduced in the Ministry, legislative committee, or other governmental body.	5	0
	Committee/Ministry discussion is held on the WUA Policy issues and proposals.	5	0
	Hearings are conducted by committee/Ministry, at which time WUA federations and/or coordination councils advocate for policy/strategy to officially recognize WUA federations’ role in irrigation system co-management and expanded river basin approach to integrated water resource management.	10	0
	New WUA policy, embodied in revised law and Water Code is passed/adopted by full approval process.	2	0
<b>Stage 4</b> Implementation	Detailed policy guidance or action plan developed, at which time WUA federations and/or basin coordination councils advocate for policy to officially recognize WUA federations’ role in irrigation system co-management and expand the river basin approach to integrated water resource management.	4	0
	Policy guidance or action plan publicly disseminated.	1	0
	Administering agencies are informed and technical assistance provided so parties (WUAs, Mirops, BCCs, local government/ hukumat, etc.) can fulfill or enhance new roles/responsibilities.	1	0
	Financial resources are allocated and disbursed, or identified, for implementation of new law, and rehabilitation of irrigation infrastructure, prior to transfers.	1	0
	Organizational restructuring takes place; Mirop, Ministry separate.	1	0

Stage	Policy/Strategy Development Milestone	Weight	Score
	Baseline = 10 Total Score Possible: 100	100	50

#### 4.3 Prepare WUAs to interact with a basin-level management structure

The MEWR is yet to create the basin-level management units (coordination councils) that it has indicated are planned. The advanced WUA guides and other resources developed under Activity 4.1 provide practical resources to improve current and future WUA capacity, and will thereby enhance WUAs' ability to effectively interface with their eventual counterparts at basin-level units. In addition to this, the proposed WUA Law revisions developed under Activity 4.2, if adopted, will further strengthen WUAs' role in irrigation water management and as a result ensure that WUAs have an adequate role in water management once the basin-level units are created. Lastly, FFP's significant progress in developing and strengthening WUA federations under Activity 1.1.5 will further ensure that WUAs are well-organized and capable of advocating for their needs effectively with the future basin-level units.

#### 4.4 Determine a method to calculate water delivery costs

During the third quarter, STTA Irrigation Specialist Mark Svendsen prepared a report entitled "Needs-Based Budgeting for Irrigation System Management in Tajikistan." This report was submitted to USAID in July 23, 2014, and discussed: 1) institutional needs within government required for development of needs-based budgets that accurately reflect delivery costs; and 2) recommended management tools used for developing needs-based budgets.

## CONSTRAINTS

The focus on irrigation sector policy and implementation of policy-related activities began with the conclusion of the 2013 contract modification, allowing only 13 months to address policy reforms affecting WUAs. Many of the efforts will require government involvement, which is often slow and constrained by a shortage of technical staff in the MEWR at both the national and oblast levels. Fortunately, FFP relations with the government are very good and dialogue about actions to effect reform has been positive. Nonetheless, there are a very limited number of experienced counterparts available in government to act on recommendations. The list below provides a summary of the constraints related to policy reform:

- Ambiguity of roles and responsibilities taken by the reorganized water sector government agencies, ALRI and MEWR.
- Limited duration of the project, limiting ability to support amendment of WUA Law.
- Reform process not progressing as fast as desired, namely, re-organizing ALRI operational units along hydrological boundaries has not occurred, neither the creation of sub-river basin coordination councils not begun.
- Ministry of Energy and Water Resources staff is quite small and did not include enough of highly experienced leaders of the former Ministry of Land Reclamation and Irrigation.

- Government has not set up coordination councils, which would provide for basin-level water resource management, the organization of these councils is not yet scheduled.
- The Tax Committee does not view the current WUA law as sufficient to recognize the NGO status of WUA Federations. As a result, the WUA Federations have not been able to gain tax registration and are limited in their abilities to coordinate joint management of water resources and interact with government water management agencies.

## **PLANS FOR REMAINING PERIOD OF PERFORMANCE**

Remaining activities under the Policy Reform component for Year 5 consist of the following:

- Finalize proposed changes to the WUA Law. In October 2014, Legal Specialist will meet with WUA representatives and MEWR/ALRI officials to discuss the proposed changes and then assemble a final version of recommendations on the law amendments. Included in these recommendations is the definition of the role of WUA federations, which should provide a legal framework for their registration.
- Prepare legislation for review by Parliament. After Mr. Hodgson completes his recommendations, a local legislative expert will be hired to follow up on and assemble the legislative change documents required by Parliament to formally amend the law.
- Coordination with ALRI and MEWR to ensure that the FFP-developed advanced policy become an established part of these agencies' resources available to support WUAs.
- FFP's IWM Component Manager will attend a conference in Bishkek in November to deliver a presentation on FFP's successes working with WUAs on water management.
- Deliver an end-of-project presentation to interested stakeholders that discusses lessons learned and recommendations for ongoing WUA development.

# GRANTS

## GRANTS TO SUPPORT IRRIGATION INFRASTRUCTURE REHABILITATION AND WUA CAPACITY DEVELOPMENT

FFP grants continued to support WUAs in rehabilitating irrigation systems in the project's target regions, as well as help build WUA financial management and administrative capacity. FFP provided financial assistance for rehabilitation of WUAs' on-farm irrigation structures, which included installation of water gates, cleaning of drainage ditches, cleaning of canals, and other structural repairs. In this year, an improved system of marking USAID funded infrastructure sites, by using factory installed placards, was implemented.

Grant funds were also used for the construction of WUA offices and procurement of office furniture and equipment. In addition to supporting individual WUAs, grant funds were also provided to the Sarob WUA federation to rehabilitate intra-village irrigation systems that supply water to 10 villages. Specific rehabilitation activities completed by the Sarob federation include installation of 22 full sets of water control gates, rehabilitation of six existing water control gates, rehabilitation of three aqueducts, and rehabilitation of an electric water pump.

In Year 4 a total of 71 grants were awarded to 33 WUAs and one WUA federation. These grants included 50 fixed obligation grants (FOGs) and 21 in-kind grants, and a total of \$2,040,130 in grant funds was dispersed during the reporting period, bringing the life of project total of grants disbursed to \$2,908,061. During the year, FFP received 28 grant applications totaling \$1,692,738 from partner WUAs. These were evaluated by FFP's grant review panel and were submitted to USAID for approval. Table 13 below shows a high level summary of grants activity during the year. Annex 7 at the end of this report provides a detailed list of grant disbursements during the reporting year.

All outstanding grants expired on July 31, 2014. Under the project extension, FFP re-allocated the unmet milestones from grants under the original contract period and awarded WUAs new grant agreements to enable WUAs them to complete these milestones by December 27, 2014. These grants included 39 fixed obligation grants (FOGs), 30 of which include funding for office construction. FFP submitted the second round of grants to USAID in September 2014 and, as of October 1, 2014, \$495,745 in extension grants funding is pending approval.

**Table 13: UPDATE OF GRANT REQUESTS, IMPLEMENTATION AND COMPLETION**

Grants Status Update		
Grant Applications Received by FFP	28	During Y4, the following WUAs applied for grants: Mehnat-2013, Gulobod-2013, Gulbakhor-2014, Navbakhor-1, Toshrobod, Istiqlol PL6, Chorgul-2012, Norin, Aqua International, Sitorayi Yovon, Obshoroni Yovon, Mehnati sof, FWUA Sarob (2), Jayhun, Dusti-2013, Panjrud, Chashmayi Zulol, Vodii Beshkent, Ehyo-2013, Barakat Ya, Huseyini Auyb, Rudi Vakhsh-2012, Safo-52, Buston K, Obrason K, Ibrogim Karimov, Tojikobod-1.
Grant Applications Evaluated by FFP	28	During Y4, FFP awarded grants to the following WUAs: Mehnat-2013, Gulobod-2013, Gulbakhor-2014, Navbakhor-1, Toshrobod, Istiqlol PL6, Chorgul-2012, Norin, Aqua International, Sitorayi Yovon, Obshoroni Yovon, Mehnati sof, FWUA Sarob (2), Jayhun, Dusti-2013, Panjrud, Chashmayi Zulol, Vodii Beshkent, Ehyo-2013, Barakat Ya, Huseyini Auyb, Rudi Vakhsh-2012, Safo-52, Buston K, Obrason K, Ibrogim Karimov, Tojikobod-1.
Dollar Amount of Grants Evaluated by FFP	\$1,692,738	
Requests for FOG approvals sent to USAID CO	9	WUAs: Rudi Vakhsh-2012 (2), Safo-52, Buston K, Huseyini Auyb, Obrason K, Ibrogim Karimov (2) , Tojikobod-1
Requests for GIK approvals sent to USAID CO	0	N/A
Requests for FOG approvals sent to USAID COR	63	WUAs: Jayhun (2), Dusti-2013 (2), Panjrud (2), Chashmayi Zulol (2), Vodii Beshkent (2), Ehyo-2013 (2), Barakat Ya (4), FWUA Sarob (2), Mehnat-2013 (2), Gulobod-2013 (2), Gulbakhor-2014 (2), Navbakhor-1 (2), Toshrobod (2), Istiqlol PL6 (2), Chorgul-2012 (2), Norin (2), Aqua International (2), Sitorayi Yovon (2), Obshoroni Yovon (2), Mehnati sof (2), Tojikobod-1, Huseyini Auyb, Safo-52, Vatan-1, Chashmasoroni Vakhsh, Nahri Dusti, Obi Vakhsh-1, Obi Vakhsh, Khingobi Bolo, Obchakoron, Obi Ravon, Hazorchashma RQ, Qumsangir-2013, Farovon, Nahri Yoron, Beshkent, Bahoriston-2013, Obrason K, Buston K, Obi Shirin Z, Selbur
Requests for GIK approvals sent to USAID COR	15	WUAs: Jayhun, Rudi Vakhsh-2012, Safo-52, Dusti-2013, Panjrud, Buston K, Chashmayi Zulol, Huseyini Auyb, Obrason K, Ibrogim Karimov, Tojikobod-1, Vodii Beshkent, Ehyo-2013, Barakat Ya, FWUA Sarob
FOGs approved by USAID CO	7 <sup>13</sup>	WUAs: Rudi Vakhsh-2012, Safo-52, Buston K, Huseyini Auyb, Obrason K, Ibrogim Karimov, Tojikobod-1
GIKs approved by USAID CO	0	N/A
FOGs approved by USAID COR	40 <sup>14</sup>	WUAs: Mehnat-2013 (2), Gulobod-2013 (2), Gulbakhor-2014 (2), Navbakhor-1 (2), Toshrobod (2), Istiqlol PL6 (2), Chorgul-2012 (2), Norin (2), Aqua International (2), Sitorayi Yovon (2), Obshoroni Yovon (2), Mehnati sof (2), FWUA Sarob (2), Jayhun, Dusti-2013, Panjrud, Chashmayi Zulol (2), Vodii Beshkent (2), Ehyo-2013, Barakat Ya (4), Tojikobod-1, Huseyini Auyb
GIKs approved by USAID COR	15	WUAs: Jayhun, Rudi Vakhsh-2012, Safo-52, Dusti-2013, Panjrud, Buston K, Chashmayi Zulol, Huseyini Auyb, Obrason K, Ibrogim Karimov, Tojikobod-1, Vodii Beshkent, Ehyo-2013, Barakat Ya, FWUA Sarob

<sup>13</sup> Approvals for FOGs submitted to CO in September 2014 are pending as of October 1, 2014

<sup>14</sup> Approvals for FOGs submitted to COR in September 2014 are pending as of October 1, 2014

Grants Status Update		
Total Value of Grants Disbursed in Year 4	\$2,040,130	
Total Cumulative Value of Grants Disbursed during Life of Project	\$2,908,061	

## GRANTS MANAGEMENT TRAINING FOR GRANTEES

During the reporting year FFP's Grants Team conducted Phase 1, 2, and 3 grants management trainings that were attended by 232 Grants Management Committee members from 27 WUAs. FFP's Grants team also conducted Table 14 below provides further detail on the training content and the attendees. As a result of these training sessions, the WUAs were able to develop proposals for fixed obligation and in-kind grants. Eighteen WUAs and one WUA federation are currently in the process of implementing their grant programs. These WUAs are following USAID regulations, including those related to procurement, financial reporting, environmental compliance, and branding and marking.

**Table 14: GRANTEE TRAINING**

WUA Grants Management and Financial Procedures Training
<b>Phase 1: Guide To Preparation Of USAID Grant Documents</b>
28 Grant Management Trainings Phase 1 for WUAs: Mehnat-2013, Gulobod-2013, Gulbakhor-2014, Navbakhor-1, Toshrobood , Istiqlol PL6, Chorgul-2012, Norin, Aqua International, Sitorayi Yovon, Obshoroni Yovon, Mehnati sof, FWUA Sarob (2), Barakat Ya, Ehyo-2013, Vodii Beshkent, Tojikobod-1, Ibrogim Karimov, Obrason-K, Buston-K, Huseyini Auyb, Panjrud, Dusti-2013, Safo-52, Rudi Vakhsh-2012, Jayhun, Chashmayi Zulol.
The total number of Phase 1 participants in Year 4 was 92 people.
<b>Phase 2: How To Implement Your USAID Grant</b>
31 Grant Management Trainings Phase 2 for WUAs: Mehnat-2013, Gulobod-2013, Gulbakhor-2014, Navbakhor-1, Toshrobood , Istiqlol PL6, Chorgul-2012, Norin, Aqua International, Sitorayi Yovon, Obshoroni Yovon, Mehnati sof, FWUA Sarob (2), Jayhun, Dusti-2013, Panjrud, Chashmayi Zulol, Vodii Beshkent, Ehyo-2013, Barakat Ya (2), Tojikobod-1, Huseyini Auyb, Rudi Vakhsh-2012, Safo-52, Buston K, Huseyini Auyb, Obrason K, Ibrogim Karimov, Tojikobod-1.
The total number of Phase 2 participants in Year 4 was 140 people.
<b>Phase 3: Informal On-Site Training, Mentoring, and Monitoring</b>
Finance Management
Procurement training
Filing and record maintenance training
Training on milestones' reporting

## **CONSTRAINTS**

- A requirement to renew all expired grants has delayed some office construction and infrastructure rehabilitation work.
- Some WUAs may have “growing pains” as members evaluate the performance of leaders.
- Bad weather or canals’ extended season use could prevent water control gate installation during November and December.
- The decision by the tax committee not to recognize the registration status of federations has limited FFP in awarding grants to federations. In particular, it has delayed the award of a grant-in-kind for a wheeled excavator to the Jilikul WUA Federation.

## **PLANS FOR REMAINING PERIOD OF PERFORMANCE**

With respect to grants, FFP anticipates the following activities in Year 5:

- Complete remaining targeted infrastructure improvement activities;
- By way of grant-in-kind, provide WUA members of the Jilikul WUA federation with a wheeled excavator to be used for canal maintenance and rehabilitation;
- Support preparation of the final report that summarizes the amount and types of grant activities funded under FFP.

# MONITORING AND EVALUATION

This section provides an overview of activities implemented and challenges encountered by FFP’s M&E unit during the reporting year. In this period, the FFP M&E team completed a revision of the Activity M&E Plan, as well as supported ongoing monitoring, evaluation, and reporting requirements in order to ensure compliance with the FFP contract and USAID regulations.

## ACTIVITIES

### Revision of Activity M&E Plan

During the reporting year, the M&E team completed revisions to the Activity M&E plan in order to align with the August 2013 contract modification. The revised plan was submitted to USAID for review during the first quarter, and the final version was approved by the COR in January. This document includes detailed descriptions of each indicator, as well as identifies units of measure, data sources, and data collection methodologies. The revised Activity M&E plan was presented and discussed with all FFP staff during the FFP annual session held in December 2013 to ensure that there is broad ownership of the document.

### Data Quality Assessments

Per ADS 203.3.5, the quality of indicators and data used in reporting to USAID is required to be reassessed no less than once every three years. The quality of data is of high importance due to its use in assessing impact as well as its role in guiding project management decisions. The data quality assessments (DQAs) of the FFP/FTF standard indicators conducted by the M&E team are found in Table 15, below.

**Table 15: DATA QUALITY ASSESSMENT - FFP/FTF STANDARD INDICATORS**

#	USG #	Indicator	Status	1 <sup>st</sup> DQA	Date Finalized
1	4.5.2-23	Value of incremental sales (collected at farm- level) attributed to FTF implementation	Completed	June 2013	November 2013
2	4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	Completed	February 2013	June 2013
3	4.5.2-11	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business	Completed	February 2013	October 2013

		associations, and community-based organizations (CBOs) receiving USG assistance			
4	4.5.2-13	Number of rural households benefiting directly from USG interventions	Completed	February 2013	February 2014
5	4.5.2-42	Number of private enterprises, producers organizations, water users associations, women's groups, trade and business associations and community-based organizations (CBOs) that applied new technologies or management practices as a result of USG assistance	Completed	February 2013	October 2013
6	4.5.2-2	Number of hectares under improved technologies or management practices as a result of USG assistance	Completed	February 2013	October 2013
7	4.5.2(25)	Number of people with a savings account or insurance policy as a result of USG assistance	Completed	February 2013	June 2013
8	4.5.2(7)	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	Completed	October 2013	November 2013
9	4.5.16,17,18	Gross margin per unit of land, kilogram, or animal of selected product (crops/animals selected vary by country)	Completed	October 2013	February 2014
10	3.1.9(1)	Number of people trained in child health and nutrition through USG-supported programs	Completed	October 2013	November 2013
11	4.5.1(28)	Hectares under new or improved/rehabilitated irrigation (RiA) (WOG)	Completed	October 2013	November 2013

The general data quality issues were the following:

- The PIRS for indicators 4.5.16,17,18 and 3.1.9(1) were not adjusted to program activities;

- The methodology for data processing was not documented in the past.

When revising the Activity M&E plan, the M&E team ensured that all the PIRs were adjusted to the project activities and developed Standard Operation Procedures on data processing for each indicator.

During the same reporting period, the M&E team conducted DQAs of the FFP program level indicators found in Table 16, below.

**Table 16: FFP PROGRAM LEVEL INDICATORS**

FFP #	Indicator	DQA	Status
2	Percentage change in score on the Water Users Association Capacity Assessment Tool (WUA-CAT)	February 2014	Completed
15	Percentage membership service fees collected by WUAs as related to the WUA budget	February 2014	Completed
9	Perceived change in improvements in intra-village water supply	February 2014	Completed
13	Change in irrigation frequency as measured by 'irrigation-days'	February 2014	Completed

The DQAs of the indicators above revealed that they were tracking the results they are intended to measure, and that the data was being collected and reported on time. The data collection methods, analysis, storing, reporting, and responsibilities were found to be clearly defined and documented in the PIRS, assessment protocol, and Standard Operation Procedures documents. FFP M&E staff verify data for accuracy based on the USAID DQA checklist and store it in the project's M&E database. The data was available at the time of the reporting period.

#### **Intra-Village Assessment**

FFP conducted a targeted intra-village assessment between September 25th – October 4th, 2013 in 10 villages in Khatlon that were identified as having irrigation problems. Overall, 295 interviews were conducted in randomly selected households. The assessment was mainly conducted to collect baseline data for the project indicators. Please see Annex 8 for a full report on this intra-village assessment, which provides information on both pre- and post-rehabilitation conditions. The study enabled the project to effectively target interventions and technical assistance, and at the close of the project, measure progress made on enhancing irrigation systems in Tajikistan. In addition, information collected could be used to examine what steps that can be taken by villages in future to make strides in effective irrigation management without donor-project assistance.

Per USAID request, a wider geographic scale intra-village assessment was conducted in July 2014 in FFP target districts in order to more closely examine the current status of irrigation water systems within villages in the FtF target zone. The specific objectives of the intra-village assessment were to:

- Deepen the understanding of problems/challenges of rural households in FFP target areas related to irrigation water;
- Gain a better understanding of the target areas that can lead to refining the planned interventions in the future;
- Gather the end-line data for the following FFP indicators to be able to measure the progress or change over time.

### **FFP Staff Training on Data Collection System and Techniques**

In December 2013, FFP’s M&E team conducted an orientation for technical staff on the Activity M&E plan. The purpose of the training was to ensure that all team members understood the importance of tracking indicators, the meaning of each indicator, and the data collection responsibilities of each individual. FFP staff were also trained on the data collection tools used by the project, the frequency of data collection, and how indicator data will be used by FFP stakeholders. During the training, FFP’s M&E team emphasized the importance of not double-counting training participants and discussed in detail the revised training attendance sheets to be used by WUA Organizers.

### **Capacity Assessment of 60 WUAs**

The WUA Capacity Assessment Tool, or WUA-CAT, was developed in August 2013 by FFP’s Monitoring and Evaluation (M&E) and IWM teams, with support from an outside M&E Specialist. The WUA-CAT uses a simple 1-4 scale scoring system to rank nine key areas of organizational capacity, among them including governance, service delivery, financial management, advocacy, and gender inclusiveness.

During the reporting period, the FFP M&E team conducted baseline and endline WUA-CAT assessments on all 60 FFP WUAs. Given the wide range of “institutional ages” of WUAs, the 60 associations were divided into six different age groups in order to enable comparisons that controlled for institutional age. The team collected, analyzed, and disseminated baseline and endline data to WUAs and presented the findings to FFP staff. Endline data indicated that FFP had achieved its target of an average overall improvement of 10% over baseline within each institutional age group. Please see Annex 9 for a full report on the WUA-CAT’s methodology and findings.

## **PLANS FOR REMAINING PERIOD OF PERFORMANCE**

A summary of M&E activities for the remaining period of performance is included in Table 17, below. It is worth highlighting that given the addition of some additional activities under the IWM and Policy components, a revised M&E plan will be submitted to USAID for review and approval.

### **Final Evaluation**

An independent final project evaluation will take place during October-November of 2014 to review project performance, analyze sustainability of results and determine whether the project

has achieved its immediate objectives, global environmental objectives; and contributed towards the overall development objectives.

The final evaluation will be overseen by the FFP M&E staff, but implemented by an external third party contractor. FFP M&E team developed scope of work and advertised in local UN website. Three local research companies applied and FFP sent RFP to applied companies.

The evaluation contractor will be responsible for implementation of the final evaluation with guidance by FFP M&E staff, data entry, analysis of findings and a final report outlining all evaluation findings and recommendations.

**Table 17: M&E ACTIVITIES FOR THE REMAINING PERIOD OF PERFORMANCE**

#	Activities	Delivery Date	Responsible
1	Continue with monitoring, data collection, analysis and reporting on FFP indicators	October 2014 – February 2015	M&E specialists and FFP program staff
2	Continue updating the FTF MIS system	October 2014 – February 2015	M&E specialist and team
3	Revision of Activity M&E plan	October 2014 – February 2015	M&E specialist and team
4	Conduct Final Project evaluation	October-November 2014	M&E specialist and team
3	Develop WUA-CAT guide	October-November 2014	M&E specialist and STTA

# COMMUNICATIONS AND REPORTING

FFP has leveraged the media and has created publications to share FFP achievements and best practices during the year. The following section details those activities.

## MEDIA COVERAGE

Table 18 below details media coverage received by the FFP project during the reporting year.

**Table 18: FFP MEDIA COVERAGE**

#	TV/ Radio	Lang.	Activity/ Participants	Interviewee/Position	Date/ Time of Broadcast	Broadcast Area*
1.	Oblast TV and newspaper	TAJ	Opening ceremony of Sitorai Subh WUA	Newscaster of TV spot talked about the goal and task of organizing a WUA. An article on WUA "Sitorai Subh" establishment process, its main activities and progresses made so far by WUA was published.	10/24/2013	Khatlon oblast
2.	TV Jahonnamo and Tajik State Radio "Sadoi Dushanbe"	TAJ	Conference on "Strengthening Water Users Associations for Water Sector Reform in Tajikistan"	TV and Radio reporters talked about the goals of the conference. Representatives from WUAs and FWUAs during interviews expressed their opinions about the importance of conducting such conference for WUAs development in the country.	2/26/2014 – 2/27/2014	97% of the RT population
3.	TV Jahonnamo and Tajik State Radio "Sadoi Dushanbe"	TAJ	General Assembly Meeting of the WUA "Korvon" in N. Khusrav district	Newscaster of TV spot talked about the goals and tasks of the WUA, the importance of such activities, and about the participants in the event. During interviews farmers talked about existing problems with irrigation water and plans for solving them though newly established WUA. WUA organizer from FFP, Dilovar Taghoimurodov, spoke about the principles of organizing WUAs.	April 2014	97% of country
4.	TV Jahonnamo and Tajik State Radio "Sadoi Dushanbe"	TAJ	Opening ceremony of Chashmasoroni Vakhsh WUA	TV and Radio reporters talked about the goal and task of organizing a WUA. Ibrohim Khojayev, Manager of WUA "Chashmasoroni Vakhsh" during an interview with TV and Radio reporters talked about the significance of a WUA establishment, improvement of water management in their service area and future plans for solving existing challenges related to cleaning of canals and drains and installation of	6/18/2014	97% of country

#	TV/ Radio	Lang.	Activity/ Participants	Interviewee/Position	Date/ Time of Broadcast	Broadcast Area*
				water gates.		
5.	News Program on Jahonnamo TV	TAJ	Training “Computer aided design of water flow measurement structures” conducted by a STTA	Newscaster was talking about the importance of the training, but no interview was broadcasted.	June 2014	97% of the RT population
6	TV Jahonnamo and Tajik State Radio “Sadoi Dushanbe”	TAJ	Opening ceremony of Navbahor-1 and Gulbahor-2014 WUAs	Newscasters talked about the goals and tasks of WUAs. Turayev Shernazar, Manager of WUA “Navbahor-1” and Alinazar Khojanazarov, Chairman of WUA “Gulbahor-2014” in response to reporters’ questions talked about progresses made so far and existing problems related to cleaning of canals and drains.	8/21/2014	97% of country
7	TV Jahonnamo and Tajik State Radio “Sadoi Dushanbe”	TAJ	Opening ceremony of Zarnisor-F and Bahoriston-2013 WUAs	TV and radio reporters talked about the goal and task of organizing a WUA, as well as Najmiddinov Muso, Chairman of WUA “Zarnisor-F” and Gadoi Naimov, Manager of WUA “Bahoriston-2013” talked about the number of gates they installed, the canals, and drainages they cleaned in their area and a pump unit they installed, which will help them to regulate the water supply.	9/4/2014	97% of country
8	District newspaper “Navidi Balkh”	TAJ	Opening ceremony of Obchakoron WUA	An article on WUA “Obchakoron” establishment process, its main activities and progresses made so far by WUA was published.	9/18/2014	J. Rumi district

\*Since FFP and the utilized media cannot measure media impressions, we are noting the number of people who have access to the media outlet.

## SUCCESS STORIES

# INCREASED WATER SUPPLY ENABLES THREE SUCCESSFUL HARVESTS



*Shohrahimov Davlatdiyov is impressed by the yield of carrots grown on his land this year. Credit: USAID FFP*

Sixty-six year old Shohrahimov Davlatdiyov lives with his large extended family of 18 in the village of Rudaki, located in the Qumsangir district of southern Tajikistan. The farm lands in Shohrahimov's village are irrigated by a Soviet era irrigation canal, which until recently was in severe disrepair and had not seen adequate maintenance in the last 12 years. The poor state of the canal limited the availability of water, preventing Shohrahimov and his neighbors from harnessing the full potential of their lands. As a result, farmers in Shohrahimov's village could

only plant a single harvest's worth of cotton and wheat during the year, instead of sowing a second harvest or a variety of other crops for home consumption or sale in the district market.

USAID directly addresses the shortage of water in rural areas through organizing local water user associations and involving associations in irrigation water management and infrastructure improvements. Shohrahimov and his neighbors established a new association and are now members of *Bahoriston-2013 Water User Association*. With the support of USAID funding, the Bahoriston-2013 association cleaned 10 km (6.2 miles) of canal and installed 34 new water control gates and an irrigation pump. These repairs and improvements positively impacted the availability of irrigation water in Shohrahimov's village, and farmers at the end of the canal now report receiving an adequate supply of water. As a result of these improvements, an additional 100 hectares (247.1 acres) of lands in Shohrahimov's village are now under irrigation for the first time in over 20 years.

In 2014, with more water available to him, Shohrahimov planted a wider variety of crops and had three successful harvests on the same plot. After harvesting onions late in spring, he planted and harvested corn and sesame, followed by a crop of carrots. Shohrahimov is happy not only with the increased yields, but also with the additional income generated through a higher volume of sales.

# TAJIKISTAN MODERNIZES IRRIGATION SYSTEMS AT NATIONAL AND LOCAL LEVELS

*First published in March 27, 2014 in the Feed the Future Monthly Newsletter*

Located in Central Asia, Tajikistan is a small, landlocked country with an arid climate and dry soils. These conditions mean Tajik farmers are heavily dependent on irrigation for agriculture: eighty-four percent of Tajikistan's arable land is serviced by a network of irrigation and drainage systems.

Developed during the Soviet era, these irrigation systems have fallen into disrepair over more than 20 years, and rural farmers are suffering the consequences. Small-scale private farmers as well as families, who raise their own crops and livestock, have seen their harvests decrease while under nutrition rates have climbed.

Years of irrigation system neglect continue to cause deterioration of soil quality from salinization and shrinking irrigated areas. At the same time, most former Soviet collective and state farms have been redistributed to farmers, giving them more production independence, but leaving local irrigation management in a vacuum.

The urgency and breadth of this problem demand significant irrigation sector policy reforms, and the Government of Tajikistan is doing just that.

With support from the U.S. Agency for International Development (USAID) under Feed the Future as well as the

World Bank, the Government of Tajikistan is working with farming communities to promote local irrigation system management and integrated watershed management.

In November 2013, the President of Tajikistan issued a Decree on Water Sector Reform, modernizing the Tajik Ministry of Energy and Water Resources by separating the role of policy creation and regulation from irrigation water delivery management and operations, which is now provided by a separate Government of Tajikistan agency.



*A Water Users Association gathers by an irrigation canal in Tajikistan.  
Credit: USAID*

While national-level reforms take hold, USAID is also supporting a local solution to irrigation management: the creation of water users associations. These community-based associations are planning needed repairs to the old systems and planning water delivery schedules that make efficient use of irrigation water.

To date, Feed the Future has helped farmers in Tajikistan establish and legally register 46 water user associations, which have repaired or installed 164 water-control gates and cleaned 14,700 meters of irrigation canals, improving and rehabilitating more than 13,000 hectares of farmland. About 90,000 households are benefiting from a more reliable irrigation water supply.

This model has been so effective that it is being replicated through other development efforts in Tajikistan. With a \$45.9 million grant from the World Bank-managed [Global Agriculture and Food Security Program](#) (GAFSP), the Government of Tajikistan is supporting local NGOs to adopt many of the best practices learned from USAID over ten years of leadership on community-led irrigation management and repair. These groups are now creating additional farmer-run water users associations to manage water delivery, improve water access and quality, and rebuild and maintain their irrigation systems. This cooperation between USAID and the World Bank greatly expands the area of Tajikistan that will have well-trained water user associations, and revitalized infrastructure.

“Participatory irrigation management is key to a sustainable system,” says Nargiz Yuldasheva of the GASFP-supported NGO, Source of Life. “Recognizing the importance and role of [water users associations], farmers are becoming more active and willing to become involved.”

To help connect high-level policy reforms with community-level water management, USAID is supporting the Government of Tajikistan on transferring some local infrastructure to water users associations, fostering good governance and developing specific legal and regulatory reforms to enhance the sustainability of the associations. In addition to improving irrigation management, these reforms have generated greater sense of ownership among farmers of Tajikistan’s irrigation system and enhanced their ability to collect revenues for operational costs.

Under Feed the Future, USAID continues to work closely with smallholder farmers, the Government of Tajikistan and the World Bank to ensure that improvements in irrigation and drainage systems are sustained for the benefit of the next generation of Tajik families and businesses.

# ENVIRONMENTAL COMPLIANCE

All activities during the Year 4 were conducted in compliance with environmental requirements. The Program Environmental Officer (PEO) made numerous trips to project sites to monitor activities related to the IWM component throughout the reporting year. In order to ensure better accountability and capture environmental monitoring activities by WUA members, the FFP PEO developed a Monitoring and Mitigation Form that was distributed to WUA engineers and other key members.

During the reporting period a number of training sessions were conducted with grantees on important environmental topics such as proper selection and storage of fuel and cement and purchase of goods only from eligible countries. Also emphasized was the use of proper quality of concrete for repairs and construction, drainage management, and maintenance. The PEO also discussed the importance of avoiding the use of drainage canal water for drinking or swimming. These trainings generally were piggybacked on organizational trainings delivered by FFP's WUA Association Organizers.

Throughout the year FFP maintained a good working relationship with the USAID Mission Environmental Officer (MEO), Nina Kavetskaya. Over the course of the reporting period, FFP submitted ER checklists for review and approval and all were approved. Table 19 below contains a summary of environmental compliance activities conducted during Year 4 and indicates the status of ER checklists. During the MEO's visits to FFP target sites her recommendations and advice were taken into account and addressed in a timely manner.

## **WATER TESTING FOLLOWING DRAINAGE DITCH CLEANING**

As a follow up to cleaning WUA drainage ditches, FFP developed a protocol for testing at seven sites where drainage water flows toward villages and where the improved drainage could potentially degrade water quality. Over the year the PEO conducted 21 water tests at WUA irrigation system sites (at water in-flow, drainage out flow, and downstream at the nearest village). The report is in progress, though initial analysis of the data indicates no detectable levels of arsenic, as well as no overall degradation in water quality due to improved drainage. The report will be finalized in the next quarter.

All the above-mentioned activities fall under the category of Negative Determination with Condition (NDC). As a result, all the activities must be done in accordance with USAID environmental requirements as well as those of the host country.

**Table 19: FFP COMPONENT ACTIVITY ENVIRONMENTAL COMPLIANCE TRACKING**

Project title	District	Activity	ER Checklist Developed and Approved by MEO	Status of Activity
WUA "Vodi Beshkent"	N. Khusrav	Office construction	√	Ongoing
WUA "Toshrobod"	J. Rumi	Office construction, including office equipment	√	Ongoing
WUA "Barakat-Ya"	Qumsangir	Gate construction/rehabilitation Office construction, Cleaning drainage canals	√	Ongoing
WUA "Chasmai Zulol"	J. Rumi	Gate construction/rehabilitation Office construction	√	Ongoing
WUA "Guliston"	J. Rumi	Gate construction/rehabilitation Office construction	√	Ongoing
WUA "Navbahor-1"	Bokhtar	Office construction, including office equipment/machines	√	Completed
WUA "Gulbahor"	Bokhtar	Office construction, including office equipment/machines	√	Completed
WUA "Ibrohim Karimov"	Vakhsh	Gate construction/rehabilitation Office construction	√	Ongoing
WUA "Tojikobod-1"	Vakhsh	Gate construction/rehabilitation Office construction, Cleaning drainage canals	√	Ongoing
WUA "Istiqlol -PL-6"	Khuroson	Office construction, including office equipment/machines	√	Completed
WUA "Gulobod"	Khuroson	Office construction, including office equipment	√	Completed
WUA "Buston"	Qumsangir	Gate construction/rehabilitation Office construction, Cleaning drainage canals	√	Ongoing
WUA "Obrason"	Qumsangir	Gate construction/rehabilitation Office construction, Cleaning drainage canals	√	Ongoing
WUA "Khuseyni Ayub"	Qumsangir	Gate construction/rehabilitation Office construction, Cleaning irrigation canals	√	Ongoing
WUA "Obshoroni Yovon"	Yovon	Office construction, including office equipment	√	Ongoing
WUA "Sitorai Yovon"	Yovon	Office construction, including office equipment	√	Ongoing
WUA "Mehnati sof"	Yovon	Office construction, including office equipment	√	Completed
WUA "Chorgul-2012"	Yovon	Office construction, including office equipment	√	Ongoing
WUA "Norin"	Yovon	Office construction, including office equipment	√	Ongoing
WUA "Aqua International"	Yovon	Office construction, including office equipment	√	Ongoing

# OPERATIONS

During the past year, FFP provided strong program operations, administrative and financial management support to achieve FFP's program targets. Major achievements in supporting program operations include the following:

**FFP Contract Modification.** In July 2014 the FFP contract period of performance was extended until February 27, 2015, and the budget ceiling raised to fund additional activities. The project's SOW was also updated to reflect the change in activities.

**Winrock Subcontract Modification.** As a result of the prime contract modification signed in July, DAI modified Winrock's subcontract to account for the extended period of performance, increased budget ceiling, and additional activities.

**Qubodiyon office close-down.** FFP effectively closed down its office in Qubodiyon in July as a response to the modification. The guest house was retained and has been used heavily by FFP staff working with WUAs in the Nosiri Khusrav, Qubodiyon, and Shahritus districts.

**Logistical and procurement support.** The FFP Operations team successfully provided logistical and procurement support to program activities. During the first quarter, the team successfully managed production and delivery of the final set of 540 water control gates to be granted to WUAs.

The operations team also facilitated the procurement selection process for a wheeled excavator which is intended to be transferred to a WUA federation via a grant-in-kind. During the second quarter the operations team issued a public tender for the procurement, and in the third quarter evaluated offers and completed the vendor selection. Once the beneficiary's tax registration is completed, FFP will submit the grant approval request to USAID, and upon approval will complete the transaction and begin preparations for the awarding ceremony.

In addition to the aforementioned, FFP's operations team provided logistical support for and facilitated the organization of several working group meetings, stakeholder roundtables, WUA opening ceremonies, and the national conference on Strengthening Water Users Associations for Water Sector Reform in Tajikistan.

**Partial property disposition.** In August, FFP submitted a partial disposition approval request to USAID for non-expendable property. USAID approval is still pending.

**Closedown Preparations.** During the final quarter, FFP began preparations for the project's closeout in February 2015. The field and home offices worked together on auditing grants, procurement, finance, and personnel files and ensured that the project's inventory tracking system was up to date.

**VAT Exemption Status.** Despite exhaustive efforts taken throughout the year, FFP was unable to secure VAT exemption from the Government of Tajikistan. The Tax Committee indicated that FFP was considered a grantee to the Republic of Tajikistan, and as such did not qualify for VAT exemption. A detailed memo discussing the FFP's unsuccessful attempts to secure VAT exemption was submitted to the USAID CAR Regional Legal Advisor on April 9, 2014. The memo also requested permission to bill incurred VAT expenses in light of the project's inability to secure the exemption. On June 19, 2014 the Contracting Officer sent a response indicating that FFP was authorized to bill all VAT expenses incurred during the life of the project.

**STTA support.** FFP provided administrative and logistical support to 9 STTAs during the year to support operations, technical activities, and the attainment of project objectives.

**Staffing Changes.** Over the course of the reporting year FFP saw a number of changes in personnel, as well as the phasing out of several staff. Staffing changes over the reporting year included the following:

- Operations Manager Mutriba Latypova took over in early 2013, and stepped down on April 11, 2014.
- Rados Dabetic took over as Acting Operations Manager on April 14, 2014 and will stay on until the end of the project.
- IWM Coordinator Fakhriddin Kuziboev stepped down on November 18, 2013. He was replaced by
- Sharif Sharipov took over as IWM Coordinator on January 6, 2014 and will stay on until the end of the project.
- Kate Zavarazhina filled the Grants Manager position in October 2014 and will stay on until the end of the project.
- Given the completion of the project's WUA organizing work, 14 WUA Organizers completed contracts as of June 30, 2014.

# ANNEX 1: LIST OF FFP INDICATORS

## ACTIVITY 1: IMPROVE WATER PROVISION FOR AGRICULTURE PRODUCTION THROUGH WATER USERS ASSOCIATIONS

Intermediate Result A: Improved productivity of smallholder farms								
Sub IR A2: Improved water provision for production of agricultural goods for market sale and home consumption								
Indicator Number	Indicator	LOP Targets	Baseline	Y1 Results	Y2 Results	Y3 Results	Y4 Results	Y1-Y4 Results
FFP #1	Number of Water Users Associations supported, newly established, and continuing	60	0	0	11	22	27	60 <sup>15</sup>
FFP #2	Percentage change in score on the Water Users Association Capacity Assessment Tool (WUA-CAT)	Baseline + 10% increase	G 1= 2.6 G 2= 2.4 G 3= 2.3 G 4= 1.9 G 5= 1.9 G 6= 2.2				G 1= 3.1 G 2= 2.9 G 3= 2.9 G 4= 2.9 G 5= 3.0 G 6= 2.5	
FFP #3	Percentage membership service fees collected by WUAs as related to the WUA budget	60%	30%				60%	60%
FFP #4	Number of WUA Federations created	4					4	4
FFP #5 FTF 4.5.2(2)	Number of hectares under improved water management practices	90,000	0	0	26,073 <sup>16</sup>	49,656	46,924	122,653
FFP #6	Number of hectares under new or improved/rehabilitated irrigation	65,000	0	0	2,316	10,128	55,198	67,642

<sup>15</sup> Does not include one drinking water association, as reported in previous years

<sup>16</sup> Get language from Erica on this

Indicator Number	Indicator	LOP Targets	Baseline	Y1 Results	Y2 Results	Y3 Results	Y4 Results	Y1-Y4 Results
FFP #7 FTF 4.5.2(5)	Number of farmers and others who have applied water management practices/	9,800	0	0	38,894 <sup>17</sup>	9,251	4,594	13,845
FFP #12 FTF 4.5.2(13)	Number of rural households benefiting directly from U.S. Government interventions	100,000	0	N/A	20,940 (ADLE)	78,440	49,016	148,396
FFP #14 FTF 4.5.2(7)	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	27,550	0	N/A	20,946 (ADLE)	20,062 (ADLE +IWM)	2,538	43,546

### Intermediate Result A: Improved productivity of smallholder farms

#### Sub IR A2a: Improved intra- village water distribution

	Indicator	LOP Targets	Baseline	Y1 Results	Y2 Results	Y3 Results	Y4 Results
FFP #8	Number of villages in targeted districts that benefit from improved village irrigation systems/ Number of grants made to villages to improve intra – village water supply	10	0	0	0	0	11 <sup>18</sup>
FFP #9	Perceived change in improvements in intra-village water supply	60% of respondents perceive a favorable change in water supply over the previous year	43% of respondents reported poor water supply within their villages				67.5%

<sup>17</sup> Includes data collected under the phased out agricultural support component

<sup>18</sup> Though FFP targeted 10 villages, in one of the intervention locations, two villages are very close to each other. So, 11 villages are recognized, locally, as benefitting from the intervention activities.

FFP #13	Change in irrigation frequency as measured by 'irrigation-days'	BL + 10%	3 times in a week	0	0		3.2 times in a week
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\*\*The progress will be measured on annual basis

**Intermediate Result A: Improved productivity of smallholder farms**

**Sub IR A2b: Support to water sector reform at sub-basin level**

Indicator Number	Indicator	LOP Targets	Baseline	Year 1 Results	Year 2 Results	Year 3 Results	Total year 4
FFP #10	*Number of WUA's represented at coordination council meetings	BL+10%	0	0	0	0	0*
FFP #11	*Change in perception of coordination council members on WUAs representation	BL +15% improvement	0	0	0	0	0*

\*The government has not yet created these coordination councils or other river basin level equivalents; therefore no progress could be made toward target by FFP.

**ACTIVITY 4: SUPPORT RESEARCH AND ADVOCACY FOR POLICY REPORTS THAT ENHANCE FOOD SECURITY**

**Intermediate Result A: Improved productivity of smallholder farms**

**IR A2b: Sub IR A2b: Support to water sector reform at sub-basin level**

Indicator Number	Indicator	LOP Targets	Baseline	Year 1 Results	Year 2 Results	Year 3 Results	Total year 4
FFP #15	Policy Milestone Score	Stage 2	Stage 1	N/A	N/A	N/A	Stage 2

# ANNEX 2: WUA IMPLEMENTATION TIMELINE

DISTRICT	FFP YEAR 2												FFP YEAR 3												FFP YEAR 4												DISTRICT TOTAL		
	2011				2012								2012				2013								2013				2014								TOTAL	Non-WB	WB Overlap
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S			
1 Kulob					1																																1	1	
2 Qabodiyon	2				1			1			1																								3		8	8	
3 Qumsangir																				2	1	1						4									8	8	
4 Shahrituz						1																1													1		3	3	
5 Vakhsh																						2	1	1													6	6	
6 Vose						1																															1		1
7 N. Khusrav															1												1				2	1					5		5
8 Rumi											1					1	1				1					1	1	1									7		7
9 Jilikul														1						1	1																3		3
10 Jomi																1	1	1			1	2									1					7		7	
11 Yavon																														3	1	1				5		5	
12 Khuroshon																											3									3		3	
13 Bokhtar																											2	1									3		3
<b>TOTAL</b>	<b>2</b>				<b>2</b>	<b>2</b>	<b>1</b>		<b>4</b>				<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>1</b>		<b>1</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>4</b>				<b>60*</b>	<b>26</b>	<b>34</b>		

\*1 drinking water association not included.

- 8** = Districts overlap with World Bank PAMP II project
- 56** = Organized and Registered
- 4** = Strengthened
- 0** = In Progress

# **ANNEX 3: LIST OF COMMODITIES PROCURED AND REVISED INVENTORY**

Note: Because of the sensitive nature of the contents of this section it will be forwarded to USAID under separate cover.

# ANNEX 4: LIST OF ALL REPORTS, ANALYSES, PRESENTATIONS, AND OTHER KEY DOCUMENTS PRODUCED DURING THE YEAR

## REPORTS, SPECIAL STUDIES, RECOMMENDATIONS, AND GUIDES COMPLETED IN YEAR 4

IWM and Policy Components					
#	Title, Author, Date, Language	Author	Date	Language	Target Audience
1	Guide For Contents Of The By-Laws For A Water Users Association	Douglas Vermillion	July 1, 2014	English	WUAs
	Роҳнамо Оид Ба Мазмуну Мундариҷаи Оинномаи Ассотсиатсияи Истифодабарандагони Об (Translation of document above)	Douglas Vermillion	Sept. 16, 2014	Tajik	WUAs
2	Guide For Preparing An Irrigation Asset And Management Transfer Agreement In Tajikistan	Douglas Vermillion	July 1, 2014	English	WUAs, Agency for Land Reclamation and Irrigation
	Роҳнамо Доир Ба Омода Намудани Созишнома Оид Ба Интиқоли Салоҳияти Идоракунии Обёрӣ Дар Тоҷикистон (Translation of document above)	Douglas Vermillion	Sept. 16, 2014	Tajik	WUAs, Agency for Land Reclamation and Irrigation
3	Guide for an Irrigation Service Plan Prepared by a Water Users Association for Its Members	Douglas Vermillion	July 1, 2014	English	WUAs
	Роҳнамо Оиди Нақшаи Хизматрасонии Обёрӣи Аз Ҷониби Ассотсиатсияи Истифодабарандагони Об Барои Аъзоён Тартиб Додашуда (Translation of document above)	Douglas Vermillion	Sept. 16, 2014	Tajik	WUAs
4	Guide for Annual Water Service Contracts between the Basin Water Supply Agency	Douglas Vermillion	July 1, 2014	English	WUAs, Agency for Land Reclamation and

	and a Water Users Association				Irrigation
	Роҳнамо Оиди Шартномаи Солонаи Хизмати Обрасонӣ Миёни Агентии Ҳавзавии Обтаъминкунӣ Ва Ассотсиатсияи Истифодабарандагони Об (Translation of document above)	Douglas Vermillion	Sept. 16, 2014	Tajik	WUAs, Agency for Land Reclamation and Irrigation
5	Guide for Establishing Strong Water Users Associations in Tajikistan	Douglas Vermillion, Asoev Saidali, , Sharif Sharipov, Ekaterina Zavrazhina, Sheroz Bakiev, and James Campbell	July 1, 2014	English	Tajikistan Government, Donors, Projects, Evaluators and WUA leaders
	Дастурамал Оид Ба Таъсиси Ассотсиатсияҳои Истифодабарандагони Оби Қавӣ Дар Тоҷикистон (Translation of document above)	Douglas Vermillion, Asoev Saidali, , Sharif Sharipov, Ekaterina Zavrazhina, Sheroz Bakiev, and James Campbell	Sept. 16, 2014	Tajik	Tajikistan Government, Donors, Projects, Evaluators and WUA leaders
6	Needs-Based Budgeting For Irrigation System Management In Tajikistan	Mark Svendsen; Husniddin Sharofiddinov	July 23, 2014	English	Tajikistan Government, Donors, Projects, Evaluators and WUA leaders
7	Design Of A Flow Monitoring System For WUAs Of The Lower Kofarnihon Basin	J. Mohan Reddy	April 30, 2014	English	Tajikistan Government, Donors, Projects, Evaluators and WUA leaders
8	Recommendations of Principles and Priority Actions for Irrigation and Drainage in the Republic of Tajikistan	Douglas Vermillion	Sept. 11, 2014	English	Tajikistan Government, Donors, Projects, Evaluators and WUA leaders
9	Review Of The Legal Framework For Water Users Associations In Tajikistan	Stephen Hodgson	Sept. 16, 2014	English	Tajikistan Government, Donors, Water Sector Reform Stakeholders

## HOUSEHOLD NUTRITION AND ECONOMICS GUIDES AND POSTER MATERIALS COMPLETED IN YEAR 4

#	Title	Description and Dissemination
1	Household Finance Guide	This publication offers guidance smallholder production financing and financial planning. Electronic and 70 hard copies were printed to be delivered to WUA during trainings.
2	Household Garden Poster	The poster encourages diversifying household gardens with ten nutritious crops (i.e., carrot, sweet pepper, broccoli, pumpkin, cabbage, cauliflower, dill, eggplant, spinach, and red beets). Electronic and 20 hard copies were printed and delivered to FTF partners and Ministry of Health
3	Recipes for a Healthy and Balanced Diet	The book provides instructions and illustrations of five new and 12 existing recipes. These recipes focus on complementary feeding for children under five as well as pregnant and lactating women. Electronic and 20 hard copies were printed and delivered to FTF partners and Ministry of Health
4	Food Preservation and Storage Guide	The guide provides technical instruction on preserving and storing fruits and vegetables for winter. Electronic and 20 hard copies were printed and delivered to FTF partners and Ministry of Health

## CROP MANUALS AND ANIMAL PRODUCTION GUIDES COMPLETED IN YEAR 4

ADLE Component			
#	Subject/Crop	Tajik Title	Style
<b>Crop Productivity</b>			
1	Technology of Tomato	Самаранокии иктисодии парвариши помидор	Handout
2	Technology of Beans	Самаранокии иктисодии парвариши луби	Brochure
3	Technology of Sunflower for Oil	Самаранокии иктисодии парвариши офтобпараст барои равған	Brochure
4	Aerobic Compost Making	Ташкил кардани компост бо рохи азробики	Brochure
5	Soil Testing	Тартиби гирифтани намунаи хок барои ташхис	Handout
6	Technology of Small Tunnel for Seedling (1mx10m)	Технологияи парвариши ниhoли сабзавот дар гармхонаи хурд (1X10)	Handout
7	Technology of Vegetable Seedling Preparation (tomato, cabbage, cauliflower, eggplant, sweet pepper, onion, broccoli)	Парвари ниhoлхои сабзавот (помидор, карам, гулкарам, боимчон, каламфури ширин, пиёз, браколли)	Handout
8	GH Management	Самаранокии иктисодии идоракунии гармхона	Handout
9	Technology of Pumpkin	Самаранокии иктисодии парвариши каду	Handout
10	Technology of Cucumber	Самаранокии иктисодии парвариши бодиринг	Handout
11	Technology of Fodder Beet	Самаранокии иктисодии парвариши лаблабуи хуроки чорво	Handout
<b>Livestock Productivity</b>			
12	Technology of Maize Silage making	Технологияи истехсол ва захира намудани силоси чуворимакка	Handout
13	Veterinary First Aid	Кумаки якуминдараҷаи таъчилии бойтори	Handout
14	Technology of Milk Processing	Технологияи истехсол ва коркарди шир	Handout

# ANNEX 5: PERSONNEL SUMMARY

Note: Because of the sensitive nature of the contents of this section it will be forwarded to USAID under separate cover.

# ANNEX 7: GRANTS

Grant #	Grantee	Grant Signed	Location	Grant Amount	Amount Disbursed during Y4	Total Amount Disbursed during Life of Project	Amount Remaining	Grant Program Description
G-DUS-001	WFP	Nov. 11,2011		\$68,760	\$35,550	\$68,760	\$0	Food security monitoring
G-DUS-002	Nahri Kalon	June 4, 2012	Qubodiyon	\$25,153	\$7,546	\$25,153	\$0	Rehabilitation of irrigation infrastructure and office construction (RII&OC)
G-DUS-003	Jui Ravon	June 4,2012	Qubodiyon	\$45,929	\$22,965	\$45,929	\$0	RII&OC
G-DUS-004	Obi Hayot	June 4,2012	Qubodiyon	\$14,680	\$13,970	\$14,680	\$0	RII&OC
G-DUS-005	Havaskor	June 12,2012	Qubodiyon	\$47,809	\$16,700	\$47,809	\$0	RII&OC
G-DUS-006	Navruz	June 12,2012	Shahritus	\$48,447	\$19,370	\$48,447	\$0	RII&OC
G-DUS-007	Obi Shirin -D	June 12,2012	Kulob	\$21,457	\$11,802	\$21,457	\$0	RII&OC
G-DUS-008	Selbur	June 12,2012	Vose	\$49,318	\$17,262	\$49,318	\$0	RII&OC
G-DUS-009	Obchakoron	Jan. 23,2013	J.Rumi	\$79,495	\$15,121	\$79,495	\$0	RII&OC
G-DUS-009b	Obchakoron		J.Rumi	\$5,731			\$5,731	RII&OC
G-DUS-010	Chashmasoroni Vakhsh	Jan. 24,2013	Vakhsh	\$92,807	\$17,840	\$92,807	\$0	RII&OC
G-DUS-010b	Chashmasoroni Vakhsh		Vakhsh	\$466			\$466	RII&OC
G-DUS-012	Obi Vakhsh-1	Jan. 23,2013	Vakhsh	\$81,724	\$10,232	\$81,724	\$0	RII&OC
G-DUS-012b	Obi Vakhsh-1		Vakhsh	\$6,151			\$6,151	RII&OC
G-DUS-013	Farovon	Jan. 23,2013	Qubodiyon	\$72,715	\$9,538	\$72,715.00	\$0	RII&OC
G-DUS-013b	Farovon		Qubodiyon	\$19,330			\$19,330	RII&OC
G-DUS-014	Selbur	Jan.9,2013	Vose	\$28,524	\$4,894	\$28,524	\$0	RII&OC
G-DUS-014b	Selbur		Vose	\$2,996			\$2,996	RII&OC
G-DUS-015	Obi Shirin-D	Jan. 9,2013	Kulob	\$49,331	\$3,289	\$49,331	\$0	RII&OC
G-DUS-016	Navruz	Jan. 22,2013	Shahritus	\$43,106	\$13,515	\$43,106	\$0	RII&OC
G-DUS-017	Nahri Kalon	Jan. 16,2013	Qubodiyon	\$38,933	\$2,143	\$38,933	\$0	RII&OC
G-DUS-018	Jui Ravon	Jan. 2,2013	Qubodiyon	\$21,894	\$1,679	\$21,894	\$0	RII&OC
G-DUS-019	Havaskor	Jan. 9,2013	Qubodiyon	\$42,492	\$10,763	\$42,492	\$0	RII&OC

Grant #	Grantee	Grant Signed	Location	Grant Amount	Amount Disbursed during Y4	Total Amount Disbursed during Life of Project	Amount Remaining	Grant Program Description
G-DUS-020	Obi Hayot	Jan. 9,2013	Qubodiyon	\$25,180	\$403	\$25,180	\$0	RII&OC
G-DUS-021	Beshkent	March 15,2013	N. Khusrav	\$46,304	\$5,508	\$46,304	\$0	RII&OC
G-DUS-021b	Beshkent		N. Khusrav	\$705			\$705	RII&OC
G-DUS 022	Obi Vakhsh	March 28,2013	Jilikul	\$40,688	\$13,911	\$40,688	\$0	RII&OC
G-DUS 022b	Obi Vakhsh		Jilikul	\$4,024			\$4,024	RII&OC
G-DUS-023	Sitorai Subh	April 15,2013	A. Jomi	\$47,033	\$14,227	\$47,033	\$0	RII&OC
G-DUS-024	Gayrat	April 15,2013	A. Jomi	\$47,703	\$24,889	\$47,703	\$0	RII&OC
G-DUS-025	Nahri Dusti	April 23,2013	J. Rumi	\$38,155	\$23,775	\$38,155	\$0	RII&OC
G-DUS-025b	Nahri Dusti		J. Rumi	\$8,376			\$8,376	RII&OC
G-DUS-026	Zarnisor F	April 23,2013	J. Rumi	\$46,236	\$27,352	\$46,236	\$0	RII&OC
G-DUS-027	Nahri Yoron	June 7,2013	A. Jomi	\$29,984	\$9,727	\$29,984	\$0	RII&OC
G-DUS-027b	Nahri Yoron		A. Jomi	\$18,377			\$18,377	RII&OC
G-DUS-028	Obi Ravon	Aug.28,2013	Qumsangir	\$26,812	\$26,812	\$26,812	\$0	RII&OC
G-DUS-028b	Obi Ravon		Qumsangir	\$13,813			\$13,813	RII&OC
G-DUS-029	Obi Ravon (GIK)	Feb. 19,2013	Qumsangir	\$58,273	\$58,273	\$58,273	\$0	RII&OC
G-DUS-030	Khingobi Bolo	Dec. 4,2013	Jilikul	\$13,357	\$13,357	\$13,357	\$0	RII&OC
G-DUS-030b	Khingobi Bolo		Jilikul	\$16,326			\$16,326	RII&OC
G-DUS-031	Khingobi Bolo (GIK)	Nov. 7,2013	Jilikul	\$28,172	\$28,172	\$28,172	\$0	RII&OC
G-DUS-032	Hazorchashma RQ (FOG)	Dec. 6,2013	Qumsangir	\$13,496	\$13,496	\$13,496	\$0	RII&OC
G-DUS-032b	Hazorchashma RQ		Qumsangir	\$49,746			\$49,746	RII&OC
G-DUS-033	Hazorchashma RQ	Nov. 7,2013	Qumsangir	\$48,145	\$48,145	\$48,145	\$0	RII&OC
G-DUS-034	Bahoriston (FOG)	Dec. 2,2013	Qumsangir	\$64,120	\$64,120	\$64,120	\$0	RII&OC
G-DUS-034b	Bahoriston (FOG)		Qumsangir	\$11,316			\$11,316	RII&OC
G-DUS-035	Bahoriston	Nov. 7,2013	Qumsangir	\$24,124	\$24,124	\$24,124	\$0	RII&OC
G-DUS-036	Qumsangir 2013	Aug. 28,2013	Qumsangir	\$25,321	\$21,252	\$25,321	\$0	RII&OC
G-DUS-036b	Qumsangir 2013		Qumsangir	\$19,895			\$19,895	RII&OC
G-DUS-037	Qumsangir 2013	Nov. 7,2013	Qumsangir	\$25,421	\$25,421	\$25,421	\$0	RII&OC

Grant #	Grantee	Grant Signed	Location	Grant Amount	Amount Disbursed during Y4	Total Amount Disbursed during Life of Project	Amount Remaining	Grant Program Description
G-DUS-038	Obi Shirin-Z (FOG)	Aug. 28,2013	Jilikul	\$20,453	\$20,453	\$20,453	\$0	RII&OC
G-DUS-038b	Obi Shirin-Z (FOG)		Jilikul	\$10,074			\$10,074	RII&OC
G-DUS-039	Obi Shirin-Z	Aug.28,2013	Jilikul	\$16,023	\$16,023	\$16,023	\$0	RII&OC
G-DUS-040	Vatan-1 (FOG)	Sept. 12,2013	Shahritus	\$26,586	\$26,586	\$26,586	\$0	RII&OC
G-DUS-040b	Vatan-1 (FOG)		Shahritus	\$18,475			\$18,475	RII&OC
G-DUS-041	Vatan-1 (GIK)	Nov. 7,2013	Shahritus	\$21,615	\$21,615	\$21,615	\$0	RII&OC
G-DUS-042	Jayhun (FOG)	Dec. 9,2013	Jomi	\$14,689	\$14,689	\$14,689	\$0	RII&OC
G-DUS-042b	Jayhun (FOG)		Jomi	\$15,913			\$15,913	RII&OC
G-DUS-043	Jayhun (GIK)	Dec. 9,2013	Jomi	\$25,616	\$25,616	\$25,616	\$0	RII&OC
G-DUS-044	Rudi Vakhsh-2012 (FOG)	Jan. 29,2014	Vakhsh	\$35,026	\$35,026	\$35,026	\$0	RII&OC
G-DUS-044b	Rudi Vakhsh-2012 (FOG)		Vakhsh	\$66,206			\$66,206	RII&OC
G-DUS-045	Rudi Vakhsh-2012 (GIK)	Jan. 29,2014	Vakhsh	\$16,828	\$16,828	\$16,828	\$0	RII&OC
G-DUS-046	Safo-52 (FOG)	Jan. 29,2014	Vakhsh	\$80,769	\$80,769	\$80,769	\$0	RII&OC
G-DUS-046b	Safo-52 (FOG)		Vakhsh	\$24,126			\$24,126	RII&OC
G-DUS-047	Safo-52 (GIK)	Jan. 29,2014	Vakhsh	\$9,514	\$9,514	\$9,514	\$0	RII&OC
G-DUS-048	Dusti-2013 (FOG)	Dec. 9, 2013	Jomi	\$20,832	\$20,832	\$20,832	\$0	RII&OC
G-DUS-048b	Dusti-2013 (FOG)		Jomi	\$13,889			\$13,889	RII&OC
G-DUS-049	Dusti-2013 (GIK)	Dec. 9, 2013	Jomi	\$18,201	\$18,201	\$18,201	\$0	RII&OC
G-DUS-050	Panjrud (FOG)	Sept. 12,2013	Jomi	\$31,424	\$31,424	\$31,424	\$0	RII&OC
G-DUS-050b	Panjrud (FOG)		Jomi	\$10,475			\$10,475	RII&OC
G-DUS-051	Panjrud (GIK)	Sept. 12,2013	Jomi	\$17,225	\$17,225	\$17,225	\$0	RII&OC
G-DUS-052	Buston K (FOG)	March 7,2014	Qumsangir	\$47,794	\$47,794	\$47,794	\$0	RII&OC
G-DUS-052b	Buston K (FOG)		Qumsangir	\$34,609			\$34,609	RII&OC
G-DUS-053	Buston (GIK)	March 7,2014	Qumsangir	\$39,828	\$39,828	\$39,828	\$0	RII&OC
G-DUS-054	Chashmayi Zulol (FOG)	Jan. 13,2014	J.Rumi	\$22,434	\$22,434	\$22,434	\$0	RII&OC
G-DUS-054b	Chashmayi Zulol (FOG)	Sept. 10,2014	J.Rumi	\$18,356		\$10,198	\$8,158	RII&OC

Grant #	Grantee	Grant Signed	Location	Grant Amount	Amount Disbursed during Y4	Total Amount Disbursed during Life of Project	Amount Remaining	Grant Program Description
G-DUS-055	Chashmayi Zulol (GIK)	Jan. 13,2014	J.Rumi	\$39,825	\$39,825	\$39,825	\$0	RII&OC
G-DUS-056	Huseyin Auyb (FOG)	Feb. 17,2014	Qumsangir	\$65,657	\$65,657	\$65,657	\$0	RII&OC
G-DUS-056b	Huseyin Auyb (FOG)	Feb. 17,2014	Qumsangir	\$18,520			\$18,520	RII&OC
G-DUS-057	Huseyin Auyb (GIK)	Feb. 17,2014	Qumsangir	\$31,729	\$31,729	\$31,729	\$0	RII&OC
G-DUS-058	Obrason K (FOG)	March 4,2014	Qumsangir	\$63,641	\$63,641	\$63,641	\$0	RII&OC
G-DUS-058b	Obrason K (FOG)		Qumsangir	\$19,009			\$19,009	RII&OC
G-DUS-059	Obrason (GIK)	March 4,2014	Qumsangir	\$31,729	\$31,729	\$31,729	\$0	RII&OC
G-DUS-060	Ibrogim Karimov (FOG)	Feb. 17,2014	Vakhsh	\$39,103	\$39,103	\$39,103	\$0	RII&OC
G-DUS-060b	Ibrogim Karimov (FOG)		Vakhsh	\$79,391			\$79,391	RII&OC
G-DUS-061	Ibrogim Karimov (GIK)	Feb. 17,2014	Vakhsh	\$4,658	\$4,658	\$4,658	\$0	RII&OC
G-DUS-062	Tojikobod-1 (FOG)	Feb. 17,2014	Vakhsh	\$105,418	\$105,418	\$105,418	\$0	RII&OC
G-DUS-062b	Tojikobod-1 (FOG)	Sept. 10,2014	Vakhsh	\$4,392			\$4,392	RII&OC
G-DUS-063	Tojikobod-1 (GIK)	Feb. 17,2014	Vakhsh	\$13,991	\$13,991	\$13,991	\$0	RII&OC
G-DUS-064	Vodii Beshkent (FOG)	Feb. 17,2014	N. Khusrav	\$22,272	\$22,272	\$22,272	\$0	RII&OC
G-DUS-064b	Vodii Beshkent (FOG)	Sep. 10,2014	N. Khusrav	\$12,528	\$6,530	\$6,530	\$5,998	RII&OC
G-DUS-065	Vodii Beshkent (GIK)	Feb. 17,2014	N. Khusrav	\$41,559	\$41,559	\$41,559	\$0	RII&OC
G-DUS-066	Ehyo 2013 (FOG)	Feb. 10,2014	Vakhsh	\$21,564	\$21,564	\$21,564	\$0	RII&OC
G-DUS-066b	Ehyo 2013 (FOG)		Vakhsh	\$25,315			\$25,315	RII&OC
G-DUS-067	Ehyo 2013 (GIK)	Feb. 10,2014	Vakhsh	\$36,420	\$36,420	\$36,420	\$0	RII&OC
G-DUS-068(a)	Barakat Ya (FOG)	Feb. 17,2014	Qumsangir	\$44,121	\$44,121	\$44,121	\$0	RII&OC
G-DUS-068(a)b	Barakat Ya (FOG)	Sept. 10,2014	Qumsangir	\$900			\$900	RII&OC
G-DUS-068(b)	Barakat Ya (FOG)	April 24,2014	Qumsangir	\$15,238	\$15,238	\$15,238	\$0	RII&OC
G-DUS-068(b)b	Barakat Ya (FOG)	Sept. 10,2014	Qumsangir	\$8,205			\$8,205	RII&OC
G-DUS-069	Barakat Ya (GIK)	Feb. 17,2014	Qumsangir	\$15,582	\$15,582	\$15,582	\$0	RII&OC
G-DUS-070	FWUA Sarob (FOG)	March 13,2014	Qubodiyon	\$35,892	\$35,892	\$35,892	\$0	RII&OC
G-DUS-071	Mehnat 2013 (FOG)	May 12,2014	Khuroson	\$22,953	\$22,953	\$22,953	\$0	Office Construction (OC)
G-DUS-071b	Mehnat 2013 (FOG)	Sept. 10,2014	Khuroson	\$485	\$485	\$485	\$0	OC
G-DUS-072	Gulobod 2013	April 17,2014	Khuroson	\$22,953	\$22,953	\$22,953	\$0	OC

Grant #	Grantee	Grant Signed	Location	Grant Amount	Amount Disbursed during Y4	Total Amount Disbursed during Life of Project	Amount Remaining	Grant Program Description
G-DUS-072b	Gulobod 2013	Sept. 10,2014	Khuroson	\$485	\$485	\$485	\$0	OC
G-DUS-073	Gulbakhor 2014	April 22,2015	Bokhtar	\$22,953	\$22,953	\$22,953	\$0	OC
G-DUS-073b	Gulbakhor 2014	Sept. 10,2014	Bokhtar	\$485	\$485	\$485	\$0	OC
G-DUS-074	Navbakhor -1	April 22,2016	Bokhtar	\$22,953	\$22,953	\$22,953	\$0	OC
G-DUS-074b	Navbakhor -1	Sept. 10,2014	Bokhtar	\$485	\$485	\$485	\$0	OC
G-DUS-075	Toshrobod	April 22,2017	J.Tumi	\$13,779	\$13,779	\$13,779	\$0	OC
G-DUS-075b	Toshrobod	Sept. 10,2014	J.Tumi	\$9,659			\$9,659	OC
G-DUS-076	Istiqlol PL6	May 12,2014	Khuroson	\$22,953	\$22,953	\$22,953	\$0	OC
G-DUS-076b	Istiqlol PL6	Sept. 10,2014	Khuroson	\$485	\$485	\$485	\$0	OC
G-DUS-077	Chorgul 2012	May 12,2014	Yovon	\$13,779	\$13,779	\$13,779	\$0	OC
G-DUS-077b	Chorgul 2012	Sept. 10,2014	Yovon	\$9,659	\$4,120	\$4,120	\$5,538	OC
G-DUS-078	Sitorayi Yovon	May 12,2014	Yovon	\$17,899	\$17,899	\$17,899	\$0	OC
G-DUS-078b	Sitorayi Yovon	Sept. 10,2014	Yovon	\$5,538			\$5,538	OC
G-DUS-079	Aqua International	May 12,2014	Yovon	\$13,779	\$13,779	\$13,779	\$0	OC
G-DUS-079b	Aqua International	Sept. 10,2014	Yovon	\$9,174	\$4,120	\$4,120	\$5,054	OC
G-DUS-080	Mehnati Sof	May 12,2014	A.jomi	\$13,779		\$13,779	\$0	OC
G-DUS-080b	Mehnati Sof	Sept. 10,2014	A.jomi	\$9,659	\$4,120	\$4,120	\$5,538	OC
G-DUS-081	Norin	May 12,2014	Yovon	\$13,779	\$13,779	\$13,779	\$0	OC
G-DUS-081b	Norin	Sept. 10,2014	Yovon	\$9,659	\$4,120	\$4,120	\$5,538	OC
G-DUS-082	Obshoroni Yovon	May 12,2014	Yovon	\$17,899	\$17,899	\$17,899	\$0	OC
G-DUS-082b	Obshoroni Yovon	Sept. 10,2014	Yovon	\$5,538			\$5,538	OC
G-DUS-083	FWUA Sarob			\$28,077.00	\$17,688	\$17,688	\$10,389	Rehabilitation of Irrigation Infrastructure (RII)
G-DUS-084	FWUA Sarob (GIK)			\$20,927.00	\$20,927	\$20,927	\$0	RII
	<b>Total at End of Y4</b>			\$3,501,759	\$2,040,130	\$2,908,061	\$593,698	
	<b>Total Available Under Contract</b>			\$3,805,999				
	<b>Total Under USAID Review</b>			\$495,745				
	<b>Total Available to Grant</b>			\$304,240				

# ANNEX 8: INTRA-VILLAGE IRRIGATION

## THE INTRA-VILLAGE IRRIGATION STATUS FOLLOWING FFP SPONSORED REHABILITATIONS

### Background

The USAID Family Farming Program (FFP) is a four-year activity to mitigate Tajikistan's food insecurity and increase the availability, access, and reliability of water to the country's small holder farmers and their families. Achieving these goals has involved an ambitious program of activities, including agricultural development and livestock enhancement; water management interventions; nutrition enhancement and household economics; grants and subcontracts; access to finance; and policy reform.

Irrigation is essential for all intensive agricultural production in Tajikistan. However, maintenance of irrigation and drainage systems has been severely neglected for the past decade which has resulted in an inadequate water supply in the rural areas of the Khatlon region. This inadequate water supply has in turn led to reduced crop production due to land degradation, increased salinity and in some cases, water logging. Improving irrigation supplies to villages will allow farmers to help to mitigate Tajikistan's food insecurity and increase the availability, access, and reliability of water by the country's small holder farmers and their families, and thus increase their production of food for the benefit of their families.

To respond to these challenges, USAID Family Farming Program (FFP) for Tajikistan selected ten villages with scarce irrigation water in the village, and provided small grants for prioritized villages for rehabilitation of village irrigation systems. FFP focused on proven, effective activities that have addressed the shortcomings in water management through appropriate organizations and procedures, along with limited system rehabilitation that has improved identified problems.

This report will look at baseline data collected prior to FFP interventions in these ten villages, the work that was conducted by FFP in these villages and then results of an end-line assessment to determine progress towards indicators, impact of work, identifiable at this time and lessons learned.

The intra-village irrigation water assessment was carried out in all FFP target districts of the Khatlon region including Qubodiyon, Shahrituz Yovon, A.Jomi, Khuroson, Sarband, Bokhtar, Vakhsh, J.Rumi, Jilikul, Qumsangir, and Nosiri Khisrav. It consisted of a baseline assessment in late September/early October 2013, and then after FFP WUA technical assistance was implemented, an end-line assessment in July 2014.

### Implementation of FFP Intra-Village irrigation water initiative

FFP work with WUAs in Tajikistan was primarily through grants. This particular grant project was implemented in 10 selected villages of Qubodiyon, Shahrituz and Nosiri Khisrav districts through 8 Water Users Associations (WUAs) functioning in these districts. The WUAs involved in the

implementation of the grant project included WUAs “Qubod”, “Obi hayot”, “Juyi ravon”, “Nahri kalon” and “Havaskor 1” in Qubodiyon district, WUAs “Navruz” and “Sayod” in Shahrituz district and WUA “Beshkent” in Nosiri Khisrav district.

The main goal of this project was to improve intra-village irrigation (household plots and additional (presidential lands). However, households in most of villages had restricted access to irrigation water and most of household plots were not used for agricultural production due to the lack of irrigation water. The implementation of this project also promoted irrigation improvement of a large area of dehkan farm lands owned by the residents of selected villages.

Planning, organizing and the initial preparatory activities of this sub-activity was launched in August 2013 and a grant project agreement was signed between the Federation of Water Users Association “Sarob” (FWUA) and Development Alternatives Inc. (DAI) on March 12, 2014. The term of the agreement was until May 30, 2014 but upon request of FWUA “Sarob,” the term of the agreement was extended until June 15, 2014. Meanwhile, an agreement was signed between FWUA and WUAs. The grant project was funded by DAI in four fixed milestones of progress.

FWUA “Sarob” role was to be the grant-holder, to supply and deliver construction materials to the project sites, distribute water distribution gates (fabricated in Dushanbe), control and monitor the progress of construction and rehabilitation work, assist in community (beneficiaries) mobilization, organize heavy lifting, transportation and equipment such as excavators, organize and regulate installation, electrical, welding and painting work.

The role of WUAs in project implementation was to accept water distribution gates and construction materials from FWUA “Sarob” and store them, mobilize community (beneficiaries) and organize construction and rehabilitation work on project sites, ensure high quality construction, installation and rehabilitation work. WUAs also assisted FWUA “Sarob” in preparation and submission of a report on completed. WUAs closely cooperated with the heads of selected villages to involve communities in implementation of technical activities of the project. The size of the project was modest, averaging \$3500 per village.

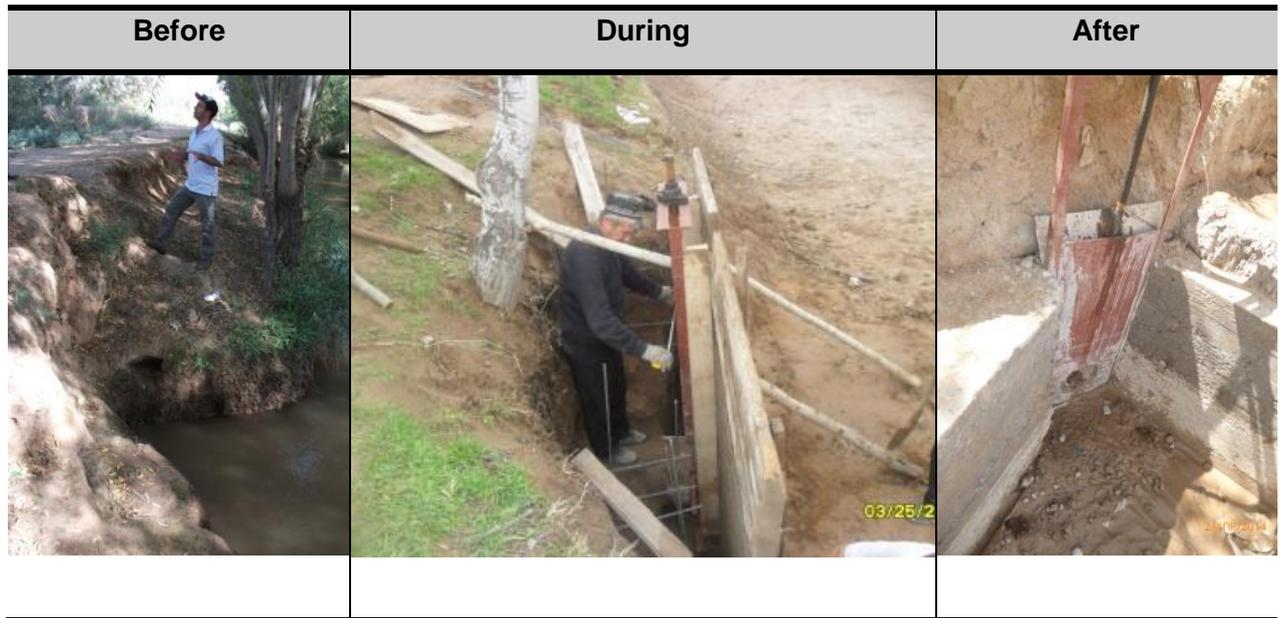
Each village had a unique set of problems and FFP designed an engineering plan suitable to ameliorate these problems. FWUA “Sarob” developed a budget and technical documents which was approved by the FWUA’s members in a General Assembly of FWUA “Sarob”. WUAs installed 22 water distribution gates, rehabilitated 6 gates which were out of service, rehabilitated three aqueducts, constructed one water distribution structure and fully restored one pump station. Implementation of this project resulted in improvement of irrigation for more than 2,000 hectares of lands. Total number of this project’s beneficiaries is more than 22,000 people. This activity improved, the irrigation condition of over 4,150 households.

## **Description of implemented project activities**

- I. Chapari 1 and Boshqala villages, Utaqara Nazarov Jamoat-dehot, Qubodiyon district, WUA “Qubod”**
  - Total number of beneficiaries: 3,500 people
  - Total area provided in the project:
    - Household plots: over 80 ha

- Additional (presidential) lands: 117 ha
- Dehkan farm lands: over 180 ha
- Existing problems: Lack of conditions and opportunity for proper management and distribution of irrigation water in villages.
- Proposed approach: installation of water control gates and partial repair of existing gates in inter-village canals.

Within the framework of this sub-project, two water distribution gates were repaired and their damaged panels were replaced in Beshqala village, including two panels of gate OC 0.87m by 1m. And two water distribution gates were installed in Chapari 1 village, including one gate OC 1,1m by 2,5m and one more gate OC 0,7m by 2m



**II. Chorbogh and Ziraki villages, E. Niyozov Jamoat-dehot, Qubodiyon district, WUA “Obi hayot”**

- Total number of beneficiaries: 2,200 people + 1,100 people
- Total area provided in the project:
  - Household plots: 40 ha + 20 ha
  - Additional (presidential) lands: 21 ha + 40 ha
  - Dehkan farm lands: 70 ha + 185 ha
- Existing problems: Lack of adequate system for proper and effective distribution of irrigation water.
- Proposed approach: installation of water distribution gates and construction of water control and distribution structure.

Within the framework of this sub-project, four water distribution gates were installed in Chorbogh village, including one gate OC 0.7m by 2,1m, one gate OC 0,6m by 1,7m, one gate OC 0,7m by 1,7m and one gate OC 0,5m by 1,6m. Also, one water distribution structure was constructed and one cement aqueduct was fully repaired and rehabilitated in Ziraki village.



**III. Akhcha-Guzari bolo village, N. Khusrav Jamoat-dehot, Qubodiyon district, WUA “Juyi Ravon”**

- Total number of beneficiaries: 1,140 people
- Total area provided in the project:
  - Household plots: 60 ha
  - Additional (presidential) lands: 25 ha
  - Dehkan farm lands: 210 ha
- Existing problems: Lack of condition and opportunity for proper management of irrigation water.
- Proposed approach: installation of water distribution gates and rehabilitation of water control structure.

One cement water distribution structure was constructed and three water distribution gates were installed in Akhcha-Guzari bolo village, including one gate OC 0,5m by 1,6m, one gate OC 0,6m by 1,6 and one gate ПС 1,4m by 2,5m. 21 m2 of bank protection work was done as well.

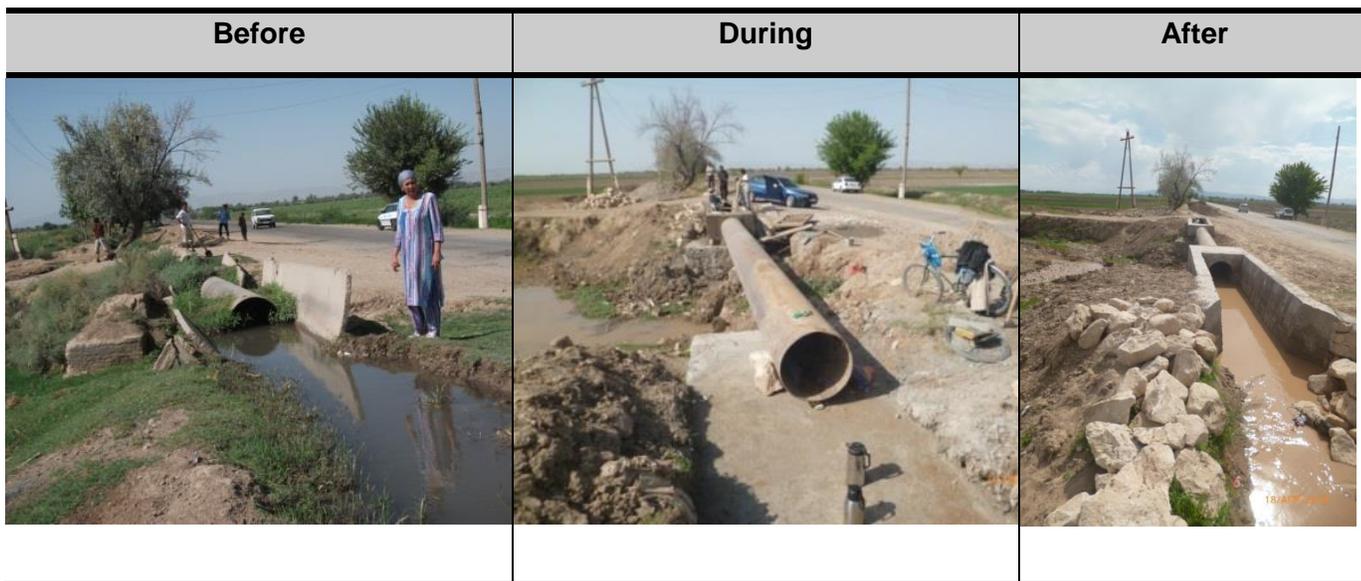


**IV. Qizilnishon and Laylakuya villages, 20-solagii istiqloliyat Jamoat-dehot, Qubodiyon district, WUA “Nahri Kalon”**

- Total number of beneficiaries: over 1200 people + 1100 people
- Total area provided in the project:
  - Household plots: about 33 ha + 41 ha
  - Additional (presidential) lands: 10 ha + 36 ha
  - Dehkan farm lands: 56 ha + 90 ha
- Existing problems: Lack of irrigation water in village lands.
- Proposed approach: rehabilitation of aqueduct and installation of water distribution gates.

Two water distribution gates were installed in Laylakuya village, including one gate ПС 1,1m by 2,5m, one gate OC 0,7m by 1,7m. Also, one aqueduct made of steel pipe was repaired and rehabilitated and 33 m2 of bank protection work was done.

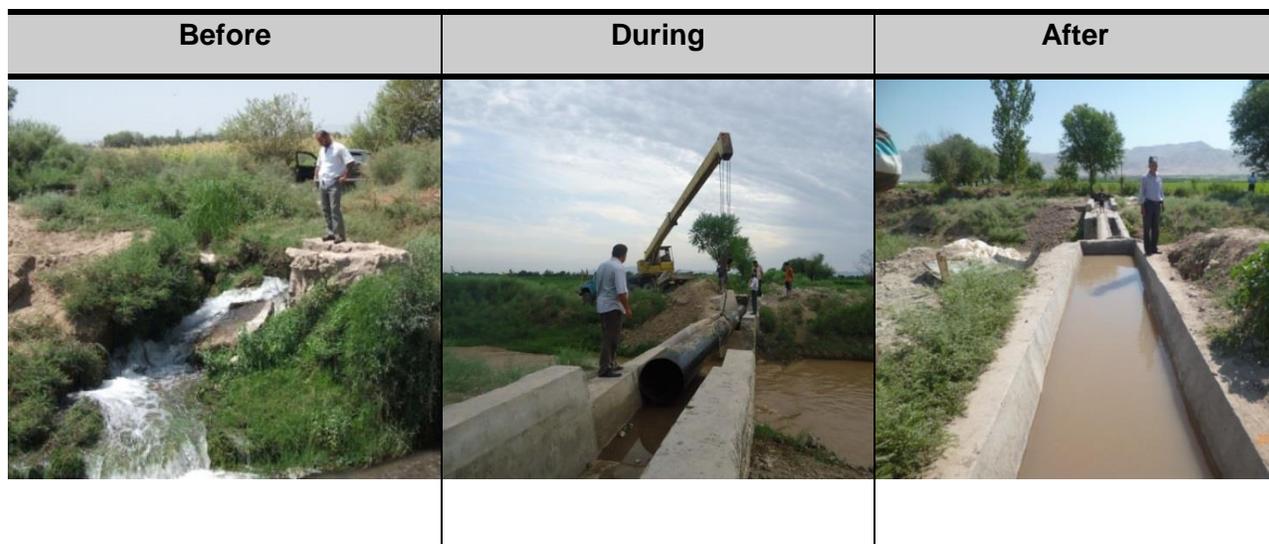
Four water distribution gates were installed in Qizilnishon village, including one gate ПС 1,1m by 2,5, one gate OC 0,7m by 2,1m, one gate OC 0,,7m by 1,8m and one gate OC 0,5m by 1,6m.



**V. Havaskor village, Takhti Sangin Jamoat-dehot, Qubodiyon district, WUA “Havaskor-1”**

- Total number of beneficiaries: 6684 people
- Total area provided in the project:
  - Household plots: 142 ha
  - Additional (presidential) lands: 65 ha
  - Dehkan farm lands: over 180 ha
- Existing problems: Lack of condition for effective use of irrigation water in the village.
- Proposed approach: repair of aqueduct and installation of one water gate.

One aqueduct made of steel pipe, diameter 600mm, length 14m was reconstructed in Havaskor village. Also, one water gate ПС 1,1m by 2,5m was constructed next to this structure.



**VI. Chuyanchi village, Sayod Jamoat-dehot, Shahrituz district, WUA “Sayod”**

- Total number of beneficiaries: 1600 people
- Total area provided in the project:
  - Household plots: over 63 ha
  - Additional (presidential) lands: 23 ha
  - Dehkan farm lands: over 96 ha
- Existing problems: Lack of favorable condition for management and distribution of irrigation water.
- Proposed approach: installation of water distribution gates.

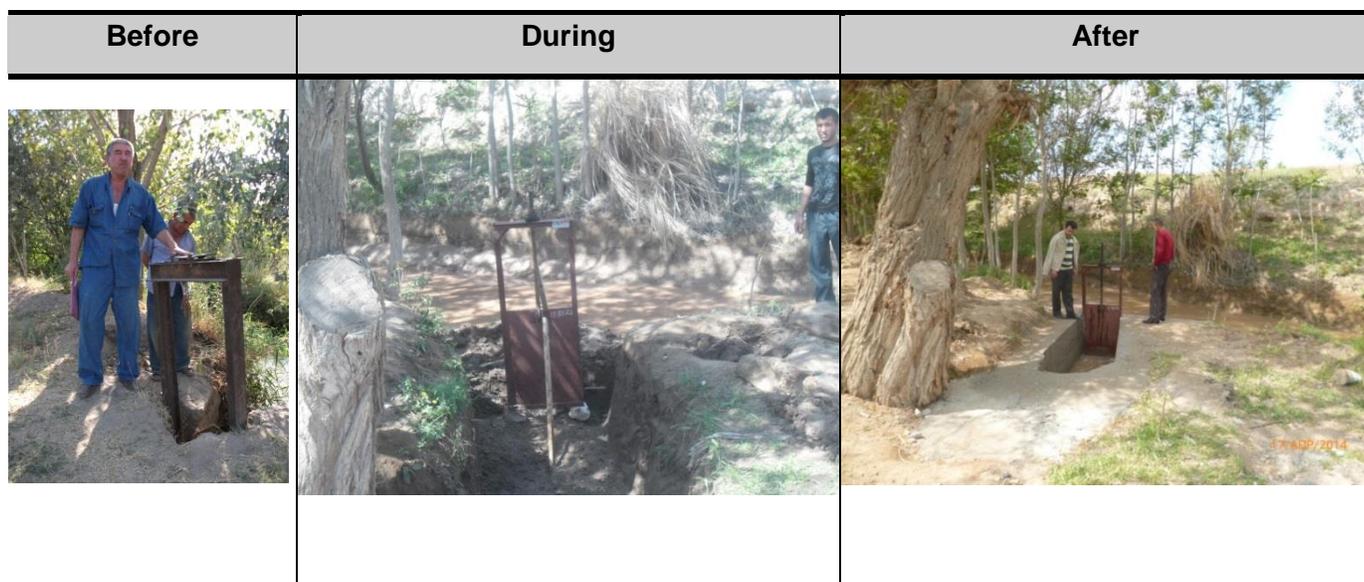
Within the framework of this sub-project, four water distribution gates were installed in Chuyanchi village, including one gate ПС 1m by 2,5m, two gates ПС 0,9m by 1,9m and one gate ОС 0,8m by 1,6m.



**VII. B. Qaraboyev village, Obshoron and Kholmatov Jamoats-dehot, Shahrituz district, WUA “Navruz”**

- Total number of beneficiaries: 3000 people
- Total area provided in the project:
  - Household plots: 67 ha
  - Additional (presidential) lands:
  - Dehkan farm lands: over 200 ha
- Existing problems: Lack of irrigation water for household plots of the villages located at the end of C2 canal. The people living in these villages also use irrigation water for drinking purpose.
- Proposed approach: installation of water distribution gates in C2 canal.

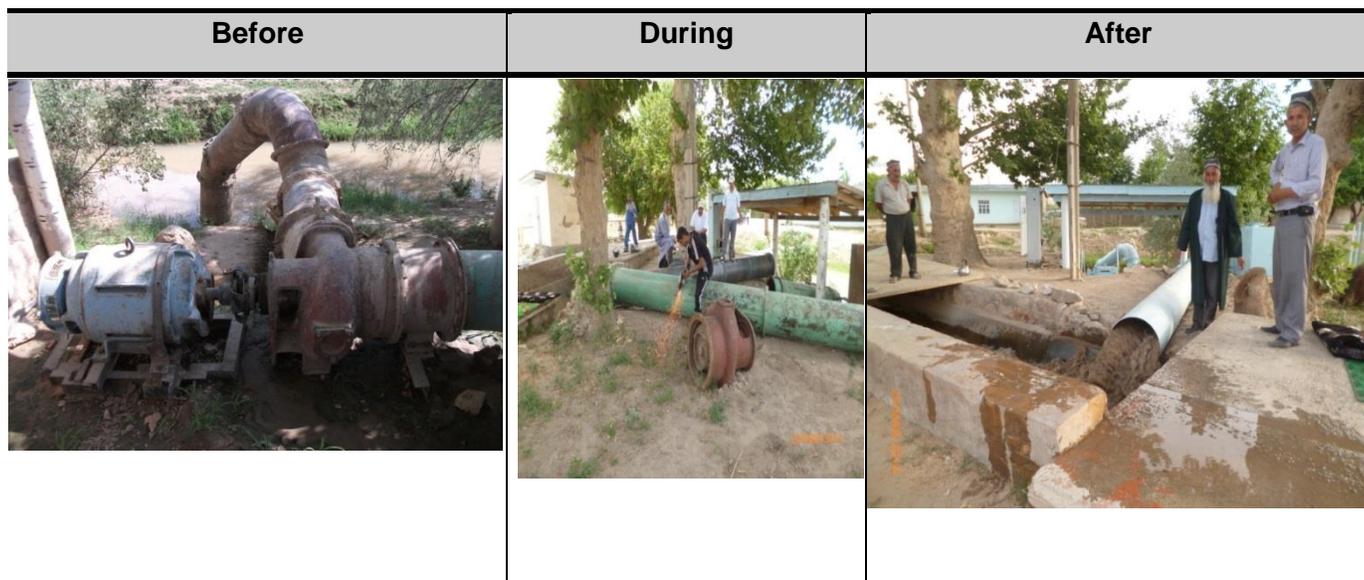
Two water distribution gates were installed in Beshkent canal in B. Qaraboyev village, including one gate OC 0,6m by 1,7m and one gate OC 0,7m by 1,7m. also, two existing water distribution gates were repaired and their panels were replaced. The size of both panels is OC 1m by 0,87m. Moreover, two water distribution gates were repaired and their lifting devices (shafts) were replaced.



**VIII. H. Olimov village, Komsomol Jamoat-dehot, Nosiri Khusrav district, WUA “Beshkent”**

- Total number of beneficiaries: 960 people
- Total area provided in the project:
  - Household plots: over 35 ha
  - Additional (presidential) lands: n/a
  - Dehkan farm lands: n/a
- Existing problems: Lack of irrigation water in the village due to the fact that the pump station of the village needs to be repaired.
- Proposed approach: partial repair of the village’s pump station.

Within the framework of this sub-project, one pump station was partially repaired in H. Olimov village, including some parts were replaced, 8 m of steel pipe was replaced, electric parts were fully replaced to new ones, fence with 18 m length was constructed and the roof (shed) over pump station was replaced. The size of roof is 40 m<sup>2</sup> and made of iron sheets and timber. This project also provided concrete and painting work and 2460 kg of cement and 25 kg of paint were used for these activities.



## Assessment Objectives

The objectives of the intra-village assessment were aligned with and driven by the FFP work plan. Overall the major objectives were to:

- deepen the understanding of problems/challenges of rural households in FFP target areas related to irrigation water;
- as part of the baseline data collection, gain a better understanding of the target areas that would lead to refining the planned interventions for greater impact;
- gather baseline and end-line data for the following FFP indicators, to be able to measure change attributable to FFP

FFP Indicators	Targets
Perceived change in improvements in intra-village water supply	60% improvement
Change in irrigation frequency as measured by 'irrigation-days	BL+10%

## Methodology

The baseline survey was conducted in the ten priority villages of the Khatlon region from September 24<sup>th</sup> --October 10<sup>th</sup> 2013, when irrigation water was running. The villages were selected by the IWM team based on the preliminary rapid assessment results conducted by the team at the end of August. The ten villages were selected based on 1) having a relatively larger population size than surrounding villages, 2) they needed to already be connected with a WUA, and 3) the community should have been actively involved in the past in finding solutions to irrigation problems and it should have been prepared to contribute to implementation of an FFP supported solution.

### Sampling design

A multi-stage sampling method was used to ensure reliable data. At the first stage, a proportional probability sampling method was used to determine the sample size, which was 300 interviews in total. At the second stage sampling was done by using proportion to village's households' size to identify the number of interviews per each village. We come up with the following result: e.g. there are a total of 2,644 households in ten identified villages where we have to interview 300 households. The total number of the population was divided by the number of interviews (300) to be conducted for the survey. It was defined that 11.3% of households should be interviewed per each village. The table below shows the summary of sample size per each village.

Table 1 includes the list of ten villages, their population size and an estimated number of households (HHs).

**Table1: FFP Villages**

No	District	Jamoat	Village	WUA	# HHs	Population
1	Qubodiyon	N. Khisrav	Ravshanobod 1	Farovon	300	1,900

2	Qubodiyon	U. Nazarov	Boshkala	Qubod	450	2,000
3	Qubodiyon	E. Niyozov	Chorbogh	Obi Hayot	400	2,200
4	Qubodiyon	Tahti Sangin	Faroghat	Havaskor 1	400	860
5	Qubodiyon	20 –solagii istikloliyat	Laylakuya	Nahri Kalon	251	1,100
6	Qubodiyon	N. Khisrav	Guzari Bolo	Juyi Ravon	200	880
7	Qubodiyon	20 –solagii Istikloliyat	Kizilnizshon	Nahri Kalon	176	820
8	Shahrituz	Sayod	Juyanchi	Sayod	150	1,353
9	Shahrituz	Kh. Kholmatov	B. Karaboev	Navruz	90	606
10	N.Khusrav	Istikloliyat	H. Olimov	Bishkent	227	1,248
<b>Grand total</b>		<b>9</b>	<b>10</b>	<b>9</b>	<b>2,644</b>	<b>12,967</b>

**Table 2: Number of villages and households interviewed for baseline**

No	District	Jamoat	Village	WUA	Household	# of interviews
1	Qubodiyon	N. Khisrav	Ravshanobod 1	Farovon	300	34
2	Qubodiyon	U. Nazarov	Boshkala	Qubod	450	51
3	Qubodiyon	E. Niyozov	Chorbogh	Obi Hayot	400	45
4	Qubodiyon	Tahti Sangin	Faroghat	Havaskor 1	400	45
5	Qubodiyon	20 –solagii istikloliyat	Laylakuya	Nahri Kalon	251	28
6	Qubodiyon	N. Khisrav	Guzari Bolo	Juyi Ravon	200	23
7	Qubodiyon	20 –solagii Istikloliyat	Kizilnizshon	Nahri Kalon	176	21
8	Shahrituz	Sayod	Juyanchi	Sayod	150	17
9	Shahrituz	Kh. Kholmatov	B. Karaboev	Navruz	90	11
10	N.Khusrav	Istikloliyat	H. Olimov	Bishkent	227	26
<b>Grand Total</b>					<b>2,644</b>	<b>300</b>

The third stage of sampling was done in the villages using the table of random numbers, which was used by each survey team in the field. This method was applied to determine the sampling interval between the households from one to five depending on the size of the village and the number of households (e.g. in the villages with smaller number of households the interval was smaller, from one to three). By spinning the pen the team identified street direction in each village and assessed households on the left side using the sampling interval.

### **Fieldwork**

The Monitoring and Evaluation (M&E) and Irrigation Water Management (IWM) staff were involved in data collection. A one-day training was conducted in the FFP Qurghonteppa office for all survey team members and the training was followed-up with a field testing activity. A total of three teams, consisting of two people in each team, were involved in data collection. The baseline data collection started from September 24<sup>th</sup> and lasted until October 4<sup>th</sup>, 2013.

The FFP intra-village post-rehabilitation, endline assessment was conducted on July 8<sup>th</sup> through 25<sup>th</sup> 2014 in three districts. Overall, 120 households were interviewed for the assessment including 7 females and 113 males.

**Table 3: Number of interviews by district and households interviewed during end line**

#	District	Number of households	Percent
1	Qubodiyon	70	58.3
2	N.Khusrav	30	25.0
3	Shahrituz	20	16.7
<b>Total</b>		120	100.0

**Table 4: Number of interviews by district with gender breakdown**

#	District	Male	%	Female	%	Total	%
1	Qubodiyon	67	95.7%	3	4.3%	70	100.0%
2	N.Khusrav	26	86.7%	4	13.3%	30	100.0%
3	Shahrituz	20	100.0%	0	0	20	100.0%
<b>Total</b>		113	94.2%	7	5.8%	120	100.0%

### **Questionnaire**

The survey instrument was designed jointly by M&E and IWM specialists. It consisted of the following sections: general information, household crop production, access to irrigation water, quality of irrigation water and delivery for irrigation, level of satisfaction with WUA operation and households food security. The questionnaire was translated into Tajik languages and was tested during the one-day data

collection training. As a result of this pre-testing, slight changes were made to the finalized survey tool. See Annex 1.

### **Data entry and analysis**

The data was entered into the database developed in Excel by M&E staff. Overall, 299 questionnaires were entered. However, as a result of data verification and cleaning, four questionnaires were considered inadequate and contained incomplete information. The data of 295 questionnaires were thus analyzed. The analysis also was done in Excel, using analytical tables with numbers and percentages.

### **Limitations**

The survey was conducted during the production season; therefore, it was difficult to reach some farmers in their households. The survey team had to interview farmers in the field. Also, the survey team had to wait long in one of the villages as most farmers in the village went to Friday prayer.

Data collection for the end-line survey took place between July 8<sup>th</sup> and 25<sup>th</sup>, 2014 and was completed within 14 days, again when the irrigation water was running. A total of eight enumerators, including seven data collectors and one field supervisor, were involved and assigned to conduct the household interviews and focus group discussions in the selected areas. The field supervisor was responsible for monitoring the field work of interviewers and checking all the questionnaires for accuracy and completeness.

Prior to data collection, a rigorous, one day training was provided to the survey team by FFP M&E specialists. The survey team was informed about the survey goals and objectives and the methods of data collection from the field. Each and every concept and question on the survey was explained and discussed in detail. The training was followed by a pre-test in a nearby village of the Qurghonteppa district and a debrief session where the enumerators tested their research skills and understanding of the survey tools.

All enumerators were fluent in Tajik and Uzbek and had prior work experience at the village level. Each interviewer completed four or five questionnaires per day. Each questionnaire took from 30 to 40 minutes complete.

## KEY FINDINGS OF INTRA-VILLAGE IRRIGATION ACTIVITY

Summary OF Baseline Findings Before Improvements										Summary Of Endline Finding After Improvements										
<p><i>Frequency of household irrigation.</i> Average 2.9 times per week. 21% get no irrigations.</p>										<p><i>Frequency of household irrigation.</i> Average 3.2 times per week. 1% gets no irrigations.</p>										
How many times in a week does your village get irrigation water?										How many times in a week does your village get irrigation water?										
Districts	0	1	2	3	4	5	6	7	Total	District	0	1	2	3	4	5	6	7	7+	Total
N.Khusrav	1	23	2						26	Qubodiyon	1	14	33	14	6	2	0	0		70
Qubodiyon	53	34	64	8	2	4	1	75	241	N.Khusrav	0	0	5	13	5	3	0	3		130
Shahrituz	7	8	2					11	28	Shahrituz	0	0	1	2	4	0	1	0	12	20
<b>Total</b>	<b>61</b>	<b>65</b>	<b>68</b>	<b>8</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>86</b>	<b>295</b>	<b>Total</b>	<b>1</b>	<b>14</b>	<b>39</b>	<b>29</b>	<b>15</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>13</b>	<b>120</b>
Average	21%	22%	23%	3%	1%	1%	0%	29%	100.0%	Average	1%	12%	33%	24%	13%	4%	1%	3%	11%	100%

**Rating of household irrigation supply.**

Favorable - Acceptable to Excellent - .56.5%

Unfavorable - Poor to Very Poor – 43.4%

Very Unfavorable – Very Poor – 29.8%

Overall, how would you currently rate the water supply within your village?						
Districts	Acceptable	Good	Excellent	Poor	Very poor	Grand Total
N.Hisrav				11	15	26
Qubodiyon	31	111	8	18	73	241
Shahrituz	6	8	3	11		28
Grand Total	<b>37</b>	<b>119</b>	<b>11</b>	<b>40</b>	<b>88</b>	<b>295</b>
Total in %	<b>12.5%</b>	<b>40.3%</b>	<b>3.7%</b>	<b>13.6%</b>	<b>29.8%</b>	<b>100.0%</b>

**Improvement in intra-village water supply**

67% of respondents noticed an improvement in water supply.

**Over the last 12 months have you noticed an improvement in the water supply within your village?**

District	Yes	%	No	%	Do not know	%	Total
Qubodiyon	52	74.3%	16	22.9%	2	2.9%	70
N.Khusrav	15	50.0%	10	33.3%	5	16.7%	30
Shahrituz	14	70.0%	0	0.0%	6	30.0%	20
<b>Total</b>	<b>81</b>	<b>67.5%</b>	<b>26</b>	<b>21.7%</b>	<b>13</b>	<b>10.8%</b>	<b>120</b>

**Rating of household irrigation supply.**

Favorable - Acceptable to Excellent - .72.5

Unfavorable -Poor to Very Poor – 22.5%

Very Unfavorable – 2.5%

**Overall, how would you currently rate the water supply within your village?**

Districts	Acceptable	Good	Excellent	Poor	Very poor	Don't Know	Grand Total
N.Hisrav	1	16	40	12	1	0	70
Qubodiyon	0	8	11	4	2	5	30
Shahrituz	1	1	12	5	0	1	20
<b>Total</b>	<b>2</b>	<b>25</b>	<b>63</b>	<b>21</b>	<b>3</b>	<b>6</b>	<b>120</b>
Total in %	<b>1.7%</b>	<b>20.8%</b>	<b>52.5%</b>	<b>17.5%</b>	<b>2.5%</b>	<b>5.0%</b>	<b>100.0%</b>

Summary Of Other Baseline Findings	Summary Of Other Endline Findings
<p><b>Land ownership</b></p> <ul style="list-style-type: none"> <li>100% (n= 295) have kitchen gardens, 52% (n=156) have presidential land, 22.6% (n=66) have dekhkan farms, 2.4% (n=7) of households have rented land and 0.33% (n=1) of households use the land of their relatives;</li> </ul>	<p><b>Question not asked in endline</b></p>
<p><b>Distance to the water source</b></p> <ul style="list-style-type: none"> <li>For 44.4% of households the irrigation water source was from 10 to 500 meters away.</li> <li>For 36.6% of households from 501 to 10,000 meters away.</li> <li>For 9.5% of households from 10,000 up to 25,000 meters away.</li> </ul>	<p><b>Distance to the water source</b></p> <ul style="list-style-type: none"> <li>For 45.0% of households the distance between their household and a water source is from 500 to 1,000 meters.</li> <li>For 33.3% of households the irrigation water source was from 10 to 500 meters away.</li> <li>For 1.7% of households from 5,000 to 10,000 meters away.</li> </ul>
<p><b>Duration of irrigation water delivery received</b></p> <ul style="list-style-type: none"> <li>30.5% of households mentioned that they irrigated their plots <b>only for one hours</b> each time;</li> <li>17.3% of households mentioned that they irrigated their plots two hours each time;</li> <li>19.7% of households from three to four hours each time.</li> </ul>	<p><b>Duration of irrigation water delivery received</b></p> <ul style="list-style-type: none"> <li>33.3% of households mentioned that they irrigated their plots for two hours each time;</li> <li>16.7% of households mentioned that they irrigated their plots three hours each time;</li> <li>17.5% of households for four hours each time.</li> </ul>
<p><b>Access to water</b></p> <ul style="list-style-type: none"> <li>79.7% (n=235) of households reported that the main source of irrigation water in their villages is self-flow canal and</li> <li>20.3% (n=60) of households mentioned a pumped canal;</li> </ul>	<p><b>Access to water</b></p> <ul style="list-style-type: none"> <li>66.4% of households reported that the main source of irrigation water in their villages is self-flow canals;</li> <li>20.7% of households mentioned a pumped canal;</li> <li>67.5% of households reported that over the last 12 months they have noticed an improvement in the water supply within their village</li> </ul>

<p><b><i>Satisfaction with Water Delivery for Irrigation</i></b></p> <ul style="list-style-type: none"> <li>• 43.1% (n=127) of households reported that water is not always delivered when required;</li> <li>• 36.3% (n=107) of households noted that water is not always delivered in the required quantity;</li> <li>• 28.5% (n=84) of households mentioned that the drainage canals are not well maintained;</li> <li>• 15.3% (n=45) of households noted that the irrigation canals are not well maintained;</li> <li>• 13.2% (n=39) of households mentioned that pumps are not reliable and in good condition;</li> <li>• 12.9% ((n=86) of households noted that water quality is poor and 9.5% of households mentioned that irrigation water fees are too high;</li> </ul>	<p><b><i>Satisfaction with irrigation water delivery</i></b></p> <ul style="list-style-type: none"> <li>• 57.2% of households were satisfied with water delivery at the village level;</li> <li>• 23.2% of households reported water is not always delivered in the required quantity</li> </ul>
<p><b><i>Frequency of water that should be received</i></b></p> <ul style="list-style-type: none"> <li>• 40.7% of households mentioned that the village should get water three times in a week;</li> <li>• 37.3% of households said at least two times in a week;</li> </ul>	<p><b><i>Frequency of water that should be received</i></b></p> <ul style="list-style-type: none"> <li>• 54.2% of households mentioned that the village should get water four times in a week;</li> <li>• 19.2% of households said at least three times in a week;</li> </ul>
<p><b><i>Duration of water that should be received (hours)</i></b></p> <p>68.8% highlighted that one to four hours would be sufficient to irrigate the household plots. However, the overall requirement for plot irrigation is six hours on average for a household depending on the type of crops</p>	<p><b><i>Duration of water that should be received (hours)</i></b></p> <ul style="list-style-type: none"> <li>• 70.8% highlighted that four to six hours would be sufficient to irrigate the household plots. However, the overall requirement for plot irrigation is six hours on average for a household depending on the type of crops.</li> </ul>
<p><b><i>Existence of WUA</i></b></p> <ul style="list-style-type: none"> <li>• 79% (n=233) of households mentioned that they have a WUA in their villages that manages the irrigation water in the village;</li> <li>• 20% ( n=59) of households did not know</li> </ul>	<p><b><i>Existence of WUA</i></b></p> <ul style="list-style-type: none"> <li>• 92.5% of households mentioned that they have a WUA in their village that manages the irrigation water in the village, moreover they noted the names of the WUA;</li> </ul>

<ul style="list-style-type: none"> <li>• 44.1% (n=130) of households mentioned that they are the member of the WUA</li> </ul>	<ul style="list-style-type: none"> <li>• 90.1.1% of households mentioned that they are a member of their WUA;</li> <li>• 95.0% mentioned that WUA manages the distribution of irrigation water in their village</li> </ul>
<p><b><i>Level of satisfaction with WUA</i></b></p> <ul style="list-style-type: none"> <li>• 27.8% (n=82) of households were very satisfied with WUAs operation;</li> <li>• 31.8% of households were partially satisfied;</li> <li>• 14.8% of households were dissatisfied with WUAs operation in their villages;</li> <li>• 25.4% of households did not know</li> </ul>	<p><b><i>Level of satisfaction with WUA</i></b></p> <ul style="list-style-type: none"> <li>• 81.1 % of households were satisfied and very satisfied with WUAs operation; And 44,7% out of this people noted that WUA is doing well in solving existing problems and challenges related to irrigation water, 35.9% noted that they are supplied with sufficient irrigation water.</li> </ul>
<p><b><i>Irrigation Water Management</i></b></p> <ul style="list-style-type: none"> <li>• 75.9% (n=224) of households mentioned that a WUA is considered as a main water management point in their villages;</li> <li>• 5.1% (n=15) of households mentioned the governmental water management department (Vodkhoz);</li> </ul>	<p><b><i>Irrigation Water Management</i></b></p> <ul style="list-style-type: none"> <li>• 85% of households mentioned that irrigation system mainly managed by installed water gates,</li> <li>• 42.5% of respondents mentioned repair of water gates would lead to improved irrigation water</li> <li>• 15% of respondents mentioned proper management and regular monitoring of water distribution by WUA and head of village would also lead to improved irrigation water</li> </ul>
<p><b><i>Question not asked in baseline</i></b></p>	<p><b><i>Length of irrigation water season</i></b></p> <ul style="list-style-type: none"> <li>• 61.7% of households report having water available for eight months of the year;</li> <li>• 17.5% of households mentioned that they have water available for their irrigation for seven months;</li> <li>• 11.7% reported that they have irrigation water available for nine months;</li> </ul>

	<ul style="list-style-type: none"> <li>The average months of water availability is eight months.</li> </ul>
<p><b><i>Irrigating land by gender</i></b></p> <ul style="list-style-type: none"> <li>83.4% (n=246) of households mentioned that mainly men are responsible for irrigating land in the households;</li> <li>13.2% (n=39) of households mentioned that women are irrigating the land;</li> <li>3.4% (n=10) of households mentioned that children are irrigating the kitchen garden.</li> </ul>	<p><b><i>Irrigating land by gender</i></b></p> <ul style="list-style-type: none"> <li>100% of households mentioned that mainly men are responsible for irrigating land in the households;</li> </ul>
<p><b><i>Water fees payment</i></b></p> <ul style="list-style-type: none"> <li>83.4% (n=246) of households are paying irrigation water fees;</li> <li>14.2% (n=42) of households reported that they do not pay water fees;</li> <li>2.45 (n=7) were not aware of irrigation payment fees.</li> </ul>	<p><b><i>Water fee payment of irrigation</i></b></p> <ul style="list-style-type: none"> <li>98.3% of respondents pay water fees</li> </ul>
<p><b><i>Question not asked in baseline</i></b></p>	<p><b><i>Conflict management</i></b></p> <ul style="list-style-type: none"> <li>49.2% of households experienced or witnessed conflicts over irrigation water in their villages.</li> <li>62.7% of household reported that the possible conflicts are prevented by giving advices</li> </ul> <p>5.1% of households mentioned WUA's involvement in conflict resolution.</p>

## DISCUSSION

### ACCESS TO IRRIGATION WATER

#### *Main source of water*

Given the hot and dry climate in the Khatlon region, irrigation makes a significant difference in the productivity of land. Small kitchen gardens, located close to home, are frequently irrigated. As part of the survey, households were asked about the source of irrigation water in the village. Most households, in fact 93 (66.4%), identified the source of irrigation water in the villages as mainly the self-flow canals. About 29(20.7%) households mentioned that pumped canals were the source of their irrigation water and 9 (6.4%) households reported springs as the source of their irrigation water. Wells were mentioned for 7 (5.0%) households. Table 5 displays irrigation water sources by district.

**Table 5: Source of irrigation water**

Question B1: What is the main source of irrigation water in your village?							
#	District	Canal self – flow	Canal pumped	Well	Spring	Drain system	Total
1	Qubodiyon	60	20	7	0	1	88
2	N.Khusrav	13	9	0	9	1	32
3	Shahrituz	20	0	0	0	0	20
<b>Total</b>		<b>93</b>	<b>29</b>	<b>7</b>	<b>9</b>	<b>2</b>	<b>140</b>

#### *Availability of irrigation water*

Availability of irrigation water is a concern for the majority of rural farmers in some villages of the Khatlon region. It is need to mention that irrigation season starts from March and continues till the November, therefore, in order to define the overall situation the households were asked about the availability of irrigation water in the past 12 months. The survey showed that 74 households (67.1%) have the water available eight months of the year, 21 (17.5%) reported that they have irrigation water available for seven months and 11.7.7% of households mentioned that they have water available for irrigation for nine months of the year. The results revealed that the average availability of irrigation water is eight months out of the year.

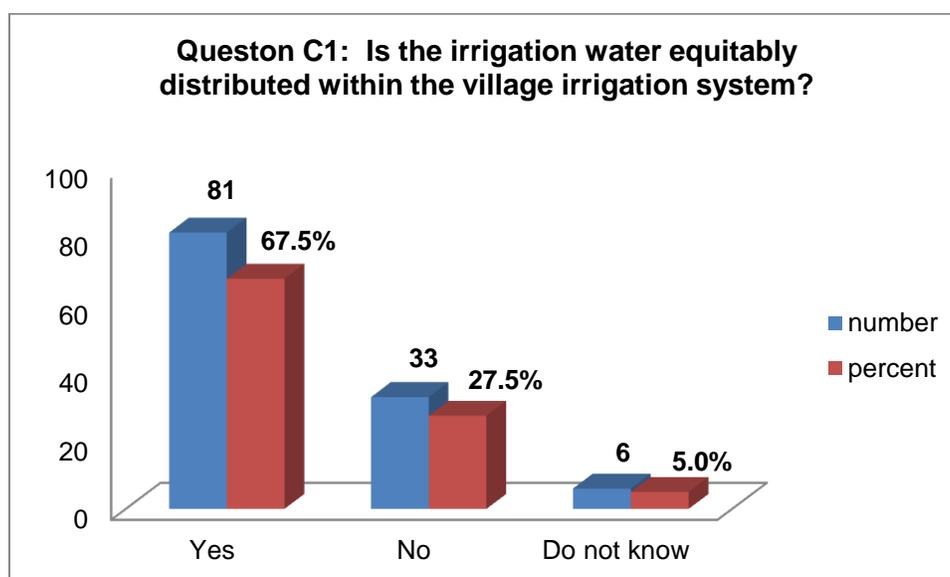
**Table 6: Availability of irrigation water**

<b>Question B3: In the last 12 months how many months did you have irrigation water?</b>							
#	District	6 months	7 months	8 months	9 months	10 months	Total
1	Qubodiyon	9	16	44	1	0	70
2	N.Khusrav	1	2	13	13	1	30
3	Shahrituz	0	3	17	0	0	20
<b>Total</b>		10	21	74	14	1	120

***Distribution of irrigation water***

Insufficient irrigation water and poor water management has always been a major challenge in the rural areas of Tajikistan. Irrigation water is not always equitably distributed within villages, because much water distribution infrastructure was destroyed and during long time was not maintained. Usually the households located in the upper level of a canal get more water than those located in the lower level of the main canal; this problem was to all villages, where FFP did engineering maintenance work. During the end line survey, 81 households (67.5%) reported that the irrigation water is equitably distributed within the village irrigation system and only 33 households (27.5%) mentioned that the water is not equitable distributed.

**Figure 1: Distribution of irrigation water after rehabilitations**



The result of focus group discussion with farmers found that the majority of respondents are satisfied with the distribution of water at the village level, even though in some instances the water supply to farmers is increasingly unreliable and inequitable. They attribute this mainly to the work that WUAs have been doing in terms of managing equitable water distribution. Another factor is the tacit agreement among farmers themselves to regulate water distribution. However, they also acknowledge that, in some instances, due to broken water gates, it is hard to distribute water proportionately, particularly when the plots are at the edge of the irrigation system. In other instances, upland areas using pump irrigation face significant challenges due to broken pumps. This often leads to disputes among desperate farmers. The district department of water resources hardly pays any attention to this issue and fails to address it. The only hope, the respondents claim, is the formation and strengthening of WUAs in the area.

### **Quality of irrigation water delivery**

In order to identify the overall situation of the water supply in the villages and define the impact attributed to FFP interventions, the respondents were asked if they noticed an improvement in the water supply within their villages over the last 12 months. The result demonstrated that 81 (67.5%) of households saw improvements in the water supply within their villages and only 26 (21.7%) of households reported that they did not notice any improvement. The analysis showed that in ten villages where the intra-village water supply intervention was carried out by FFP, 73% of households noticed improvement as a result of USAID support.

**Table 7: Improvement in intra-village water supply after rehabilitations**

<b>Question C8: Over the last 12 months have you noticed an improvement in the water supply within your village?</b>									
<b>#</b>	<b>District</b>	<b>Yes</b>	<b>%</b>	<b>No</b>	<b>%</b>	<b>Do not know</b>	<b>%</b>	<b>Total</b>	<b>%</b>
1	Qubodiyon	52	74.3%	16	22.9%	2	2.9%	70	100.0%
2	N.Khusrav	15	50.0%	10	33.3%	5	16.7%	30	100.0%
3	Shahrituz	14	70.0%	0	0.0%	6	30.0%	20	100.0%
	<b>Total</b>	<b>81</b>	<b>67.5%</b>	<b>26</b>	<b>21.7%</b>	<b>13</b>	<b>10.8%</b>	<b>120</b>	<b>100.0%</b>

In addition to overall picture of the intra-village water supply in these districts of the Khatlon region, households were asked to rate the current situation within their villages. The end line survey results revealed that the intra-village water supply in most villages needs improvement. And the problem not only access to water but also poor water management at village level. Of all interviewed households, 63 households (52.5%) rated the water supply as acceptable, 25 (20.8%) indicated that the intra-village water supply is poor, whereas 21 households (17.5%) indicated that it is good.

**Table 8: Rating the intra-village water supply after rehabilitations**

<b>Question C9: Overall, how would you currently rate the water supply within your village?</b>								
#	District	Very poor	Poor	Acceptable	Good	Excellent	Do not know	Total
1	Qubodiyon	1	16	40	12	1	0	70
2	N.Khusrav	0	8	11	4	2	5	30
3	Shahrituz	1	1	12	5	0	1	20
<b>Total in numbers</b>		<b>2</b>	<b>25</b>	<b>63</b>	<b>21</b>	<b>3</b>	<b>6</b>	<b>120</b>
<b>Total in %</b>		<b>1.7%</b>	<b>20.8%</b>	<b>52.5%</b>	<b>17.5%</b>	<b>2.5%</b>	<b>5.0%</b>	<b>100.0%</b>

Households were asked to describe the quality of water delivery for irrigation to household's plots. The end line survey revealed that 57.2% of respondents were satisfied with the quality of water delivery, 23.2% mentioned that water is not always delivered in the required quantity. The drainage canals were not well maintained and poor maintenance of irrigation canals reported 2.9% of respondents 4.3% of respondents mentioned that pumps were not reliable and

**Table 9: Quality of irrigation water delivery after rehabilitations**

<b>Question C2. How would you describe the quality of water delivery for irrigation to household's plots?</b>								
District	Water delivery is satisfactory	Water is not always delivered when required	Water is not always delivered in the required quantity	Water quality is poor	Irrigation canals are not well maintained	Drainage canals are not well maintained	Pumps are not reliable	Total
Qubodiyon	36.2%	2.2%	10.9%	0.0%	1.4%	2.9%	4.3%	58.0%
N.Khusrav	10.1%	2.9%	10.1%	0.0%	0.0%	0.0%	0.0%	23.2%
Shahrituz	10.9%	2.9%	2.2%	1.4%	1.4%	0.0%	0.0%	18.8%
<b>Total</b>	<b>57.2%</b>	<b>8.0%</b>	<b>23.2%</b>	<b>1.4%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>4.3%</b>	<b>100.0%</b>

In addition to quantitative data and for more detailed information on the status of intra-village irrigation water supply, focus discussions with the leaders and farmers were organized. The result of the discussion revealed that in some districts, since the formation of WUAs, the

situation has improved considerably. For example, in Shahrituz district, Jamoat “Kholvmatov”, Qabodiyon district, Jamoat “Nosiri Khusrav”, the respondents praised the work that WUAs has carried out in managing and improving the irrigation system. WUAs, in these particular districts, took overall management of inter-farm and on-farm irrigation systems and mobilized farmers to clear main canals and drainage systems. As a result, the underground water levels decreased whilst water distribution has improved, which has allowed farmers to have access to water on time. Despite these improvements, the respondents acknowledged that due to lack of water gates and water measurement equipment, there is significant amount of water waste. This also entails costs for farmers who have to pay for water which they have not used.

### **Frequency of irrigation water**

Households were asked “*how many times in a week does your village get irrigation water?*” The majority of households, 39 (32.5%) mentioned that they get water two times a week, 29 households (24.2%) report they get water three times a week and 16(13.3%) mentioned that their village receive water all the time. In average the villages receive water 4 times in a week.

**Table 10: Times in a week a village receive irrigation water after rehabilitations**

<b>Question C3. How many times in a week does your village get irrigation water?</b>											
#	District	0	1	2	3	4	5	6	7	Have water all the times	Total
		time	times	times	times	times	times	times	times		
1	Qubodiyon	1	14	33	14	6	2	0	0	0	70
2	N.Khusrav	0	0	5	13	5	3	0	3	1	30
3	Shahrituz	0	0	1	2	4	0	1	0	12	20
<b>Total</b>		<b>1</b>	<b>14</b>	<b>39</b>	<b>29</b>	<b>15</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>13</b>	<b>120</b>

To the question “*how many times in a week should your village get irrigation water?*” the responses were different. The majority of households, 65 (54.2%) mentioned that the village should get water four times a week, 23 (19.2%) said that two times a week.

**Table 11: Times in a week a village should receive irrigation water after rehabilitations**

<b>Question C4: How many times in a week should your village get irrigation water?</b>								
#	District	2 times	3 times	4 times	5 times	6 times	7 times	Total
1	Qubodiyon	1	20	44	4	1	0	70
2	N.Khusrav	0	3	20	1	1	5	30
3	Shahrituz	0	0	1	1	2	16	20
<b>Total</b>		<b>1</b>	<b>23</b>	<b>65</b>	<b>6</b>	<b>4</b>	<b>21</b>	<b>120</b>

The survey showed that even if villages received irrigation water in some villages it is not always sufficient for irrigation and observed poor water management at household level. Therefore, during the survey the households were asked “*how many hours did your household get in irrigation water (each time)?*” The survey results indicated that on average, each household had access to irrigated water for their household plot for 3.9 hours each time (min=1 and max=13). About 40 households (33.3%) mentioned that they had access for two hours, 21 households (17.5%) said that they had access for their plots four hours and 20 households (16.7%) for three hours each time.

**Table 12: Hours in a week households received irrigation water after rehabilitations**

<b>Question C5: How many hours did your households get in irrigation water (each time)?</b>													
#	District	1 hr	2 hrs	3 hrs	4 hrs	5 hrs	6 hrs	8 hrs	12 hrs	24 hrs	48 hrs	0 hrs	Total
1	Qubodiyon	2	35	14	9	6	1	0	0	2	0	1	70
2	N.Khusrav	0	4	4	6	1	5	1	2	4	3	0	30
3	Shahrituz	0	1	2	6	2	6	0	0	3	0	0	20
<b>Total</b>		<b>2</b>	<b>40</b>	<b>20</b>	<b>21</b>	<b>9</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>9</b>	<b>3</b>	<b>1</b>	<b>120</b>

To the question “*how many times should your household get irrigation water (each time)*”, the majority, 85 (70.8%) highlighted that four to six hours would be sufficient to irrigate the household plots. However, the overall requirement for plot irrigation is six hours on average for a household depending on the type of crops.

**Table 13: Hours in a week households should receive irrigation water after rehabilitations**

<b>Question C6: How many hours should your household get irrigation water (each time)?</b>												
#	District	2 hrs	3 hrs	4 hrs	5 hrs	6 hrs	7 hrs	8 hrs	12 hrs	24 hrs	48 hrs	Total
1	Qubodiyon	2	3	37	12	7	3	4	0	2	0	70
2	N.Khusrav	0	0	0	2	12	0	5	3	5	3	30
3	Shahrituz	0	0	4	2	9	2	0	0	3	0	20
<b>Total</b>		<b>2</b>	<b>3</b>	<b>41</b>	<b>16</b>	<b>28</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>10</b>	<b>3</b>	<b>120</b>

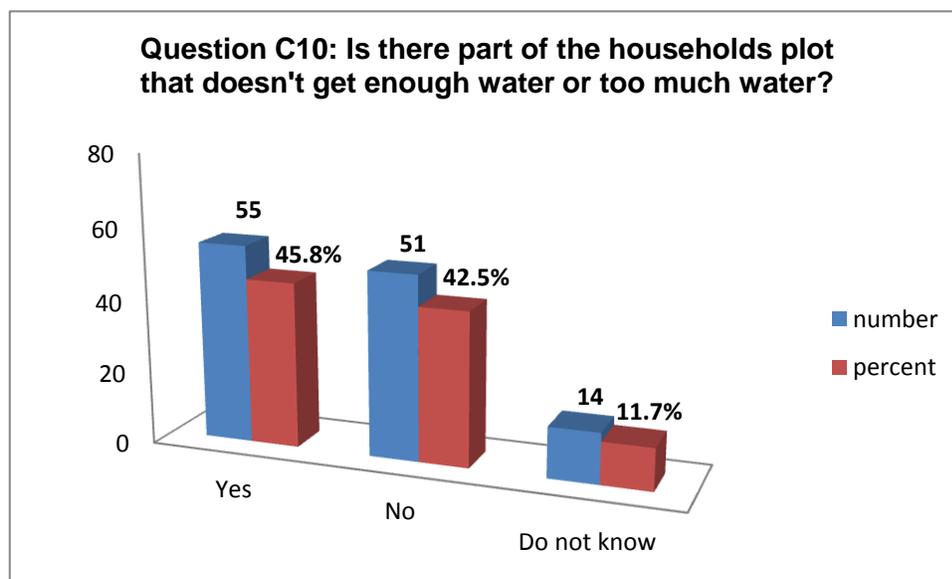
To the question: “*is the irrigation water sufficient for irrigation of all your land?*” the majority of households 83 (69.2%) gave a positive response saying that the water supply is sufficient and 37 (30.8%) said that the irrigation water is not sufficient.

**Table 14: Sufficiency of irrigation water by districts after rehabilitations**

<b>Question C7: Is the irrigation water sufficient for irrigation of all your land?</b>							
#	District	Yes	%	No	%	Total	%
1	Qubodiyon	52	74.3%	18	25.7%	70	100.0%
2	N.Khusrav	14	46.7%	16	53.3%	30	100.0%
3	Shahrituz	17	85.0%	3	15.0%	20	100.0%
<b>Total</b>		<b>83</b>	<b>69.2%</b>	<b>37</b>	<b>30.8%</b>	<b>120</b>	<b>100.0%</b>

Due to insufficient or unequal distribution of irrigation water, some parts of the household's plots do not get enough water or get too much water. The results showed that 55 households (45.8%) either don't get enough or get too much water.

**Figure 2: Water distribution within household plots, after rehabilitations**



To solve this problem almost all respondents 99 (83.0%) acknowledge that at the village level, with support of WUA farmers and community members organize “hashar” (a voluntary act) during the spring to clean the on-farm irrigation system.

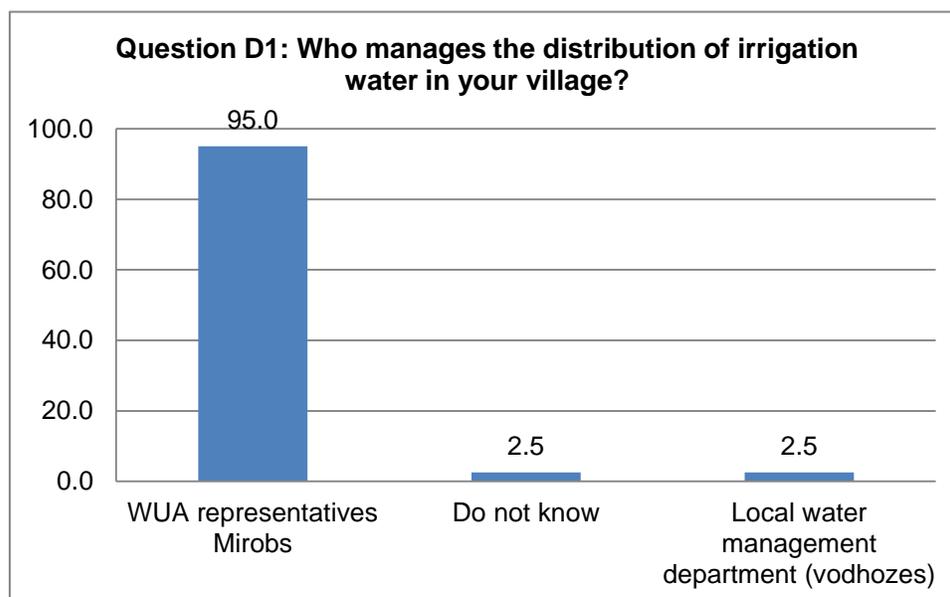
During the focus group discussion many farmers mentioned that, they also collect money to repair pumps which are critical to many farmers whose plots do not have access to the main canal irrigation systems. Moreover, during the summer time, when demand for water is critical, farmers organize “hasher” to clear drainage and on-farm irrigation channels from the grass which by then grow in height and thus create impediments to the flow of water. However,

despite these efforts, due to the fact that the drainage system and on-farm channels have not been looked after for so long, it is often difficult to carry out large scale cleaning. For example, the constant flow of sediment and poor drainage and main canals fills the system with sand which makes not only water inflow low but also increases the underground water levels. Therefore, addressing this issue is paramount in order to reduce water losses. Improved irrigation distribution should reduce also seepage losses from the main canal and excess water distribution. This should have a beneficial impact on project areas through lower water tables, lower risk of salinity, and less stagnant water pools in villages. But they have mentioned that through the WUA they have learned proper water management at household level.

The survey results indicated that in most villages the intra- village water supply is managed by the WUAs, particularly the “Mirops” 114 (95%),

The households were also asked “*who usually waters the household plots?*” All 120 respondents (100%) mentioned that the plots are mainly irrigated by men,

**Figure 3: Water management in the village after rehabilitations**



Households were asked about the management of the village irrigation system in the canal. The end line survey showed that the irrigation system is mainly managed by installed water gates ( 85%), installed pumps (3.3%). While asking this question in some villages, respondents find it difficult to answer this question (11.7%).

**Table 15: Management of the irrigation system in the village by districts after rehabilitations**

Question D3: How is the village irrigation system in the canal managed?					
#	District	By water distribution gates	By irrigation pumps	Have difficulty to answer the question	Total
1	Qubodiyon	95.7%	2.9%	1.4%	100.0%
2	N.Khusrav	60.0%	6.7%	33.3%	100.0%
3	Shahrituz	85.0%	0.0%	15.0%	100.0%
<b>Total</b>		<b>85.0%</b>	<b>3.3%</b>	<b>11.7%</b>	<b>100.0%</b>

In addition to this households were asked “*how can the intra-village water supply be improved?*” The majority of respondents mentioned repair of water gates (42.5%), proper water management by WUAs and the head of the village (15.0%), installation of gates (13.3%),. About 20% of respondents, who were mainly women, had difficulty in answering this question. The households were asked if they pay water fees. The majority of households, in fact 98.3% of respondents pay water fees and only 1.7 % said that they do not pay water fees.

**Table 16: Ways of improvement of irrigation system after rehabilitations**

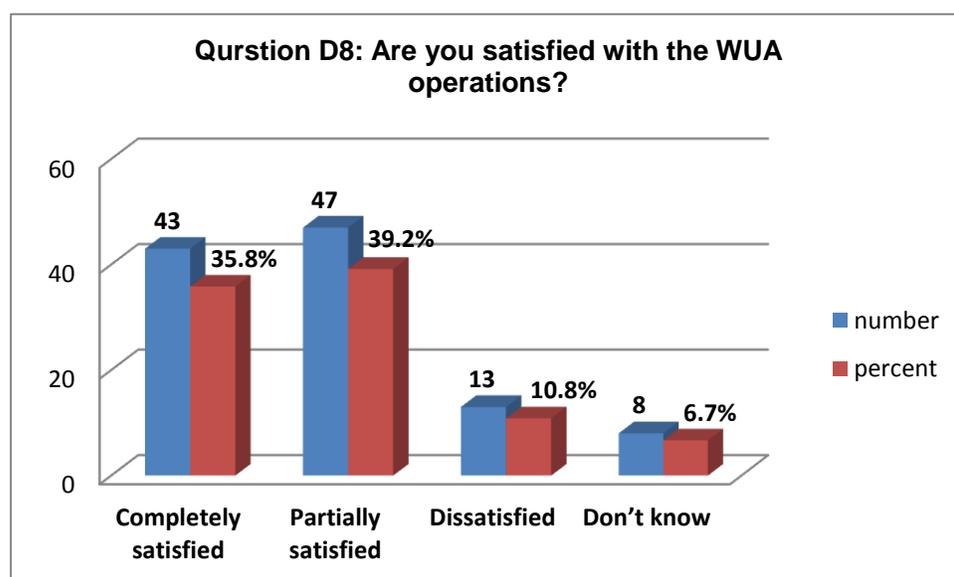
Question D4: How can it be improved?									
#	District	Mainten ance of water gates	Installat ion of water gates	Regular monitori ng of water distribut ion by WUA and head of village	Maintena nce and cleaning of water distributi on system	Have difficu lty to answe r the questi on	Financial input for maintena nce of water distributi on points	The situati on has impro ved	Tot al
1	Qubodi yon	51.4%	17.1%	15.7%	7.1%	7.1%	1.4%	0.0%	100 %
2	N.Khus rav	26.7%	3.3%	10.0%	6.7%	50.0%	0.0%	3.3%	100 %
3	Shahrit uz	35.0%	15.0%	20.0%	5.0%	20.0%	0.0%	5.0%	100 %
<b>Total</b>		<b>42.5%</b>	<b>13.3%</b>	<b>15.0%</b>	<b>6.7%</b>	<b>20.0%</b>	<b>.8%</b>	<b>1.7%</b>	<b>100 %</b>

Since the beginning FFP has created and supported 60 WUAs and 17of them (28.3%) of them operates in the survey target districts. In order to determine the awareness of households about the WUAs, households were asked if there is a WUA in their village. Almost 111 respondents (92.5%) noted that they have a WUA in their village and only 8 (6.7%) mentioned that they do not know about WUAs existence. The households were asked if they are WUA members. Of those who mentioned that there is a WUA in their village (111/92.5%), 100(90.1%) were WUA members. When asked if the households were satisfied with the WUA operations, 43 (35.8%) were completely satisfied, 47 (39.2%) were satisfied and 13(10.8%) were not satisfied with the WUAs operation in their villages.

**Table 17: Awareness about WUAs after rehabilitations**

Question D6: Is there a WUA in your village?									
#	District	Yes	%	No	%	Do not know	%	Total	%
1	Qubodiyon	68	97.1%	1	1.4%	1	1.4%	70	100.0%
2	N.Khusrav	28	93.3%	0	0.0%	2	6.7%	30	100.0%
3	Shahrituz	15	75.0%	0	0.0%	5	25.0%	20	100.0%
<b>Total</b>		<b>111</b>	<b>92.5%</b>	<b>1</b>	<b>.8%</b>	<b>8</b>	<b>6.7%</b>	<b>120</b>	<b>100.0%</b>

**Figure 4: Level of satisfaction about WUA’s operation after rehabilitations**

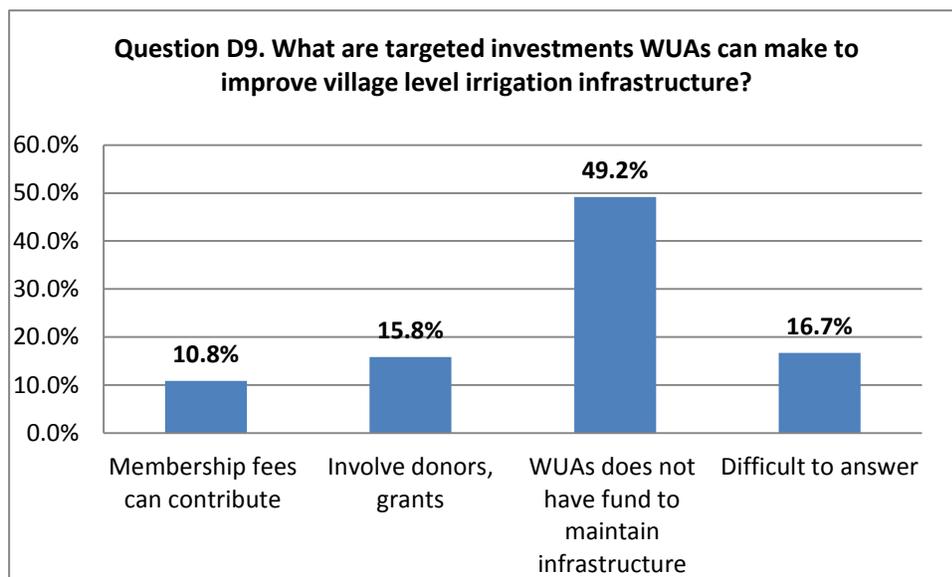


Overall, a significant majority of respondents positively evaluated the formation of WUAs in their respective villages in terms of managing water irrigation systems. Although, they say, WUAs are recently formed; their contribution is welcome in many respects. First, with the formation of WUAs they manage on-farm irrigation systems, mobilization and water distribution in a systemic way. Second, WUAs collect water fees and thus the farmers no longer had to deal with local government administration in terms of fees or the amount of water to be distributed. Few focus group members also mentioned that WUAs, in their respective villages, were able to attract outside investment to improve on-farm irrigation systems. Prior to the formation of the WUA there, the farmers used to quarrel about how water should be distributed and who should take responsibility for cleaning irrigation channels and drainages. With the formation of the WUA,

however, all these problems were solved amicably through advocacy and clear planning. Having felt the usefulness of the WUA, the farmers and communities alike, have joined the WUA’s initiatives and accepted the new regulation introduced regarding management of the irrigation system in the Jamoat.

The observation and survey findings showed that WUAs are making significant contributions to the improvement of irrigation water systems in the rural areas of the Khatlon region. The households were asked “*what are the targeted investments WUAs can make to improve village level irrigation infrastructure?*” The majority of respondents 49.2% highlighted that the village level irrigation infrastructure cannot be improved without financial assistance and WUAs do not have sufficient funds to improve the irrigation infrastructure. Therefore, it is very important for WUAs to liaise with donor agencies and apply for grants (15.8%). About 10.8% of respondents mentioned that the membership fees can be utilized for some repair works of the canals or drainages in the villages.

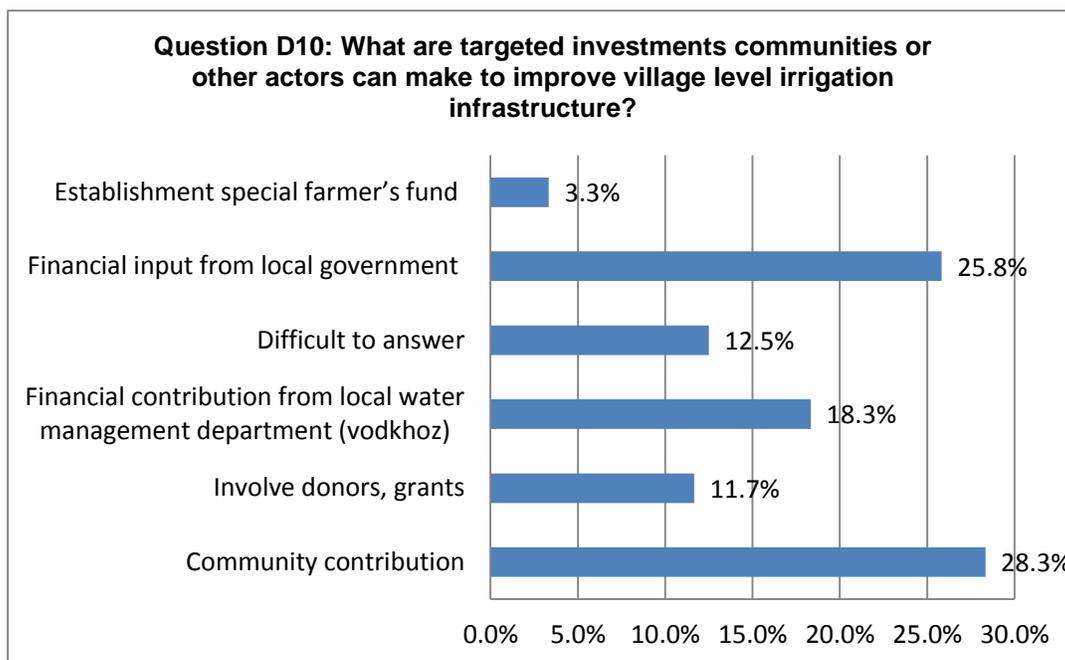
**Figure 5: Targeted investments of WUAs to improve irrigation infrastructure after rehabilitations**



A similar question was asked to get insights on communities’ contributions to improve village level irrigation water. The majority of households (28.3%) mentioned that given the low economy of households, communities can improve the irrigation water at the village level to some extent though “hashar” collective action of cleaning a canal or drain etc. About 12.5% of respondents found the question difficult to answer. 25.8% of respondents highlighted that

without financial support it would not be possible to improve the irrigation infrastructure. Therefore, the communities should seek support from donors and local government.

**Figure 6: Targeted investments of communities to improve irrigation infrastructure after rehabilitations**



The respondents acknowledge that there are a number of issues which need to be urgently addressed in order to improve irrigation systems. Neither farmers nor WUAs alone can address some of these problems and therefore there must be a concerted and joint effort by all stakeholders to improve irrigation systems. This means that not only farmers and WUAs but also local governments as well as departments of water resources at district levels should be involved in this process.

The respondents also admit that most of the WUAs have recently been established which provide a greater role for farmers in the management of the irrigation network, specifically on-farm irrigation systems. Yet, all these WUAs are in an embryonic stage of development and need to be strengthened. Many local administrators see WUAs simply as vehicles to collect water fees rather than equal partners to mobilize resources to improve the management of irrigation networks. Currently, few WUAs are sufficiently strong enough to engage in a process of asset management transfer and carrying out advocacy to explain to farmers the roles and benefits of WUAs' in the effective management of irrigation networks. Thus, one universal suggestion is the lack of clear strategy on part of WUAs to carry out advocacy work among farmers in order to engage them more effectively in the management of the irrigation system.

### **Conflicts over irrigation water**

- Water resource depletion and the rising demand on limited water supplies can result in creating conflicts among households at the village level. The survey revealed that 49.2% of households experienced or witnessed conflicts over the irrigation water in their villages. The 62.7% of household reported that the possible conflicts are prevented by giving advices and 5.1% of households mentioned WUA’s involvement in conflict resolution.

## **RESULTS OF FFP INDICATORS AND CONCLUSION**

#	FFP Indicators	Targets	Baseline	End-line
10	Perceived change in improvements in intra-village water supply	60% improvement	43% of respondents reported poor water supply within their village	67.5% of respondents reported improvement in intra-village water supply
17	Change in irrigation frequency as measured by ‘irrigation-days’	BL+10%	2.9 days	3.2 days 10% increased

\*The indicator results are only for 10 villages where FFP implemented the intra-village irrigation system repair project through USG assistance.

To conclude this report it need to mention that project achieved expected results from these 10 projects in three subject districts. The observation and survey findings showed that WUAs are making significant contributions to the improvement of irrigation water systems in the rural areas of the Khatlon region. With support of USAID Family Farming project WUAs installed water distribution gates, which improved water management at village level and improved water inflow to kitchen gardens.

Overall, a significant majority of respondents positively evaluated the formation of WUAs in their respective villages in terms of managing water irrigation systems. Although, they say, WUAs are recently formed; their contribution is welcome in many respects. With the formation of WUAs they manage on-farm irrigation systems, mobilization and water distribution in a systemic way.

# INTRA-VILLAGE QUESTIONNAIRE

Questionnaire ID \_\_\_\_\_

USAID/Family Farming Program

## Assessment of Intra-village irrigation conditions

### A: GENERAL INFORMATION

		Name
A 1	Date (dd.mm.yy)	
A 2	Interviewer	
A 3	District	
A 4	Jamoat	
A 5	Village	
A 6	Respondent	
A 7	Sex ( tick)	1 = <input type="checkbox"/> Male                      2 = <input type="checkbox"/> Female

<b>B.</b>	<b>Access to water</b>	( please tick)
B1	What is the main source of irrigation water in your village?	1. <input type="checkbox"/> Canal self –flow 2. <input type="checkbox"/> Canal pumped 3. <input type="checkbox"/> River direct 4. <input type="checkbox"/> Well 5. <input type="checkbox"/> Pond 6. <input type="checkbox"/> Steam 7. <input type="checkbox"/> Other ( specify)
B2	How far is the irrigation water source from your village? (distance m/km)	
<b>C.</b>	<b>Quality of Water Delivery for Irrigation in the village</b>	(please tick)
C1	Is the irrigation water equitably distributed within the village irrigation system?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
C2	How would you describe the quality of water delivery for irrigation to household's plots?	1. <input type="checkbox"/> Water delivery is satisfactory 2. <input type="checkbox"/> Water is not always delivered when required 3. <input type="checkbox"/> Water is not always delivered in the required quantity 4. <input type="checkbox"/> Water quality is poor 5. <input type="checkbox"/> Irrigation canals are not well maintained 6. <input type="checkbox"/> Drainage canals are not well maintained 7. <input type="checkbox"/> Pumps are not reliable (break down, suffer from shortage of fuel or electricity, not well maintained) 8. <input type="checkbox"/> Irrigation water is too expensive

C3	How many times in a week does your village get irrigation water?	
C4	How many times in a week <u>should</u> your village get irrigation water?	
C5	How many hours did your households get in irrigation water (each time)?	
C6	How many hours <u>should</u> your household get irrigation water (each time)?	
C7	Is the irrigation water sufficient for irrigation of all your land?	
C8	Over the last 12 months have you noticed an improvement in the water supply within your village ?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
C9	Overall, how would you currently rate the water supply within your village?	1. <input type="checkbox"/> Very poor 2. <input type="checkbox"/> Poor 3. <input type="checkbox"/> Acceptable 4. <input type="checkbox"/> Good 5. <input type="checkbox"/> Excellent
C10	Is there part of the households plot that doesn't get enough water or too much water?	
C11	What does a household do to regulate water inflow into plots?	
<b>D. Irrigation Water Management</b>		
D1	Who manages the distribution of irrigation water in your village?	
D2	Who usually waters household plots?	1. <input type="checkbox"/> Men 2. <input type="checkbox"/> Women 3. <input type="checkbox"/> Children 4. <input type="checkbox"/> Other ( specify) _____
D3	How is the village irrigation system in the canal managed?	
D4	How can it be improved?	
D5	Does your village pay for irrigation water fees?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
D6	Is there a WUA in your village? (Name?)	1. <input type="checkbox"/> Yes Name: _____ 2. <input type="checkbox"/> No 3. <input type="checkbox"/> Don't Know
D7	Are you members of the WUA?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No

D8	Are you satisfied with the way the Water Users Association operates?	1. <input type="checkbox"/> Completely satisfied 2. <input type="checkbox"/> Partially satisfied 3. <input type="checkbox"/> Dissatisfied 4. <input type="checkbox"/> Don't know
D9	What are targeted investments WUAs can make to improve village level irrigation infrastructure?	
D10	What are targeted investments communities or other actors can make to improve village level irrigation infrastructure?	
<b>E</b>	<b>Irrigation and Conflict Management</b>	( please tick)
E1	Are there any disputes on water access to household plots?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
E2	How are these resolved?	

THANK YOU

# ANNEX 9: WUA-CAT ASSESSMENT REPORT

## REPORT ON CHANGES IN WUA ORGANIZATIONAL CAPACITY FOLLOWING SUPPORT IN YEAR 4

### INTRODUCTION

The USAID/Family Farming Program (FFP) Water Users Association Capacity Assessment Tool (WUA-CAT) is a comprehensive and highly participatory approach to measuring organizational change and learning. The assessment framework and scoring grid were developed based on the FFP team's collective experience working with Water Users Associations (WUAs) in Tajikistan and was implemented in collaboration with WUA's.

Institutional capacity cannot be directly measured. But proxies can be used to approximate capacity, and certain proxies are better than others and more or less quantitative than others. No single proxy would be adequate. So, a careful selection of proxies of capacity was made, all needed to have clear questions that could be posed, would be relevant to a WUA and to its capacity. Since there then are numerous proxy questions, some sort of rating system need to used normalize different answer sab out capacity. FFP needed to quantitate answers and assign them a rating on the scale, so that capacity in financial skills will be used on the same scale range as, say, gender awareness. The rating system, that translates an answer to a question, is also, then, an approximation of progress in capacity. As this method is used in the future, it would be appropriate to, perhaps, weight the proxy ratings for importance to capacity and sustainability, but that would require more study and time then the FFP had at this initial use period. It is also important to note that the reason capacity might have changed from baseline to end line was not determined. These causality issues would have required a large amount of addition information to be collected for each question or category. FFP assumes several factors were important, but at virtually all WUAs, only FFP was providing significant material and institutional development support.

The purpose of administering the WUA-CAT was twofold: 1) to provide a means by which FFP or any external party could measure the change in organizational capacity of the targeted communities' WUAs, and 2) to provide a robust method of self-assessment which WUAs could use to measure their capacity as well as create a plan for ongoing organizational development. The assessment's data also allows external parties to compare organizational capacity across WUAs at a specific moment in time, in addition to tracking organizational development over time. The assessment was designed in such a way that its output would provide detailed information on strengths and weaknesses to associations, which could in turn be used by WUAs to prioritize next steps for capacity development. The framework of the survey tool was drawn from other well-established organizational capacity assessment methods, though was highly adapted to fit the unique nature of WUAs. Generally speaking, WUAs have unique operational characteristics and particular public service duties that are not common among the general population of NGOs. WUAs are specialized public service organizations that work within a defined service area and supply water as their primary goal.

The results described in this report are based on baseline and end line WUA-CAT data collected on 60 WUAs that were created and/or strengthened by FFP. As the results indicate, FFP's WUA strengthening work directly contributed to increasing capacity of the WUAs engaged by the project.

## **WUA-CAT FRAMEWORK AND METHODOLOGY**

The WUA-CAT framework evaluates seven categories of organizational capacity. Each category is assessed through a series of questions which reflect relevant “elements” of organizational capacity under a given category. Elements under each category were based on specific capacity milestones that were determined by FFP to represent essential capabilities for effective WUA operation. The questions designed for each element were pre-tested during the assessment tool's development phase in order to ensure objectivity of the answers. Given that capacity development is not a linear process and cannot be measured by a set of universally-acknowledged increments or steps, the assessment's approach contains a degree of subjectivity. FFP felt that this was an acceptable trade-off, as the milestones tied to each element were carefully and deliberately selected based on the capacities required for effectively operating a WUA.

The seven categories of organizational capacity measured by the WUA-CAT include the following:

- Governance
- Financial Management
- Water Scheduling and Delivery
- Conflict Resolution
- Organizational Learning/Knowledge
- Sustainability
- Gender

Across the categories of organizational capacity, the WUA-CAT looks at a total of 32 elements (questions) and assigns a score between 1 and 4 for each element, with 1 representing the lowest level of capacity and 4 the highest. The WUA-CAT scoring grid is included at the end of this report and shows the specific questions asked under each element. It should be noted that the elements under the Water Scheduling and Delivery category are divided into three sub-categories, with each one focusing on a different facet of water management.

The overall WUA-CAT score for each WUA was calculated by summing the ratings for each element, and then dividing by the total number of questions. Questions for which no rating was given were not accounted for in the denominator when the overall score was calculated. Scores within the categories (and sub-categories in the case of Water Scheduling and Delivery) were calculated in a similar fashion—ratings for the individual elements assessed were summed and then divided by the number of questions in that category/sub-category. No weighting of scores was done, and all scoring was done in Excel and rounded to a single decimal place. Structured discussions by FFP staff with WUA board members and management were the main means of assessment and the WUA-CAT scoring grid (see below) was the instrument used for data collection. The FFP M&E team then processed the data and calculated the results.

CALCULATION METHOD	
For categories:	Add the rating score of all elements under each category and divide by the number of questions that have actually been rated. Do not include (in this division) questions that have not been given scores. Write the results to one decimal place in the category box.
For sub - categories:	Add the rating scores of all subcategories under each category and divide by the number of sub-category elements that have been rated. Do not include sub-categories for which there is no rating. Write the result to one decimal place in the component box.

The baseline capacity was not measured before the WUA was developed, so the progress from 'No Association' to a point when they were formally constituted was not measured by this method. Based on the scoring system developed by FFP, a score of 1 indicates the lowest level of capacity and 4 the highest. A score of all 1's across all 32 elements would represent a scenario of "No Association" when a WUA is yet to be formed. In the context of FFP, the baseline WUA-CAT assessment was conducted with WUAs after the project had invested significant effort in organizing and mentoring WUAs up to the point of them completing their official registration. FFP typically spent three months on this organizing/mentoring process. As a result, the baseline WUA-CAT assessments for the FFP WUAs do not capture the capacity developed between the "No Association" phase and the "Beginning WUA" phase. What the baseline WUA-CAT assessment did provide was a benchmark against which changes in institutional capacity over time could be measured. The end line results, when evaluated against the baseline data, provide a picture of capacity development made by WUAs as a result of the project's capacity *strengthening* work—which should be distinguished from the project's initial work in *organizing* WUAs, even though the organizing efforts inevitably had some impact on building capacity.

Baseline WUA-CAT data was collected for all WUAs between September 2014 and May 2014, and end line data was gathered between July 2014 and September 2014. Given that the baseline assessment was conducted after the project had been operating for a number of years, WUAs that had been organized earlier in the project had been in existence for longer periods than the more recently organized ones. As a result, when the end line assessments were conducted, the "institutional ages" of the 60 WUAs ranged between two months and two years or more. Based on the assumption that capacity increases with age, FFP disaggregated the WUAs into groups based on institutional age, with a WUA's registration date serving as a proxy for institutional age. By doing this, the impact of age on capacity development would be controlled for as much as possible and the results would better portray the impact of FFP's capacity strengthening efforts.

## FINDINGS

This section details the changes in average baseline and end line scores within each institutional age group for overall WUA-CAT score, as well as the scores for categories and sub-categories of organizational capacity. In each instance, baseline and end line scores within each institutional age group were averaged, and the change between the two then calculated. As mentioned above, WUAs were disaggregated by registration date (in six-month intervals) in order to compare those of the same institutional age.

### Overall WUA-CAT Score Change from Baseline to Endline

Group Name	# of WUAs in group	Timeframe age	Baseline score	End line score	% Change in Score
Group 1	7	October 2011— March 2012	2.6	3.1	19.2%
Group 2	4	April—September 2012	2.4	2.9	20.8%
Group 3	6	October 2012— March 2013	2.3	2.9	26.1%
Group 4	16	April—September 2013	1.9	2.9	52.6%
Group 5	20	October 2013— March 2014	1.9	3.0	57.9%
Group 6	3	April—September 2014	1.6	2.0	25.0%
Group 7*	4	Only WUASP	2.4	2.8	16.7%
Total	60		2.2	2.8	27.3%

\* The baseline score is relatively higher for group 7 since these were the oldest WUAs, created under WUASP before October 2011.

By the end of the project, FFP targeted a 10% average increase of the baseline overall WUA-CAT score within each group. The results above show that FFP achieved this target, with the change in average overall score ranging from 13.6% up to 57.9%. Further details on changes in the categories and sub-categories of WUA capacity are discussed below.

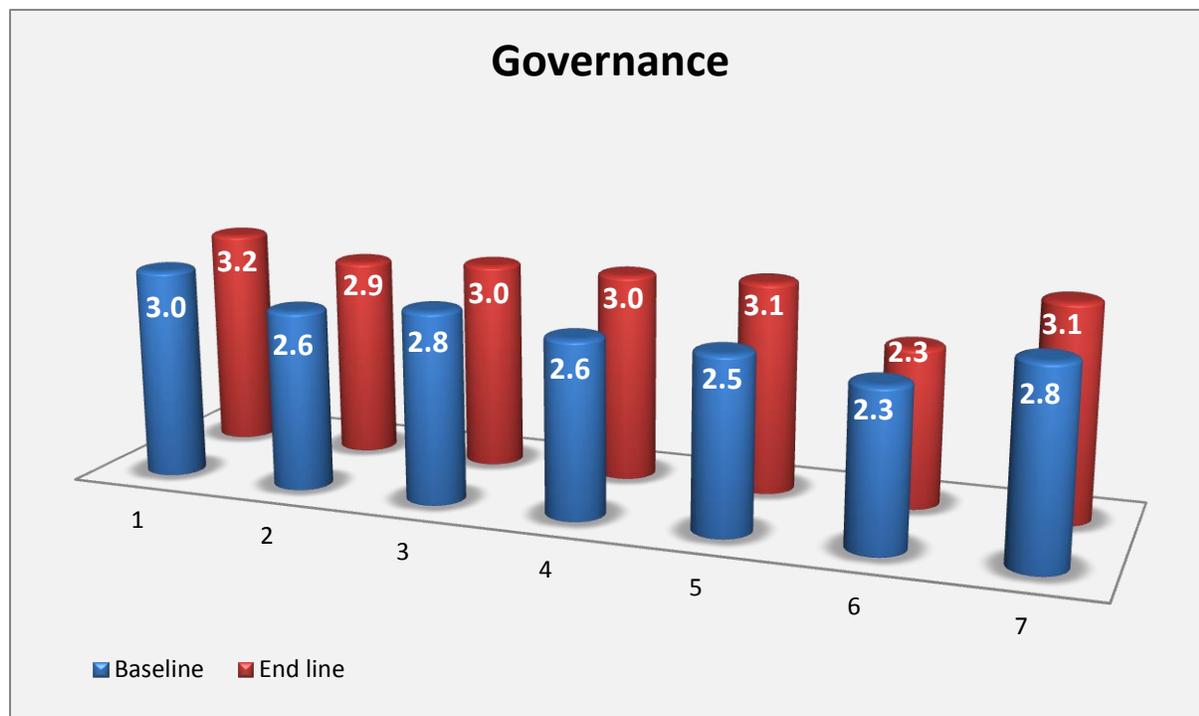
### Governance

The Governance category was used to assess WUA capacity for democratic governance and participatory decision-making processes, and looked at the following elements:

- Election of Board Members and Management Team
- Decision-making processes
- Registration
- Bylaws
- Organizational structure

The graphic below summarizes changes in average scores for the Governance category within each institutional age group. As can be seen, all seven WUA groups saw positive changes in Governance scores.

In more specific terms, the end line assessment results indicated that all 60 WUAs had elected Board Members and as well as separate Management Teams. Elections for selecting these individuals for the board were organized via General Assembly meetings and all WUA members voted for their respective Board Members. At the same time, WUAs have created an organizational structure with clearly defined lines of authority and responsibilities and filled all necessary positions for the paid Management Teams.



While these are impressive achievements, the assessment revealed cases of re-election of the Board, because of irresponsibility and unwillingness to work. All such cases were followed up by FFP staff and where needed, they facilitated the process.

The assessment results also revealed that all 60 WUAs had developed bylaws and had formally registered as legal entities—both of which were integral parts of FFP’s WUA development and strengthening activities. During General Assembly meetings attended by Board Members and Management Teams, WUAs shared information on decisions made and maintain minutes of decision making processes, which were available to WUA members.

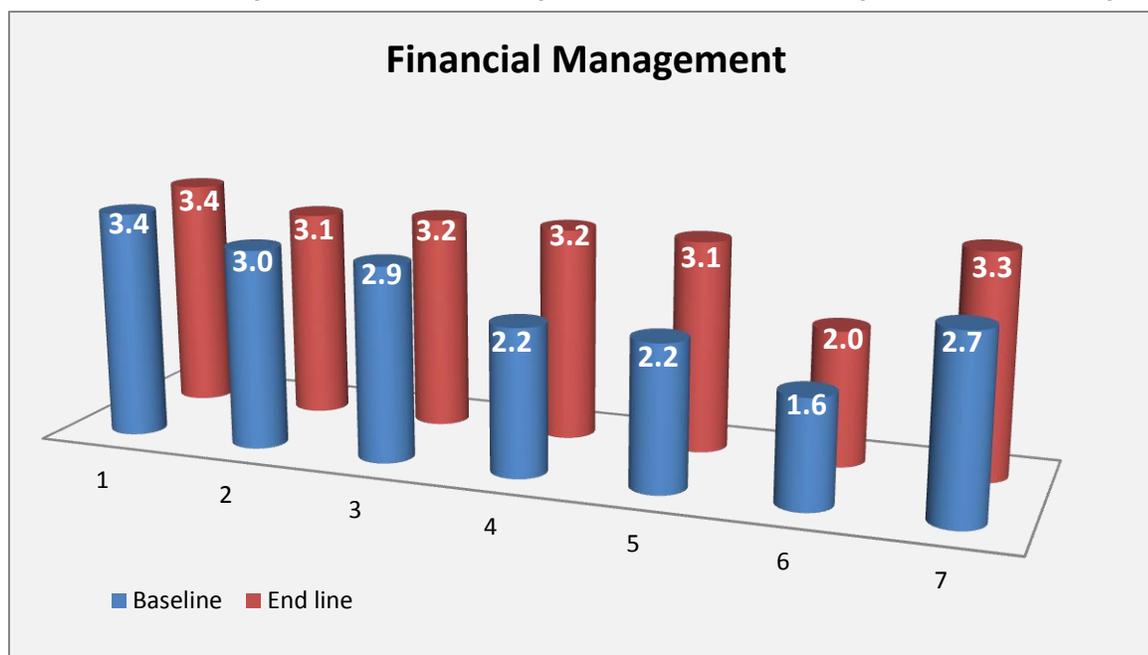
### Financial Management

The Financial Management category assessed WUAs’ capacity to manage association finances to improve creditworthiness. Elements evaluated consisted of the following:

- Membership fees

- Financial procedures and reporting systems
- Annual financial projections
- Budget
- Planning for system maintenance, repair and rehabilitation
- Inventory control systems
- Knowledge of relevant sections of the Tajikistan tax code
- WUA use financial resources to repair and rehabilitate their system

The graphic below summarizes average changes in scores for the Financial Management category within each institutional age group. As can be seen, six out of the seven WUA groups saw positive changes in Financial Management scores, and one group saw no change.



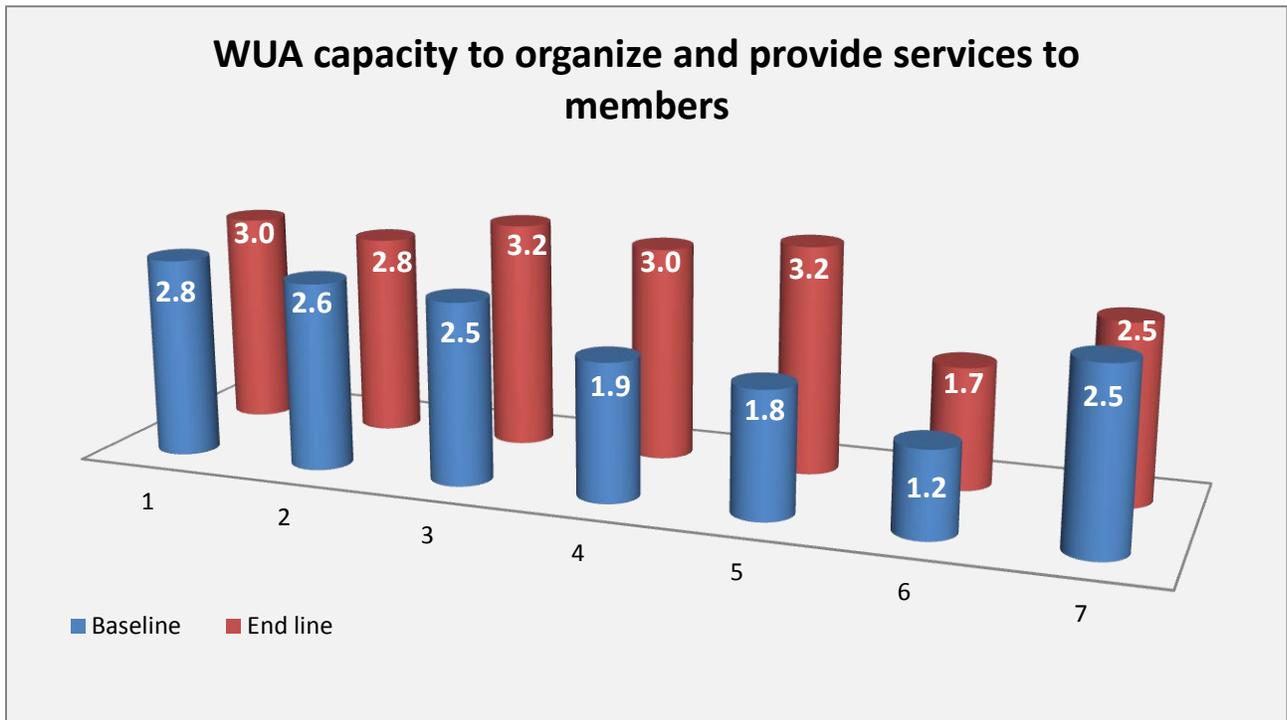
The endline assessment results indicated that all WUAs had financial management systems in place as well as accountants that were adhering to guidelines on recordkeeping and reporting. Five different types of accounting documents were in use by WUAs to track finances (Petty Cash, Accounts Receivable, Accounts Payable, Bank, and Detailed General Ledger). WUAs prepared financial projections, as well as developed detailed budgets that were made available to all members. Moreover, based on equipment granted to WUAs through FFP, WUAs had organized inventory books and which were regularly updated. During the assessment process it was observed that most of the WUA Management Teams had good knowledge on relevant sections of the Tajik tax code and were able to defend their interests to the tax committee.

Since the role of WUAs in irrigation water management is relatively new to most communities, many associations face challenges in collecting membership fees from the Dekhkan farms, which in turn makes it difficult for the WUAs to maintain their own funds. Nevertheless, 1,387,043 TJS (\$286,290USD) were collected as membership fees by WUAs between January 2014 - September 2014.

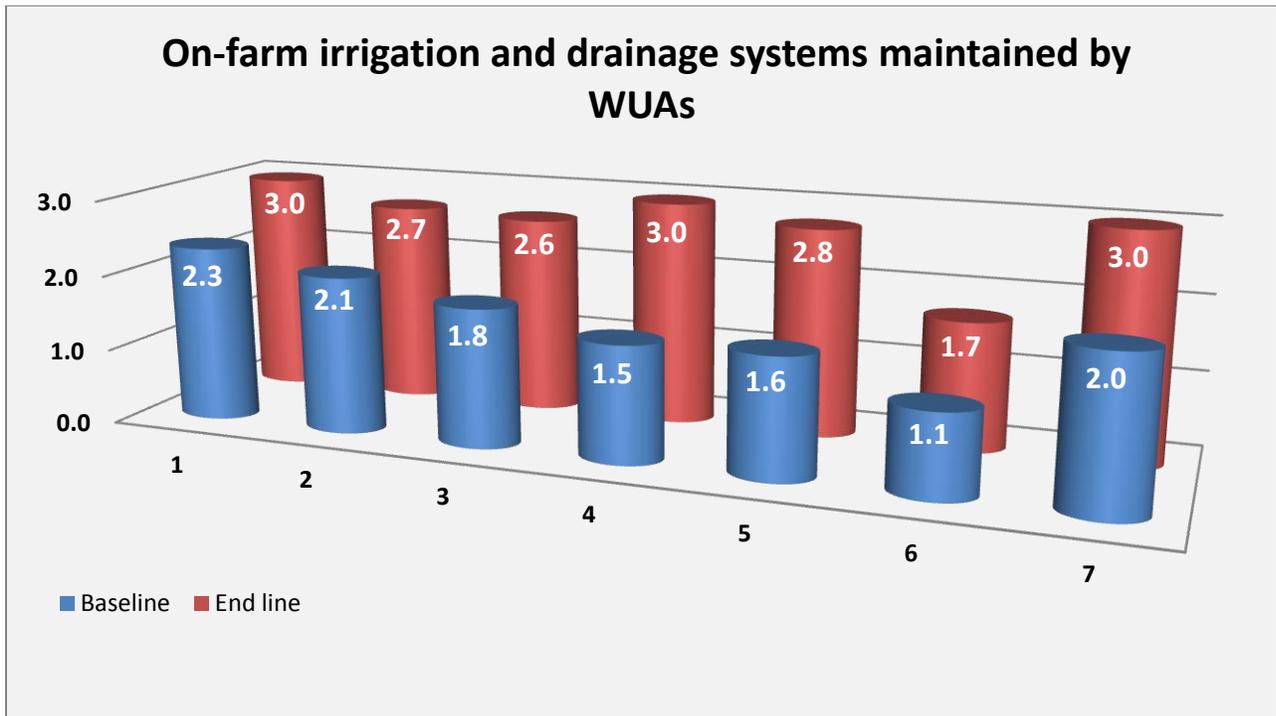
### Water Scheduling and Delivery

The Water Scheduling and Delivery category assessed WUA capacity relating to water management. As mentioned earlier, this category is subdivided into three sub-categories. These sub-categories are: WUA capacity to organize and provide services to members; Maintenance of on-farm drainage and irrigation systems; and Irrigation water delivery to on-farm canals using collected fees.

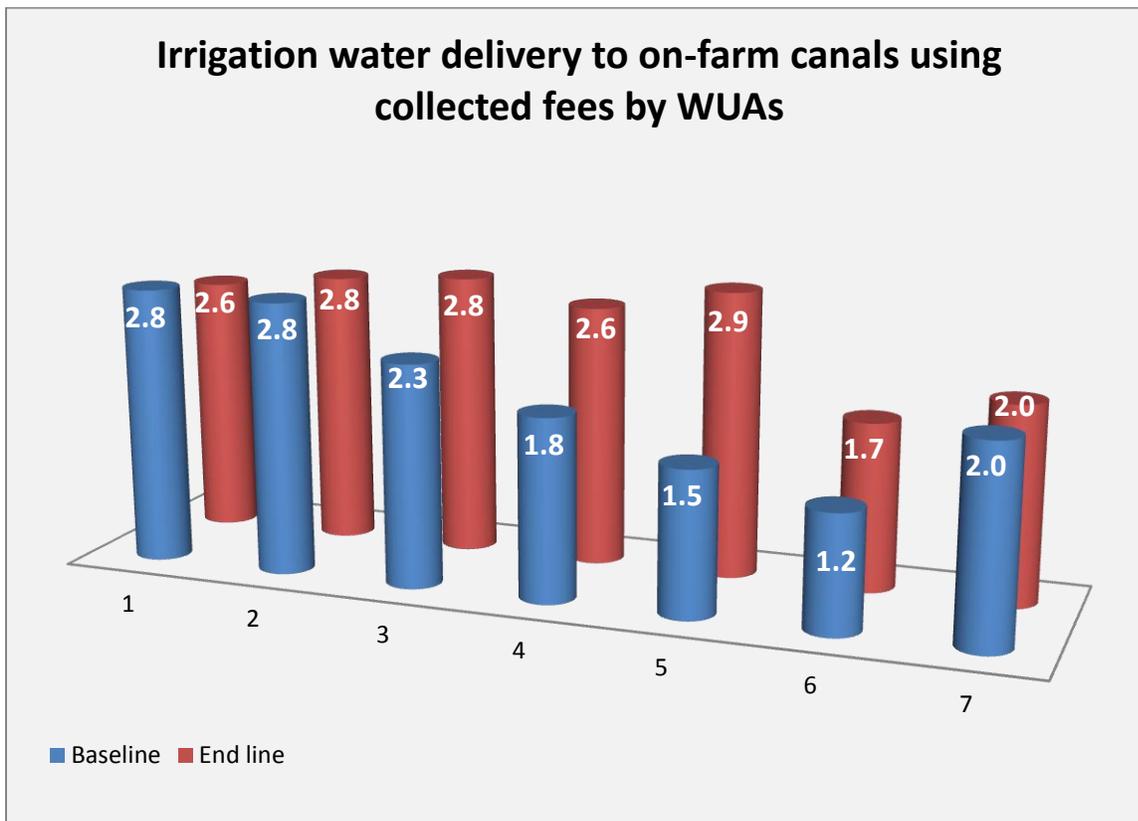
This first sub-category looks at WUA capacity to organize and provide services to members, and accounts for timely delivery of irrigation water, improvements in irrigation efficiency, and other activities that reduce costs and increase profitability for members. The graphic below summarizes average changes in scores for this sub-category within each institutional age group. As can be seen, six out of the seven WUA groups saw positive changes in scores, and one group saw no change, but this group was a mix of the newest WUA and those who were a part of a strengthen effort, and were created before the FFP project. Member services provided are based on agreements between WUAs and dekhkan farms. Lastly, survey results indicated that access to irrigation water had improved relative to the baseline figures.



The second sub-category under Water Scheduling and Delivery assess WUA maintenance of on-farm irrigation and drainage systems. The survey results indicated that since being established, FFP WUAs had made significant strides in rehabilitation/maintenance of irrigation infrastructure as a result of FFP grants and community contributions. As can be seen below, all seven institutional age groups saw positive improvements in this sub-category.



The third sub-category under Water Scheduling and Delivery evaluates at delivery of water to on-farm canals using fees collected by WUAs. As can be seen below, four institutional age groups saw positive improvements in this sub-category, while two saw no change and one saw a decrease. Special contracts were signed between WUAs and local *Vodkhoz*es (local irrigation water management departments) to facilitate the collection of water service fees. During the period of January 2014–September 2014, a total of 4,110,592 TJS (\$795,090 USD) was collected by 60 WUAs in 12 FFP districts. During this time, members of WUAs reported a reduction of complaints about the access to irrigation water.

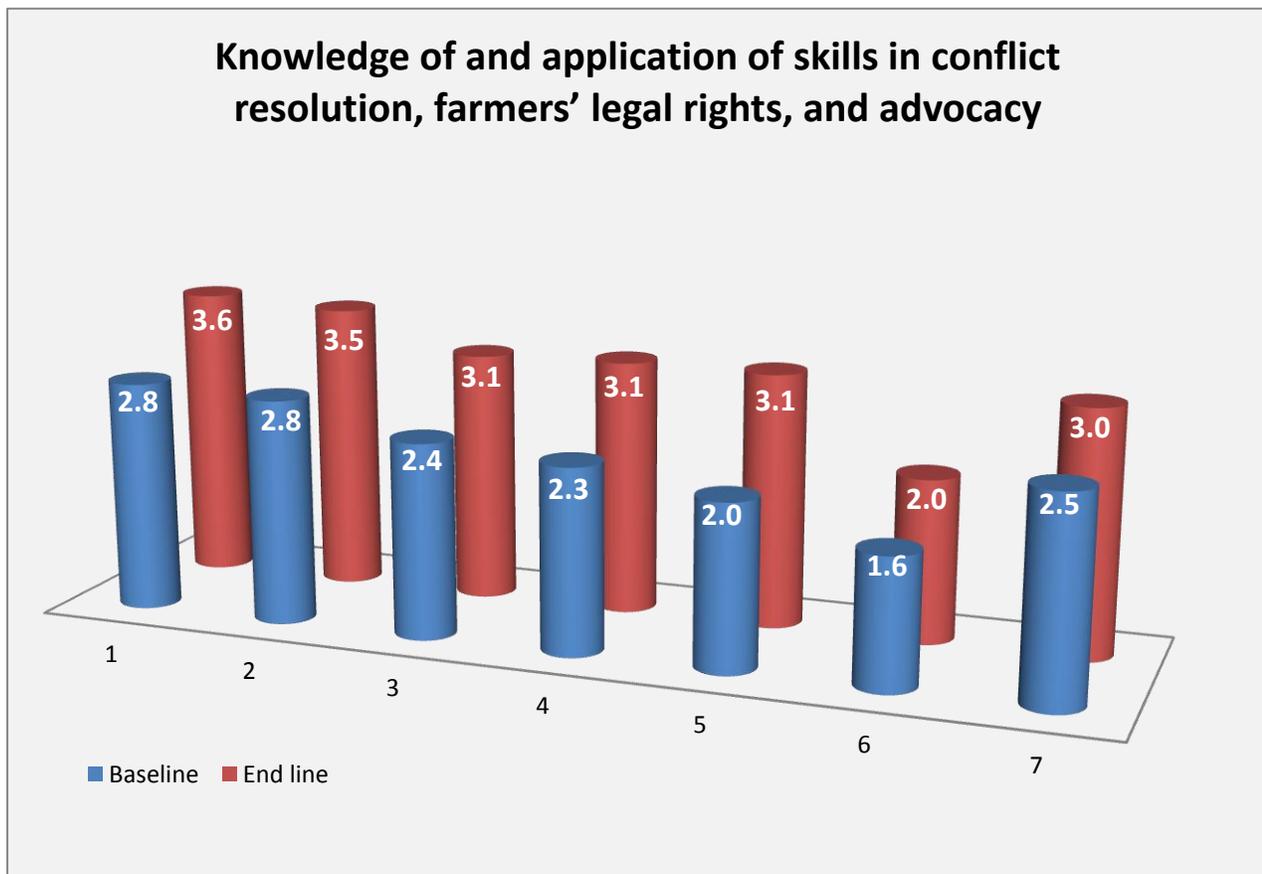


## Conflict Resolution

The Conflict Resolution category assessed WUA knowledge and skills related to mediating and managing conflict and looked at the following areas:

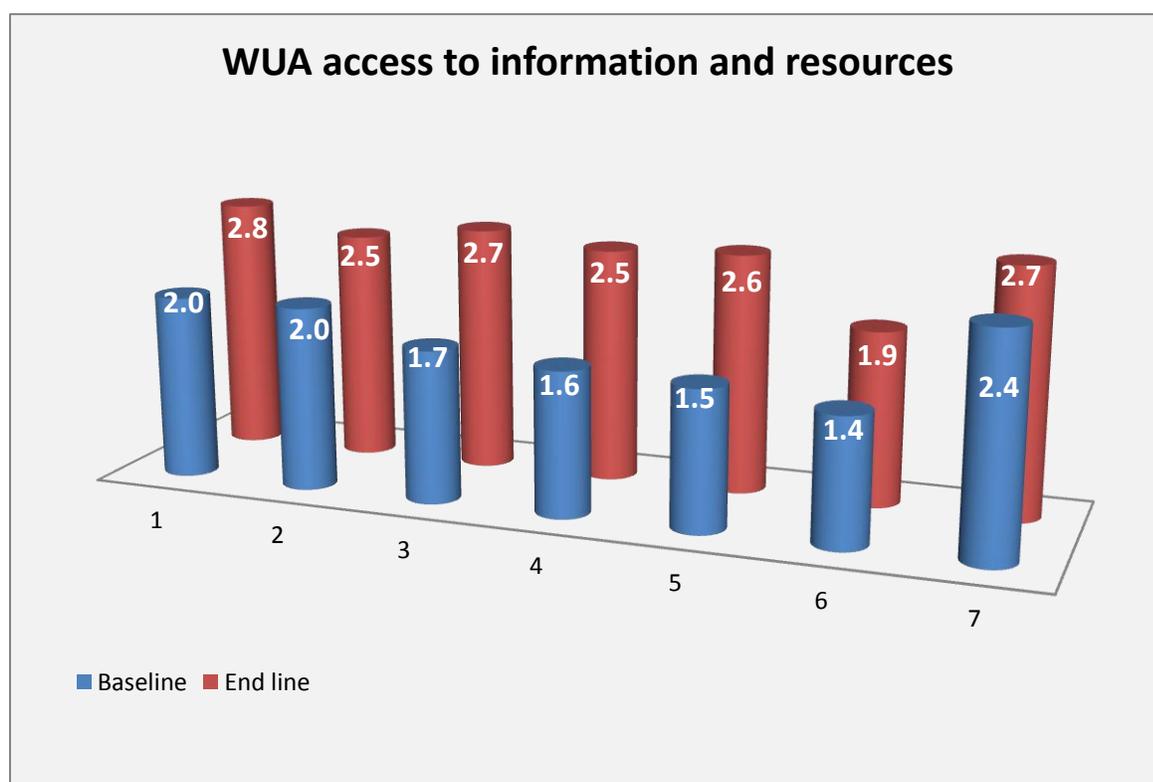
- Conflict resolution skills
- WUA legal rights
- Conflict resolution between WUA

Based on recommendations delivered during the WUA organizing and strengthening sessions, each WUA organized a conflict resolution committee. In addition to this, the Management Teams of all WUAs were trained in conflict resolution skills and diplomacy. The assessment results indicated that these conflict resolution committees were functioning very well and sought to address solve issues before they started. As can be seen below, all seven institutional age groups saw positive improvements in this category.



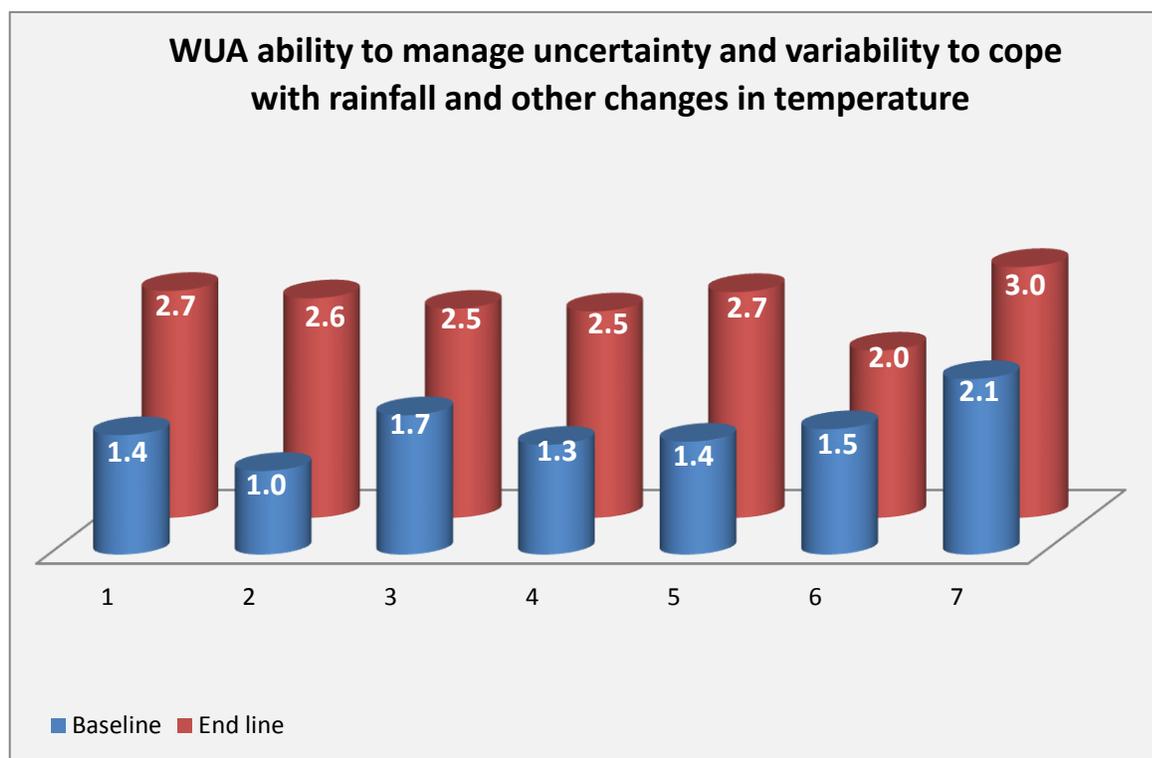
### Organizational Learning/Knowledge

Organizational Learning/Knowledge category assessed WUA skills for using information systems relating to climate and crop planning, as well as geographic information systems (GIS) technologies. Data from baseline interviews conducted among the employees of WUAs showed that they had limited knowledge in this area and that they were using maps that were created by FFP project staff. Results from the end line interviews indicated that WUA employees had made improvements in this area, which is an important development, since the creation of maps with a clear separation of boundaries is very important to WUAs. End line results also indicated an increase in use of crop calendars, which are an important tool for determining watering schedules for different crops. As can be seen below, all seven WUA groups saw improvements in this category.



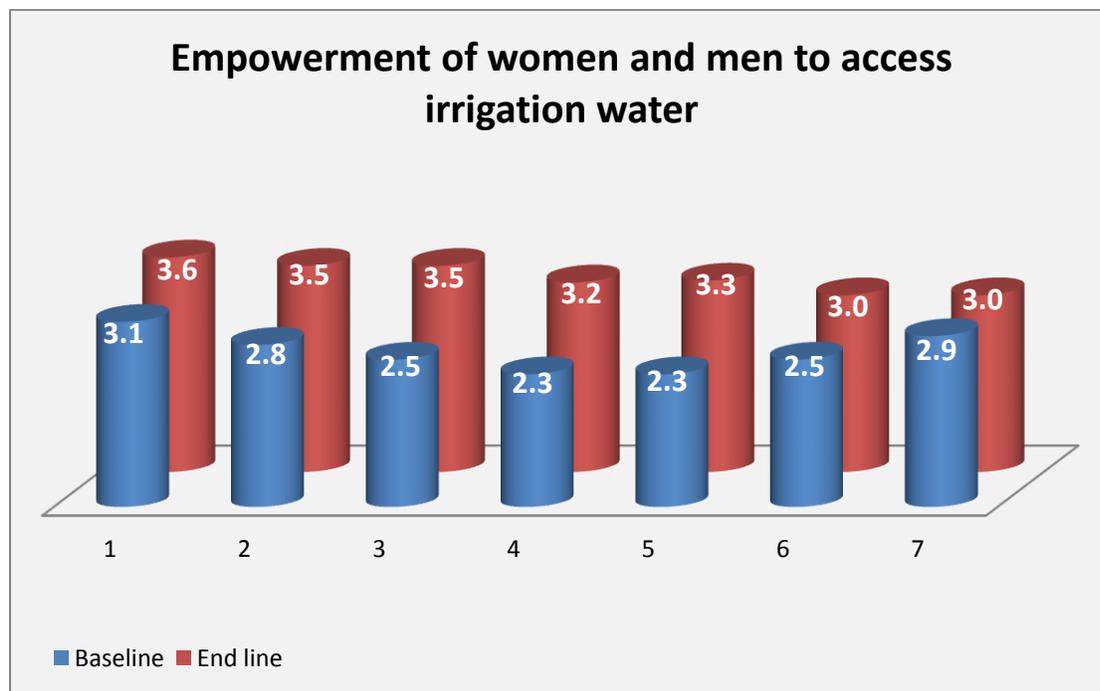
## Sustainability

The Sustainability category assessed WUAs' ability to manage uncertainty related to unforeseen shifts in climate and the resulting changes in water availability and erosion. The end line assessment revealed that overall, crop water-use tables were being used regularly by WUAs for planning, and were updated with the season's rainfall. In addition, local authorities, mandatory reporting of changes in the weather, as well as giving advice on the prevention of natural disasters, at the same time. Endline results showed that WUA staff were proactively using the internet to find information on weather in order to prepare for any changes in temperature and the resultant effects on water availability. This increased capacity makes WUAs more sustainable in that they are more capable of appropriately managing shifts in available water in an informed way. As can be seen below, all seven WUA groupings saw positive improvements in this category.



## Gender

This Gender category looked at the empowerment of women and men to access irrigation water and specifically evaluated equity in access. In general, the end line findings revealed that the number of women members in WUAs was very low, at approximately 7% out of the total number of Dekhkan farms (12,934). Nonetheless, the responses indicated that they have equal access to irrigation water, and that in some places like Rumi, Jilikul, Qumsangir, Qubodiyon, they actively participate in WUA activities. As can be seen below, all seven WUA groupings saw positive improvements in this category.



## Conclusion and Recommendations

The WUA-CAT results discussed here provide a “big picture” view of where the WUAs are in their capacity development and what is necessary in order to strengthen their capacities. In general there is significant increase in capacity of the WUAs in all categories and sub-categories. The results showed that most of the WUAs were actively involved in their daily activities and were invested in improving their knowledge and skill. However, there is still much to be done, particularly in the areas of financial management, communication with local government, and WUA advocacy/representation at the national level.

The nature of capacity measurement is a compromise of selection of appropriate questions (and categories), time needed to get an answer, to substantiate an answer, ability to translate an answer to a number score, so as to compare between baseline (past) and end line (present). It is an approximation. It does not try to determine the casual effect of any increase in capacity, that causality would be an additional and more difficult task. The working hypothesis is that since all these WUA were getting significant direct support from FFP to increase capacity, FFP gets a reasonable amount of credit for any improvements (or decreases). Of course credit must be given to the leaders and community members, but the purpose of the effort was not to

determine who deserves the credit, but, did capacity increase. Capacity of WUA appears to have increased across a range of categories.

# WUA-CAT SCORING GRID

General Information	
1. Name of WUA:	
2. District(s):	3. River Basin or Sub-Basin:
4. Start time of assessment (hour and minute):	5. End time of assessment (hour and minute):
6. Name of Assessor(s):	7. Date of assessment:
8. Name(s) and titles of those spoken with to conduct assessment:	9. Location of assessment:
10. Date WUA established:	11. Date WUA registered:
12. Total WUA approved budget (take photograph of budget page supporting this answer):	13. Membership fee at WUA per person per ha (take a photograph of documentation supporting this answer):
14. Total amount of budget collected to date (take a photograph of account information supporting this answer):	15. Total # of members in WUA (take photographs of documentation supporting this answer):

Resources	Criteria for each Progressive Stage			
	Start up	Development	Expansion/ Consolidation	Mature
<b>GOVERNANCE</b>				
<b>1. WUA capacity for democratic governance and participatory decision-making processes which should lead to better irrigation and help to develop local food security strategies</b>				
Scores	1	2	3	4
a. Election of Board Members and Management Team	No Board Members identified.	Transparent, democratically elected Board Members.	Transparent, democratically elected Board Members AND Conflict and Audit Committee elected. Has hired executive management team.	The Board Members and the Committees are effectively working for more than four years.
b. Decision-making processes	Minimal participatory decision making takes place.	Group has two or more general information exchange meetings per year, on any topic.	Written input form membership groups document continuing participatory process.	WUA shares information on decisions made in general meetings and maintains minutes of decision making process.
c. Registration	WUA is not registered according to relevant Tajik legislation.	WUA is registered according to relevant Tajik legislation, and is actively operating.	WUA is registered, has separate bank account, in WUA name.	Five year history following registration.
d. Bylaws	No bylaws.	Charter or bylaws of the organization prepared and circulated, and voted on in a general assembly meeting.	Charter amended and updated following bylaws of the WUA.	WUA participates in basin or national level discussion of bylaw standards.

e. Organizational structure	No recognizable or active organizational structure in place.	WUA has an organizational structure with clearly defined lines of authority and responsibilities and some positions filled and active.	WUA has an organizational structure with clearly defined lines of authority and responsibilities and ALL positions filled and active.	Five year history. WUA has an organizational structure with clearly defined lines of authority and responsibilities and ALL positions filled and active
<b>FINANCIAL MANAGEMENT</b>				
<b>2. Capacity to manage WUA finances to improve creditworthiness</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
a. Membership fees	Membership fees not collected.	Up to 30% of fees collected.	Between 30% and 75% of fees collected.	More than 75 % of fees collected.
b. Financial procedures and reporting systems	No financial procedures in place.	Financial procedures in place but do not meet the requirements. Reports are not prepared regularly.	Five types of accounting books in use (Cash, AR, AP, Bank, General Ledger). Detailed financial procedures in place and followed and financial reports are not regularly prepared.	Financial procedures in place, efficiently used, controlled and reported.
c. Annual financial projections	No annual financial projections ever made.	Some but not all expected cost and receipts projected.	Annual financial projections are made but need some improvement.	Financial projections prepared and available to all members.
d. Budget	No budget developed.	Rough budget developed but not controlled, or incomplete.	Detailed budget developed but not controlled.	Detailed budget developed and controlled by Audit Committee and on an ongoing, information circulated to all members.

e. Planning for system maintenance, repair and rehabilitation	No plan in place.	Rough plan developed but with little implementation.	Detailed plan developed and partially implemented.	Detailed plan developed and nearly fully implemented.
f. Inventory control systems	No inventory control systems exist (no inventory book exists).	Inventory control systems in place but not regularly updated.	Inventory control systems in place and updated regularly for office assets. Includes canal and ditch assets.	Inventory includes all working assets, depreciations, and is available to all members.
g. Knowledge of relevant sections of the Tajikistan tax code	No knowledge of relevant sections of Tajikistan tax code.	Limited knowledge of relevant sections of the Tajikistan tax code.	Knowledge of all relevant sections of the Tajikistan tax code pertaining to WUAs.	In addition, uses outside tax expert to minimize tax obligations.
h. WUA use financial resources to repair and rehabilitate their system	No internal or external (grant) resources used to improve irrigation system.	WUA has managed up to \$5000 US (20,000 TjS) to repair and rehabilitate their system.	WUA has managed over \$5,000 US (20,000 TjS) to repair, and rehabilitate their system in one year.	WUA has on going external sources or internal resources to complete rehabilitation and all on-going repairs and operation needs each year.

### WATER SCHEDULING AND DELIVERY

#### 3. WUA capacity to organize and provide services to members, including timely delivery of irrigation water, improvements in irrigation efficiency and other activities that reduce costs and increase profitability for members

	1	2	3	4
a. Member services	No member services provided.	Services provided to members but need to be improved.	Services provided to members based on written agreement.	Services provided to members ensuring sufficient irrigation water, agronomic advice on seeds or fertilizer, or other agronomic practices.
b. Water delivery	No water delivery schedule.	Rough water delivery	Detailed water delivery	Efficient irrigation water

schedule		schedule developed but does not meet members' needs.	schedule developed based on members needs but with partial implementation.	ensured based on members' needs.
c. Access to irrigation water, relative to amount needed	Up to 40%.	Up to 60%.	Up to 80%.	Greater than 80%.
d. Salinity control	No awareness of salinity issues.	Awareness and initial monitoring of salinity levels.	Some actions taken dealing with salinity issues.	Proactive dealing with salinity issues.
<b>4. On-farm irrigation and drainage systems maintained by WUAs</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
a. Irrigation system improvements/ rehabilitation (canals, drainage systems, gates etc.)	No improvements or rehabilitation of irrigation systems made.	System assessed for rehabilitation needs and members agree on prioritization.	At least 50% of assessed needs are rehabilitated.	Nearly 90% of rehabilitation needs completed.
b. Infrastructure Maintenance management	No collective maintenance conducted.	Ad-hoc collection of funds used to maintain 25% or less of irrigation canal system.	Scheduled fee collection used to maintain entire system, but underfunded.	Scheduled fee collection used to maintain entire system, funded at essentially 100% required.
c. Maintenance drainage and flood control system	Drainage system unrestored for more than five years.	33% of drainage system dredged and operable.	66% of drainage system dredged and operable.	Nearly 90 % of drainage system dredged and operable.
<b>5. Irrigation water delivery to on-farm canals using collected fees by WUAs</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
a. Irrigation water service fees	Up to 20% of fees collected.	Up to 50 % of fees collected.	Up to 75% of fees collected.	Up to 100 % of fees collected.

b. Equitability	WUA has no system to assure equitable distribution.	WUA has a system to indicate water will be delivered to all fields and households.	System has shown improved equity in distribution, fewer complaints on inequity.	No complaints about inequitable water distribution.

## CONFLICT RESOLUTION

### 6. Knowledge of and application of skills in conflict resolution, farmers' legal rights, and advocacy

	1	2	3	4
a. Conflict resolution skills	No knowledge of conflict resolution skills.	Conflict resolution plans developed; committee in place and incompletely utilized.	Conflict resolution plans developed, in place and nearly completely utilized. Fewer conflicts than prior year.	Essentially all conflicts avoided by prior planning and equitable delivery.
b. WUA legal rights	Little or no knowledge of irrigation laws or regulations.	WUA trained on legal rights.	Knowledge of WUA Law, and application to WUA management.	WUA has its status and protects its interests using legal resources.
c. Conflict resolution between WUAs	No knowledge on resolution skills.	Collaborates with other WUAs on water conflict issues and rough plan developed.	Water use conflicts discussed, detailed plan developed and issues resolved between organizations.	Implements plans to reduce conflicts between organizations, before they occur.

## ORGANIZATIONAL LEARNING/ KNOWLEDGE

### 7. WUA access to information and resources, including geospatially explicit maps compiled in geographic information system (GIS)

	1	2	3	4
a. GIS	No knowledge of GIS.	Possess GIS geo-referenced maps of their	WUA in possession of and actively using and updating	WUA creating and using GIS maps, able to

		system but of a low quality/do not meet the requirements.	GIS maps.	exchange map and data with external agencies, or organizations.
b. Climactic data	No knowledge of climactic maps, or updated climatic information.	Limited access to climatic information.	Aware of available climatic information, but not able to introduce to planning process.	Five -year history of using Climactic maps used regularly for planning.
c. Crops calendar	No skills on developing crops calendar.	Limited knowledge on developing crops calendar.	Detailed crops calendar developed and actively using and updated.	Efficient use of crops calendar for planning which are updated and followed up.

## SUSTAINABILITY

### 8. WUA ability to manage uncertainty and variability to cope with rainfall and other changes in temperature, run-off, and other changing patterns of water availability and use

	1	2	3	4
a. Crop water needs adjusted to weather	No knowledge of crop water need tables, no adjustments made for evapotranspiration levels.	Limited knowledge on crops water needs tables.	Crop water need tables used regularly for planning, which are updated with seasons' rainfall contributions.	Five-year history of using water need tables used regularly for planning, which are updated with seasons' evapotranspiration levels.
b. Erosion	No planning whatsoever for managing erosion.	Fields prepared to provide for minimize erosion.	Fields prepared to provide for suitable runoff, and reduce erosion on most fields.	Fields prepared to provide for suitable runoff, and reduce erosion on essentially all fields.

## GENDER

### 9. Empowerment of women and men to access irrigation water; and if women have as equal access as men under similar circumstances

	1	2	3	4
a. Empowerment of women and men to access irrigation water	No evaluation of gender equity considered.	Men and women participate in decision making but not active in leadership.	Gender equity is used to adjust plans for water delivery, women substantially active in WUA decision making.	Women and men are equally fully empowered to access irrigation water, according to written plan and results report.
b. If women have as equal access to irrigation water as men under similar circumstances	No equal access to irrigation water.	Limited access to irrigation water as men under similar circumstances.	Actions taken to ensure equal access to irrigation water as men under similar circumstances.	Women are equally fully empowered to access irrigation water, according to written plan and results report.

**ASSESSOR NOTES:**

**DATA REVIEW AND PROCESSING:**

<b>Date of Submission</b>	_ _   _ _   _ _ _ _ _  <i>Day Month</i> <i>Year</i>	<b>Facilitator Initials</b>		Comments
<b>Date of review by Supervisor</b>	_ _   _ _   _ _ _ _ _  <i>Day Month</i> <i>Year</i>	<b>Supervisor Initials</b>		Comments

# ANNEX 10: TRAINING REPORT

Note: Training report to be submitted separately.

## **USAID FAMILY FARMING PROGRAM**

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