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EXISTING CONDITIONS SURVEY AND ASSESSMENT OF WATER USERS ASSOCIATIONS IN THE JORDAN VALLEY REPORT

May 2013

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ACRONYMS

du	Dunum; 1,000 m ² ; One-Tenth Hectare
FTA	Farm Turnout Assembly
GIZ	Gesellschaft für Internationale Zusammenarbeit/German Technical Cooperation, <i>formerly GTZ</i>
JVA	Jordan Valley Authority
JD	Jordanian Dinar
JRV	Jordan Rift Valley
JVD	Jordan Valley Development
JVFU	Jordan Valley Farmers Union
JCC	Jordan Cooperative Corporation
KAC	King Abdullah Canal
KTR	King Talal Reservoir
MCM	Million Cubic Meters
MOA	Ministry of Agriculture
MWI	Ministry of Water and Irrigation
NCARE	National Center for Agricultural Research and Extension
TTA	Task Transfer Agreement
USAID	United States Agency for International Development
US	United States
WAJ	Water Authority of Jordan
WUA	Water User Association
WWTP	Wastewater Treatment Plant
ZCI, ZCII, ZCIII	Zarqa Carrier Pipelines I, II and III

EXECUTIVE SUMMARY

The USAID/Jordan Institutional Support and Strengthening Program (ISSP) has completed an existing conditions assessment of Water User Associations (WUAs) in the Jordan Valley. The purpose of this assessment was to establish a baseline of existing WUAs capacity, constraints and needs as the Jordan Valley Authority (JVA) determines the best options for the gradual process of transferring irrigation water distribution management to WUAs. This assessment is taking place in the broader context of widespread water sector reform, one of the core principles of which is the separation of bulk water supply and retail service delivery. The final policy objective is to determine the best options, as well as the best approach and timing, to achieve full irrigation water management coverage by WUAs across the entire Jordan Valley.

The assessment was based on a detailed survey of all existing WUAs, as well as a wide range of other stakeholders. It included the following: 24 WUA chairpersons; WUA member farmers; non-member farmers; Jordan Valley Authority (JVA) personnel; German Technical Cooperation (GIZ) personnel; Jordan Cooperatives Corporation (JCC) personnel; Ministry of Agriculture personnel; and, other relevant organizations. In total, 79 interviews, 29 consultation meetings, and 7 mini-workshops were held as a part of the survey. To ensure consistency and effectiveness, interview guides were designed by the study team in consultation with JVA representatives. In addition, secondary data was provided by JVA to supplement the primary data collected during the fieldwork. Secondary data included technical and financial information on the operation and performance of WUAs in managing retail water distribution as well as the costs incurred by JVA.

The collected data was analyzed to produce a comprehensive picture of WUAs in the Jordan Valley. A set of performance indicators was devised and applied to assess the effectiveness of retail water distribution when managed by WUAs. The economic, social, and environmental impacts of WUAs involvement were also assessed. The study team presented its findings separately to JVA, USAID, and WUAs. The feedback from these briefings was incorporated into the final analysis documented in this report.

The current legal framework for the WUAs is provided by the Jordan Cooperative Law, and overseen by the Jordan Cooperatives Corporation (JCC). At the time that WUAs were first being established, it was determined that while not perfect, this was the most suitable existing legal framework to allow WUAs to be created to increase farmer participation in irrigation issues. There are currently 19 formally registered WUAs with the JCC, while five (5) are pending in the preparation

phase. Each WUA has a different range of specific responsibilities. Some are still mostly advocacy groups, while 16 WUAs are implementing task transfer agreements (TTAs) with JVA. These agreements contract the WUA to distribute water to farmers. Eight (8) of these TTAs also include some maintenance tasks in addition to water distribution.

The WUAs have good coverage throughout the Jordan Valley and Southern Ghors. Farmers' participation has expanded successfully and the total area served by WUAs has been estimated at 182,000 dunums (du) which is 62% of the irrigable area of the Valley. There are 1,865 total members of WUAs, of which 60 are women farmers (3%). The area covered by member farm units within the WUA service area averages 75% for the areas with TTAs. There are 353 non-Jordanian farmers in the service area and they cannot become members of WUAs due to legal barriers. The purpose and usefulness of these barriers are worth re-examining as more complete membership would make the WUAs more effective.

The cost of service delivery for the WUAs is covered in different ways. The TTAs are signed with a budget agreement to cover specific costs. For some WUAs, the JVA provides operational personnel who are still JVA staff but are seconded to the WUA. Other WUAs with limited services operate on a voluntary basis. In 2012, 12 WUAs had full irrigation distribution responsibility with TTAs to cover all costs. Four (4) WUAs operated with seconded staff from JVA. Three of the WUA Chairpersons work as volunteers while the rest are paid a monthly stipend. Analysis of the TTA and contract costs shows that, for 2012, JVA paid 3.5 JD/du for irrigation services in areas served by WUAs. When the additional JVA cost for their supporting services directly to WUAs, this figure rises to 9 JD/du. The cost to JVA for managing irrigation distribution services on their own was estimated at 17 JD/du (excluding overhead and bulk water management cost). This demonstrates that there are some significant cost savings possible under WUA management of irrigation services.

Further, the quality of retail water distribution services by participating WUAs is perceived as higher than under JVA management by most member and non-member farmers, as well as by JVA personnel. The survey results showed 83% satisfaction for management indicators and 58% satisfaction for technical indicators. There are still some items that need to be improved, however, including perceptions on the equitable treatment of farmers by WUA staff. JVA representatives were highly positive regarding the participation of WUAs in retail water distribution, citing savings in staff and vehicles cost and improved quality of service. Overall, both farmers and WUAs surveyed prefer to have the retail water services delivered by WUAs, provided that they are well equipped.

The survey also examined and analyzed the key constraints identified by the WUAs to both current operational effectiveness and to taking on additional water management responsibilities.

Rehabilitation of the irrigation network is the top priority and concern, followed by water scarcity, and the absence of a proper legal framework for the establishment and operation of WUAs. Other important needs that surfaced include vehicles, equipment and tools to measure and monitor water flow and pressure. Key training needs include computer skills and operational and maintenance skills for water distribution.

Other impacts of farmers' participation in irrigation water management were also assessed. The economic impacts include savings in staff time and costs for JVA, estimated at up to 53%. There has also been a significant savings in farmers' time spent dealing with irrigation management issues, which according to their own estimates, averaged 13 work days per farmer annually. A primary social impact is the benefits of increased stakeholder participation and the promotion of democratic processes through electing members of management boards for the WUAs. Another social impact mentioned by farmers was advancing cooperation among farmers from various regions in the valley, resulting in new business relationships. The environmental impact of WUA management is reflected in water saving due to faster responses to pipeline breaks. It was estimated that there has already been a 30% improvement in response time, resulting in as much as 1,600 m³ per season in each of the WUAs areas.

Overall, this study identified significant benefits from transferring service irrigation delivery to WUAs in the Jordan Valley. It also identified a series of critical needs that still exist to continue this process and enable even greater irrigation management transfer to WUAs. The following issues are the most critical ones currently facing both the JVA and the WUAs moving ahead with these critical reforms in the irrigation sector.

1. **Legal framework.** The current legal basis for organizing WUAs is ill-suited to the structure and operations of WUAs and will not accommodate an expanded role in irrigation retail distribution. A new legal framework must be put in place providing a suitable basis for a democratic non-profit organization that can contract with JVA for bulk water services. The legal framework should empower WUAs to set its own rates and collect service fees from all clients in its service area.
2. **Representation of WUAs.** WUAs need a mechanism for joining together to facilitate interaction among WUAs and to represent WUA interests in dealing with JVA and other outside parties. A recent activity sponsored by JVA/GIZ has studied suitable options for forming a representative body for WUAs and has recommended forming a Council of WUA representatives. A revised legislative framework for WUA establishment and operation should make provision for a formal associative body of all JV WUAs.

3. **Training.** Training needs identified by respondents include operation and maintenance of water distribution systems and computer skills to enhance the managerial capabilities of WUA staff. An extensive training program must be mounted to increase both the capability of WUA staff and the ability of WUA member farmers to participate in democratic governance of their WUA. A dedicated and expanded WUA support unit is needed within JVA to support WUA capacity building and development.
4. **Contracts.** Current TTAs cover staff salaries, but include only limited amounts to cover other fixed and variable WUA costs. A new and simpler contracting mechanism is needed based on lump sum payments by WUAs to JVA for the quantities of bulk water delivered to them.
5. **System condition.** Much of the Jordan Valley (JV) irrigation network is more than 30 years old and in poor condition, with a substantial backlog of deferred maintenance. Rehabilitation of the network is a top priority across the JV, but particularly in the Southern Ghors, where WUAs refuse to take over any maintenance responsibilities due to the poor condition of the infrastructure.
6. **Expansion of responsibilities.** WUAs have shown that even with limited training and working in worn irrigation facilities, that they are capable of managing retail water delivery in a competent and professional manner. Some WUAs appear already ready to take on additional responsibilities above the tertiary distribution system. Others will achieve this capability as their skills develop through training and experience. Additional responsibilities could include pump station operation and monitoring responsibilities along the King Abdullah Canal. Selective transfer of these kinds of responsibilities should be pursued to take advantage of the developing capabilities of some WUAs and to gain experience with the process to facilitate replication.

I. INTRODUCTION

This study was carried to support implementation of ISSP Activity 4: Build and Empower Jordan Valley WUAs. It aims to establish the baseline conditions of JV WUAs and document their current situation in order to develop options for advancing the efficiency of retail water distribution and management. It has been undertaken in coordination with the JVA and the GIZ Water Resources Management Program, WUAs Component.

The existing conditions survey of WUAs is only one piece of a larger assessment of irrigation water management in the JV. Other components of the overall study will include a qualitative analysis of WUA functions and structure against a background of international experience, a functional and organizational analysis of the JVA, a detailed financial analysis of irrigation service provision costs under different scenarios, and a study of farmers' ability to pay for irrigation services. Analyzed together, these components will yield a Situational Analysis of JV irrigation service provision and a set of recommendations for reform.

The Institutional Support and Strengthening Program (ISSP) is a three-year USAID-funded program to support and develop the water sector in Jordan. The project began with a comprehensive institutional assessment of the sector which resulted in a broad-based reform and restructuring program being implemented and supported by the ISSP in close cooperation with the Government of Jordan. The main components of this program are:

- ***Activity 1: Support the Newly-Established National Water Policies Council*** to provide greater transparency, accountability and shared responsibility for water policy.
- ***Activity 2: Strengthen and Consolidate Authority for Water Resources Planning and Management in the Ministry of Water & Irrigation (MWI)*** to better meet its obligations as the lead organization in the water sector, responsible for technical and strategic management of water resource management and planning.
- ***Activity 3: Improve Water Delivery Management through the following reform actions:***
 - ***Reorganize WAJ to Focus on Bulk Water Source Development and Supply*** to remove conflicts of interest between bulk water supply and utility oversight, and to improve operational efficiency and simplify government subsidies to the water sector.
 - ***Continue the Process to More Fully Corporatize State-owned Water Utilities*** to create needed management, fiscal and operational independence.

- ***Establish an Independent Water Utility Regulator*** to oversee the financial and technical performance of the corporatized water utilities.
- ***Activity 4: Build and Empower Jordan Valley Water Users Associations (WUAs)*** to move toward coverage of the entire irrigated area of the Jordan Valley and to determine whether they can function as independent irrigation utilities, pending further study.
- ***Activity 5: Enact a National Water Law*** to institutionalize the improved structure of the water sector and resolve gaps and conflicts in the current legislative framework.

2. BACKGROUND

The JVA was formed during the 1970 to spearhead development of the Jordan Valley. Its responsibilities were wide-ranging and covered the spectrum of development and management activities including land management, infrastructure and water resources management. JVA has succeeded in significantly improving conditions in the valley and effectively and productively populating the area. Its success is demonstrated by the fact that it has since divested itself of some of these initial core obligations. JVA is now primarily responsible for providing irrigation water to farmers in the Jordan Valley and overseeing issues of land ownership and management.

For more than a decade now, the JVA has been supporting the transfer of irrigation water distribution services and parts of irrigation retail system operation and maintenance to WUAs. This process has been facilitated by technical support furnished by the WUAs Component of the Jordanian-German Program on Water Resources Management. As discussed above, as of this study, 19 WUAs have been officially established with the JCC as WUAs, and five (5) more are pending.

The 19 officially registered WUAs span a wide geographic area in the Valley. The number of association members range from about 30 farmers in the North Shuna “WUA for DA 5 Cooperative” to more than 200 members in “Tabaqat Fahel WUA for PS 33 Cooperative” and “Ramah Water Users Association Cooperative”. These associations services the range from small farmers to large organized farmers who plant high-end crops and export them to West Europe.

WUAs are established under the Cooperatives Law. These associations then sign contracts, called Task Transfer Agreements (TTAs), with JVA to undertake the distribution of irrigation water among farmers. In some cases maintenance tasks are also undertaken by WUAs. JVA and WUAs agree to annual payments from JVA to cover WUA expenses, provided that services to farmers are maintained according to contracts. Article 3 of the standard TTA specifies the particular duties and commitments for each WUA which vary from one association to another. The size of association service areas also vary along with the annual payments made to them by JVA. There is an annual evaluation of each WUA’s performance before renewing the agreement which is carried out by JVA in cooperation with GIZ.

Now the JVA and WUAs are working together to determine the best way forward to expand the role and level of responsibility for WUAs in irrigation service delivery. The overall objective is to achieve full coverage of the JV, separate bulk water and retail services, and reduce the financial burden for irrigation water distribution on both the farmers and the JVA.

In order to present and discuss the options with relevant authorities, a workshop was held by GIZ with concerned members of the Jordan Valley Authority (JVA) and WUAs. Participants investigated all options and agreed on a temporary solution in the form of a Council, whose members will be elected by the

WUAs to represent them vis-a-vis JVA and any other party. According to the GIZ newsletter no. 7; it was recommended that this option will be consolidated with a legal agreement between all concerned parties and upon approval of JVA. In the long term, it is envisaged to create the legal framework, which will enable the Council to be linked to JVA.

The agreement on the Council is an important milestone in the march towards increased farmers' participation. JVA has signaled interest to add 3 farmer representatives to the JVA Board. JVA together with the GIZ will further support the establishment the Council as it will contribute to sustaining farmers' participation as well as advancing the position of WUAs as private partners for improved management of irrigation water.

The GIZ Water Program has issued a publication entitled *The Story of Farmers' Participation in the Jordan Valley* where the experience of developing farmers' participation in irrigation water management has been documented. Last year, the World Bank Institute surveyed the needs of the agricultural sector and, working in cooperation with the Ministry of Water and Irrigation, assisted in forming the Jordan Valley Water Forum in June 2012. The main aim of the Forum is to provide a discussion platform for farmers and other stakeholders to facilitate addressing key issues such as the marketing and exporting of JV agricultural products.

3. OBJECTIVES

The objective of this activity is to assess the functions, structure, activities, and capacity of JV WUAs along with their relationship with the JVA. The results of this assessment will establish a baseline as options for expanding the role of WUAs are considered. This study will develop a set of proposed options for improving the effectiveness and efficiency of JV water management. Proposed changes will address needs on both the WUA and JVA sides as WUAs make the transition to irrigation water supply utilities and the JVA transitions into a bulk water supplier.

The activity focuses on current conditions, constraints and options for WUAs. Specifically, the objectives of the assessment are to do the following.

- Map WUAs functions and capacity in different areas of the Jordan Valley
- Study the experience of WUAs in the Jordan Valley and understand impacts and benefits for farmers on irrigation distribution efficiency and on the overall cost of retail services delivery
- Identify the opportunities and constraints for expanding the scope of WUAs to cover full retail water services

4. METHODOLOGY

This section presents the methodology used for the assessment. All data used for the analysis was through 31 December 2012. All activities were conducted in close cooperation with JVA.

1. The team identified secondary information needs and requested needed information from the JVA operational offices in Amman and the JV. Data received included the following.
 - a. JVA water revenues for WUAs areas (2008 to 2012)
 - b. Water quantities (irrigation orders) for each WUA
 - c. Actual water quantities delivered for each WUA area
 - d. Records of metered water quantities for selected farms in the northern JV
 - e. JVA annual payments to WUAs according to task transfer agreements between JVA and WUAs
 - f. Records of violations and penalties for each WUA (2008 to 2012)
 - g. Records of maintenance activities for each WUA
 - h. JVA indirect costs for WUAs operating under task transfer agreements
 - i. JVA indirect costs for non-task transfer WUAs
 - j. JVA staff numbers and locations in JV
2. An interview guide listing questions to be asked was prepared for use in the survey of WUAs and farmers. Interview guides were also prepared for meetings with JVA and other concerned organizations. Guides are attached in Annex 1.
3. A work plan was prepared and meetings held with the concerned parties, including interviews (79), consultation meetings (29), and mini workshops (7). The following persons and entities were interviewed (see also Figure 1).
 - a. JVA Secretary General
 - b. Assistants to JVA Secretary General
 - c. Directors of North, Middle, South, and Southern Ghors Directorates
 - d. Heads of all officially-registered Water Users Associations
 - e. A sample of WUA member farmers from each of the four regions: Southern Ghors, North JV, Middle JV, South JV
 - f. A sample of non-member farmers from each of the four regions
 - g. Head of JVA WUA Unit
 - h. GIZ WUAs Component staff
 - i. Other stakeholders, including Ministry of Agriculture, Jordanian Farmers Union, JV Farmers Union, Jordan Cooperative Corporation, Agricultural Credit Corporation, and Ministry of Agriculture
4. Key performance and impact indicators were developed for evaluating the WUA experience in the JV. These were based on tasks assigned to the WUAs as well as broadly desirable outcomes.
5. The findings were analyzed, leading to a report describing the impacts of farmers' participation in irrigation service delivery.

Finally, it is worth mentioning that the study team has presented the findings of the study to JVA, USAID, and WUAs in 3 separate events. The notes and comments given by the participants were taken into account in developing the analysis and the report. For details of the input received from these meetings, see Annex 5.

5. EXISTING CONDITIONS

5.1. CURRENT INSTITUTIONAL SET-UP

Since 2001, WUAs were established by farmers with support from JVA and the GIZ as part of a strategy to improve the efficiency of irrigation water distribution. The process began with the formation of water committees or councils (or simply water groups) through an agreement reached among a number of farmers in an irrigation command area (development area). With time and expansion in the number of committees, it became necessary to establish the WUAs officially. However, due to the absence of a legal framework allowing for the registration of WUAs as independent non-profit organizations, the only option available was to register the WUAs under the Cooperative Law. Today all the officially-registered WUAs are registered as per the processes and conditions of this law. A few water committees are still in the process of being officially registered.

Accordingly, the structure of all registered WUAs follows the regulations of the Cooperative Law. Typically each WUA has a General Assembly, which comprises all members, a Management Board (MB), and sub-committees (typically maintenance, finance, and monitoring). In accordance with the law, the General Assembly elects the Management Board (MB) and the Chair of the WUA. The WUA is supervised by the Jordan Cooperatives Corporation (JCC).

Each WUA elects its own MB. In some WUAs, the selection of the Board was done by acclamation rather than through a contested voting process. In 2012, 56% of the WUAs had elections to select the members of board, with 44% selected by acclamation. A board typically comprises 5 to 11 persons, though in one WUA, board membership reached 15. The MB members (145 total members) have qualifications ranging from less than secondary education (43), secondary education (62), BSc and postgraduate degrees (40).

WUAs appoint the staff they deem necessary, such as engineers, water distributors, maintenance workers, and guards, depending on the tasks they have opted to undertake. Staff members are paid a monthly honorarium (based on the task transfer agreement but not a salary paid by the WUA). The WUAs that do not have TTAs work on a voluntary basis, with no officially appointed staff.

WUA staff broken out by job category, is given in Table 1. 19% of the personnel in the WUAs are seconded by JVA with their cost paid directly by JVA. WUA staff includes technical personnel such as engineers (where maintenance work is implemented by WUAs) and water distributors which comprise the largest portion of staff (58%). Administrators and other supporting staff make up less than 20% of the total.

On the JVA side, WUAs have received the attention of top management since their establishment. Encouraging farmers' participation has been the adopted strategy of JVA since 2001. Today WUAs are well distributed in all regions of the Jordan Valley (see Figure 2). Farmers' participation starts with an introductory/preparation phase of building trust and forming water groups. Then the members move on to form WUAs, where they act on voluntary basis, taking an advocacy role to improve the process of retail water distribution. After a certain qualifying time, JVA assigns a number of tasks to individual WUAs according to an agreement developed with the WUA.

The JVA structure has been adjusted to include a unit responsible for overseeing and managing WUAs affairs. This unit reports directly to the Secretary General (or to the Assistant Secretary General) (see Figure 3).

5.2. JORDAN VALLEY REGIONS AND DISTRIBUTION OF WUAs

For administrative aspects of irrigation water distribution, the JV is organized into four (4) regions: North JV, Middle JV, South JV, and Southern Ghors and Wadi Araba. The total area as well as the irrigable area of each region is given in Table 2. As shown in the table, this area does not include 61,589 du that is excluded from the South JV (known at JVA as the 14.5 km extension irrigation project). This project area was provided with infrastructure in 1988 but has never been provided with water due to water scarcity.

There are 19 total WUAs officially registered with the Jordan Cooperatives Corporation (JCC). Another five water groups are still in the process of registering. 12 of the registered WUAs have TTAs with JVA. Their distribution in the valley is shown in Figure 4. The areas of WUAs implementing TTAs relative to WUAs areas in the respective regions of the JV are shown in Figure 5. The breakdown of WUAs with TTAs, by region, is as follows:

- South JV – 100%
- North JV – 84 %
- Middle JV – 49%
- Southern Ghors – 40%

A primary reason for the areas with low task transfer coverage, such as the Southern Ghors, is the poor condition of the irrigation network infrastructure. For example the Ghor Safi WUA will not go into the TTA phase at all without having its irrigation network rehabilitated. Other WUAs in Southern Ghors refrained from taking over maintenance tasks for the same reason. The progress of task transfer and the type of tasks assumed by WUAs is discussed below in Section 5.4

5.3. MEMBERSHIP & COVERAGE OF SERVICES BY WUAS

Membership in the WUAs is the farmers within the service area who opt to join the WUA. These members then comprise the General Assembly of the respective WUA. Membership has been steadily expanding since inception in 2001. The breakdown between member and non-member farmers in each WUA coverage area is shown in Figure 6. The total number of farmers in the service area of WUAs is 4,207, with members comprising 44.3% of total farmers in 2012 (Table 3). However, this figure does not tell the full story. Many farmers share farm units, or one farmer may own or operate a number of farm units. A more representative picture of membership can be obtained by looking at the number of farm units under membership in a WUA (Figure 7), which now averages 75% in the WUAs carrying out tasks for JVA. A few WUAs have membership areas nearly at 100%, particularly in Southern Ghors (Figure 7).

The area being serviced by WUAs has also been steadily growing since 2002. By 2012, around 182,000 du (62%) of the irrigated area of the Jordan Valley is covered by WUAs (Figure 8), with retail water managed through farmers' participation. This means that farmers' participation has been expanding at an average rate of about 19,000 du per year.

Women farmers are a relatively small group overall and this is reflected in their proportional WUA membership numbers. Only a small number of women farmers are also WUA members; the survey showed that at least 60 women are members in the WUAs, 3.2% of all members.

In addition, while farms can only be owned by Jordanians, there are farms operated by non-Jordanian farmers. Around 2% of farmers (353 farmers) are non-Jordanian: Egyptians (90) and Pakistanis (281). Non-Jordanian farmers cannot become members of the WUAs due to limitations in the JVA law related to ownership and renting of lands. While Jordanian land owners can become members, it is not known how many farm units operated by non-Jordanian farmers are considered members in WUAs.

5.4. TASKS IMPLEMENTED BY WUAS

Task transfer of water distribution and maintenance started in 2008. These TTAs enable WUAs to be assigned management responsibilities for retail water distribution and, in some cases, maintenance works (mostly maintenance of Farm Turn-out Assemblies). The list of tasks assigned to WUAs differs slightly among WUAs, depending on individual WUA capacity and needs. Tasks fall within two main categories, however, water distribution and system maintenance. Normally WUAs start by receiving water distribution tasks and then move to include light maintenance tasks. The present status of WUAs implementing distribution and maintenance activities is given in Table 4. Water

distribution is performed by 8 WUAs, while 8 WUAs perform maintenance work in addition to water distribution. Three WUAs have not yet assumed tasks.

The range of tasks carried out by WUAs is presented in Figures 9 and 10. According to the survey results, five WUAs perform additional tasks on a voluntary basis to help solve specific types of problems with water distribution. For example, some assist to repair a problem or defect in the network or coordinate with JVA to speed the repair.

5.5. COSTS COVERAGE

Under the TTAs, the cost of services is covered by JVA. For maintenance works, the cost is also covered, up to a ceiling set in the contract, based on a bill with quantities and costs for all works completed. Table 5 shows the amounts provided for services in the TTAs between 2008 and 2012.

12 of the WUAs are performing tasks according to agreements with reimbursement by JVA (Table 6). In 2012, a new model of TTA emerged, where JVA has assigned tasks to 4 WUAs and seconded to them the staff needed to carry them out. In this model, JVA pays staff directly and staff remain employees of JVA, while the chairpersons of the WUAs work on a voluntary basis. This has the effect of further limiting the already marginal autonomy and control possessed by WUAs.

The three WUAs that have not reached agreement with JVA on task performance provide voluntary logistical support. The WUA's role, in this case, is to try to coordinate and enhance the processes of water distribution and maintenance.

The amounts of the contracts signed between JVA and WUAs per unit area are provided in Figure 11. All WUAs with at-cost TTAs received roughly 3 to 4 JD/du (2.8 to 4.2 JD/du) in 2012 except for one case (Khnezeera WUA), in which case the agreement was 9.42 JD/du in 2012. This cost difference reflects that this WUA is the smallest in terms of area covered and so has little economies of scale. Due consideration needs to be given to the values of each contract according to the specific tasks as well as the characteristics of the area served. This relatively high figure could also be attributed to insufficient consideration given to the land areas served by the WUAs while pricing the contracts as the contracts are usually more dependent on the staff to be assigned to work and the administrative costs. While the area specific contract value seems high for Khnezeera WUA, it could also be true that the rest of the WUAs are priced too low. This idea is further supported by the fact that the performance of Khnezeera was among the best of the WUAs.

The total area-specific contract value averaged nearly 3.5 JD/du in 2012 (Figure 12). Since 2008 there has been an increase in the contract value per dunum mainly due to increases in the tasks transferred

to WUAs as well as inflation. A proper contract pricing system should be adopted based on area served, number of staff, administrative costs including fixed costs.

6. CONSTRAINTS AND NEEDS OF WUAs

The survey identified key challenges facing WUAs and their continued development, according to the WUA members themselves (Figure 13). The most important constraint is the poor quality of the irrigation network and the consequent need for rehabilitation. 16 of 18 interviewed confirmed this. Next came water scarcity, which is a common problem for the economic sectors in Jordan, and a particular issue for irrigated agriculture. Third was the absence of a suitable legal framework for WUA establishment and operation, along with a mechanism for providing support and assistance, followed by limited funding.

When asked about the needs to enable WUAs to take over full retail water distribution (Figure 14), these ranged from manpower, such as maintenance technicians and water distributors, to vehicle needs for pickups and motor cycles. Needs also included equipment such as flow and pressure measurement devices, computers, and loaders.

WUAs have received some training during their establishment phase. The training included operation and maintenance, management skills, flow meter maintenance, and water measurement. However, this training has been very limited in comparison with international norms, and WUAs strongly expressed the needs for additional training. The most requested training was computer skills (mentioned by more than 35 persons), and operation and maintenance training (25 persons) (Figure 14).

Clearly, a plan to further develop and empower JV WUAs must effectively address the constraints facing WUAs in a stepwise approach to achieve full local autonomy in providing retail water delivery services. Key steps in this regard are a new legal basis for establishing independent WUAs, rehabilitated irrigation networks, expanded capacity development for WUAs, full WUA decision-making authority and control over their operations, and clear contractual arrangements for bulk water supply by JVA to WUAs.

7. COST OF RETAIL WATER DISTRIBUTION

To understand the cost of retail water distribution in the areas served by WUAs, the cost of providing the service was analyzed. Major cost items include the cost of WUAs TTAs, and the cost of supporting services offered by JVA. The first cost item is known from the contracts' value as shown in Table 5. The second cost item was estimated from information collected by interviewing concerned JVA personnel in the field to determine the cost of manpower, space, electricity, maintenance work and other supporting activities including the overhead cost share of JVA Headquarters (see forms in Annex 2).

The results revealed the following.

- Contracts total value = 325,969 JD
- Estimated supporting cost including pumping electricity cost by JVA = 525,747 JD
- Total = 851,716 JD for all areas under at-cost TTAs (95,146 du).
- Total average area cost = 9 JD/du.

In comparison, the cost to JVA or providing the irrigation services to areas not served by WUAs has been estimated by JVA to be 3,387,308 JD for 200,854 du for a total average cost of 17 JD/du. Both sets of costs exclude overhead and water pumping cost. They represent only the cost of items in the field downstream from the water source for retail water supply, i.e. pumps or diversion weirs. For details of costs calculations see Annex 3. There would appear to be significant savings to be achieved by having WUAs managing retail water distribution.

8. PERFORMANCE OF RETAIL WATER DISTRIBUTION ACTIVITIES

A list of key performance indicators (KPIs) was developed by the team to better assess the work and impacts of WUAs. The survey results for the KPIs on the performance of WUAs is presented in Table 7. Where possible, the current performance has been compared with the performance before transferring the tasks to WUAs. As illustrated in the table, the performance of retail water distribution activities improved with the participation of WUAs. By contracting with WUAs to provide retail water delivery and maintenance services, the area-specific cost of providing service could be reduced to less than half of its level when provided solely by JVA. The number of “misuse of water from FTA” penalties has decreased significantly, indicating less illegal use of water from FTAs. Each farmer now spends less than 1 hour a week in following up water problems compared with 3.75 hours per week before WUAs became involved. The implications of these indicators in terms of benefits are presented in Section 10.

The JVA records of penalties assessed for “misuse of water from FTA” has reduced significantly, while misuse of water from the King Abdullah Canal, entirely managed by JVA, has increased slightly (Figure 16). It is thus worthwhile to look at the feasibility of adding monitoring of the King Abdullah Canal to the list of tasks transferred to WUAs.

The survey of farmers’ satisfaction with retail water distribution shows that the WUAs are managing retail water distribution in a highly satisfactory manner. Farmers’ level of satisfaction reached 83% for managerial aspects and 58% for technical aspects of retail water distribution by WUAs (Table 8). Farmers expressed clearly that they are comfortable with the management aspect of retail water distribution. The survey showed strong agreement among the farmers that the WUA managers regularly contact them (24/28 answered positively). The same applies to the technical qualification of the WUAs staff, their prompt response to problems, and professionalism and respect in dealing with farmers.

One of the few points that could be of concern is that there is still some perceived inequity in how WUA staff treat farmers. Answers showed that 12 of 28 did not agree that there is equal treatment of all farmers. This is expected in a society based on social links and relationships, but it may be an issue

that needs to be addressed with increased transparency and accountability in WUA operations. Interesting to compare these two values; 16 of 28 (57%) did agree that treatment is equal, while 58% were satisfied with technical service. Values are almost identical. It may be that by improving equity, satisfaction goes up as well.

Although 58% of farmers expressed satisfaction with WUA technical capability, there are ongoing concerns around the technical service levels related to pressure in pipelines and fluctuation of flow, which were marked by relatively low levels of satisfaction. These problems are generally related to Canal and pump station operation by JVA and not to WUA activities. They may also be attributed, to some extent, to the condition of the irrigation network and the need for rehabilitation. On the other hand, as indicated in the table, farmers are generally satisfied with the fair distribution of water and responses to maintenance requests.

From the perspective of JVA, the directors in the field corroborated the farmers' perception that there is fair distribution of water by WUAs (Figure 17). Only one WUA scored 5/10, while the others received 7/10 and above. JVA directors confirmed that having WUAs performing retail water distribution has resulted in reducing JVA distribution staff needs by at least 40% (in Southern Ghors, it reached to 90% in areas operated by WUAs) and the use of vehicles by at least 40% (Figure 18). Other indicators such as reduction in complaints to JVA, equitable water supply in terms of pressure and flow rate, among others, have also been valued by JVA director, showing 5% to 40% improvements (Figure 18). It is only in the North JV where the response was very positive concerning the flow time. This could be again due to the relatively reasonable condition of the network as well as the availability of acceptable flow control such as flow meters.

9. FARMER SATISFACTION AND IMPACTS ANALYSIS

Some 82% of member farmers choose WUAs to handle problems related to water quantities and maintenance. Further, 60% of non-members farmers also select WUAs to solve problems of this type. On the other hand, 68% of WUA member farmers would like to give additional tasks to WUAs while 85% of non-member farmers in WUAs agree to give additional tasks to WUAs. These findings confirm the level of satisfaction secured by WUAs participation in irrigation water management.

The survey of farmers has provided the basis for a preliminary assessment of the impacts of WUA involvement in retail water distribution. The impact analysis is based on a combination of the views of the interviewees (qualitative) and the collective data provided by JVA (quantitative).

9.1. FINANCIAL & ECONOMIC IMPACTS

Financial impacts pertain to (a) farmers' financial benefits resulting from WUA handling of water distribution and (b) saving of JVA financial resources.

9.1.1. SAVED FARMERS TIME ON WATER ISSUES:

The saving in farmer time and effort in following up water problems has been estimated by the farmers to be around 13 work days per nine-month agricultural season (Table 7). Assuming that one farmer-day is worth at least 100 JD, this would result in savings of 1,300 JD/farmer/year. If we were to extrapolate this figure to all farmers in the WUAs areas (4,200 farmers) then the total saving would reach around 5.5M JD.

WUA heads also reported increased farm productivity due to improved water services (Table 7). This impact cannot be quantified in this study, however 14 of 19 WUA chairpersons confirmed an increase in farm productivity.

9.1.2. SAVED FINANCIAL RESOURCES AT JVA

WUA management of retail irrigation water distribution results in lower direct JVA expenditures on water distribution. JVA field directors indicated that there is a saving of at least 40% in staff costs. The reduction in operation and maintenance costs was analyzed in Section 5. This analysis revealed that the unit area cost (excluding overhead and bulk water supply cost) of O&M was 17 JD/du when distribution was handled entirely by JVA, while it was 9 JD/du in areas where WUAs are operating (including the JVA-funded support). This 53% reduction corresponds well with the estimates given

by JVA field directors. This amount of saving could potentially reach 2.6M JD per year at the present coverage and WUA activity level. This figure could increase with the further expansion of WUAs horizontally, to cover more areas, and vertically, to cover more tasks.

Note however, that these savings are only “paper” savings unless JVA reduces its staffing levels to correspond to the reduced workload, or finds other productive work for surplus staff. As long as the staff made redundant by WUA retail-level water management remain on the JVA payroll, the actual costs of system operation will increase rather than decrease, since payments are now being made both to the staff who formerly handled tertiary level water distribution and also to the WUAs who now carry out these tasks.

9.2. ENVIRONMENTAL

Water conservation, in terms of reduction of losses, can be seen as the major environmental benefit resulting from the involvement of WUAs. The evidence collected showed that the relatively speedy response to repairing fractures in pipes could lead to water saving of 30%, compared with the previous response speed. The saving here comprises the amount of water saved during the trouble shooting and repair of fractures occurring in delivery pipelines. The amount of savings is a function of the flow and pressure in the affected pipe. For example, repairing a fractured pipe of a typical size of 250 mm at a flow rate 40 l/s in 40 minutes instead of 60 minutes would result in saving 43 m³ of water each time a fracture occurred. One would expect that, given the age of the pipe networks, such events may occur a few times in each WUA during a season. Assuming the event occurs twice in a season in each of the WUA areas, the water saving as a result of speedier repairs would be around 1,600 m³.

9.3. SOCIAL

The social impacts are rather qualitative. The most prominent attribute reported by WUAs and farmers is the adoption of a democratic approach (good governance) in taking decision and planning and enhancing cooperation among farmers. Other social impacts include increased equity among farmers and lower stress levels due to reduced conflict. For a complete list of social benefits valued by member farmers, see Figure 19.

10. RECOMMENDED FUTURE ACTIONS

Farmers, through their Water User Associations, have demonstrated clearly that they are capable of effectively and efficiently operating tertiary-level irrigation systems, despite a number of handicaps inherent in the current operating environment. Increasing WUA effectiveness and range of coverage is a goal that is shared by both farmers and JVA. Based on the findings of this study, a number of actions to advance coverage, effectiveness, efficiency, and sustainability of JV water management by empowering and building the capacity of WUAs are evident.

1. **Legal framework.** The current legal basis for organizing WUAs is ill-suited to the structure and operations of WUAs and will not accommodate an expanded role in irrigation retail distribution. A new legal framework must be put in place providing a suitable basis for a democratic non-profit organization that can contract with JVA for bulk water services. The legal framework should empower WUAs to set its own rates and collect service fees from all clients in its service area.
2. **Representation of WUAs.** WUAs need a mechanism for joining together to facilitate interaction among WUAs and to represent WUA interests in dealing with JVA and other outside parties. A recent activity sponsored by JVA/GIZ has studied suitable options for forming a representative body for WUAs and has recommended forming a Council of WUA representatives. A revised legislative framework for WUA establishment and operation should make provision for a formal associative body of all JV WUAs.
3. **Training.** Training needs identified by respondents include operation and maintenance of water distribution systems and computer skills to enhance the managerial capabilities of WUA staff. An extensive training program must be mounted to increase both the capability of WUA staff and the ability of WUA member farmers to participate in democratic governance of their WUA. A dedicated and expanded WUA support unit is needed within JVA to support WUA capacity building and development.
4. **Contracts.** Current TTAs cover staff salaries, but no benefits, and include only limited amounts to cover other fixed and variable WUA costs. A new and simpler contracting

mechanism is needed based on lump sum payments by WUAs to JVA for the quantities of bulk water delivered to them.

5. **System condition.** Much of the Jordan Valley (JV) irrigation network is more than 30 years old and in poor condition, with a substantial backlog of deferred maintenance. Rehabilitation of the network is a top priority across the JV, but particularly in the Southern Ghors, where WUAs refuse to take over any maintenance responsibilities due to the poor condition of the infrastructure.
6. **Expansion of responsibilities.** WUAs have shown that even with limited training and working in worn irrigation facilities, that they are capable of managing retail water delivery in a competent and professional manner. Some WUAs appear already ready to take on additional responsibilities above the tertiary distribution system. Others will achieve this capability as their skills develop through training and experience. Additional responsibilities could include pump station operation and monitoring responsibilities along the King Abdullah Canal. Selective transfer of these kinds of responsibilities should be pursued to take advantage of the developing capabilities of some WUAs and to gain experience with the process to facilitate replication.

The actions proposed above need to be considered together with proposed changes in JVA structure and operations. A comprehensive analysis of JV irrigation management is being developed under this activity and will be presented in the form of a situational analysis of JV irrigation. This report will lay the foundation for a comprehensive set of proposals for reforming the process of irrigation management in the Jordan Valley. Ultimately, after thorough discussion and consideration by stakeholders, the outcome will be a roadmap for reform, listing concrete actions and a timetable for implementation.

FIGURES AND TABLES

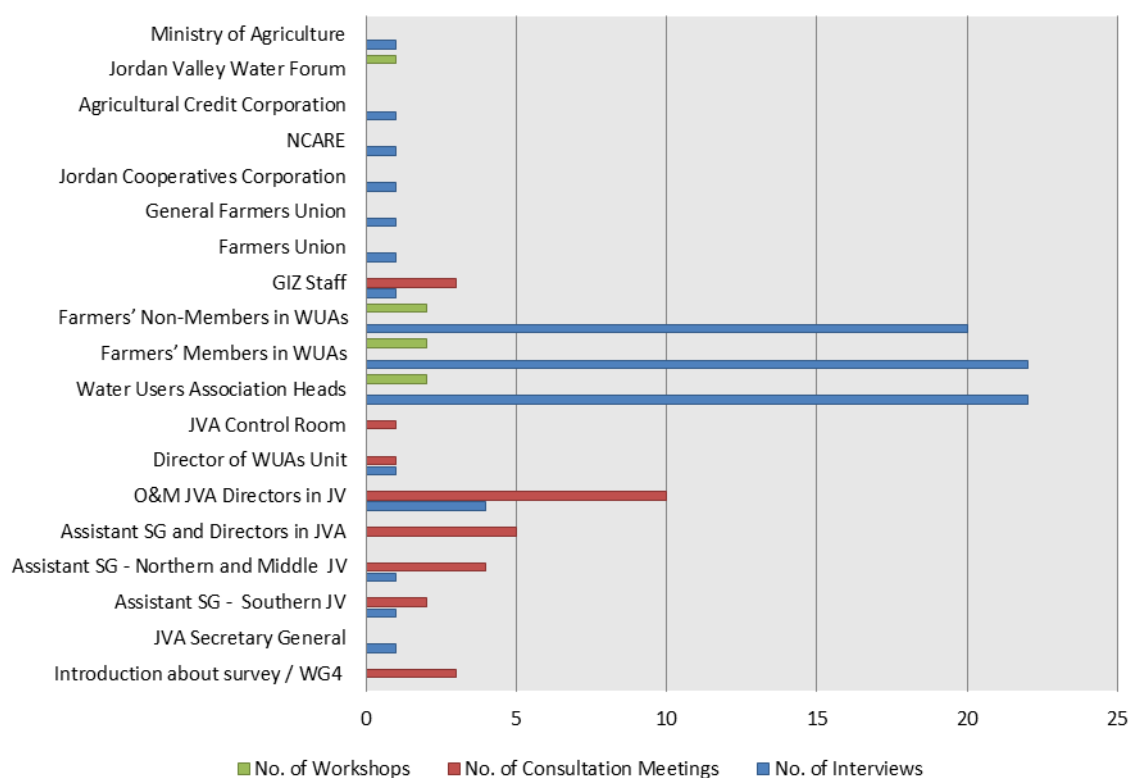


Figure 1: Distribution of meetings held with concerned parties

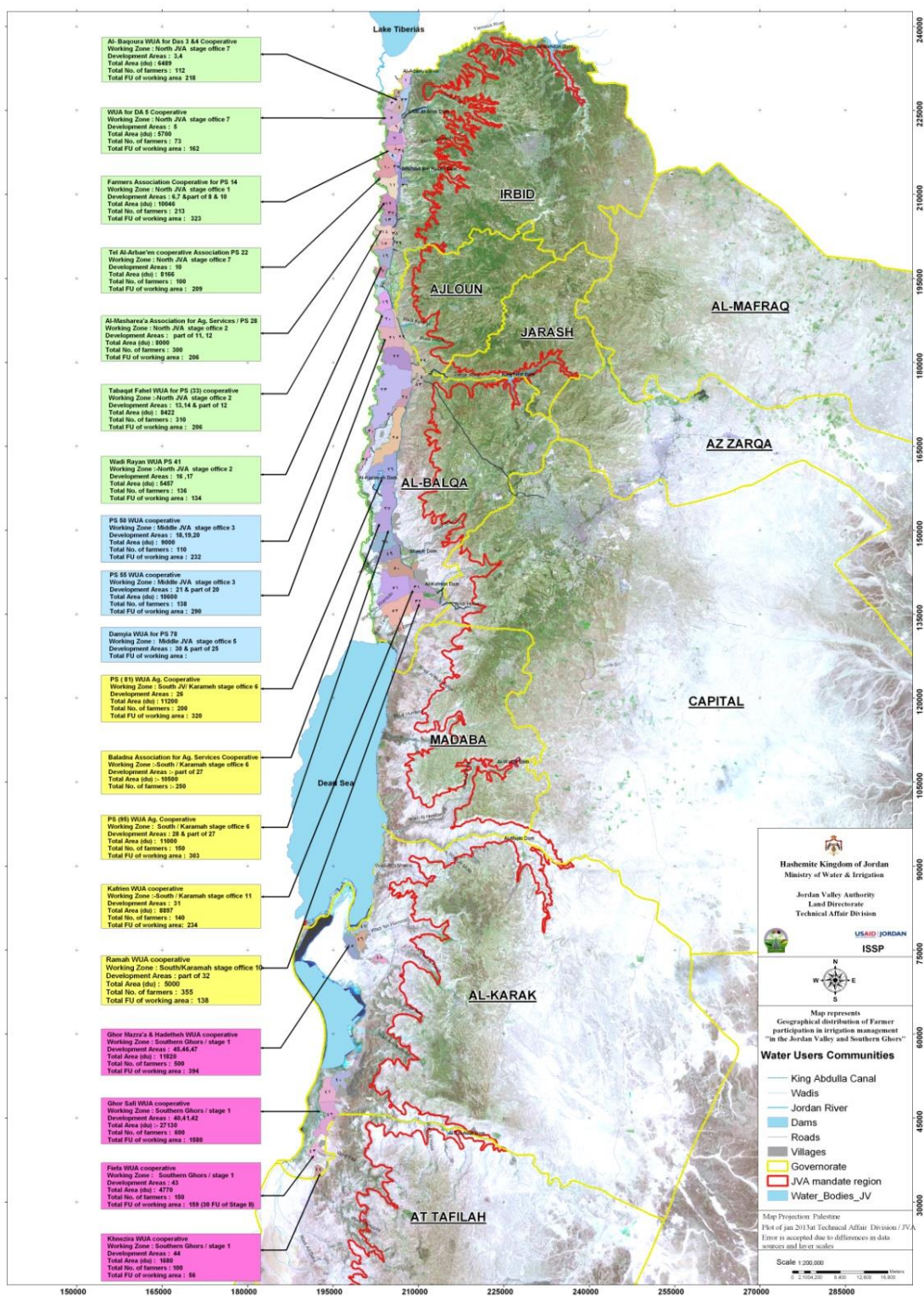


Figure 2: WUAs in Jordan Valley

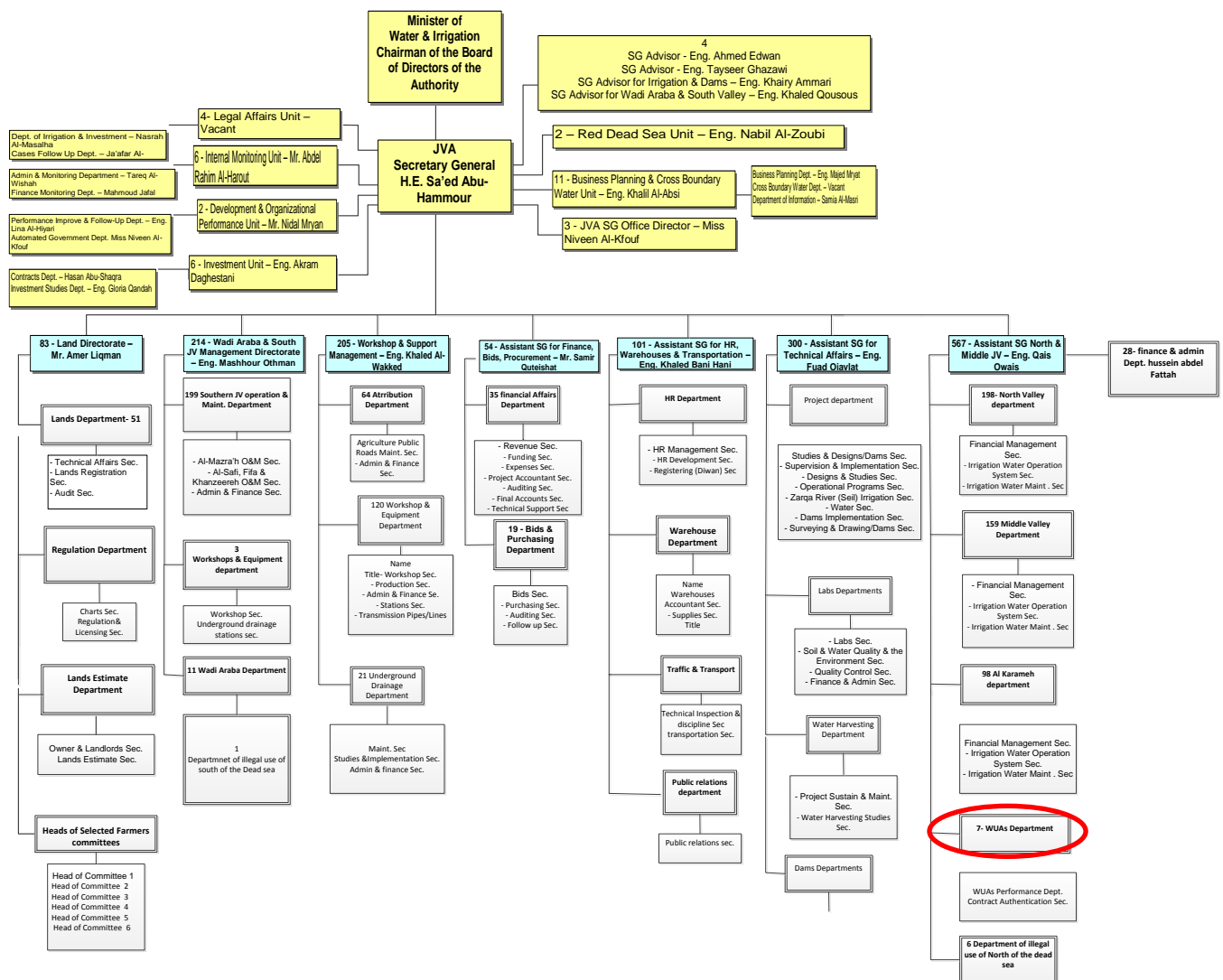


Figure 3: JVA Organizational Chart

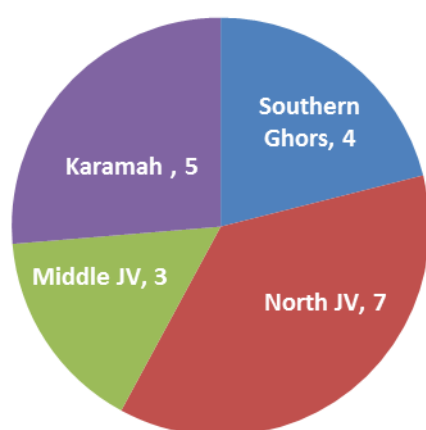


Figure 4: Distribution of WUAs in JV regions

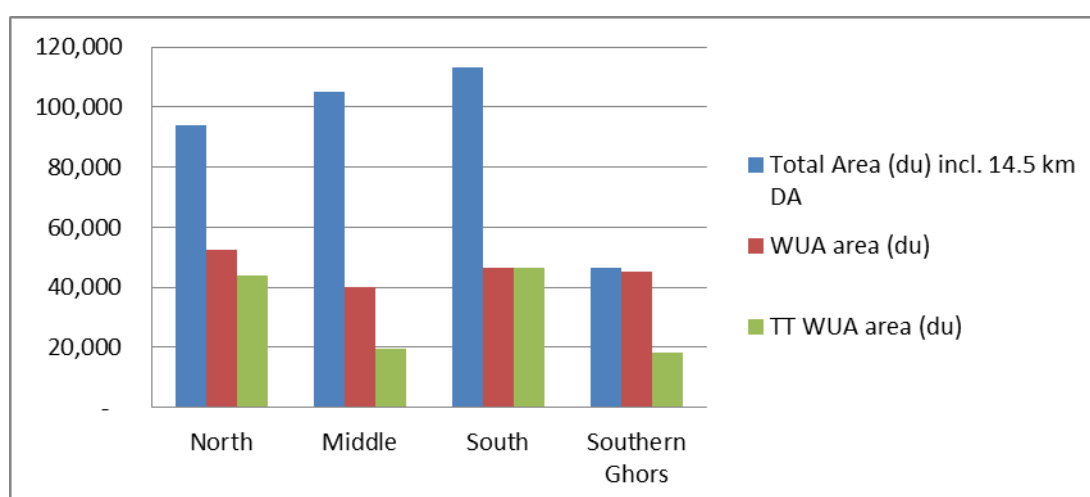


Figure 5: Coverage of WUAs and WUAs implementing tasks transfer agreements in JV regions

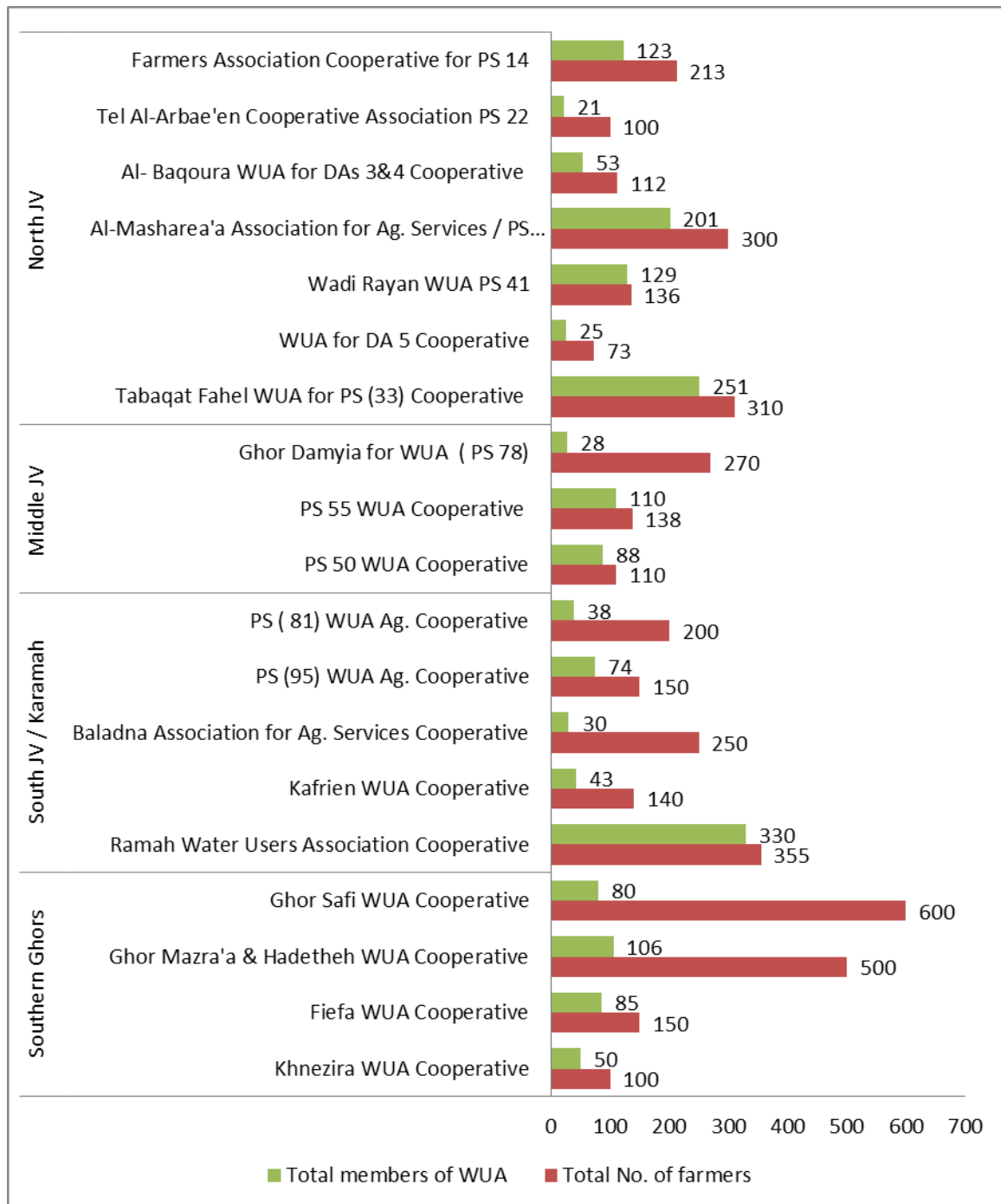


Figure 6: Member and Non-member Farmers in WUAs

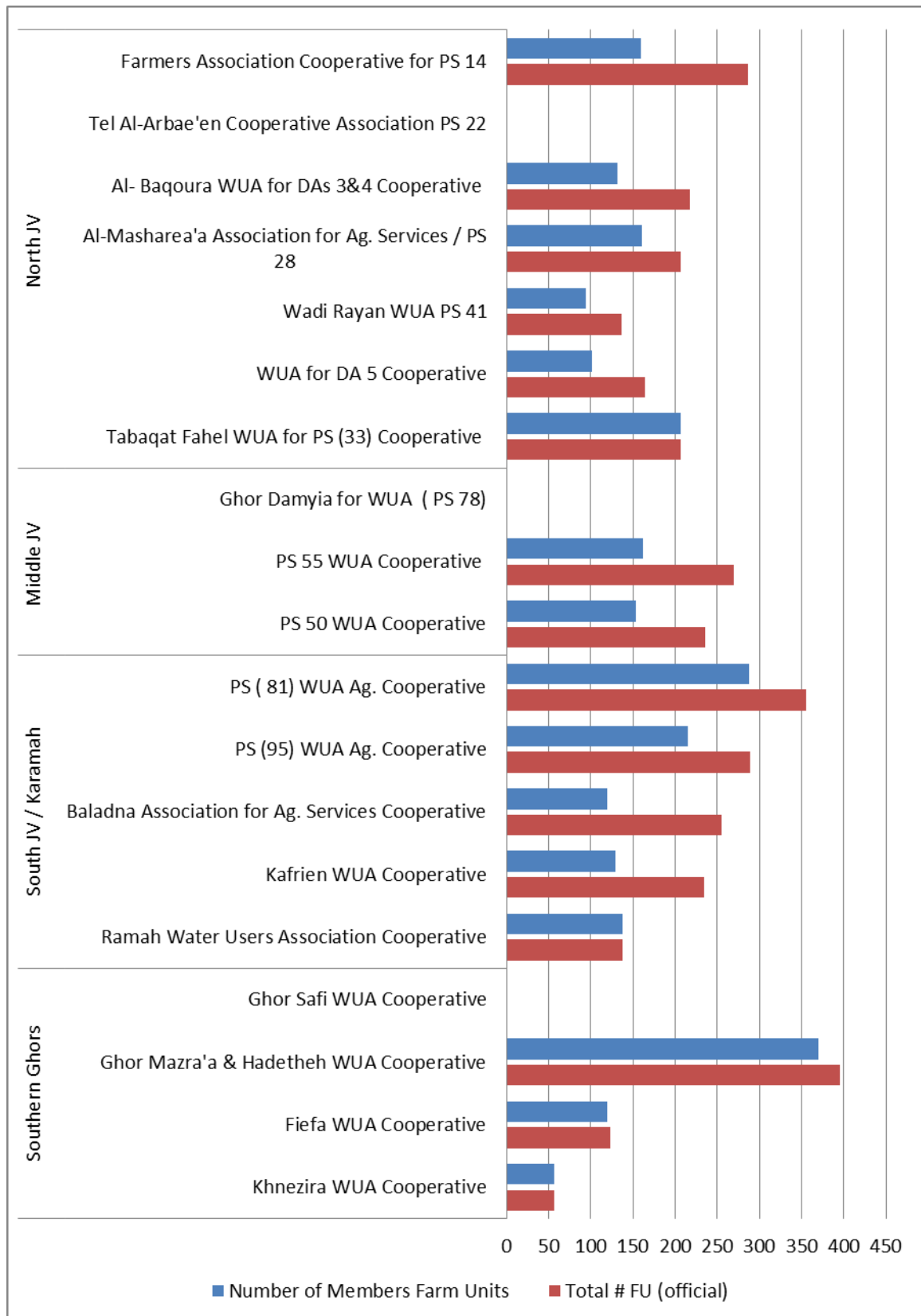


Figure 7: Member Farm Units Relative to Total Units in WUAs Task Transfer Areas

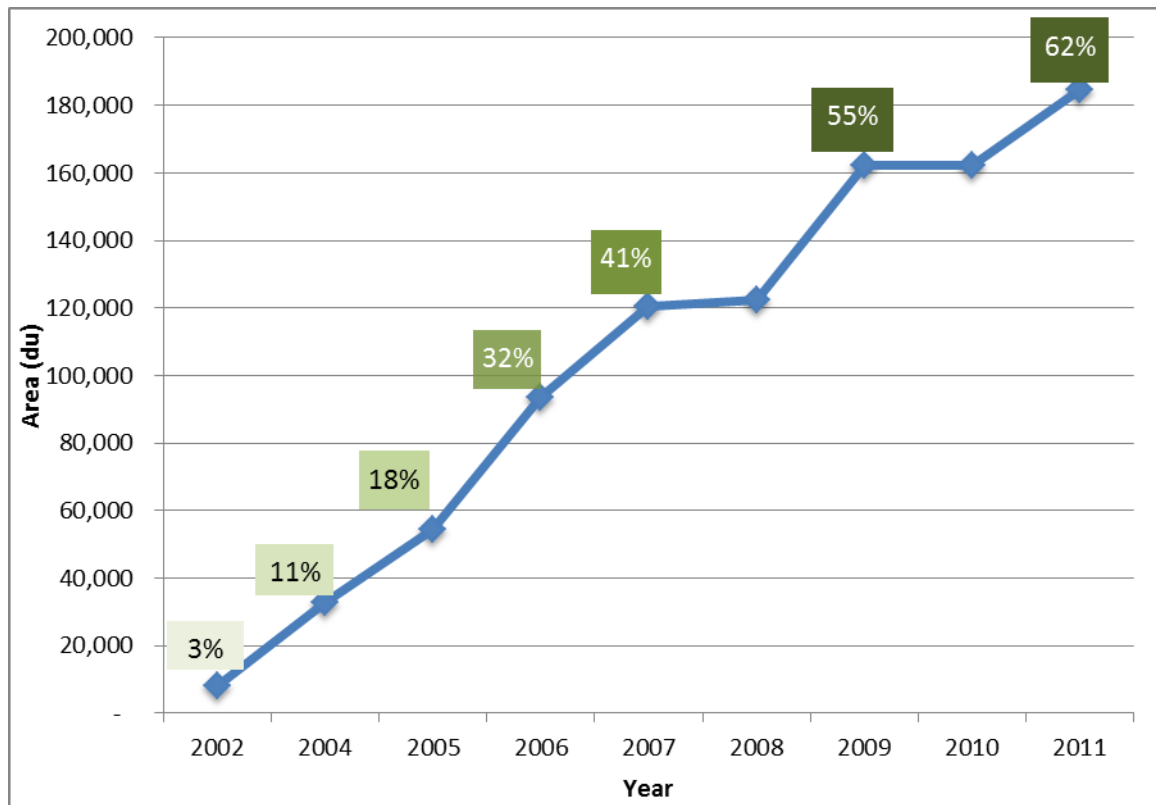


Figure 8: Growth in Farmers' Participation (du), (#% = area of WUAs / total area of JV *100)

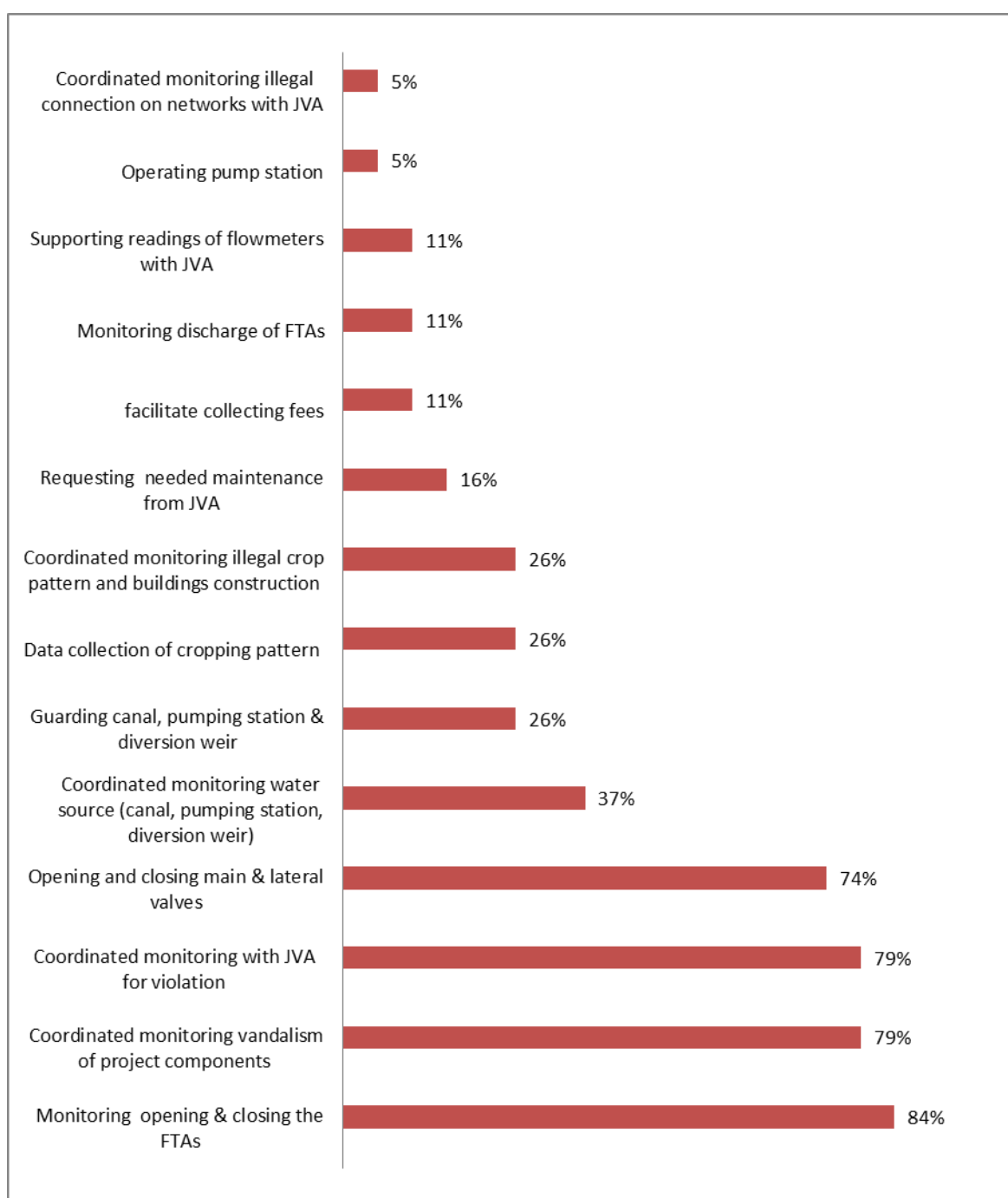


Figure 9: Range of Water Distribution Tasks Carried Out by WUAs

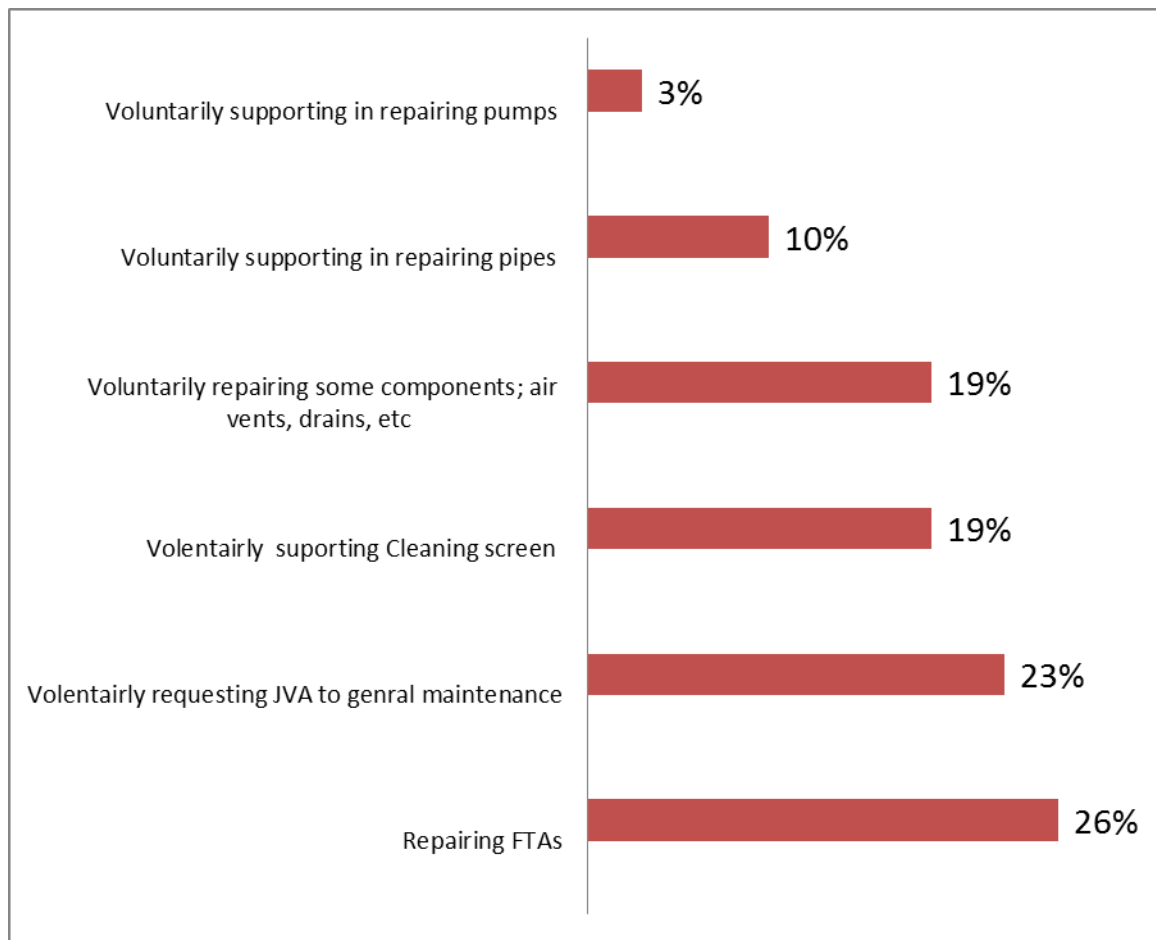


Figure 10: Maintenance Tasks Carried Out by WUAs

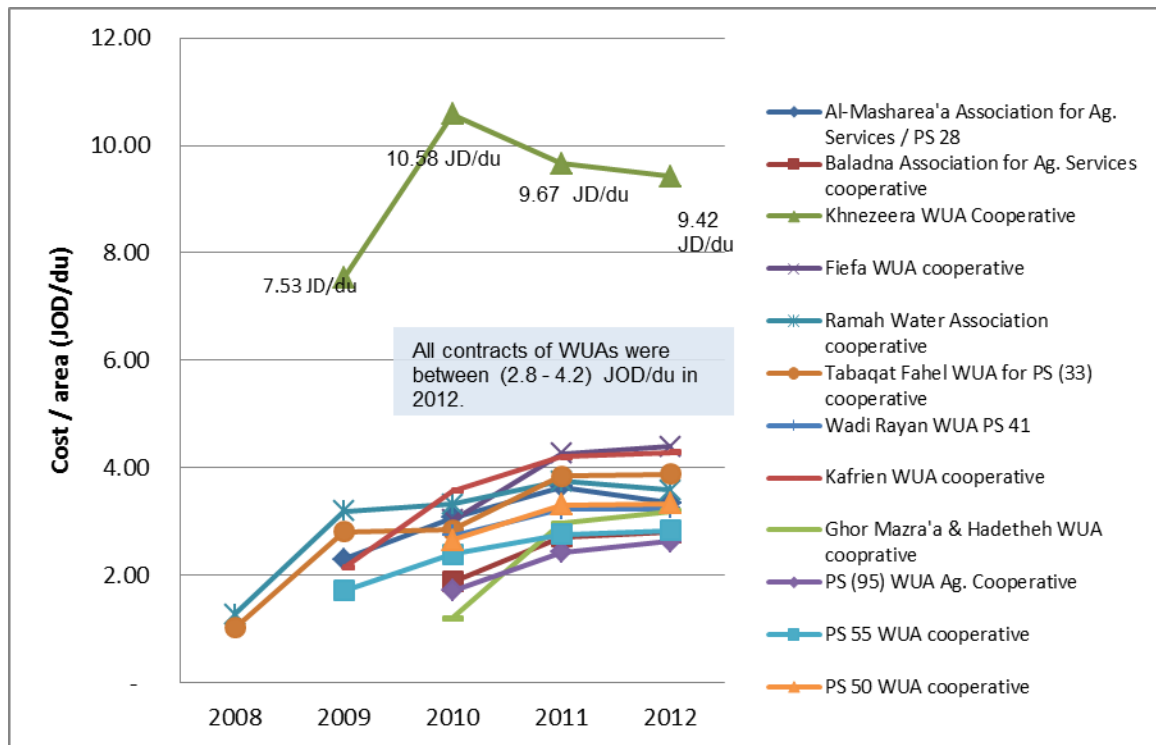


Figure 11: Area Specific Contract Value for WUAs Implementing Task Transfer at Cost

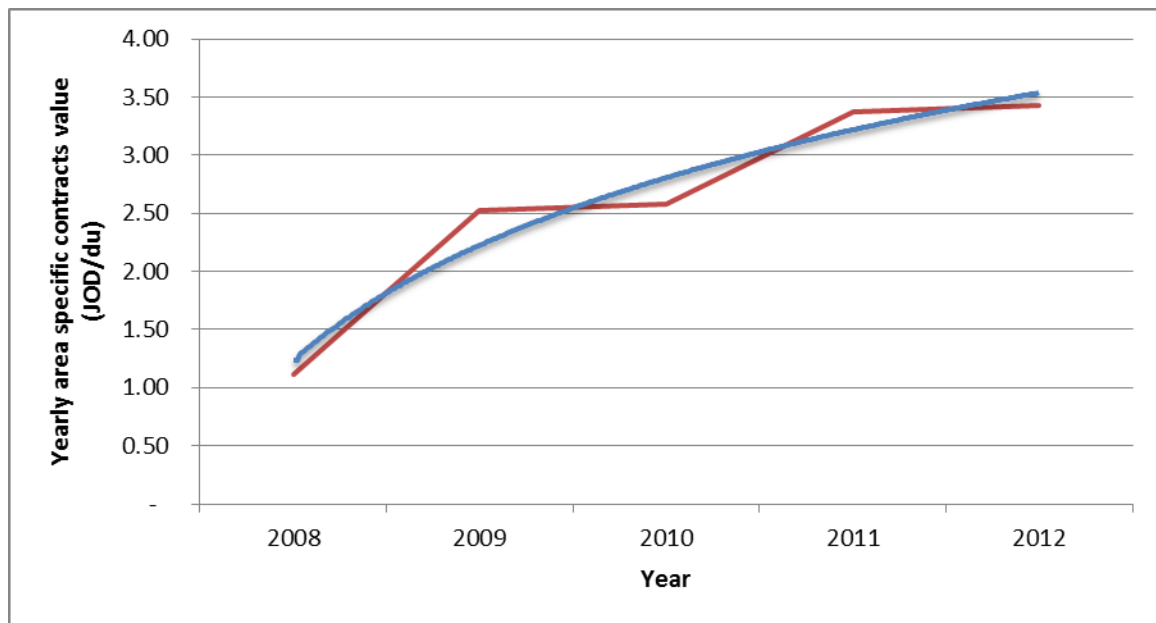


Figure 12: Total Yearly Area Specific Contracts Value For WUAs Implementing Task Transfer Agreements At Cost

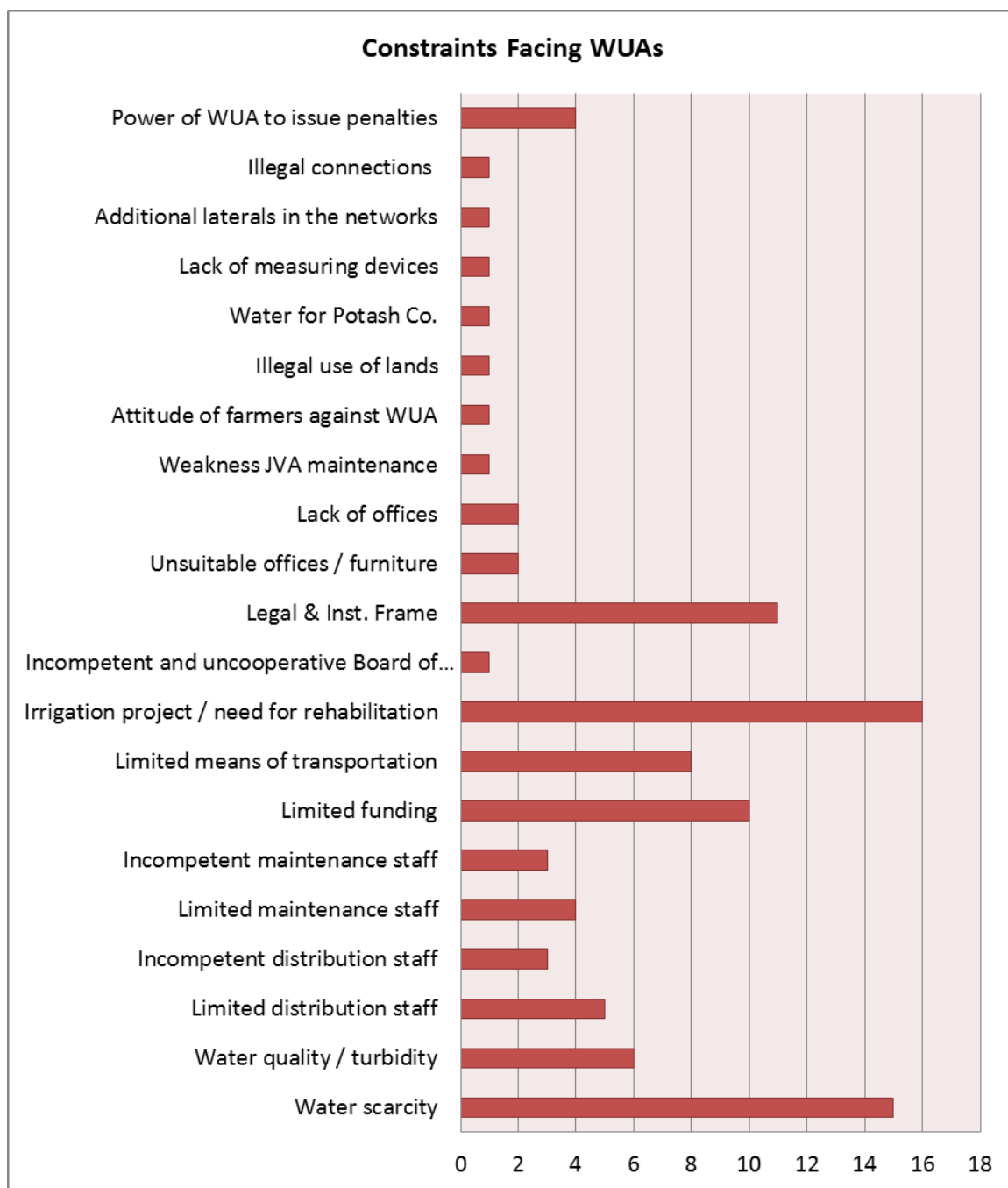


Figure 13: Constraints of WUAs

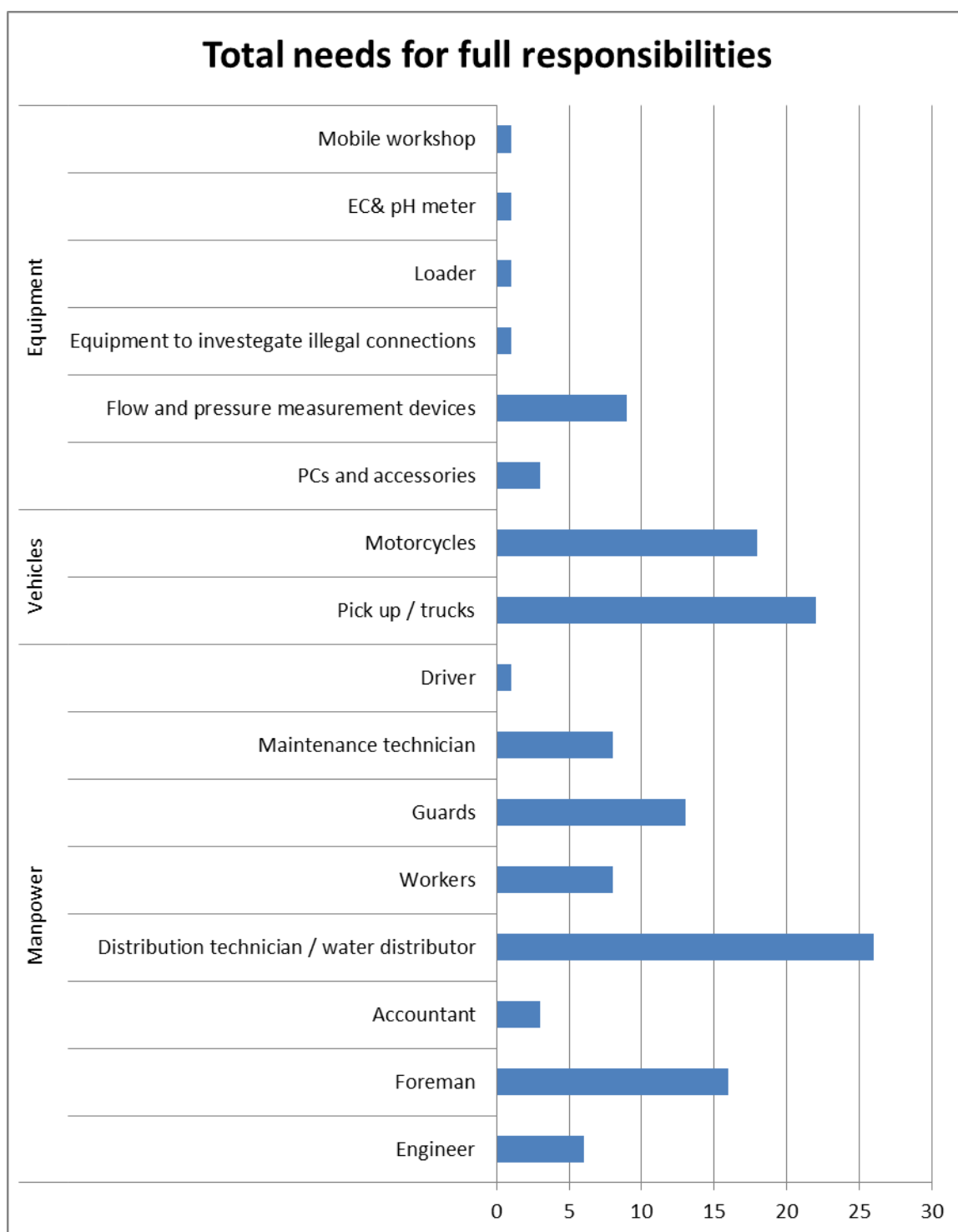


Figure 14: Needs of WUAs for Full Responsibility of Retail Water Distribution

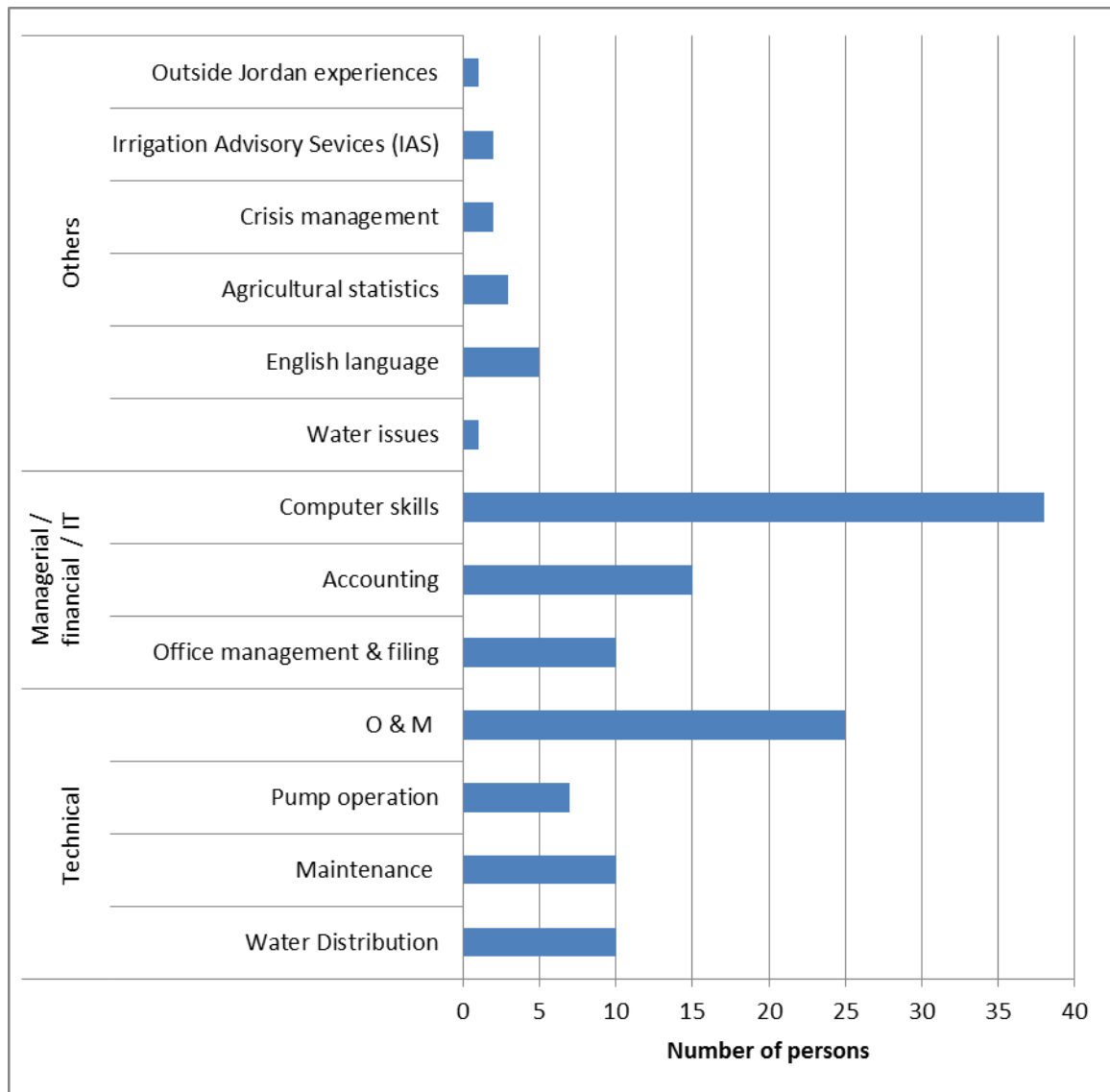


Figure 15: Training Needs for Staff of WUAs

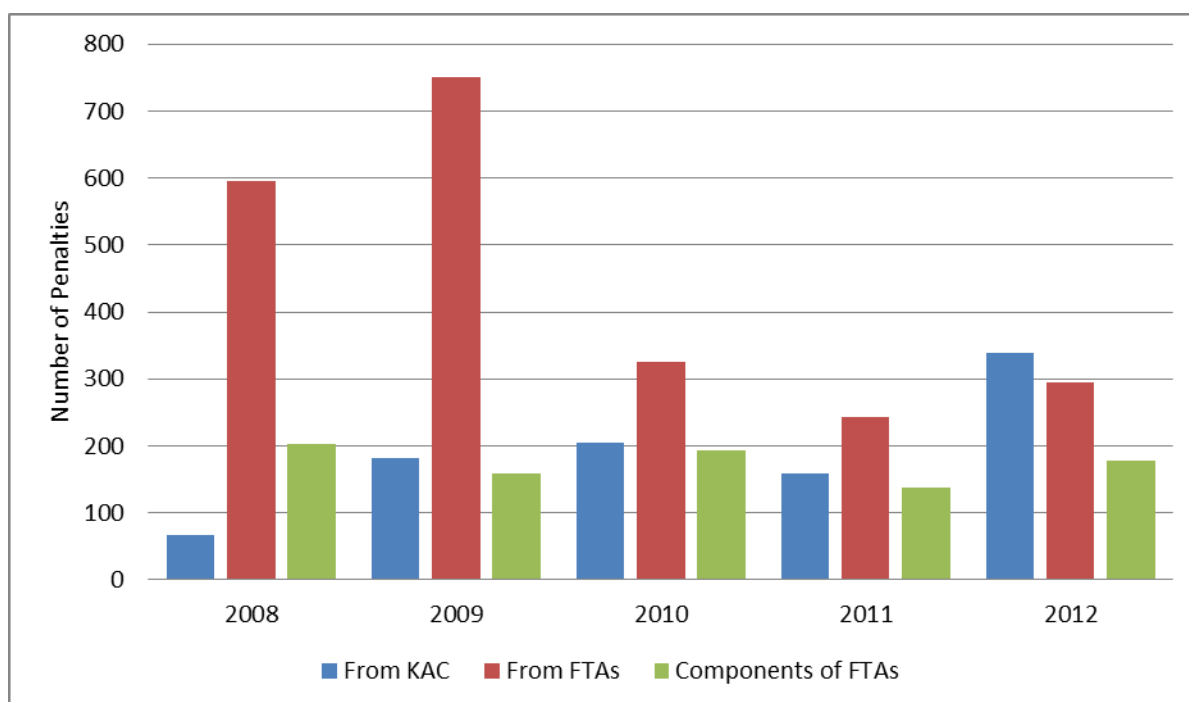


Figure 16: Number of Penalties Issued by JVA / WUAs During 2008 – 2012

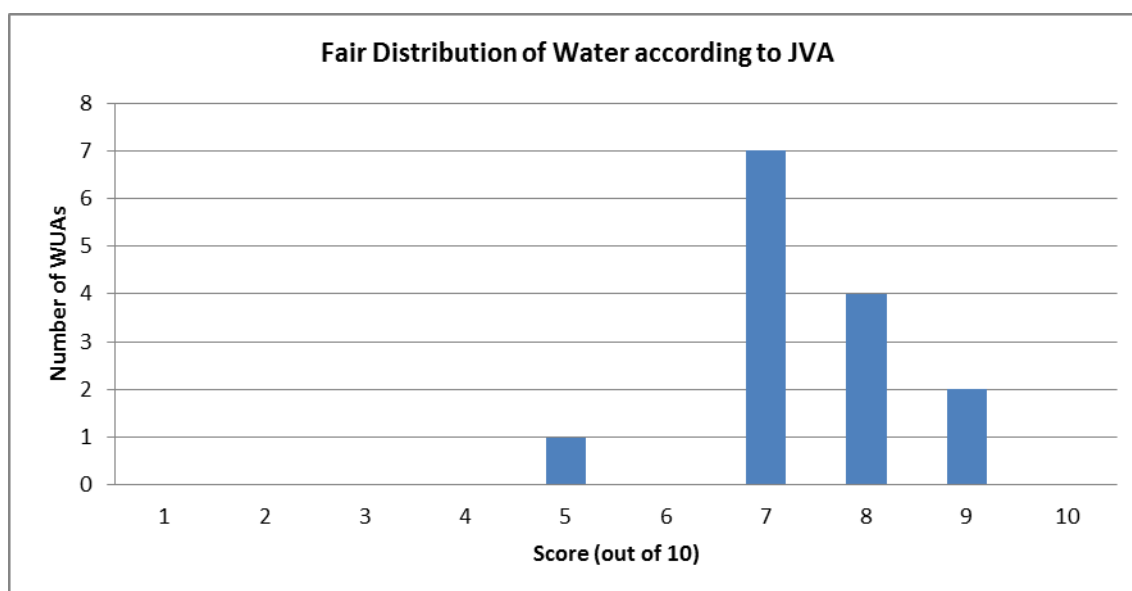


Figure 17: JVA Satisfaction with the Level of Fairness In Distributing Water by WUAs

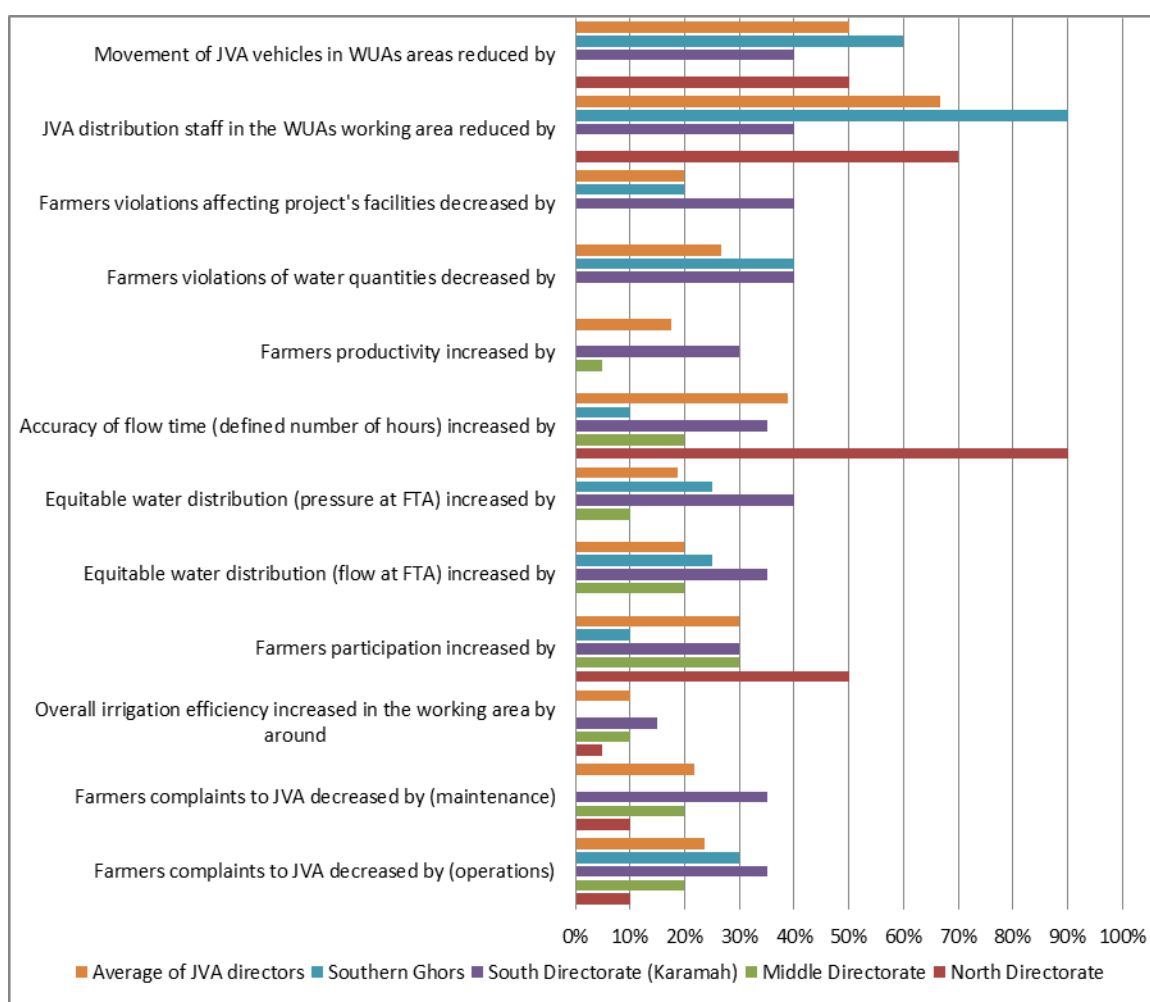


Figure 18: JVA Directors' Opinions re: WUAs performance

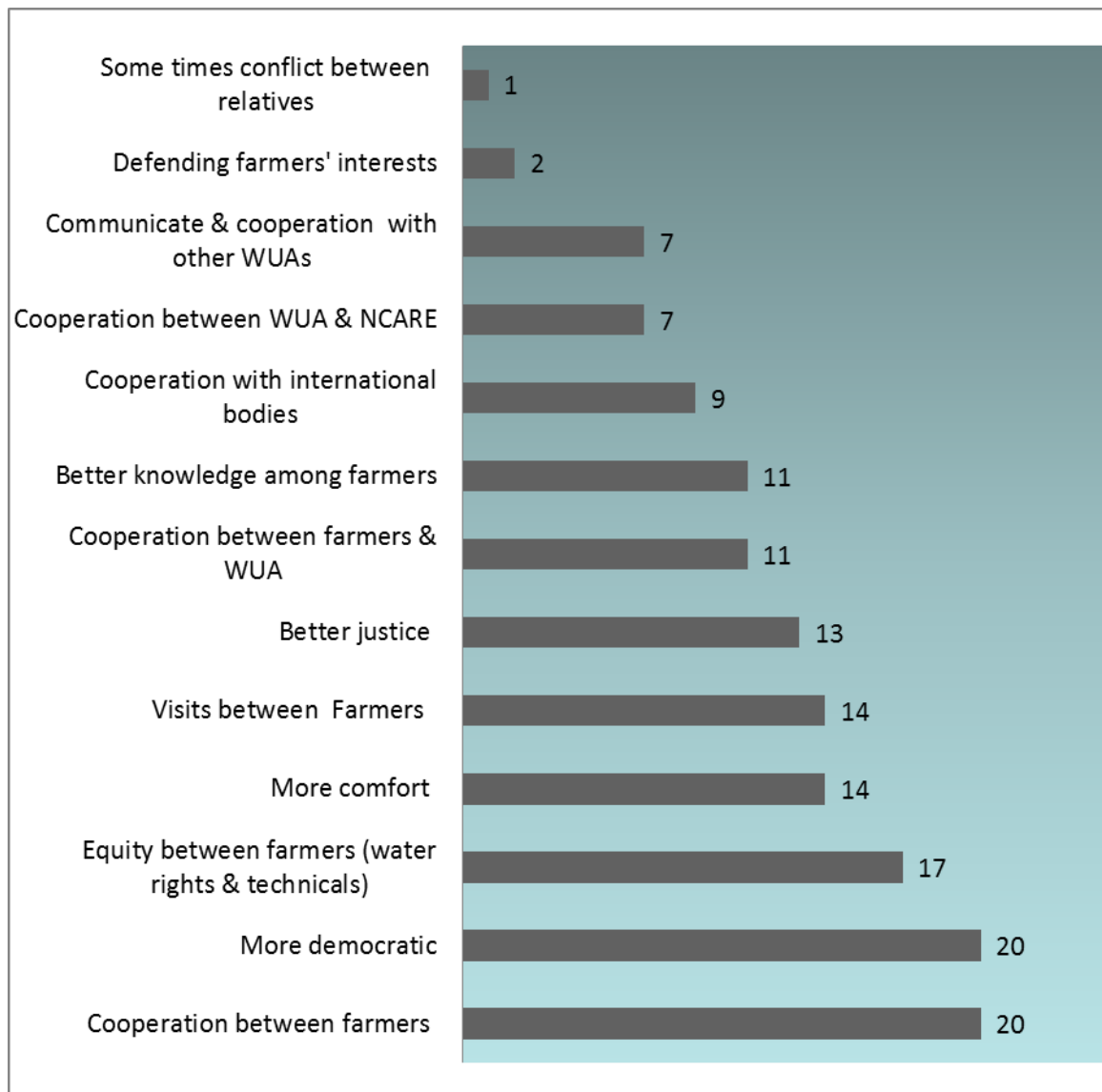


Figure 19: Social Benefits of Farmer's Participation In Retail Water Management, Given By Member Farmers

Table 1: Staff of WUAs

Staff	Total	JVA employees seconded to WUAs	WUAs employees
Engineers	5	0	5
Distributers	56	16	40
Maintenance	5	0	5
Administrators	14	2	12
Guards	13	0	13
Others	3	0	3
Total	96	18	78

Table 2: Areas of Jordan Valley and Southern Ghors Served by WUAs

Region	Total Area (du) incl. 14.5 km DA	Total Area (du) excl. 14.5 km DA	WUA area (du)	T ^T WUA area (du)
North JV	93,976	93,976	52,280	44,114
Middle JV	104,910	104,910	40,244	19,600
South JV	113,000	51,411	46,597	46,597
Southern Ghors & Wadi Araba	46,440	46,440	45,400	18,270
Total	358,326	296,737	184,521	128,581

Table 3: Farmers and Membership in WUAs

Farmer's Category	Number	Percentage
Total farmers in JV & Southern Ghors	20,000	100%
Farmers in areas of WUAs	4,207	21% of total
Farmers members in WUAs	1,865	44.3% of WUAs
Farmers non-members in WUAs	2,342	55.7% of WUAs
Renting farmers in WUAs	435	10.3% of WUAs
Owner farmers in WUAs	1,374	73.7% of members
Women farmers members in WUAs	60	3.2% of members

Table 4: WUAs Implementing Water Distribution (D) and Maintenance Tasks (M) in JV

Region	D&M	D only	None
Southern Ghors & Wadi Araba	0	3	1
North JV	2	4	1
South JV / Karamah	4	1	0
Middle JV	2	0	1
Total	8	8	3

Table 5: Value of Task Transfer Agreements

Water User Association Official Name	Area of WUA (du)	Contract value per year (JOD)				
		200 8	200 9	201 0	2011	201 2
Al-Mashare' Association for Agricultural Services/ PS 28	8,000	-	18,3 33	24,58 3	29,10 8	26,76 3
Baladna Association for Agricultural Services Cooperative	10,500	-	-	19,75 0	28,42 4	29,38 0
Khnezeera WUA Cooperative	1,680	-	12,6 50	17,78 0	16,23 8	15,82 5
Fiefa WUA Cooperative	4770	-	-	14,41 7	20,32 0	20,92 5
Ramah Water Association Cooperative	5,000	6,31 7	15,9 23	16,62 0	18,75 4	17,92 1
Tabaqat Fahel WUA for PS (33) Cooperative	8,422	8,62 3	23,5 95	23,94 2	32,40 0	32,70 0
Wadi Rayan WUA PS 41	5,457	-	-	14,95 1	17,56 6	17,65 0
Kafrien WUA Cooperative	8,897	-	18,9 92	31,78 5	37,33 3	38,10 0
Ghor Mazra'a & Hadetheh WUA Cooperative	11,820	-	-	14,13 3	34,98 6	37,74 6
PS (95) WUA Ag. Cooperative	11,000	-	-	18,75 0	26,65 8	28,96 0
PS 55 WUA Cooperative	10,600	-	18,1 44	25,32 3	29,28 0	30,00 0

Water User Association Official Name	Area of WUA (du)	Contract value per year (JOD)				
		200 8	200 9	201 0	2011	201 2
PS 50 WUA Cooperative	9,000	-	-	23,83 0	29,76 6	30,00 0
Total Contracts						
Value (JD/Year) for		14,9	107,63	245,8	320,8	325,9
TT		40	7	64	33	69
at cost model						

Table 6: WUAs Status in Implementing Task Transfer Agreements and Their Served Areas

Region	Total WUAs	TT @ cost	TT @ no cost	No TT yet
Southern Ghors (area du)	4 45,400	3 18,270	0 0	1 27,130
North JV (area du)	7 52,280	3 21,879	3 22,235	1 8,166
South JV/Karamah (area du)	5 46,597	4 35,397	1 11,200	0 0
Middle JV (area du)	3 40,244	2 19,600	0 0	1 20,644
Total (area du)	19 184,521	12 95,146	4 33,435	3 55,940

Table 7: Overall Performance of Activities in Retail Water Distribution

<i>KPI</i>	<i>Unit</i>	<i>Performance in 2012</i>	<i>Performance before WUAs</i>	<i>Remarks</i>
Area specific cost of operation	JD/du	9	17	Excluding bulk supply and overhead costs
Number of penalties of water use (FTA) / farm unit	# of water use penalties / FU	295	751	751 in 2009
Amount of penalties (assaults to water distribution systems) / farm units	JD penalties/FU			
Representation of WUAs; Number of farm units represented by members in WUAs / number of farm units served in WUAs area	# member FU / Total served FU in TT WUAs areas	73%	Not applicable	
Efficiency of water distribution: Time spent by farmer for securing water by farmer	hours / week	0.86	3.75	13 work days / farmer (during 9 months, planting season)
	JD saving / farmer	2,604.68		
Saving water by speed maintenance of pipes fractures	% of saving	30%	Not applicable	
Satisfaction of farmers	% Farmers satisfied with the service			
Managerial aspects		83%	Not available	
Technical aspects		58%	Not available	

Table 8: Level of Satisfaction of Member Farmers with Retail Water Distribution

Management level					
Indicator	Level of Satisfaction				
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. The Head of the WUA is in constant contact with you	1	1	2	12	12
2. WUA staff are qualified technically	3	2	1	18	4
3. WUA staff respond quickly to maintenance orders and issues related to water distribution	0	0	1	13	14
4. WUA staff show the appropriate level of professionalism and respect in dealing with you	0	0	1	13	14
5. WUA staff treat equally all farmers	0	12	0	2	14
Total	4	15	5	58	58
%	3%	11%	4%	41%	41%
	14%			83%	
Technical level					
Indicator	Level of Satisfaction				
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. Always I receive the amount of water specified in the irrigation order	7	4	0	12	5
2. There is no fluctuation in the amount of flow	3	11	1	12	1
3. Water is distributed fairly among farmers in accordance with the water quota	2	6	1	14	5
4. Water pressure is consistent and sufficient	0	14	1	9	4
5. Response to maintenance requests for irrigation system are quick enough	0	7	2	10	9
Total	12	42	5	57	24
%	9%	30%	4%	41%	17%
	39%			58%	

ANNEXES

ANNEX I: INTERVIEW GUIDES

Secretary General and Assistants - Secretary General of JVA

1. Name:
2. Position:
3. Working area
 - North & middle JV.
 - Southern Ghors & Wadi Araba.
4. Total employees:
 - Jordan Valley Authority.
 - North & middle JV.
 - Southern Ghors & Wadi Araba.
5. Total farmers in (estimate):
 - Jordan Valley.
 - North & middle JV.
 - Southern Ghors & Wadi Araba
6. Regarding the responsibilities & functions transferred to the WUAs- Do you think that these associations have performed their duties according to the contract?

YesNo, Why?
7. Do you think that the issues that WUAs raised to you are worthy and have a value to come to your office in Amman? Could these issues be solved by the Director of the Directorate and Assistant Secretary-General?
8. Who is considered the reference for reviews, communication and coordination with WUAs?
 - Assistants Secretary General of JVA
 - Director of Directorate
 - Director of WUAs Unit
 - Head of Stage office
 - Head of O&M
 - Others
9. In order to set WUAs under the umbrella of JVA; JVA will modify the law of JVA No. 19 for the year 1988 and the amendments. In case the modifications were not done; does this disturb the works for the JVA and the associations and how?
10. In your opinion, do you believe the irrigation efficiency has been increased in the distribution

network of associations that has taken upon itself the functions and task transfer of the water distribution? Please explain.

11. What are the future strategies of JVA regarding the WUAs?
12. What are the positives and negatives of WUAs?
 - Positives.
 - Negatives.
13. Taking into consideration the amount of water as of irrigation orders, meters readings and estimation; do you think that the associations distribute water fairly?

1 (worst)	2	3	4	5	6	7	8	9	10 (excellent)
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14. In case the WUAs show failed in their tasks, what are your actions?
15. The financial possibilities of JVA are modest, what is your vision for the future regarding the rehabilitation of irrigation projects and maintenance tasks of Irrigation projects?
16. May be the elected or chosen head of any of the associations is not based on a good selection or efficiency; do the JVA have any positive intervention in this regard?
17. Hopefully, the WUAs will have a future role in water issues, social, agricultural and economic for their members and the local community; what is your vision for the future in this regard, especially if these associations were developed under the umbrella of JVA law?
18. What are JVA actions in case of disputes between WUA's board members and the farmers which will affect the performance of the WUA and carry out its tasks?
19. Do you see a way to motivate and stimulate farmers to join the membership and activities of water users' association?
20. It is noted that the agreements with the WUAs were not covered by inflation rate, rising prices, especially fuel and also increase the annual salaries of staff association; will you reconsider these agreements in the future?
21. Any other comments.

Heads of Water Users Associations (WUAs) in Jordan Valley

1. Name:
2. Official Name of the Association:
3. Number and date of registration :
4. Working Area (in detail):
 - Directorate:
 - North Jordan Valley
 - Middle Jordan Valley
 - South Jordan Valley / Al-Karamah
 - Southern Ghors
 - WUAs Unit
 - Stage office:
 - Geographical location:
 - DA / DAs:
 - Boundary of working area:
5. Total No. of farm units:
 - Total Area (du):
 - Irrigable Area (du):
6. Total No. of farmers in the WUA working area:
 - Less than 500
 - From 501 – 1,000
 - From 1,001 – 1,500
 - From 1,501 – 2,000
 - From 2,001 – 2,500
 - From 2,501 – 3,000
 - From 3,001 – 3,500
 - More than 3,500 (provide estimate :)

<p>7. Total No. of members of the WUA in the WUA working area: members</p> <ul style="list-style-type: none"> • Less than 50 • 51 – 100 • 101 – 150 • 151 – 200 • 201 – 250 • 251 – 300 • More than 301
<p>8. No. of members of WUA who own farm units:</p> <ul style="list-style-type: none"> • Less than 50 • 51 – 100 • 101 – 150 • 151 – 200 • 201 – 250 • 251 – 300 • More than 301 <p>9. Percentage of ownership of the members out of the total area of the WUA working area is:</p> <ul style="list-style-type: none"> • Less than 5% • 5 – 10% • 10 – 20% • 20 – 30% • 30 – 40% • 40 – 50% • 50 – 60% • 60 – 70% • 70 – 80% • 80 – 90% • 90 - 100%

10. No. of members of WUA who are renting farm units:

- Less than 50
- 51 – 100
- 101 – 150
- 151 – 200
- 201 – 250
- 251 – 300
- More than 301

11. Is membership in the WUA open to all farmers in the WUA working area:

- Yes
- No, reason:
 - Farmers do not want to join the WUA
 - Farmers do not know about the WUA
 - Farmers know about the WUA but were not invited to become members
 - The Associations law does not allow for open membership / Law no.
For the year no. Article no.....
 - The desire to keep the Board without change
 - Other/specify

12. Are there non-Jordanian farmers in the WUA working area:

YesNo.

If yes, what is the number of non-Jordanian farmers:

- Egyptians:
- Pakistanis:
- Others (specify):

13. Number of members in Board of Directors = members

- elected
- acclamation, reason:
 - None of the members wishes to run for the Board
 - None of the general assembly members can due to:
 - Limited time
 - For fear of not winning
 - Lack of desire for voluntary work
 - Candidates intimidation
 - Votes are bought
 - Others/specify

14. Name of WUA Head:

Academic Qualifications:

15. Number of members of Board of Directors = members

Name	Academic Qualifications

16. Number of **members** of the Oversight Committee:

Name	Academic Qualifications

17. Number of members of the Oversight Committee

Acclamation

Appointed

18. Number of staff in the WUA and on its payroll:

Name	Position/ Responsibilities	Distribution/ Maintenance	Academic Qualifications	Monthly Salary (JOD)
Total for Distribution				
Total for Maintenance				

19. Training courses received by any of the members or staff of the WUA.

Name	Date of Training	Training Subject	Training provided by:

20. Training courses needed by the members and staff of the WUA:

Training Subject	Number of members/staff who need training

Technical	
Managerial	
Financial	
IT	
others	

21. Describe in detail the responsibilities of the WUA related to the distribution of water (compared to what is included in the agreement):

- Opening and closing the FTAs as per the Irrigation Orders
- Opening and closing the main and lateral valves
- Monitoring farm units for violation of water turn
- Water source monitoring (the Canal, the pumping station, the diversion weir)
- Compromising the project components
- Guarding the Canal, the pumping station and the diversion weir
- None of the above
- Others/specify

22. What is the average monthly cost that the WUA incurs related to water distribution?

- Less than 200 JD
- 200 – 400 JD
- 400 – 600 JD
- 600 – 800 JD
- 800 – 1,000 JD
- 1,000 – 1,200 JD
- 1,200 – 1,400 JD
- 1,400 – 1,600 JD
- 1,600 – 1,800 JD
- 1,800 – 2,000 JD

23. Describe in detail the responsibilities of the WUA related maintenance:

- Repairing FTAs
- Repairing some of the Irrigation project component such as ventilators, cleaning valves.....
- Repairing main and lateral irrigation pipes
- Repairing pumps
- Cleaning screen filters
- Reporting on damages only related to non-FTA items
- Reporting on damages that need repairs only
- None of the above
- Others/specify
- What is the average monthly cost that the WUA incurs related to FTA maintenance?
 - Less than 10 JD
 - 10 – 15 JD
 - 15 – 20 JD
 - 20 – 25 JD
 - 25 – 30 JD
 - More than 30 JD
- Can the WUA provide maintenance services for anything other than the FTA?
 - No
 - Yes, and they are:
 - Repairing some of the Irrigation project component such as ventilators, cleaning valves.....
 - Repairing main and lateral irrigation pipes
 - Repairing pumps
 - Cleaning screen filters, and precipitation ponds or canals (or than the KAC)
 - Reporting on damages that need repairs other than what was previously listed
 - Others/specify
- Are there trained resources able to carry out maintenance activities?
 - No
 - Yes, how many?

<ul style="list-style-type: none"> • Can the WUA provide manpower for maintenance activities? <ul style="list-style-type: none"> • No • Yes • Can the WUA provide maintenance tools and equipment? <ul style="list-style-type: none"> • No • Yes • Can the WUA provide spare parts? <ul style="list-style-type: none"> • No • Yes
<p>24. What is the number and types of cars / vehicles available at the disposal of the WUA?</p> <ul style="list-style-type: none"> • Number: owned/ rented • Type: • Working hours: <p>25. Revenue streams for the WUA:</p> <ul style="list-style-type: none"> • Affiliation and membership fees: • From the Government/JVA: • From the Jordanian Cooperative Corporation • From the Private Sector • From Donor Agencies • Others (specify):
<p>26. What is the role of the Jordanian Cooperative Corporation (in detail) regarding the work of the WUA?</p> <ul style="list-style-type: none"> • Attending all meetings of the General Assembly • Preparing the WUA accounts • Auditing the WUA accounts • Follow-up on WUA activities • Managing the WUA activities • Conducting training courses for the Board of Directors and members of the WUA • Providing loans to the WUA • Providing the WUA with the production requirements • Providing the WUA with tools and equipment such as PCs, printers, desks, office supplies • Others/specify

27.	<p>What is the entity responsible for auditing the WUA accounts?</p> <ul style="list-style-type: none"> • The Jordanian Cooperative Corporation • JVA • A private company • Others/specify
28.	<p>What are the challenges facing the WUA in carrying out their responsibilities (by order of priority)</p> <ul style="list-style-type: none"> • Water scarcity • Water Quality/turbidity • Limited distribution staff • Incompetent distribution staff • Limited maintenance staff • Incompetent maintenance staff • Limited funding • Limited means of transportation/vehicles • Irrigation project / in need of rehabilitation • Incompetent and uncooperative Board of Directors • The WUA reports to an entity other than JVA • The WUA offices and furniture are not suitable • There are no offices for the WUA • Others/specify
29.	<p>What is required by the WUA to enable it to carry out fully its responsibilities pertaining to water distribution and serving the farmers in its working area?</p> <ul style="list-style-type: none"> • Manpower, cars and vehicles: • Engineer • Foreman • Distribution technician/water distributor • Worker • Security guard • Driver • Pick Up trucks • Motorcycles • PCs and accessories • Flow and pressure measurement devices

	<ul style="list-style-type: none"> Others (specify):
30.	<p>Who would you prefer carry out the maintenance activities?</p> <ul style="list-style-type: none"> JVA (as is the case currently) JVA if it has the required capacity WUA if it has the required capacity Others (specify):
31.	<p>What is the support that has been provided to the WUA since its registration (in detail)?</p> <p><u>Financial</u> <u>provided by</u></p> <p><u>Non-financial</u> <u>provided by</u></p>
32.	<p>Which party is responsible for specifying irrigation water quantities to be provided to farmers? Does the WUA take flow meter readings for the farm units if they are in working order? And if they are not, how are the readings estimated?</p> <ul style="list-style-type: none"> The WUA JVA The farmer himself <p>For how many farm units are flow meter readings taken?</p> <ul style="list-style-type: none"> 100% 75% 50% 25% 0% <p>What is the number of farm units for which flow meter readings cannot be taken due to malfunctions?</p> <ul style="list-style-type: none"> 100% 75% 50% 25% 0%

33.	Does the WUA participate in collecting fees?
	<ul style="list-style-type: none"> • Yes • No • What is the collections rate within the WUA working area?
34.	How does JVA monitor the work of the WUA related to irrigation water distribution?
	<ul style="list-style-type: none"> • Inspection rounds in coordination with the WUA • Sudden unplanned rounds • Others/specify
35.	Does JVA monitor the accounts of the WUA?
	<ul style="list-style-type: none"> • Yes • No
36.	How is issuing irrigation orders coordinated between JVA and the WUAs?
	<ul style="list-style-type: none"> • A meeting is held including JVA officials and the Heads of the WUAs at the beginning of each season to agree on flow times, and agreement is reached on issuing Irrigation Orders which is usually done by JVA • JVA issues Irrigation Orders without consulting with the WUAs • It is common knowledge with JVA as it is responsible the water? • The WUA refers to JVA to increase water flow duration • The WUA has nothing to do with it • Other/specify
37.	Does JVA cover the salaries of WUA staff exactly as stated in the contract between JVA and the WUA?
	<ul style="list-style-type: none"> • Yes • No
	If not, explain how is any discrepancy handled?
38.	Are WUA staff covered by Social Security?
	<ul style="list-style-type: none"> • Yes • No
	If yes, what are the monthly amounts paid to Social Security?

39. What is the water quantities allocated to the WUA through irrigation orders?
What are the actual quantities of water received by farmers? Detailed monthly figures required.

Year	Quantities of irrigation water allocated to the WUA by irrigation orders (m3)	Actual quantities of irrigation water provided (m3)
2008		
2009		
2010		
2011		
2012		

40. In your opinion, did the farmers' productivity and subsequently financial benefits increase with the presence of the WUA?

- Yes
- No

41. Any additional comments:

Required: A copy of the Annual budget for previous years

Signature of Head of WUA

WUA Stamp

Farmers/Members of the Water Users Associations (WUAs)

1. Name:
2. Farm owner/farmer:
3. Number of farm units:
Farm Unit No. DA
Farm Unit No. DA
Farm Unit No. DA
4. Cropping pattern:
Plastic houses :

No.= Type of crop :
5. I am member of a WUA
6. Date of membership:
 - Year 2008
 - Year 2009
 - Year 2010
 - Year 2011
 - Year 2012
7. The person who directed me to become a member of the WUA:
 - JVA (individual's name is;)
 - GIZ
 - The Head of the WUA
 - A member of the WUA
 - A farmer who is a member of the WUA
 - A farmer who is not a member in the WUA
 - My personal initiative
 - Other / specify:
8. Services provided to me by the WUA (or it makes sure that I get) related to water quantities:
 - Opening the FTA valve when I have no turn in the Irrigation Order
 - Closing the FTA valve when I have no turn in the Irrigation Order
 - Water quantities included in the Irrigation Order;
 - The whole quantity specified
 - More than the quantity specified
 - Less than the quantity specified

<ul style="list-style-type: none"> • Schedule according to the Irrigation Order: <ul style="list-style-type: none"> ▪ As per the Irrigation Order ▪ More than what is included in the Irrigation Order ▪ Less than what is included in the Irrigation Order • Water pressure as specified by JVA • Measuring the flow at the FTA • I have no opinion on this • Other services/specify
<p>9. The services provided to me by the WUA (or it makes sure that I get) related to maintenance:</p> <ul style="list-style-type: none"> • Maintaining the FTA • Maintaining the pipe that supplies my farm • Cleaning the screen in the pumping station • Guarding the water source • I have no opinion on this • Others/specify in detail <p>10. Services other than water distribution and maintenance:</p> <ul style="list-style-type: none"> • Agricultural extension and outreach • Cropping pattern/type of crops • Marketing • Environmental issues • All of the above • I have no opinion on this • Others/specify <p>11. Are you with giving more responsibilities to the WUAs such as maintenance activities and fees collection and full responsibility for irrigation water?</p> <ul style="list-style-type: none"> • Yes • No • I have no opinion on this <p>12. Do you accept to be provided with additional water quantities if available, for a tariff higher than the current one?</p> <ul style="list-style-type: none"> • Yes • No • I have no opinion on this <p>13. If you were faced with a problem related to water quantity or maintenance, whom do you turn to solve the problem:</p> <ul style="list-style-type: none"> • WUA • JVA • Others

14. The time spent in reviewing JVA regarding water or maintenance issues compared to the current situation

Before 2008	Currently
..... hours every Day hours every Day

15. Have you attended the last meeting of the General Assembly of the Association?

- Yes
- No – reason:
 - I was too busy, did not have the time
 - I was not invited
 - I am not convinced by this meeting
 - I forgot
 - I have no opinion on that
 - Other/specify

16. Are you satisfied with the services provided by the WUA?

Measuring the level of satisfaction of farmers with the services provided by WUAs

Technical Level/ quantity and operating pressure.

a. Pumping:

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
You always receive the amount of water specified in the irrigation order					
There is no fluctuation in the amount of flow					
Water is distributed fairly among farmers in accordance with the water quota					
Water pressure is consistent and sufficient					
Response to maintenance requests for irrigation system are quick enough					

Beginning of Pumping Lateral

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
You always receive the amount of water specified in the irrigation order					
There is no fluctuation in the amount of flow					
Water is distributed fairly among farmers in accordance with the water quota					
Water pressure is consistent and sufficient					
Response to maintenance requests for irrigation system are quick enough					

Middle of Gravity Flow Lateral

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
You always receive the amount of water specified in the irrigation order					
There is no fluctuation in the amount of flow					
Water is distributed fairly among farmers in accordance with the water quota					
Water pressure is consistent and sufficient					
Response to maintenance requests for irrigation system are quick enough					
Indicator	End of Gravity Flow Lateral				
	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
You always receive the amount of water specified in the irrigation order					
There is no fluctuation in the amount of flow					
Water is distributed fairly among farmers in accordance with the water quota					
Water pressure is consistent and sufficient					
Response to maintenance requests for irrigation system are quick enough					

Managerial Level / Staff and Services**a. Pumping:****Beginning of Pumping Lateral**

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The Head of the WUA is in constant contact with you					
From your point of view the WUA staff are qualified technically					
WUA staff respond quickly to maintenance orders and issues related to water distribution					
WUA staff show the appropriate level of professionalism and respect in dealing with you					
WUA staff discriminate between the farmers in the quality of service provided, response time and interaction					

Middle of Pumping Lateral

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The Head of the WUA is in constant contact with you					
From your point of view the WUA staff are qualified technically					
WUA staff respond quickly to maintenance orders and issues related to water distribution					
WUA staff show the appropriate level of professionalism and respect in dealing with you					
WUA staff not discriminate between the farmers in the quality of service provided, response time and interaction					

End of Pumping Lateral

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The Head of the WUA is in constant contact with you					
From your point of view the WUA staff are qualified technically					
WUA staff respond quickly to maintenance orders and issues related to water distribution					
WUA staff show the appropriate level of professionalism and respect in dealing with you					
WUA staff not discriminate between the farmers in the quality of service provided, response time and interaction					

Beginning of Gravity Flow Lateral

b: Flow by Gravity

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The Head of the WUA is in constant contact with you					
From your point of view the WUA staff are qualified technically					
WUA staff respond quickly to maintenance orders and issues related to water distribution					
WUA staff show the appropriate level of professionalism and respect in dealing with you					
WUA staff not discriminate between the farmers in the quality of service provided, response time and interaction					

Middle of Gravity Flow Lateral

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The Head of the WUA is in constant contact with you					
From your point of view the WUA staff are qualified technically					
WUA staff respond quickly to maintenance orders and issues related to water distribution					
WUA staff show the appropriate level of professionalism and respect in dealing with you					
WUA staff not discriminate between the farmers in the quality of service provided, response time and interaction					

End of Gravity Flow Lateral

Indicator	Level of Satisfaction				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The Head of the WUA is in constant contact with you					
From your point of view the WUA staff are qualified technically					
WUA staff respond quickly to maintenance orders and issues related to water distribution					
WUA staff show the appropriate level of professionalism and respect in dealing with you					
WUA staff not discriminate between the farmers in the quality of service provided, response time and interaction					

17. What other services would you like to be provided to you by the WUA?
 - Training on water distribution and water management and maintenance
 - Agricultural extension and outreach
 - Cropping pattern/type of crops
 - Marketing
 - Environmental issues
 - All of the above
 - I have no opinion on this
 - Others/specify
18. Which is better, the service provided by WUAs or before? Why?
 - Before the establishment of the WUA
 - After the establishment of the WUA, reason:
 - Water distribution more equitable
 - No equity in water distribution
 - Better water pressure
 - Water pressure not better
 - Saving more of my time spent in reviewing JVA on water matters
 - I now have an opinion to be heard
 - Maintenance is better and quicker
 - Maintenance is worse and slower
 - I have no opinion on this matter
 - Others/specify
19. Do you accept the resolutions /decisions made by the WUA?
 - Yes, without discussion
 - Yes after discussion and by conviction
 - No
 - I have no opinion on this
20. Have you ever run for office as member of the Board of the Association?
 - Yes
 - No, reason:
 - I have no time
 - I was not able to compete on this
 - I was pressured not to
 - I am not convinced with this
 - I have no opinion on this
 - Other/specify
21. In your opinion has farmers' productivity increased and consequently financial benefit with the presence of the WUA?
 - No
 - Yes
22. Any additional issues/comments

Farmers/Nonmembers of the WUA's

1. Name:
2. Owner / Farmer
3. Number of farm units:

Farm Unit No.	DA
Farm Unit No.	DA
4. Cropping pattern:
5. Plastic houses:

No.=	Cropping pattern :
------	--------------------
6. Have you heard of the existence of WUA in the area?
7. Do you have been asked to become a member of the WUA?
8. Do you want to be a member of the Water Users Association?

<u>Yes</u>	<u>No, explain why?</u>
------------	-------------------------
9. Are there any services provided by the WUAs regarding to the quantity of water?

<u>Yes, please mention.</u>	<u>No.</u>
-----------------------------	------------
10. Are there any services provided by the WUAs regarding to the maintenance for F.T.A?

<u>Yes, please mention.</u>	<u>No.</u>
<u>How many of times / kind</u>	<u>dates</u>
11. If you become a member of the WUA, what are the services you wish to provide by WUAs?
12. If more responsibilities give to the WUA such as maintenance and the collection of water fees and full responsibility of the irrigation water could you become a member of it?
13. Do you accept to provide with additional quantities of water if available, with tariff greater than the current?
14. If you faced problem in relation to the quantity of water or maintenance, to whom you request to solve the problem?
 - WUA
 - JVA
 - Others
15. Any other matters

Jordan Valley Authority Directors (O&M Directors)

1. Name :
2. Position / Director of Directorate:
3. Directorate working area:

Stage Office	Total Area (du)	Irrigable area (du)	No. of Farm Units

Development Areas:

4. The total number of employees:
 - Engineer:
 - Foreman:
 - Clerk:
 - Administrative assistant:
 - Pump operator:
 - Ditch rider & water distributor:
 - Driver:
 - Worker:
 - Guard:
 - Maintenance technician:
 - Data entry:
 - Typist:
 - Tele- operator:
 - Others:

Total :

5. The total number of farmers in the working area (estimate)?
 - Less than 500
 - From 501 – 1,000
 - From 1,001 – 1,500
 - From 1,501 – 2,000

- From 2,001 – 2,500
- From 2,501 – 3,000
- From 3,001 – 3,500
- More than 3,500 (provide estimate :)

6. Total Number of Water Users Associations (WUAs) in the working area:

- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

7. Number and names of WUAs and according to the below:

- Number & names of WUAs that received transferred Permissions with cost (payments) from JVA.

Number	Name of WUA
1	
2	
3	
4	
5	
More than 5 (Specify :)	

- Number & names of WUAs that received transferred Permissions without cost (payments) from JVA.

Number	Name of WUA
1	
2	
3	
4	
5	
More than 5 (Specify :)	

- Number of associations that have no permissions or responsibilities.

Number	Name of WUA
1	
2	
3	
4	
5	
More than 5 (Specify :)	

8. How do you evaluate working and coordination with these WUAs in terms of:

- Water distribution.
 - Excellent
 - Very Good
 - Good
 - Bad
 - Very Bad
 - There is no coordination
- Maintenance.
 - Excellent
 - Very Good
 - Good
 - Bad
 - Very Bad
 - There is no coordination
- Violations.
 - Excellent
 - Very Good
 - Good
 - Bad
 - Very Bad
 - There is no coordination
- Fees collection.
 - Excellent
 - Very Good
 - Good

- Bad
- Very Bad
- There is no coordination
- Cropping pattern/type.
 - Excellent
 - Very Good
 - Good
 - Bad
 - Very Bad
 - There is no coordination
- Complaints.
 - Excellent
 - Very Good
 - Good
 - Bad
 - Very Bad
 - There is no coordination
- Meetings.
 - Excellent
 - Very Good
 - Good
 - Bad
 - Very Bad
 - There is no coordination
- Financial claims.
 - Excellent
 - Very Good
 - Good
 - Bad
 - Very Bad
 - There is no coordination
- Others (specify):
 - Excellent
 - Very Good
 - Good

- Bad
- Very Bad
- There is no coordination

9. Number of violations that were caught in the working area of each WUA (2008 - 2012)

Year	Number	Less Than	Less Than	Less Than
2008				
2009				
2010				
2011				
2012				

10. In your opinion, was there any improvement on irrigation efficiency the distribution network of associations:

Name of WUA:

Year	Distribution Efficiency	Sales Efficiency
2008		
2009		
2010		
2011		
2012		

11. From your point of view, what are the benefits of WUAs?

- Farmers complaints to JVA decreased by % (Operations)
- Farmers complaints to JVA decreased by % (Maintenance)
- Overall irrigation efficiency increased in the working area by around %
- Farmer's membership increased by %
- Equitable water distribution (flow at FTA) increased by %
- Equitable water distribution (pressure at FTA) increased by %
- Accuracy of flow time (flow by defined number of hours) increased by %
- Farmer's productivity increased by %
- Improved environmental conditions by %
- Farmers violations related to water quantities decreased by %
- Farmers violations related to compromising project facilities decreased by %

<ul style="list-style-type: none"> • Farmers violations related to types of crops decreased by % • Inspection rounds in the WUA s working area decreased by % • Distribution staff in the WUAs working area reduced by % • Volume of traffic in the WUAs working area reduced by % • Cost on JVA reduced by % • Others/specify:
<p>12. From your point of view, what are the drawbacks of WUAs?</p> <ul style="list-style-type: none"> • Farmers complaints to JVA increased by % (Operations) • Farmers complaints to JVA increased by % (Maintenance) • Overall irrigation efficiency decreased in the working area by around.... % • Farmer's membership decreased by % • Equitable water distribution (flow at FTA) decreased by % • Equitable water distribution (pressure at FTA) decreased by % • Accuracy of flow time (flow by defined number of hours) decreased by % • Farmer's productivity decreased by % • Environmental conditions worsened by % • Farmers violations related to water quantities increased by % • Farmers violations related to compromising project facilities increased by % • Farmers violations related to types of crops increased by % • Inspection rounds in the WUA s working area increased by % • Distribution staff in the WUAs working area increased by % • Volume of traffic in the WUAs working area increased by % • Cost on JVA reduced by % • Others/specify: <p>13. Do you think that the WUAs distribute irrigation water fairly? Please consider the water quantities as per irrigation orders and flow-meter readings or estimation? As per the following:</p> <p><u>Name of WUA:</u> <u>Score (1) Worse - (10) Excellent</u></p>

14. How does the Directorate monitor the WUAs in terms of distribution of water and maintenance if applicable? In terms of:

- Water Distribution we monitor WUAs in terms of:
 - FTAs – in terms of illegal water flow
 - Opening and closing main and lateral valves
 - Water source monitoring (the Canal, the pumping station, the transfer dam)
 - Compromising the project components
 - Others/specify
- Maintenance we monitor WUAs in terms of:
 - Quality of repair works for FTAs
 - FTA components that were repaired to ensure they are the same as the original
 - Others/specify
- Violations:
 - Farmers violations from the WUA are not verified
 - Farmers violations from the WUA are verified
 - Farmers violations from the WUAs are only verified upon complaints from farmers
 - Others/specify
- Fees Collection:
 - The WUA has a role in fees collection
 - The WUA has no role in fees collection
 - Others/specify
- Cropping pattern/types:
 - The WUA has no role in specifying cropping pattern/type
 - The WUA monitors for and reports on illegal crops
 - Other/specify
- Complaints:
 - Farmers complaints are not verified
 - Farmers complaints are verified
 - Farmers complaints received through the WUAs are only verified upon farmers complaints
 - Others/specify
- Meetings:

<ul style="list-style-type: none"> ➤ JVA is invited to attend all WUA meetings including Board of Directors meetings ➤ JVA is invited to attend only General Assembly meetings ➤ JVA is not invited to attend any meetings ➤ JVA invites the Head of the WUA to periodic meetings ➤ Others/specify <ul style="list-style-type: none"> • Others (specify):
<p>15. Does the Directorate participate in specifying water quantities received by farmers, and how:</p> <ul style="list-style-type: none"> • <u>Yes</u> • <u>No</u> <p>16. Does the Directorate monitor the accounts of the WUAs?</p> <ul style="list-style-type: none"> • <u>Yes</u> • <u>No</u>
<p>17. How is issuing irrigation orders coordinated between JVA and the WUAs?</p> <ul style="list-style-type: none"> • JVA conducts a meeting with the WUAs at the beginning of the season to specify water flow quantities and schedules • The WUA always goes back to JVA for issuing Irrigation Orders after the general meeting • The WUA does not go back to JVA for issuing Irrigation Orders after the general meeting • JVA issues Irrigation Orders upon agreement in the general meeting • The WUA issues Irrigation Orders upon agreement in the general meeting • There is no coordination between the WUAs and JVA in issuing Irrigation Orders
<p>18. .What do you think are the obstacles facing the WUAs?</p> <ul style="list-style-type: none"> • Water scarcity • Limited distribution staff • Incompetent distribution staff • Limited maintenance staff • Incompetent maintenance staff • Limited funding • Limited means of transportation/vehicles • Irrigation project / in need of rehabilitation • Incompetent Head of WUA • Incompetent Board of Directors • Electing the Head of the WUA and its members is not carried out in the proper

<p>manner</p> <ul style="list-style-type: none"> • The WUA does not follow the JVA law • The WUA offices and furniture are not suitable • Others/specify
<p>19. In your opinion, who is responsible within JVA for the implementation of the agreement pertaining to the transfer of responsibilities and powers?</p> <ul style="list-style-type: none"> • The Secretary General • Assistant Secretary General for Operation and Maintenance • The concerned Director • The WUA Unit Head • The Head of Irrigation or Maintenance Sections • The Stage Supervisor • All of the Above • Other/Specify
<p>20. Who is responsible within JVA to meet with and respond to the head and members of the WUA for matters related to violations or complaints or applications:</p> <ul style="list-style-type: none"> • The Secretary General • Assistant Secretary General for Operation and Maintenance • The concerned Director • The WUA Unit Head • The Head of Irrigation or Maintenance Sections • The Stage Supervisor • All of the Above • Other/Specify
<p>21. In your opinion, did the farmers' productivity and thus financial benefits to farmers increase with the WUAs?</p> <ul style="list-style-type: none"> • <u>Yes</u> • <u>No</u> <p>22. Any other issues/comments/additions.</p>

Jordan Cooperative Corporation (JCC)

1. Name and position.
2. Working area:
3. What are the administrative and technical relationship between Jordanian Cooperative Corporation (JCC) and water users associations (WUAs):
4. There are varying in the duration of the work of the management board of cooperatives, why?
5. How JCC monitors the work and performance of WUAs?

Administration acts:

Financial acts:

Technical acts:

Others:

6. What are other services offered by the JCC to WUAs in Jordan Valley?
7. What are the supports offered by JSS to water users associations?
8. Through past experience of JCC, What is your opinion with WUAs?
9. Do you prefer to be legally the WUAs under umbrella of Jordan Valley Authority to achieve the interests of water users (farmers) with agree of the founders?
10. It is noted a discrepancy in the financial auditing fees for WUAs in the Jordan Valley, as well as the charge for meetings of the association, what is the reason?
11. Any others

German International Cooperation (GIZ)

1. Name:
2. Position:
3. The project:
4. Support provided by GIZ to WUAs by the end of 2012:
 - Financial support.
 - Offices, desks...
 - Air conditions.
 - Spare parts like flow meters.
 - Training.
 - Other, please specify.
5. Who is responsible of monitoring the performance of WUAs?
6. How do you rate monitoring activity?
Excellent, good, satisfactory, other?
7. How could it be improved?
8. What is the role of GIZ in monitoring / following up the implementation of WUAs activities:
 - Administration works.
excellent, good, satisfactory, bad
 - Financial works.
excellent, good, satisfactory, bad
 - Technical works
excellent, good, satisfactory, bad
9. In your opinion, what are the obstacles facing the works of water users' associations?
 - Financial
 - Network rehabilitation
 - Shortage of equipment?
 - Shortage of vehicles?
 - Lack of interest of farmers?
 - Need for more political support? How?
 - Other
10. What are the indicators that GIZ depend on to evaluate WUAs? Membership coverage: # of farmers, land (farm units)
 - Efficiency of water distribution (define it please)
 - Reduction in penalties?

- Reduction in illegal use / vandalism?

Any other

11. What are the latest values of indicators and rating as an overall or individual?
12. Due to the lack of adequate financial for the rehabilitation of irrigation infrastructure. In your opinion, what is the alternative and how?
 - Donors support.
 - Public private partnership.
 - Others.
13. How do you see the progress in membership coverage in WUAs?
 - A. Adequate
 - B. Good and should be improved
 - C. Low and should be improved

For B & C above, please describe how you would improve membership status

- Training
 - Political / legal support
 - More of public awareness
 - Others?
14. What are the orientations of the GIZ regarding technical support for WUAs staff in the case they given additional responsibilities?
 - Additional training?
 - Joint supervision with JVA / advisor?
 - Field advisor; supporting WUAs for an interim period?
 - Others?
 15. How do you describe the experience of associations in Jordan in comparison with similar experiences in other countries?
 - Outstanding
 - Very good
 - Good
 - Satisfactory

Please mention with whom we are comparing.

Provide supporting information where possible.

16. What are the strengths and weaknesses WUAs, how to improve?

Proposals for improvement / enhancement	Item
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	<ul style="list-style-type: none"> • strengths
	<ul style="list-style-type: none"> • weaknesses

17. For the sustainability of WUAs, is there a tendency to continued activity program of the German Agency for International Cooperation (GIZ)? What is the future direction of the Agency regarding these associations?

18. Please share with us how you see the impacts of farmers' participation on the social, financial, economic and environmental levels.

- For example:
- On the social level:
 - More democratic approach?
 - Horizontal communication and cooperation between areas of JV?
 - Less troubles among farmers and with JVA?
- Financial level: did this experience improve productivity of farmers? How?
- Economic level, cost of retail water management?
- Environmental: saving water resources by reducing losses of water?

19. Any others.

General Union for Jordanian farmers
Jordan Valley farmers union

1. Name:
2. Position
3. Working area
4. Give us an idea about the General Union for Jordanian farmers?
5. Is there any relationship with water users associations in the Jordan Valley?
6. In your opinion, do you see that it is possible to give more 'T'T' to the WUAs?
7. In your opinion, in future; what do you think of the maintenance of irrigation projects?
8. How do you see the future relationship with water users associations?
9. Any other issue.

National Center for Research and Agriculture Extension (NCARE)

1. Name:
2. Position:
3. Working area
4. What kinds of agricultural research, extension and functions of the National Center for Agricultural Research and Extension in the Jordan Valley?
5. What is the number of farmers who have been providing extension services in JV?
6. What is the number of Extension Agent and their specialties? Is the work area is covered by the services?
7. What is the relationship between the NCARE with WUAs in the Jordan Valley? What is the possibility of cooperation with these associations in the future?
8. Do you think; is it worthily to give more TT to WUAs?
9. Can NCARE provide in-kind assistance to WUAs?
10. Do NCARE have clean energy and environment projects?
11. How many times you have been invited to the WUAs?
12. In your opinion, what is the future role of water users associations in the Jordan Valley?
13. In your opinion, what is the best legal umbrella for the WUAs? Is JCC as it is currently, or other?
14. Any other matters.

Agricultural Credit Corporation (ACC)

1. Name:
2. Position:
3. Working Area:
4. Tasks of the Agricultural Credit Corporation (ACC)
5. Is there a relationship between the ACC with WUAs in the Jordan Valley?
6. How are the future ambitions relationship between the ACC and the WUAs?
7. Any other matters.

Ministry of Agriculture (MOA)

1. Name:
2. Position:
3. Working Area:
4. Can Ministry of Agriculture register water users associations legally? Why?
5. Is there a relationship with the water users associations in the Jordan Valley? What is it?
6. What services can MOA provide to water users' associations in the Jordan Valley?
7. Water users associations play a role in the distribution irrigation water in Jordan Valley, and it is possible to work in the maintenance of irrigation projects, as well as providing extension services to farmers in the working area, what is the possibility of cooperation with these associations in the future? Please detail.
8. Any other matters

ANNEX 2: FORMS TO DETERMINE COST OF RETAIL WATER DISTRIBUTION FOR JVA

Yearly Payments from JVA to WUAs (JD)

No.	WUA	Region	Yearly payments (JD)				
			2008	2009	2010	2011	2012
1	Khnezira WUA Cooperative	Southern Ghors					
2	Fiefa WUA cooperative	Southern Ghors					
3	Ghor Mazra'a & Hadetheh WUA cooperative	Southern Ghors					
4	Ghor Safi WUA cooperative	Southern Ghors					
5	Ramah Water Users Association Cooperative	South / Karamah					
6	Kafrien WUA Cooperative	South / Karamah					
7	Baladna Association for Ag. Services Cooperative	South / Karamah					
8	PS (95) WUA Ag. Cooperative	South / Karamah					
9	PS (81) WUA Ag. Cooperative	South / Karamah					
10	PS 50 WUA cooperative	Middle JV					
11	PS 55 WUA cooperative	Middle JV					
12	Ghor Damyia for WUA (PS 78)	Middle JV					
13	Tabaqat Fahel WUA for PS (33) cooperative	North JV					

Yearly Payments from JVA to WUAs (JD)

	WUA	Region	Yearly payments (JD)				
No.			2008	2009	2010	2011	2012
14	WUA for DA 5 Cooperative	North JV					
15	Wadi Rayan WUA PS 41	North JV					
16	Al-Masharea'a Association for Ag. Services / PS 28	North JV					
17	Al- Baqoura WUA for Das 3&4 Cooperative	North JV					
18	Tel Al-Arbac'en cooperative Association PS 22	North JV					
19	Farmers Association Cooperative for PS 14	North JV					

Maintenance Records for WUAs

No.	WUA	Region	Maintenance works									
			2008		2009		2010		2011		2012	
			FTA	Ne'twork	FTA	Network	FTA	Network	FTA	Network	FTA	Network
1	Khnezira WUA Cooperative	Southern Ghors										
2	Fiefa WUA cooperative	Southern Ghors										
3	Ghor Mazra'a & Hadetheh WUA cooperative	Southern Ghors										
4	Ghor Safi WUA cooperative	Southern Ghors										
5	Ramah Water Users Association Cooperative	South / Karamah										
6	Kafrien WUA Cooperative	South / Karamah										
7	Baladna Association for Ag. Services Cooperative	South / Karamah										
8	PS (95) WUA Ag. Cooperative	South / Karamah										
9	PS (81) WUA Ag. Cooperative	South / Karamah										
10	PS 50 WUA cooperative	Middle JV										
11	PS 55 WUA cooperative	Middle JV										
12	Ghor Damyia for WUA (PS 78)	Middle JV										
13	Tabaqat Fahel WUA for PS (33) cooperative	North JV										
14	WUA for DA 5 Cooperative	North JV										

15	Wadi Rayan WUA PS 41	North JV										
16	Al- Masharea'a Association for Ag. Services / PS 28	North JV										
17	Al- Baqoura WUA for Das 3&4 Cooperative	North JV										
18	Tel Al- Arbae'en cooperative Association PS 22	North JV										
19	Farmers Association Cooperative for PS 14	North JV										

Irrigation Water Quantities for Selected Farm Units (m3)

Month	Actual delivery Irrigation water for farm unit No... DA... (Khnezzera WUA)			
	2009	2010	2011	2012
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				
Month	Quantities of irrigation water according to order for farm unit No.... DA ... (Khnezzera WUA)			
	2009	2010	2011	2012

January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

Records Violations in each Association of Water Users Associations

Records violations in each association of Water Users Associations										
WUA :										
Year	Violation type									
	illegally water use					Tampering and violations				
	From KAC	From FTA	Other	Total illegally water use	Total Value (JD)	On irrigation networks	On FTA component	other	total tampering and violations	Total Value (JD)
2008										
2009										
2010										
2011										
2012										

In-kind Annual Cost of JVA for each WUA that have TT at Cost

Region:							
Annual operating cost:	WUAS						
	WUA:	WUA :	WUA:	WUA:	WUA:	WUA:	Total
All Human resources							
SG							
ASG							
Control center employees							
WUAs unit employees							
Financial Dep.							
Director of directorate							
Operation Engineers							
foremen							
advisor							
ditch riders							
Drivers							
financial & Adm. Employees							
Vehicles							
fuel							
offices							
Tel-communications							
drinking water							
electricity for office							
others							
Annual maintenance cost:							
All Human resources							
SG							
ASG							
Director of directorate							
Financial & Adm. Employees							
Maintenance Eng.							

Foremen							
Maintenance Technicians							
Labors							
Drivers							
Vehicles							
Heavy Machines							
Spare parts							
Fuel							
Office maintenance							
Others							

JVA water revenues from areas served by WUAs

JVA water revenues from areas served by WUAs for year							
Region:							
Item	Name of WUA						
	WUA1:	WUA2:	WUA3:	WUA4:	WUA5:	WUA6:	Total
Collected fees (JD)							
Penalties (JD)							
Amount of water charged at normal fee (m3)/year							
Amount of water charged at penalties rate (m3)							

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)					
Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
Kick –off ISSP Team	ISSP	Introductory Meeting	05-Nov-12	Barbara Rossmiller, COP Ra'ed Daoud, Organizational Development Advisor Bassam Hayek, Senior Irrigation/Agricultural Management Expert Nayef Seder, WUA's/ Agricultural Management Expert Akram Rabadi, Utility & Institutional Strengthening Advisor	a,b,c,d,e
Kick-off ISSP Team	ISSP	-Interview Guides & Questions -Work plan	06-Nov-12	Bassam Hayek, Senior Irrigation/Agricultural Management Expert Nayef Seder,	a,b,c

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
				WUA's/ Agricultural Management Expert Akram Rabadi, Utility & Institutional Strengthening Advisor	
Jordan Valley Authority JVA	JVA	-Data and Information Request -1st group of meetings -Names of entities	08-Nov-12	Qais Owais, Assistance SG for north and mid Jordan Valley	a,b,c
Jordan Valley Authority JVA	JVA	-WUA's interview Guides -JVA directors interview Guides -Penalties Form	12-Nov-12	Qais Owais, Assistance SG for north and mid Jordan Valley Ziad Ababeneh, Director of WUA Unit	a,b,c
Jordan Valley Authority JVA	JVA	Members and Non- members farmers and GIZ interview Guides	18-Nov-12	Qais Owais, Assistance SG for north and mid Jordan Valley	a,b,
Jordan Valley Authority JVA	JVA	Continue Members and Non-members farmers and GIZ interview Guides	22-Nov-12	Qais Owais, Assistance SG for north and mid Jordan Valley	a,b,
Jordan Valley Authority JVA	JVA	Introductory meeting to present the project	25-Nov-12	Eng. Mashhoor Harb, Director for Southern JV and Wadi Araba	a,b,c
Jordan Valley Authority JVA	South JV Directorate	Interview meeting	29 Nov-12	Eng. Mahamoud Al- Qamaz, Director for South JV	a,b,c
Jordan Valley Authority JVA	Middle JV Directorate	Interview meeting	29 Nov-12	Eng., Mohammad Al-Fuhaily, Director for Middle JV	a,b,c
Jordan Valley Authority JVA	Southern JV and Wadi Araba Directorate	Interview meeting	2 Dec-12	Eng. Mashhoor Harb, Director for Southern JV and Wadi Araba Eng. Khaled Wrekat, O&M Southern JV Director	a,b,c

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
Water User Associations (WUAs)	Ghoor Al-Safi	Interview meeting	2 Dec-12	Sabri Al-Dalaeen, Head of WUA	a,b,c
Water User Associations (WUAs)	Mazraa & Haditha	Interview meeting	2 Dec-12	Saleem Huwamil, Head of WUA	a,b,c
Water User Associations (WUAs)	Ghoor Feifa	Interview meeting	3 Dec-12	Musa Khataba, Head of WUA	a,b,c
Water User Associations (WUAs)	Ghoor Khuniezireh	Interview meeting	3 Dec-12	Musa Khataba, Head of WUA	a,b,c
Jordan Valley Authority JVA	JVA	Continue Design Forms & update on the 1st interviews	4 Dec-12	Qais Owais, Assistance SG for north and mid Jordan Valley/Acting SG of the JVA	a,b,c
ISSP Team	ISSP	1st assessment of the interview Guides and regrouping results	9 Dec-12	Ra'ed Daoud, Organizational Development Advisor Lina Sheqem, OD specialist	a,b,c
GIZ	GIZ/JV offices	Interview meeting	12 Dec-12	Ali Edwan, German-Jordanian Program "Management of Water Resources" "Principle Technical Advisor	a,b,c
Water User Associations (WUAs)	Middle JV	Interview meeting	16 Dec-12	Waleed Al-Faqeer, Head of WUA No. 55, Middle JV	a,b,c
Water User Associations (WUAs)	Middle JV	Interview meeting	16 Dec-12	Hafez Al-Shobaky, Head of WUA No. 50, Middle JV	a,b,c
Water User Associations (WUAs)	South JV	Interview meeting	18 Dec-12	Ahmad Abd Al-kareem Al-Edwan, Head of Al - Kafraeen WUA, south JV	a,b,c
Water User Associations (WUAs)	South JV	Interview meeting	18 Dec-12	Awaad (Eid)Zaid Al-Edwan, Head of Al -Rama WUA, south	a,b,c

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
				JV	
Water User Associations (WUAs)	Middle JV	Interview meeting	20 Dec-12	Tawfiq Al-Satary, Head of Ghoor Kabed P.S 81 WUA, Middle JV	b,c
Water User Associations (WUAs)	Middle JV	Interview meeting	20 Dec-12	Eng. Ali Mustafa, Head of Ghoor Kabed P.S 91 WUA, Middle JV	b,c
Water User Associations (WUAs)	Middle JV	Interview meeting	20 Dec-12	Hussien Qateanch, Head of Ghoor Kabed P.S 95 WUA, Middle JV	b,c
Jordan Valley Authority JVA	North JV Directorate	Interview meeting	30 Dec-12	Eng. Ghassan Obidat, Director for North JV Eng. Fadi Suhyoum, O&M North JV Director	a,b,c
Water User Associations (WUAs)	North JV	Interview meeting	30 Dec-12	Zaki Mohammad Abd Al-Rohman, Head of wadi Alrayan P.S 41 WUA	b
Water User Associations (WUAs)	North JV	Interview meeting	30 Dec-12	Nawaf Karaeam Mohammad Al Rayaheneh, Head of Tabaqat Fahel P.S 33 WUA	c
Water User Associations (WUAs)	North JV	Interview meeting	30 Dec-12	Ra'aef Ayyob Ali Al Obeadawi, Head of Development Area (DA) 5 WUA	a
Water User Associations (WUAs)	North JV	Interview meeting	30 Dec-12	Ashraf Adnan Mohammad Al Ghzawi, Head of P.S 28 WUA	b
Water User Associations (WUAs)	North JV	Interview meeting	31 Dec-12	Eng. Ali Ibrahim Ali Al Hussien, Head of Development Area (DA) 3& 4 WUA	a
Water User Associations (WUAs)	North JV	Interview meeting	31 Dec-12	Abdulla Asa'ad Al Horani, Head of Development Area (DA) 14 WUA	c
Water User Associations (WUAs)	North JV	Interview meeting	31 Dec-12	Suliman Al Ghzawi, Head of Tal Al Arbaeen P.S 22 WUA	a,c

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
Farmers-Members in WUA	Southern JV and Wadi Araba	Interview meeting	7 Jan-13	Fadel Sameeh Mahadeen, Member of Mazraa & Haditha WUA	a
Farmers-Members in WUA	Southern JV and Wadi Araba	Interview meeting	7 Jan-13	Nassar Aboud Al- Dghemat, Member of Mazraa & Haditha WUA	c
Farmers-Members in WUA	Southern JV and Wadi Araba	Interview meeting	7 Jan-13	Abdul Al-Ghafor Shtewi Jar'arat , Member of Mazraa & Haditha WUA	b
Farmers-Members in WUA	Southern JV and Wadi Araba	Interview meeting	7 Jan-13	Ramadan Abdul Muhsen Awad Al- Mahaneh, Member of Ghoor Feifa WUA	c
Farmers-Members in WUA	Southern JV and Wadi Araba	Interview meeting	7 Jan-13	Emad Zakaria Juwaehan, Member of Ghoor Feifa WUA	b
Farmers-Members in WUA	Southern JV and Wadi Araba	Interview meeting	7 Jan-13	Issa Salem Naser Al- Bawat, Member of Ghoor Feifa WUA	a
Farmers-Non-members in WUA	Southern JV and Wadi Araba	Interview meeting	8 Jan-13	Abed Awad Selmi Al-Hweimel, Non- member of Mazraa & Haditha WUA	a
Farmers-Non-members in WUA	Southern JV and Wadi Araba	Interview meeting	8 Jan-13	Samerr Mote'e Al- Habashneh, Non- member of Mazraa & Haditha WUA	c
Farmers-Non-members in WUA	Southern JV and Wadi Araba	Interview meeting	8 Jan-13	Owdeh Rezik Al- Nawaisheh, Non- member of Mazraa & Haditha WUA	a
Farmers-Non-members in WUA	Southern JV and Wadi Araba	Interview meeting	8 Jan-13	Zakaria Saleem Khlaefat, Non- member of Ghoor Feifa WUA	c
Farmers-Non-members in WUA	Southern JV and Wadi Araba	Interview meeting	8 Jan-13	Ibrahim Al-Sayed Qwdeh Al- Sa'adeyyen, Non- member of Ghoor Feifa WUA	a
Farmers-Non-members in WUA	Southern JV and Wadi Araba	Interview meeting	8 Jan-13	Sa'aadoun Nawras Al-Majaly, Non- member of Ghoor Feifa WUA	b

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
GIZ	ISSP offices	Follow up coordination and data collection meeting	14 Jan-13	Ali Edwan, German- Jordanian Programme "Management of Water Resources "Principle Technical Advisor Eng. Hisham Al Salamat- Coordination Eng with the WUAs	a
Farmers-Members in WUA	North JV	Interview meeting	16 Jan-13	Tawfiq Shlash Al- Mehdawi-Member of Pump 28 WUA	c
Farmers-Members in WUA	North JV	Interview meeting	16 Jan-13	Awad Eid Mutaq- - Member of Pump 28 WUA	b
Farmers-Members in WUA	North JV	Interview meeting	16 Jan-13	Mahmood Atallah Azayzeh- -Member of Pump 28 WUA	c
Farmers-Members in WUA	North JV	Interview meeting	16 Jan-13	Mohammad Suliman Al Rayaheneh- - Member of Pump 33 WUA	b
Farmers-Members in WUA	North JV	Interview meeting	16 Jan-13	Kahled Mohammad Al Rayaheneh- - Member of Pump 33 WUA	c
Farmers-Non-Members in WUA	North JV	Interview meeting	16 Jan-13	Suliman Turkey Abdallah- Non- Member of Pump 28 WUA	a
Farmers-Non-Members in WUA	North JV	Interview meeting	16 Jan-13	Ziad Ibrahim Bani Amer- Non-Member of Pump 28 WUA	a
Farmers-Non-Members in WUA	North JV	Interview meeting	16 Jan-13	Hamad Kahlaf Mohammad- Non- Member of Pump 33 WUA	a
Jordan Valley Authority JVA	Middle JV	Interview meeting	16 Jan-13	Eng. Ali Omary, Director for WUAs	a,b,c

**Existing Conditions Survey and Assessment of Water Users Associations
(WUAs) in the Jordan Valley/Interviews and Consultation Meetings
(2012/2013)**

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
				Unit	
Farmers-Non-Members in WUA	North JV	Interview meeting	17 Jan-13	Mohammad Hamad Mohawesh - Non-Member of Pump 33 WUA	b
Farmers-Non-Members in WUA	North JV	Interview meeting	17 Jan-13	Gahazi Monahor- Non-Member of Pump 33 WUA	b
Farmers-Non-Members in WUA	North JV	Interview meeting	17 Jan-13	Ali and Yehya Jaber Abdallah Bani Yaseen - Members of Pump 28 WUA	a,b,c
Farmers-Members in WUA	North JV	Interview meeting	17 Jan-13	Yosef Mohammad Yosef Asey - Member of Pump 33 WUA	a
Farmers-Members in WUA	South JV	Interview meeting	20 Jan-13	Gahleb Mustafa Ali Dyala-Member of Baldna pump 91 WUA	c
Farmers-Members in WUA	South JV	Interview meeting	20 Jan-13	Mohammad Yosef Alabd Aledwan - Member of Al - Rama WUA	b
Farmers-Members in WUA	South JV	Interview meeting	20 Jan-13	Fras Ismaiel Abdallah Aledwan - Member of Al - Rama WUA	c
Farmers-Non-Members in WUA	South JV	Interview meeting	20 Jan-13	Nabeela Abd Alra'aof Nusirat – Non-Member of Baldna pump 91 WUA	b,c
Farmers-Non-Members in WUA	South JV	Interview meeting	20 Jan-13	Suliman Ayyad Hussien Hussan – Non-Member of Baldna pump 91 WUA	c
Farmers-Non-Members in WUA	South JV	Interview meeting	21 Jan-13	Shareef Abd AlKareem Nusierat –Non-Member of Baldna pump 91 WUA	c
Farmers-Non-Members in WUA	South JV	Interview meeting	21 Jan-13	Mohammad Mohammad AlShuriqui –Non-Member of Al - Rama WUA	a

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
Farmers-Non-Members in WUA	South JV	Interview meeting	21 Jan-13	Hanadi Ibrahim Hussien (um Muhmmud) –Non-Member of Baldna pump 91 WUA	a,c
Farmers-Non-Members in WUA	South JV	Interview meeting	21 Jan-13	Fuwaz Odeh AlAmarat –Non-Member of pump 95 WUA	a
Farmers-Members in WUA	South JV	Interview meeting	21 Jan-13	Awney AlDasooky –Member of pump Baldna 91 WUA	a,c
Farmers-Members in WUA	South JV	Interview meeting	21 Jan-13	Ahmad Shaheen – Member of pump 95 WUA	c
Farmers-Members in WUA	South JV	Interview meeting	21 Jan-13	Salameh Ali Hussan AlSaedani –Member of pump Baldna 91 and 95 WUAs	a
Jordan Valley Authority JVA	JVA	Consultation and Follow up meeting	24 Jan-13	Eng. Khaled Ban Hani-Ass. SG for administration and HR	a,c,d
Jordan Valley Authority JVA	JVA	Consultation and Follow up meeting	24 Jan-13	Sameer Qatashat-Ass. SG for Finance Isam Rahhal-Director of Finance Department	a,c,d
Jordan Valley Authority JVA	JVA	Consultation and Follow up meeting	24 Jan-13	Manar Mahaseneh-Director of Land Department	a
Jordan Valley Authority JVA	JVA	Consultation and update meeting	27 Jan-13	Eng. Tayseer Al Ghzawi- Senior Advisor to SG and member of WG4	a,c
Jordan Valley Authority JVA	JVA	Consultation and update meeting	27 Jan-13	Dr. Khaleel Absi-Director of planning and regional water – member of WG4	a
Farmers-Non-Members in WUA	Middle JV	Interview meeting	29 Jan-13	Yosef Ghaleb Al Qadoomi –Non-Member of pump 50 WUA	a
Farmers-Non-Members in WUA	Middle JV	Interview meeting	29 Jan-13	Jameeleh Ma'roof Musalam Al Balaweneh –Non-Member of pump 50 WUA	b

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
Farmers- Members in WUA	Middle JV	Interview meeting	29 Jan-13	Mohammad Ismaiel Al Shobaki – Member of pump 50 WUA	a
Farmers- Members in WUA	Middle JV	Interview meeting	29 Jan-13	Maher Methqal Ahmad Al Gool – Member of pump 50 WUA	b
Farmers- Members in WUA	Middle JV	Interview meeting	29 Jan-13	Hmood Hussan Mohammad Al Madahenh –Member of pump 50 WUA	c
Farmers- Members in WUA	Middle JV	Interview meeting	29 Jan-13	Musa Abu Medareas –Member of pump 50 WUA	c
Jordan Valley Authority JVA	JVA	Interview meeting	30 Jan-13	Eng. Sa'ad Abu Hammoor-JVA SG	a,b,c
Jordan Valley Authority JVA	JVA	Interview meeting	30 Jan-13	Eng. Mashoor Harb- Director for Southern JV and Wadi Araba	a,b,c
Water User Associations (WUAs)	Middle JV	Interview meeting	6 Feb-13	Damiya WUA head, , Middle JV	c
Jordan Cooperative Corporation JCC	JCC	Interview meeting	6 Feb-13	Sameh Al Sa'adoon, Director of Corporation-JCC	a,c
National center for agriculture research and extension NCAR	Jordan Valley	Interview meeting	7 Feb-13	Dr. Nabeel Bani Hani, NCAR Director	a,c
Farmers Union in JV	Jordan Valley	Interview meeting	7 Feb-13	-Adnan Khddam, Union head -Salah Al Rabea, board member -Khled Hani, Finance manager -Hasan Al Muhsen, farmer	a,c
Agricultural credit corporation ACC	ACC	Interview meeting	10 Feb-13	Tawfiq Al Habashenh, ACC Director	a,c
Jordan Farmers Union JFU	JFU	Interview meeting	10 Feb-13	-Odtallah Al Rawashedh, JFU President -The General Director of the	a,c

**Existing Conditions Survey and Assessment of Water Users Associations
(WUAs) in the Jordan Valley/Interviews and Consultation Meetings
(2012/2013)**

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
				Union	

Staff:

- a. ARabadi
- b. BHayek
- c. NSeder
- d. RDaoud
- e. BRossmiller

**Existing Conditions Survey and Assessment of Water Users Associations
(WUAs) in the Jordan Valley
(2012/2013)/ Workshops**

Workshop	Location	Date	Participants	Number of Attendees	Staff
Survey and Assessment of WUAs Orientation and Interviews Workshop	JV north Directorate-North JV	30-Dec-12	Assistance SG for north , middle and south, WUAs heads (transfer Authorities), JVA directors, JVA staff	15	a,b,c
Survey and Assessment of WUAs Orientation and Interviews Workshop	JV north Directorate-North JV	31-Dec-12	Assistance SG for north , middle and south, WUAs heads (non-transfer authorities), JVA directors, JVA staff	15	a,b,c
Survey and Assessment of WUAs Orientation and Interviews Workshop	Southern JV and Wadi Araba Directorate-	7 Jan-13	Member farmers of Mazraa & Haditha and Fiefa WUAs, Assistance SG for southern JV , WUAs heads (transfer Authorities), JVA directors, JVA staff	17	a,b,c
Survey and Assessment of WUAs Orientation and Interviews	Southern JV and Wadi Araba Directorate-	8 Jan-13	Non-member farmers of Mazraa & Haditha and Fiefa WUAs, Assistance SG for Southern , WUAs heads (transfer Authorities), JVA directors, JVA staff	16	a,b,c

Existing Conditions Survey and Assessment of Water Users Associations (WUAs) in the Jordan Valley/Interviews and Consultation Meetings (2012/2013)

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
Workshop					
Jordan Valley water Forum	Guest house of JVA in JV	13 Jan 13	SG of JVA SG of MOA Agricultural Credit Corporation USAID, GIZ, EU, WB, WUAs heads and farmers, Head of farmer union	60	a,c
Survey and Assessment of WUAs Orientation and Interviews Workshop	JV north Directorate- North JV	16 Jan 13	Member farmers of Pump 28 and 33 WUAs(transfer Authorities), Director of north JV , JVA staff	13	a,b,c
Survey and Assessment of WUAs Orientation and Interviews Workshop	JV north Directorate- North JV	17 Jan 13	Non-Member farmers of Pump 28 and 33WUAs(transfer Authorities), Director of north JV , JVA staff	12	a,b,c
follow up all forms and data feedback from JVA senior staff in the JV	Jordan Valley- Control Center	7 Feb- 13	-All O&M Directors except the southern -WUA unit Director -Control Center director -Asst. SG Qais Owais	9	a,c
Presentation to USAID	ISSP	27 Feb- 13	USAID staff	10	a,b,c
Presentation to JVA	WAJ meeting room	28 Feb- 13	JVA staff	18	a,b,c
Presentation to JVA	JV Control Center	9 April- 13	JVA O&M directors	5	a,c

**Existing Conditions Survey and Assessment of Water Users Associations
(WUAs) in the Jordan Valley/Interviews and Consultation Meetings
(2012/2013)**

Meeting/ Consultation	Location	Discussion	Date	Participants	Staff
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Staff:

- a. ARabadi
- b. BHayek
- c. NSeder

Interviews , meetings and small workshops			
	No. of interviews	No. of consultation meetings	No. of Workshops
JVA Secretary General	1	0	0
Assistance SG for the southern JV	1	2	0
Assistance SG for the northern and middle JV	1	4	0
Assistance SG's and Directors at JVA	0	5	0
O&M JVA Directors in the JV	4	10	0
Director of WUAs unit	1	1	0
JVA control room	0	1	0
Water user association heads	22	0	2
Farmers' members in the WUAs	22	0	2
Farmers' non-members in the WUAs	20	0	2
GIZ staff	1	3	0
Farmer Union	1	0	0
General farmer Union	1	0	0
Jordan Cooperative Organization	1	0	0
Ministry of Agriculture	1	0	0
National center for agriculture research and extension	1	0	0
Agricultural credit corporation	1	0	0
Jordan valley water forum	0	0	1
Introductory for the survey and WG4	0	3	0
Total	79	29	7

ANNEX 3: ESTIMATING COST OF RETAIL WATER DISTRIBUTION BY JVA

Table A3-1: Cost of JVA to support WUAs Implementing task Transfer Agreements

وسط وادي الأردن				جنوب وادي الأردن (الكرامة)				شمال وادي الأردن				الأغوار الجنوبية				حساب التشغيل السنوي :
المجموع	جمعية : 55	جمعية : 50	المجموع	جمعية : 91	جمعية : 95	جمعية : الرامة	جمعية : الرامة	المجموع	جمعية : 41	جمعية : 33	جمعية : 28	المجموع	جمعية : خنيزيرة	جمعية : فيفا	جمعية : المزرعة والحديثة	
																كافة الكوادر البشرية *
																الأمين العام
660	330	330	1320	330	330	330	330	990	330	330	330	420	140	140	140	مساعد الأمين العام
4126	2063	2063	4126	2063	2063			6189	2063	2063	2063	0				موظفي مديرية التحكم
9100	4550	4550	18200	4550	4550	4550	4550	13650	4550	4550	4550	13650	4550	4550	4550	موظفي وحدة الجمعيات
																موظفي المديرية المالية
600	300	300	4250	1500	1250	750	750	5250	1680	1470	2100	3240	720	1080	1440	مدير المديرية
6400	3200	3200	2200	800	600	400	400	2290	720	670	900	5280	720	1200	3360	مهندسي التشغيل
0			1690	940	750	0	0	1425	440	385	600	1720	688	1032	0	المرافقين
0			6125	2500	2500	1000	125	0				6020	688	1032	4300	المرشدين
0			6960	3000	3000	960	0	0				7104	1280	2560	3264	الموزعين
4800	2400	2400	3750	1500	1500	750	0	765	0	315	450	25200	1680	3360	20160	السواقين
0			12950	4535	4535	1940	1940	14286	4762	4762	4762	15840	1584	3168	11088	موظفي أقسام الإدارة والمالية
3600	1800	1800	2078	90	90	1898	0	1800	600	600	600	0				السجلات
3600	1800	1800	365	80	80	205	0	2052	684	684	684	15400	1500	3100	10800	المحروقات
2400	1200	1200	360	120	120	0	120	0				25	0	0	25	المكاتب
240	120	120	0					600	200	200	200	1040	100	200	740	الهواتف
400	200	200	0					972	324	324	324	790	75	160	555	مياه (للمكاتب)
2400	1200	1200	0					1260	420	420	420	1490	140	300	1050	كهرباء (للمكاتب)
24000	12000	12000	0					0				0				مستلزمات مطبخ
0			0					0				0				غيرها
0			0					0				0				حساب المصاريف السنوي :
0			0					0				0				كافة الكوادر البشرية التالية
0			0					0				0				الأمين العام
0			0					0				0				مساعد الأمين العام
0			3000	750	750	750	750	5250	1680	1470	2100	1800	360	360	1080	مدير المديرية
0			2000	500	500	500	500	8100	2700	2700	2700	3900	390	780	2730	الإدارة والمالية وأمين المصنوع
500	250	250	1255	417	208	315	315	770	200	200	370	3360	240	720	2400	مهندسي المصاريف
1000	500	500	6030	1440	1440	1575	1575	440	120	120	200	1720	688	1032	0	المرافقين
1000	500	500	3560	1000	1000	780	780	1860	500	500	860	19008	3456	5760	9792	قبلي المصاريف
1000	500	500	5324	1000	1000	1662	1662	700	200	200	300	13500	1620	2700	9180	المعامل
4800	2400	2400	4160	1040	1040	1040	1040	1125	360	315	450	24948	4536	7560	12852	السواقين
0			4550	1600	885	885	1180	1140	380	380	380	0				السجلات
1600	800	800	5512	2358	1572	693	889	13500	4500	4500	4500	0				الآليات
200	100	100	6156	1703	1135	1327	1991	3000	1000	1000	1000	0				قطع الغيار
0			0					792	264	264	264	0				المحروقات
0			0					0	0	0	0	0				مصاريف المكاتب
0			0					0				0				غيرها
0			0					0				0				ملاحظات مهمة :
72426			105921					88206				165455				المنطقة الجغرافية :

يقتصد بها شمال أو وسط أو جنوب (الكرامة) أو الأغوار الجنوبية .

الكوادر البشرية : بما فيها الأمين العام ومساعد الأمين العام والدعاء و المهندسين والمرافقين والمرشدين * والموزعين والسواقين وغيرهم من أي مديرية في السلطة الذين خدموا الجمعية بصورة أو بأخرى بحيث يتم حساب مقدار الوقت الذي قضاه في خدمة الجمعية ويقترن من راتبه الكلي الذي يتقاضاه

المكاتب : يقصد بها أجهزة مبنى المكاتب ، إذا كانت الجمعية تشغل مكاتب من السلطة .

غيرها : يمكن تفصيلها على ورقة منفصلة

Supporting cost JOD	432,008
Contract cost JOD	325,969
Total JOD	757,977
Area of WUAs du	95,146
Area specific cost JOD/du	8

Table A3-2: Cost (in JOD) of JVA in managing water distribution with no participation of WUAs

مصاريف سلطة وادي الأردن لعام 2012

Total	لوازم قطع غيار	لوازم متفرقة	لوازم زراعية	لوازم حاسوب و توليعه	أجور الميومة	السفر	قرطاسية و مطبوعات	صيانة الآلات و الأثاث	هاتف و بريد	المحروقات	الماء	الضمان الاجتماعي	إجمالي الرواتب والأجور	المنيرية
366,578.05	5769.6	0	454.3	0	2901.6	0	85	0	908	90843.4	392	32512.28	232711.864	منيرية الأغوار الشمالية
518,688.66	18488.3	0	3513.98	3025.09	10167	0	85	0	1450.57	90843.4	0	47944.55	343170.77	منيرية التحكم وإدارة المياه
1,061,443.26	131043.83	497.5	14932.605	0	18910	0	85	0	1939.86	90843.4	5457.1	97789.56	699944.402	منيرية الأغوار الوسطى
620,278.17	20753.75	0	3393	0	23951	0	85	0	908.29	90843.4	0	58882.54	421461.189	منيرية الكرامة
2,566,988.13	176055.48	497.5	22293.885	3025.09	55929.6	0	340	0	5206.72	363373.6	5849.1	237128.9	1697288.225	المجموع
1,578,297.23	466570.856	0	37561.057	105	21423	3917.7	210	945	1769.76	51700.79	0	66657.13	927436.938	إدارة الأغوار الجنوبية و وادي عربه
4,145,285.37	642626.336	497.5	59854.942	3130.09	77352.6	3917.7	550	945	6976.48	415074.4	5849.1	303786.1	2624725.163	الإجمالي

المساحة

	Minus values for areas served by WUAs	Total
Total Cost JOD	3,387,308	4,145,285
Area du	200,854	296,000
Area specific cost JOD/du	17	14

ANNEX 4: DETAILED SURVEY FINDING (DATA SHEETS)

	Water User Association	Head of WUAs	Mobile No.	No. & date of issue	Date of Tasks Transfer	Tasks (water distribution (D) / F.T.A)	Working Zone		Development Areas	Total # of FU in WUA work area according to WUA heads	Total # FU (official)	Total Area (du)	Irrigable area (du)	Total No. of farmers
							JVA Directorate	JVA Stage office						
Southern Ghors	Khneizira WUA Cooperative	Ayed Saleh Abdul - Nabi Rawashdeh	795813800	1760 dated 13/6/2008	March, 2009	D	Southern Ghors / stage 1	Southern Ghors / stage 1	44	56	57	1680	1680	100
	Fiefa WUA Cooperative	Mousa Saleem Al-khutabah	796467816	... dated 1/4/2005	March, 2010	D	Southern Ghors / stage 1	Southern Ghors / stage 1	43	189	123	4770	4770	150
	Ghor Mazra'a & Hadetheh WUA Cooperative	Saleem Musalam Khalaf Hweimel	795242403	2533 dated 30/10/2005	March, 2011	D	Southern Ghors / stage 1	Southern Ghors / stage 1	45,46,47	394	395	11820	11370	500
	Ghor Safi WUA Cooperative	Sabri Ahmad Rabee Dalaen	795490391	2743 dated 23/10/2007	Not Yet		Southern Ghors / stage 1	Southern Ghors / stage 1	40,41,42	1580		27130	27130	600
South JV / Karamah	Ramah Water Users Association Cooperative	Talal Farhan Al-Odwan	796083590	2526 Dated 2/10/2005	2008	D & M	South JV/ Karamah	10	part of 32	138	138	5000	5000	355
	Ahmad Abdul-Kareem Al-Odwan	775809900	2645 Dated 1/11/2006	2009	D & (JVA)		South JV/ Karamah	11	31	234	234	8897	8897	140
	Kafrien WUA Cooperative	Ali Mustafa Ali Dayak	079 651 9504	2451 dated 20/10/2004	03/01/2010	D & M	South JV/ Karamah	6	part of 27	255	255	10500	10500	250
	Baladna Association for Ag. Services Cooperative	Hussien Ali Mufleh Qutaineh	079 563 4908	2626 dated 17/8/2006	03/06/2010	D & M	South JV/ Karamah	6	28 & part of 27 (2 lines)	303	289	11000	11000	150
	PS (95) WUA Ag. Cooperative	Tawfeeq Ab-Dulkareem	795579105	2845 dated 9/2/2009	11/08/2012	D	South JV/ Karamah	6	26	320	355	11200	11200	200
	PS (81) WUA Ag. Cooperative	Mohammad Al-Shoubaky	796117396	2409 dated May, 2004	03/06/2010	D & M	Middle JV	3	18,19,20	232	236	9000	9000	110
Middle JV	PS 55 WUA Cooperative	Waleed Omer Al-Faqeer	796212655	2567 dated April, 2006	04/01/2009	D & M	Middle JV	3	21, part of 20	290	270	10600	10600	138
	Ghor Damiya for WUA (PS 78)	Jamal Mohammad Ahmad Masalha	797776080	2839 dated 1/2009	Not Yet		Middle JV	5	30 & part of 25	538		20644	20644	270
North JV	Tabaqat Fahel WUA for PS (33) Cooperative	Nawaf Kraem Mohammad Al-Rayahneh	786889832	2573 dated 10/4/2006	06/11/2008	D & M	North JV	2	13 , 14 , part of 12	206	206	8422	7166	310
	WUA for DA 5 Cooperative	Rae'f Ayoub Ali Al- E'padawi	787645864	3052 dated 10/8/2011	14/7/2012	D	North JV	7	5	162	164	5700	5700	73
		Zaki Mohammad Abdulrahman Al-Rababa'a	777742913	2387 dated 18/3/2004	2010	D & M	North JV	2	16, 17	134	136	5457	4548	136
	Wadi Rayan WUA PS 41	Ashraf Adnan Mohamad Al-	795711822	2312 dated 15/12/2002	24/2/2009	D	North JV	2	part of 11, part of 12	206	206	8000	8000	300
	Al-Masharea'a Association for Ag. Services / PS 28	Ali Ibraheem Ali Al-Husien		3067 dated 8/8/2011	07/12/2012	D	North JV	7	3 , 4	218	218	6489	5938	112
	Al- Baqoura WUA for DAs 3&4 Cooperative	Sulaiman Mohammad Saleh Al-Ghezawi	795500033	2882 dated 2/6/2009	not yet	not yet	North JV	7	10	209		8166	7367	100
	Tel Al-Arbae'en Cooperative Association PS 22	Ab-Dullah Asa'ad Raja Al-Howrani	7777720075	3019 Dated 10/4/2011	11/08/2012	D	North JV	1	6,7,part of 8 , part of 10	323	286	10046	9471	213
	Farmers Association Cooperative for PS 14													

Water User Association		Total members of WUA	Total members of owners	Total members of rentals	% of covering area of members as per WUA heads	% of covering area (calculated as FU members/FU)	Number of Members Farm Units	Water Resources	Membership (closed (C) / open (O))	Managerial Board (Elected (E) / Appointed (A))	Distribution Cost (JD/Year)	Maintenance Cost (JD/Year)	Income JD/year from JVA	Transfer Functions Model
Southern Ghors	Khnezira WUA Cooperative	50	50	0	75%	100%	57	W. Khnezira	O	A				with Cost
	Fiefa WUA Cooperative	85	77	8	74%	98%	120	W.Fiefa	O	A			20925	with Cost
	Ghor Mazra'a & Hadeeth WUA Cooperative	106	85	21	80%	94%	370	W. Hadeetha & W. Karak	O	A				with Cost
	Ghor Sali WUA Cooperative	80	40	40				W. Hasa	O	E				Not Yet
South JV / Karamah	Ramah Water Users Association Cooperative	330	330	0	100%	100%	138	W. Hisban	O	A				with Cost
	Kafrien WUA Cooperative	43	43	0	60%	55%	129	Kafrien Dam	O	E				with Cost
	Baladna Association for Ag. Services Cooperative	30	18	12	35%	47%	120	KAC South	O	E				with Cost
	PS (95) WUA Ag. Cooperative	74	60	14	90%	74%	215	KAC South	O	E				with Cost
	PS (81) WUA Ag. Cooperative	38	38	0	22%	81%	288	KAC South	O	E	JVA staff	JVA	0	Without Cost
Middle JV	PS 50 WUA Cooperative	88	45	43	89%	65%	153	Canal /North	O	E	26460	3480	29940	with Cost
	PS 55 WUA Cooperative	110	60	50	94%	60%	162	ZCIII	O	A	26928	3000	29928	with Cost
	Ghor Damiya for WUA (PS 78)	28	24	4	10%			KAC south & ZCII		O	A			Not yet
North JV	Tabaqat Fahel WUA for PS (33) Cooperative	251	162	44	75%	100%	206	KAC North	O	E	24120	7780	31900	with cost
	WUA for DA 5 Cooperative	25	24	1	40%	62%	101	KAC North	O	A	JVA staff	JVA	0	Without Cost
	Wadi Rayan WUA PS 41	129	112	17	77%	69%	94	KAC North & KTR (ZCIII)	O	E	15300	2340	17640	with cost
	Al-Masharea'a Association for Ag. Services / PS 28	201	125	76	75%	78%	161	KAC North	O	E	29892	0	29892	with cost
	Al- Baqoura WUA for DAs 3&4 Cooperative	53	50	3	25%	61%	132	KAC North	O	A	JVA staff	JVA	0	Without Cost
	Tel Al-Arbae'en Cooperative Association PS 22	21	21	0	40%			KAC North	O	A				Not Yet
	Farmers Association Cooperative for PS 14	123	62	61	42%	56%	159	KAC North	O	E	JVA staff	JVA	0	Without Cost
						75%								
Total		1865	1426	394										

ANNEX 5: NOTES RECEIVED FROM THE PRESENTATION OF THE STUDY FINDINGS TO JVA, USAID, WUAs

Issues raised by WUA during the Consultation Workshop on March 26th, 2013:-

Comments provided by **Ali Mustafa**:-

- Introduction:-
 - Happy to see USAID involved in JV irrigation.
 - Initial steps at establishing WUAs were slow, but are now picking up speed.
- Task Transfer Contract:-
 - There is discrepancy between the concept of Task Transfer contract and the articles of the contract.
 - The WUA had no technical input or say in the drafting of these contracts which take the form of employment contracts rather than a service contracts. If this doesn't change, WUA staff will turn into being JVA employees with no full employment rights.
 - The contracts did not observe the Jordanian labor law, social security, or inflation and it has been of a fixed amount for the past four years.
 - The contracts need to be upgraded to serve as service contract as well as observe matters such as health insurance, social security, etc.
 - The Contract doesn't give the WUA financial nor administrative autonomy.
 - Contracts allow JVA to interfere with accounting books and budgets.
 - The Contracts stipulate that TT funds should only be allocated for salaries.
 - The fees collected from farmers are only "shares" and can't be used. (But the real case is that actually some are used for administrative expenses.)
 - Hiring of WUA staff is subject to JVA approval.
 - As the matter stands, the Contracts give the authority for JVA to penalize WUAs but don't give the right for WUAs to hold JVA accountable to any shortcoming on JVA's side.
 - The Contracts need to be balanced and should be drafted by a committee from WUA, JVA, and financial and legal experts NOT by JVA alone.
- There is a need to establish a WUAs federation. Earlier attempts to establish the federation were impeded by the successive JVA senior management. Serious and bold steps need to be taken towards establishing the federation.
- WUA should play a role in water resources development and conservation:-

- WUA participation in setting higher water policies should be granted to protect the rights of farmers in water.
- Water is currently managed by MWI and there is clear dominance from WAJ on irrigation water and JVA can't protect the rights of the Jordan Valley to irrigation water.
- Right to irrigation water is a crucial right for Jordan valley farmers.
- Legal Framework:-
 - A draft legal framework for WUA was developed four years ago but since then there has been no consultation with the WUA, nor were they updated on its status.
 - The WUAs should be given the chance to review the Draft law.
 - 1. WUAs represent a large number of farmers but they take no part in the decision making process, therefore, WUA should have a representative on the JVA board. Currently, there are 3 farmers on the JVA Board but these are appointed by the minister and not elected through the WUAs.
- Water Distribution related Obstacles :-
 - Fluctuation in water levels
 - Poor maintenance from JVA side due to understaffing of maintenance cadre versus the overstaffing of operations cadre.
 - There is no neutral /independent party to solve disputes between WUA and JVA.

Comments provided by Hafeth **Al Shobaki**:-

The WUAs requests are as follows:-

- Pilot areas for enhanced WUA activity selected according to criteria and conditions (not arbitrarily)
- Building the capacity and proficiency of WUAs administrative cadre to enhance their interaction with farmers.
- Build more trust in the WUAs.
- Increase their water allocations.
- Provide more financial support
- Provide extension services
- Support Job stability for WUA staff
- Provide training to WUA staff
- Include WUA staff in Social Security
- Annual inflation adjustment for TTT agreements
- Expedite the establishment of a federation similar to the Farmers' Federation to have a voice.
- Legal protection for water distributors in their work.

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