



Sustainable Water Integrated Management - Support Mechanism (SWIM- SM)

Project funded by the European Union

REPORT ON SWIM-SM

EVALUATION WORKSHOP OF THE PILOT IMPLEMENTATION FOR THE M&E SYSTEM TO MONITOR AND EVALUATE THE PARTICIPATORY IRRIGATION MANAGEMENT (PIM) AND IRRIGATION MANAGEMENT TRANSFER (IMT) PROCESS

**15- 16 September 2014
Amman-JORDAN**

(SWIM-SM Work Package 1, Activity 1.2.8.4



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1. BACKGROUND AND OBJECTIVES

The EU-funded “Sustainable Water Integrated Management – Support Mechanism” (SWIM-SM) Project organised a **two-days evaluation workshop in Jordan** for the partners in the country who have been engaged in the pilot testing of the regional monitoring and evaluation (M&E) system that was developed in 2013 to monitor and evaluate the Participatory Irrigation Management (PIM) and the Irrigation Management Transfer (IMT) process.

The workshop falls under the “Water Governance at the Local Level:” thematic pillar of the SWIM-SM project as part of its 4 year work Plan

The Evaluation Workshop was organised within the framework of the SWIM-SM by LDK; the leading company in the SWIM-SM consortium, in close cooperation with the Jordan Valley Authority (JVA) and with the “International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) / Mediterranean Agronomic Institute of Bari (IAMB)” which was hired by the SWIM-SM to convert the proposed M&E system into a computer application.

The objectives of the workshop were to:

- Analyse the monitoring and evaluation results of the PIM/IMT process as a result of applying the M&E system application in the pilot areas in Jordan;
- Based on the M&E results Identify actions needed to improve the PIM/IMT planning and implementation;
- Identify lessons learnt and recommendations for system refinement

A total of **23 participants** attended the evaluation workshop. These included in addition to the four SWIM-SM experts, **14 partners representing the Jordan Valley Authority (JVA)**; the irrigation agency responsible for the irrigation schemes in the country, **the Water Users Association (WUA) Support Unit** at JVA, the **regional operation and maintenance directors/officers** involved in the pilot implementation of the M&E system, namely the **“North Valley” and “Karameh” Directorates** in addition to the designated water officials from **the two WUAs that were selected for the application of the system at the local level (WUA 41 and WUA 91)** . The evaluation workshop was also open for **the IT specialists at JVA**, who will be responsible for providing support to the users of the system in the future, **in addition to donors** who are active in the field of PIM/IMT. The detailed list of participants is included in Section 6.

The language of the evaluation workshop was Arabic and English.

The evaluation workshop was intended to enable the target users of the M&E system to review the evaluation results emanating from the entry of real data and information into the system – data entry for all levels (national, regional and local). Prior to the workshop, intensive data collection was undertaken; requiring considerable support from SWIM-SM, to enable the customisation of the available data to suit the needs of the system.

2. METHODOLOGY AND STRUCTURE OF THE EVALUATION WORKSHOP

Form a methodological point of view, the workshop was structured to be highly participatory and interactive among all participants. The participatory aspect was particularly relevant since the workshop was meant to facilitate the dialogue between JVA officials (at the national and regional levels) and the representatives of the WUAs so as to understand the mutual needs and present limitations.

During the workshop use was made of professional learning tools such as:

- Presentations to clarify or review some of the main concepts related to importance of M&E.
- Open discussions of the M&E results and other emerging topics



- Review of the main features of the M&E system “computer application” and inter acting for its improvement
- Interactive workgroups to prepare the action plan needed based on the evaluation results of the M&E system
- Use of facilitators during the workgroups

Although the participants had different professional levels, this was not an obstacle for the understanding of the proposed system that was designed to suit all levels.

2.1 Structure of the evaluation workshop

The evaluation workshop which was held over two days (15 & 16 September, 2014) as per the detailed Agenda in Section 5 of this report, was structured in four main parts in order to achieve the planned objectives:

- **Part I: Overview of the main characteristic of the evaluation system, including a complete tour of the updated version of the system/computer application.**
- **Part II: Evaluation of PIM/IMT at the National and Regional Levels and Development of action plans**
 - Evaluation of the M&E results at the National and Regional level. Since the system is divided into four main modules (A, B, C, D), this part focused on modules A and B; pertaining to the monitoring and evaluation of the government interventions in support of PIM/IMT.
 - Identifying the main actions needed in the future by the JVA at the national and regional levels, as a result of the evaluation of the outputs and outcomes identified.
- **Part III Evaluation of PIM/IMT at the Local Level and Development of action plans**
 - Evaluation of the M&E results at the local levels (i.e. evaluation of the selected WUAs implicated in the pilot implementation of the M&E system). This part is essentially dealing with module C pertaining to the monitoring and evaluation of the WUAs performance and module D; related to assessing the socioeconomic and environmental impacts of the WUAs’ operationalisation.
 - Identifying the main actions needed in the future by the WUAs (local level) as a result of the evaluation of the outputs and outcomes identified at the respective level
- **Part IV: Summarizing the lessons learnt from the pilot implementation at all levels (national, regional and local)**

A certificate of attendance was also awarded to all participants at the end of the workshop. The detailed agenda is available in Section 6 of this report.

3. OUTCOMES

- The system has been designed to allow customization to the specific conditions of Jordan at all levels (national, regional and local).
- The M&E computer programme provides detailed evaluation reports for each outcome (and related outputs) at each level; national, local and regional. However, the reporting part at the local level still needs finalization.
- The points system used for the evaluation system provides a clear view of the degree of achievement in the implementation of the PIM/IMT programme in Jordan with respect to the respective outputs and outcomes



3.1 Outcomes of the Analysis of the evaluation results at the national and regional levels

Analysis of the above mentioned results allowed the identification of the following important shortcomings as well as the major achievements:

- There is a lacking in the planning for PIM/IMT (Indicator A03010) that allocates the human and financial resources and the time frame required for the implementation of the program.
- Presently the WUA associations are established under the cooperative law in the absence of a dedicated law for Water Users associations.
- The legal framework for JVA was assessed/ revised during the implementation period of PIM/IMT to ensure its suitability for the legal establishment of the WUAs (**indicator A04010**). However, the positive answer provided at the national level for this indicator was challenged by the WUAs. It was indicated that the participants should not make any conclusive judgement about the legal framework for the WUAs before analysis of all the relevant indicators is made. In this particular case, **A04010** was one of several indicators to evaluate (a) whether the legal framework was formulated or revised and in use and (b) whether the government is effectively regulating WUAs establishment and functioning and the implementation and management of the PIM/IMT programme. JVA's response to the other indicators at the national level offers a good example in this regard, whereby JVA indicated that although the impact of the existing laws on the PIM/IMT performance was assessed, no improvements were made to the legislations.
- Although reorientation of irrigation agency staff has taken place (Indicator A05010); involving the assignment of new relevant roles to the irrigation agency, as a result of the PIM/IMT, and despite the administrative measure to decrease the staff dedicated to O&M activities as a result of the transfer of such activities to the WUAs, the numerical indicators show that the **staff of the irrigation agency dedicated to O&M tasks has been increasing at the national and regional levels** when a decreasing trend is warranted (M05080). **Furthermore, O&M costs depicted at the local level are also increasing** (example variable C05081). This suggests the need for JVA to develop a long term vision for the transfer of O&M tasks¹ and a policy for the concomitant reduction/redeployment of staff.
- Transfer of Irrigation schemes is progressively undertaken with due consideration to relevant technical and socio-economic criteria (Indicator A05110). Normally the transfer takes place after the preparation of a technical report regarding the condition of the irrigation system to be transferred and following training of WUA leaders and staff. Should the WUA meet specific technical and socioeconomic criteria under the Participatory model, transfer of irrigation management (in the case of Jordan distribution of water to farmers and in some cases minor maintenance works) is pursued. Such criteria include the level of farmers' representation (The WUA should represent 80% of the farmers).
- The JVA strategy that foresees that "WUAs will take full management responsibility of their irrigation system at end of the PIM/IMT program (Indicator A05120)" was seen by the WUAs as a project not yet implemented, considering the limited functions assigned to the WUAs. Since the indicator addresses the future vision by the end of PIM/IMT, this should give JVA the motive to sharpen its vision with respect to the final scope of the WUAs' functions and to develop the road map to get there.
- The presentations of the sample results of the evaluation at the regional level demonstrated both the similarities with the evaluation results at the National level and differences including the absence of structured coordination mechanism at the regional level (compared to the national). However, the meetings with the relevant stakeholders held regularly at the regional level, render coordination more effective.

¹ Confirmed by the zero score obtained on the indicator "A05100" related to the "adoption of adequate policy/strategy by the Irrigation Agency to ensure effective transfer of O&M responsibilities to the waters users"



- The lack of financial resources for the rehabilitation of irrigation systems to be transferred - or that has already been transferred - to the WUAs, contribute to the discrepancies in the allocation of rehabilitation funds between the regions.
- Almost all the money that was invested in rehabilitation during the past ten years has been in favour of the North region at the expense of the Karameh directorate in the South, which has adversely affected the respective performance of the pilot WUA (WUA 91). This demonstrates the importance of carrying out the M&E analysis not only at the national level, but also at the regional level, to catch variations in the implementation of PIM/IMT between the regions.
- In view of the above, the spatial resolution for PIM/IMT planning and data collection and analysis should consider each of the different regions in the country that are targeted by PIM/IMT
- JVA has not been as active during the past two years (2012 and 2013) in establishing new WUAs or transferring areas to existing ones (N01040).
- Should the northern directorate implement the awareness meetings as planned, then the farmers participation will automatically improve (indicator N02060).
- Reaching the farmers that need awareness raising should be part of a plan for awareness campaigns covering a period of at least years. This should facilitate quarterly monitoring of the actual progress made on this indicator with respect to the plan. Corrective measures can be taken accordingly.
- The same applies on the training of relevant JVA staff (at the central level and in the regional offices) and the training of WUA leaders and staff, which should become part of an annual training plan, that is regularly monitored to enable corrective actions in due time.

3.2 Outcomes of the Analysis of the evaluation results at the local level

- Data availability for Module D is scarce
- Good practices in WUA operationalisation require that:
 - The membership of farmers is compulsory. This is not the case in Jordan. Specifically WUA 91 needs to increase the number of registered farmers. In the next statute, membership in the WUAs will be redefined
 - The general assembly meets once a year (this is not practiced in WUA 41)
 - Conflict resolution committee report to the General Assembly (although the committee is established and conflicts are documented, nothing is reported)
- Although the degree of satisfaction of the farmers with the performance of WUA 91 has significantly increased since the beginning of transfer, however, the lack of rehabilitation in the transferred irrigation system did not allow the WUA to attain higher level of achievement.
- As a result of the topography of the area served by WUA 91, and the fact that there are no flow limiting devices, the average flow (C04041) and pressure (C04042) at the lower turnouts in the irrigation systems could be higher than those at the upper turnouts.
- All indicators related to the degree of satisfaction of farmers and government staff with the WUA performance (C04061, C04062 and C05060, and C05070) need to be systematically based on surveys
- Due to the limited functions of the WUAs in Jordan (involving only the distribution of irrigation water and minor maintenance works), most of the O&M costs are still incurred by the irrigation agency and related data are hosted at JVA.
- The indicators related the O&M costs (incurred both by the WUA and JVA) show increasing costs in both piloted WUAs



- The financial sustainability of both JVA and the WUAs is not possible with the current cost recovery rates of 27% of the total annual costs in 2013 (consider the average value of water billed during that year).
- Several documents including the operation guidelines already exist. These should be integrated into the WUA operational procedures. The same applies on the maintenance guideline proposed as a result of the analysis of the M&E results at the local level.
- Other documents such as the training material for the WUA leaders and staff and the results of the WUA surveys should be disseminated to the WUA.

3.3 Action Plans

The formulation of the action plans were developed in mixed workgroups involving representations from all levels. This exercise which emanated from the evaluation at the National, Regional and local levels demonstrated how well the participants were able to interpret the results. The plans of action are included in Annex 1 for the national level, Annex 2 for the regional level and Annex 3 for the local level. The plans provide a good vision of the most urgent actions that JVA (including its regional offices), and the WUAs need to take to address the main shortcomings, improve the status of implementation of PIM/IMT in the country and the performance of the WUAs.

It is worth mentioning that two major actions emerged at the national level: one was the need for preparing a national vision where the road map of the development of the WUAs is clearly specified. The other one was the need to prepare a PIM/IMT plan covering a horizon of 3 years where the financial and human resources are well defined and committed. The review of the legal framework also emerged as an important activity, in addition to the establishment of effective coordination mechanism at the regional level.

At the local level, a great effort was made in the collection of data that covered information for years 2010, 2011, 2012 and 2013 which permitted to see the historical evolution of the indicators. The system showed a great capacity to identify shortcomings in the achievements of the outcomes (and corresponding outputs) at this level, as well as the achievements made.

In general terms the WUAs are functioning well from the organizational point of view but control of cost is limited, the efficient operation is also limited by the old irrigation networks, and maintenance is also limited due to the fact that they are only responsible for minor maintenance. The number of farmers that do not pay the services are increasing and arrears from previous years are also logically increasing. The degree of satisfaction of the farmers with the performance of the WUAs is moderate ranging in the 60-80 %, however the performance of the WUAs are strongly affected by the limited responsibilities designated by JVA so far.

3.4 Proposed Refinements in the System

On some occasions, small improvements were suggested to refine/sharpen the definition of the indicators or change the settings of the system including the scoring criteria according to the local experience. **The proposed improvements were categorised according to the following:**

1. Refinements to the computer application (to be undertaken by CIHEAM during this phase of the contract). It should be noted that since the system has great facilities for customization, some of the recommended adaptations were immediately incorporated by CIHEAM.
2. Further changes in the system settings to suit the local conditions (to be Undertaken by Jordan)
3. Refinements to the M&E System involving possible changes in the approach (that can be accommodated by CIHEAM beyond SWIM life).

For the sake of complete documentation, the **proposed improvements are listed in annex 4.**



3.5 Data that need verification by JVA

Another outcome of the analysis of the evaluation reports was the detection of some conspicuous figures that needed further investigation or verification by JVA for re-entry in the system. These **are listed in Annex 5** below.

4. Lessons Learnt

In general the discussions illustrated that the participants have a strong appreciation for the system. Since the M&E system application helps identify the decisions and actions that are needed to improve the PIM/IMT process, it can serve to some extent as a decision support system. The following points were expressed by the participants in terms of the perceived lesson learnt. They have been grouped into four main issues / questions around which the discussion was made in order to facilitate the responses.

4.1 JVA staff

1. On the results of the system

- The M&E system is very important for JVA; not only for its capacity to monitor performances at all levels but because it has been an eye opener to some of the deficiencies and the issues that need to be addressed/resolved.
- The system is not only for monitoring and evaluation but is a good tool to help in planning and decision making. In that sense it can be considered as a decision support system. The results of the system should be adopted by the decision makers.
- Plans and vision are the missing ingredients in the PIM/IMT process in Jordan as clearly evidenced by the system.
- The system has made evident the need to prepare an action plan for the next 3 years. This should include the necessary human and financial resources (including resources need for equipment such as computers, printers, etc.) to support the PIM/IMT process. The development of the plan will also support the M&E system adequately.
- The implementation of the actions identified as result of the evaluation should be supported by another project or institution to ensure the sustainability of the pilot implementation results
- Documentation and classified information are very important in evaluating performance and this is what the system allows for.

2. On data collection and data flows

- The system is data intensive requiring considerable time for data collection by all involved parties to run and test the system. A lot of direct coaching by SWIM expert was needed to clarify the concepts (to ensure that results are reliable and reflecting the intended meaning of the indicators/variables) and to standardise the methodology used for the calculation of the indicators and variables, at all levels.
- The volume of information needed is very large. In order to enable regular utilisation of the system, JVA will need to adapt their present information system to facilitate the data entry into the M&E system. This is task will require some time and external support.
- The data flow procedures should be clearly defined involving all relevant departments (including the human and financial resources departments) to integrate the requirements of the system into its business functions. JVA will need to delineate data flows from the different departments/donors to ensure timely availability of data for the system, which will require a follow up period of 6-12 months from SWIM.
- The M&E system has put in evidence the limitation of not having cost centres that would allow improved knowledge of JVA O&M costs at the main intake (pump station) of each WUA. Having such cost centres would also allow aggregating O&M costs at the regional and national levels. In this regard, considerable number of data had to be estimated since the required data were not available on a segregated level. The JVA system of financial data



collection should be modified to provide more readily the required information for the system.

- Likewise, all PIM/IMT related data had to be estimated for each region to the best of JVA's knowledge (Ex: Financial allocations, human resources, training, awareness campaigns, etc.)

3. On Potential improvements for the system

- The meaning of some of the indicators was not entirely clear. The cumulative effect of SWIM coaching and the workshop enabled better understanding of such indicators.
- The Arabic version of the system (when finalised) also should facilitate the understanding of the indicators.
- The number of indicators at present is very large. Reduction of the number of indicators is desirable. This, together with the capacity of the system to inactivate (a) the indicators that are not considered relevant in a given country or where results can be indirectly deducted, and (b) the data which have proven difficult to collect, should make the system more manageable.
- Although some graphics are now provided more detailed information is needed.
- Range of scoring is limited in some cases but the system offers good possibilities to change or adapt them to local situations.

4. On Management of the system

- The communication with the WUAs needs to be strengthened to have a better understanding of their problems and needs. The system offers good basis to improve this communication which is much necessary.
- The management of the system under Intranet or internet (cloud) was largely discussed but it was considered that the WUAs will have practical difficulties with it. Hence it was considered more appropriate to continue with the installation of the system in individual computers. However, JVA may install it in its Intranet system to allow a more general use within the organization.
- The support of the SWIM and the developers will be needed in the future in order to anchor the utilisation of the system in JVA, including further training on the latest version of the system.

4.2 WUAs representatives

- They expressed high satisfaction with the system which they consider essential for their work because it allows for measuring the performance of the associations.
- Many of the difficulties that they face have their origin in the lack of vision of what will be the future development of the associations. There is an urgent need for JVA to develop a clear vision of their future.
- Although the functioning of the system is clear, adapting the information and integrating it into the WUA data collection procedures will require a follow up period of 6-12 months in which they will need support from JVA and SWIM experts.
- New computer facilities will be needed since the existing ones are old and not suitable for the system, whereas other associations do not have computer facilities.

4.3 SWIM-SM consultant

The consultant was requested to provide his view on the future needs of the PIM/IMT program in Jordan and they are summarized below:

- The PIM /IMT program has already accumulated considerable experience since its start in 2002. The processes for the initial establishment of the WUAs are well defined and most of the WUAs have a



good organization and do a reasonable operation and maintenance. However they are too limited in their financial responsibilities. JVA should not only accelerate the transfer of more functions but also delegate more financial responsibilities.

- The present organization of the WUAs as cooperatives presents several limitations that were discussed during the event. It would be more adequate if the WUAs are part of the organizational structure of JVA but with a high degree of independence. This may require special authorization to JVA by the Ministry of Water resources. If in the next future this is not feasible the JVA should implement some financial incentives for the farmers that are member of the associations as compared to those that are not members (at the present there is no particular advantage for a farmer to become part of the WUAs).
- The M&E system could be a useful instrument to evaluate the WUAs that have higher performance and therefore to evaluate those that are more prepared to undertake more functions.

5. AGENDA

Day 1 (15 September 2014)

| Time. | Description | Speaker |
|---------------|---|---|
| 8:30 – 9:00 | Registration | |
| 9:00 – 9:15 | <p>Welcome remarks</p> <p>Workshop objectives and progress to date</p> | <p>Eng. Qais Owais: JVA Assistant Secretary General</p> <p>Eng. Xavier Farrero: Representative of EU delegation to Jordan</p> <p>Suzan Taha: SWIM-SM Key water expert</p> |
| 9:15 – 9:30 | <p>Short presentation about evaluation in the context of M&E systems</p> | Juan A. Sagardoy; Senior Water Management Consultant, SWIM-SM non-key expert |
| 9:30 – 10:00 | Overview of the M&E system | Roula Khadra (M&E specialist – CIHEAM/Bari) and Marco Dauru (IT specialist) |
| 10:00 – 10:30 | <p>Presentation of the evaluation results at the national level</p> <p>First level Evaluation (30 minutes)</p> | Roula Khadra |
| 10:30-10:45 | Coffee Break | |
| 10:45-11:35 | <p>Presentation of the evaluation results at the national level (Continued)</p> <p>Second level Evaluation (20 minutes)</p> <p>Open discussion on the evaluation results at the national level (30 minutes)</p> | <p>Roula Khadra</p> <p>All participants</p> |



| | | |
|---------------|--|---|
| 11:35-13:35 | <p>Presentation of the evaluation results at the regional I level</p> <p>Region 1 First Level Evaluation: 30 minutes Open Discussion 30 minutes</p> <p>Region 2 First Level Evaluation: 30 minutes Open Discussion 30 minutes</p> | <p>Roula Khadra All participants</p> <p>Roula Khadra All participants</p> |
| 13:35-14:35 | Lunch Break | |
| 14:35 – 14:45 | – Proposal for the preparation of the action plans (all levels) | Suzan Taha |
| 14:45 – 15:45 | – Preparation of action plans at the National and Regional levels | All participants organized in two working groups Facilitators: Roula Khadra (CIHEAM M&E Specialist) and Suzan Taha |
| 15.45–16:00 | Coffee Break | |
| 16:00 – 17:00 | <p>– Presentation of the action plans at the national and regional level</p> <ul style="list-style-type: none"> - Presentation National Level (15 minutes + 15 minutes discussion) - Presentation Regional Level: (15 minutes + 15 minutes discussion) | Nominated persons by the working groups |
| 19:00 | Dinner at a restaurant in Amman. Restaurant will be announced on the workshop day | |

Day 2 (16 September 2014)

| Time. | Description | Speaker |
|---------------|--|---|
| 9:00 – 10:00 | Live testing of the system | All participants |
| 10:00 – 11:30 | <p>Presentation of the evaluation results by the WUAs</p> <p>Pump 41 WUA First Level Evaluation: 60 minutes Open Discussion 30 minutes</p> | J.A. Sagardoy |
| 11:30 – 11:45 | Coffee Break | |
| 11:45 -13:15 | <p>Presentation of the evaluation results by the WUAs (Continued)</p> <p>Pump 91 WUA First Level Evaluation: 60 minutes Open Discussion 30 minutes</p> | J.A. Sagardoy |
| 13:15-14:15 | Preparation of action plans at the local level | All participants organized in two working groups, Facilitators: Roula Khadra and Suzan Taha |
| 14:15 – 15:15 | Lunch Break | |



| | | |
|----------------------|--|---|
| 15:15 – 16:15 | Presentation of the action plans: <ul style="list-style-type: none">• Pump 41 WUA (15 minutes + 15 minutes discussion)• Pump 91 WUA (15 minutes + 15 minutes discussion) | Nominated persons by the working groups |
| 16:15 – 16:30 | Coffee Break served during sessions | |
| 16:30 – 17:30 | Lessons learnt and proposals for refinements | All participants |



6. LIST OF PARTICIPANTS

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Annex 1: Action Plan to improve PIM/IMT process at National Level (2015-2017).

Responsibility: JVA -WUA Administration

| Outcome | Output | Indicator(s) | Action | Required Support from | 2015 | 2016 | 2017 |
|---|---|--------------------------------|--|---|------|------|------|
| A.2 - The PIM/IMT program has been institutionalized for the planning and implementation phases | A.2 - 1 A coordination mechanism is in place and is effective | A02020N | Establish coordination committee. Prepare scope of work for the committee and define roles and responsibilities of all stakeholders. Conduct Regular meetings | Support at the Executive level | Apr | | |
| A.3 - The PIM/IMT program is supported with a national PIM/IMT Plan which is operational | A.3.1 - A national PIM/IMT Plan with adequate financial and human resources allocated is available | Indicators A03010 to M03020 | Prepare PIM/IMT plan that includes the development of a vision, identification of objectives and issues to be resolved, actions needed to achieve the desired objectives and to resolve the prevailing issues; including the role of the different stakeholders, and the human and financial resources that need to be mobilised to achieve the proposed action plan. The financial requirements should also cover the need for rehabilitation (while distinguishing between maintenance and rehabilitation works) and take into consideration potential sources of funds. Note: In order to ensure equity between the different regions, proposed actions should be delineated per region (as applicable) | GIZ and relevant JVA departments (planning unit, O&M, HR, FR) | Dec | | |
| A.4 - The government is effectively regulating WUAs establishment and functioning and the implementation | A.4.1 - A legal framework for WUAs is formulated or revised and in use | A04010, A04011, A04021, A04022 | Update existing legal review and make conclusions / recommendations accordingly | Planning Department, Legal | June | | |
| | | | Draft laws (preferably dedicated WUA law) to define the legal status of the WUA, its role and rights and the rights | Department, Donors (GIZ and USAID) | | Dec | |



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| Outcome | Output | Indicator(s) | Action | Required Support from | 2015 | 2016 | 2017 |
|--|---|--------------|--|-----------------------|------|------|------|
| and management of the PIM/IMT programme | | | of the users. | | | | Dec |
| | | | Approve law and put it into use. | | | | |
| A.5 - The irrigation agency is functioning effectively according to a new institutional framework and has an implementation strategy | A.5.1 - A legal framework of irrigation agency is revised and administrative reforms are made | | <ul style="list-style-type: none"> - Detailed analysis of JVA functions, the process and methods used in their application and an assessment of its physical and human resources capacity. - Develop policy for the redeployment of staff from transferred responsibilities to establishment, training and strengthening of WUAs and/or for their integration into the WUAs staff. | USAID & GIZ | | Dec. | |
| | A.5.2 - Adequate policy/strategy adopted by the Irrigation Agency to ensure effective transfer of O&M responsibilities to the waters users. | | Review the existing strategy for PIM/IMT implementation. This could be part of the preparation of the PIM/IMT plan that includes the development of a clear vision and objectives | See A3.1 | | | |



Annex 2: Action Plan at the Regional level (North Directorate and Karameh Directorate)

| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|---|--|-----------------|---|--|-------------------|---------------------|------|------|------------------------|
| | | | | | North Directorate | Karameh Directorate | | | |
| B.1 - WUAs are established according to plan | B.1.1 - PIM/IMT target coverage of equipped area have been achieved | N01040 | GENERAL ACTIONS NEEDED² - Identify WUAs eligible for transfer within each region, and the human and financial resources required to effectuate the transfer. - Identify WUAs currently operating under PIM that need strengthening to qualify them for the transfer and the financial resources required - Develop an implementation plan ³ accordingly. | Planning Department, O&M and Financial Administration | | | Apr | | Yearly update/revision |
| B.2 - Water users are informed and sensitized to the PIM/IMT program | B.2.3 - Awareness campaigns were carried out and B.2.4 - Targeted Water users are informed of their roles and responsibilities and involved in | N02040 & N02060 | GENERAL ACTIONS NEEDED: 1) Develop awareness campaigns plan⁴ - Identify the targeted water users per region that need sensitisation to the PIM/IMT program, identify the messages required to raise their awareness and the tools needed (CDs, videos, brochures). - Develop awareness campaign plans to reach all those farmers within a planning period of three years. | JVA WUA administration with the support from donors and relevant JVA departments (planning unit, O&M,etc.) | | | Jun | | Yearly update/revision |

² These refer to actions that should be undertaken under the responsibility of the WUA Administration of JVA, in close cooperation with the regional offices. All proposed activities should be carried out for the whole Jordan Valley and delineated per region.

³ This plan should be integrated with the PIM/IMT plan in order to enable estimation of all the total resources needed for the implementation of PIM/IMT plan and enable identification of sources of funds and their allocation

⁴ This plan should be integrated with the PIM/IMT plan in order to enable estimation of the total resources needed for the implementation of PIM/IMT plan and enable identification of sources of funds and their allocation



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| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|--|---|--------------|--|--|-------------------|---------------------|------|------|------------------------|
| | | | | | North Directorate | Karameh Directorate | | | |
| | the preparation of PIM/IMT program. | | <ul style="list-style-type: none"> - Identify human and financial resources needed to carry out the awareness campaigns. 2) Implement the campaigns accordingly for both farmers (and employees as needed). 3) Monitor implementation on a quarterly basis and adjust plan as necessary <p><u>Note 1: While planning, ensure that targets can be achieved considering the available resources</u></p> | | | | | | |
| | | | <ul style="list-style-type: none"> 4) Prepare Communication plan and identify communication tools for dissemination of announcements, invitations, meetings location and time, list of addresses, etc.) | | | | Jun | | Yearly update/revision |
| | | | <p>REGION SPECIFIC ACTIONS NEEDED:</p> <ul style="list-style-type: none"> - Carry out the meetings as planned (N02040). This should also increase the level of participation (N02060). - Monitor implementation of meetings on a quarterly basis and adjust plan as necessary | | √ | | | | Annual |
| B.4 ⁵ - WUAs leaders and staff know their responsibilities | B.4 ⁶ .2 - Training for the WUAs leaders and staff is | N04030, | <p>GENERAL ACTIONS NEEDED</p> <ul style="list-style-type: none"> - Carry out training needs assessment for the WUAs leaders and staff. | JVA WUA administration with the support from | | | Jun | | Yearly update/revision |

⁵ The evaluation report mistakenly uses Outcome B2 "Water users are informed and sensitized to the PIM/IMT program" instead of the outcome B4 correctly inserted in the table

⁶ The evaluation report mistakenly uses Output B2.1, B2.2 and B2.3, instead of the respective outputs for outcome B4



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| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|--|--|--------------|--|--|-------------------|---------------------|--------|--------|------|
| | | | | | North Directorate | Karameh Directorate | | | |
| and have the necessary skills to carry out their work | implemented | | <ul style="list-style-type: none"> - Identify training courses needed (both for technical staff and accountants and including M&E) - Develop a training plan⁷ - Identify the human and financial resources required for the implementation of the training plan. - Monitor implementation on a quarterly basis and adjust plan as necessary | donors and relevant JVA departments (planning unit, O&M, etc.) | | | | | |
| | | | <p>REGION SPECIFIC ACTIONS NEEDED</p> <ul style="list-style-type: none"> - Provide technical, financial and logistic support for implementing the planned trainings in the North Directorate - Ensure that the training plan is achievable and in line with the available resources. - Regularly monitor the plan and adjust plan as needed | | √ | | | Annual | |
| B.5 - Accounting management capacity of WUAs developed and operative | B.5.1 - Accounting training is implemented | - N05030 | <p>GENERAL ACTIONS NEEDED</p> Training assessment and plan under N04030 should include accounting | See B.4.2 | | | | | |
| | | | <p>REGION SPECIFIC ACTIONS NEEDED</p> Ensure that training on accounting and financial matters is implemented for relevant WUA staff according to the plan, through regular follow up (on a quarterly basis) and adaptation of plan as needed | | √ | √ | Annual | | |
| | B.5.2 - The | N05050 | <p>GENERAL ACTIONS NEEDED</p> | Coordination | | | | May | |

⁷ This plan should be integrated with the PIM/IMT plan in order to enable estimation of the total resources needed for the implementation of PIM/IMT plan and enable identification of sources of funds and their allocation



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| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|--|--|--------------|---|--|-------------------|---------------------|--------|------|------|
| | | | | | North Directorate | Karameh Directorate | | | |
| | accounting system is installed | | <ul style="list-style-type: none"> - Agree with the WUAs or Jordan Cooperative Corporation (JCC) to carry out training on accounting matters. - Should the WUA functions expand, there might be a need to uniformly acquire a dedicated financial system (software) throughout the WUAs | Committee | | | | | |
| | | | <p>REGION SPECIFIC ACTIONS NEEDED</p> <p>Follow up training with JCC to make sure that the training is implemented</p> | | √ | √ | Annual | | |
| B.6 - Government effectively regulating Federations of WUAs and implementing them according to plan | B.6.2 - WUA Federations are established according to plan | N06030 | <p>GENERAL ACTIONS NEEDED</p> <p>Undertake a feasibility study for the establishment of a federation of WUAs. Issues to be determined include whether to create one federation for all the WUAs or several federations (say one per region).</p> | JVA WUA Administration with the support of donors (GIZ, USAID) | | | | June | |
| B.8 ⁸ - A monitoring and evaluation (M&E) system provides inputs for the evaluation of PIM/IMT program and improving the | B.8.1 ⁹ - M&E system is defined and operative | N08030 | <p>GENERAL ACTIONS NEEDED</p> <p>Training assessment and plan under N04030 should include training on M&E for the leaders and staff of the WUAs</p> <p>REGION SPECIFIC ACTIONS NEEDED</p> <ul style="list-style-type: none"> - Ensure that adequate M&E training for the WUAs with newly transferred tasks is undertaken according to the training plan. M&E allows taking | See B.4.2 | | | Jun | | |
| | | | | | √ | √ | | | |

⁸ The evaluation report mistakenly uses Outcome B1 “WUAs are established according to plan” instead of the outcome B8 correctly inserted in the table

⁹ The evaluation report mistakenly uses Output B1.1 “PIM/IMT target coverage of equipped area have been achieved” instead of the outcome B8.1 correctly inserted in the table



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| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|---|--|--------------|---|-----------------------|-------------------|---------------------|------|------|------|
| | | | | | North Directorate | Karameh Directorate | | | |
| performance of WUAs | | | corrective actions in time. - Ensure regular follow up (on a quarterly basis) and adaptation of plan as needed | | | | | | |
| B.9 ¹⁰ - Reduced cost of operation and maintenance and greater availability of water in the irrigation systems transferred to WUAs | B.9.1 ¹¹ - Rehabilitation needs in the irrigation systems transferred to the WUAs are identified and works undertaken | N09040 | GENERAL ACTIONS NEEDED - Identify rehabilitation needs ¹² as part of the PIM/IMT plan. - Implement according to the plan. - Ensure regular follow up (on a quarterly basis) and adaptation of plan as needed | | | | | | |
| | | | REGION SPECIFIC ACTIONS NEEDED Identify Rehabilitation needs and planning for rehabilitation in the northern region | | √ | | | | |

Annex 3: Action Plan at the Local Level (WUA 41 (North Directorate) and WUA 91 (Karameh Directorate))

| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|---|--|--------------|--|--|----------------|--------|--------|--------|--------|
| | | | | | WUA 41 | WUA 91 | | | |
| C.2 - Governance bodies of the WUA functioning adequately | C.2.1 - General Assembly functioning regularly | C02020 | Conduct General Assembly Meetings on an annual basis | JVA WUA Administration to provide training | √ | | Yearly | Yearly | Yearly |
| | | P02010 | Develop a plan to increase the number of the registered number of members in the WUA by 10% every year | | | √ | 10% | 10% | 10% |

¹⁰ The evaluation report mistakenly uses Outcome B1 "WUAs are established according to plan" instead of the outcome B9 correctly inserted in the table

¹¹ The evaluation report mistakenly uses Output B1.1 "PIM/IMT target coverage of equipped area have been achieved" " instead of the outcome B9.1 correctly inserted in the table

¹² This should be integrated with the PIM/IMT plan in order to enable estimation of the total resources needed for the implementation of PIM/IMT plan and enable identification of sources of funds and their allocation



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| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|---|---|--------------|--|---|----------------|--------|-------------------------------|------|------|
| | | | | | WUA 41 | WUA 91 | | | |
| | C2.3 - Women represented in governance bodies | C02063 | Promote and motivate female farmers to become members of the WUA; targeting 2 female farmers by 2015 | | √ | | 2 female farmers | | |
| | C.2.6 - Internal communication and conflict resolution mechanism established and operational | C02120 | - Establish a communication and conflict resolution committee to be selected from the General Assembly. - Document annual activities/conflicts and means of solving them and present to the General Assembly for approval. | JVA WUA Administration and Regional Offices | √ | √ | Next General Assembly Meeting | | |
| C.5 - Improved level and efficiency of water delivery and more effective maintenance | C.5.1 - Procedures for improved operation and maintenance are established | C05010 | WUA 91 to use the daily irrigation schedule (already printed) as an operation guideline (describing the main norms for operating the irrigation system and the corresponding responsibilities) | JVA WUA Administration and Regional Offices | | √ | immediately | | |
| | | C05020 | - Prepare maintenance guidelines describing the main criteria for undertaking maintenance work at the farm turnouts and corresponding responsibilities. - Expand the guidelines as more maintenance responsibilities are assigned to the WUA. | JVA WUA Administration and Regional Offices | √ | √ | Feb | | |
| | | C05040 | - Prepare Annual Operation Plan describing the main operation activities to be | JVA WUA Administration and Regional | √ | √ | Feb | | |



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| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|---|---|-----------------|---|---|--|--------|-------------|-------------------------------------|-------------------------------------|
| | | | | | WUA 41 | WUA 91 | | | |
| | | | carried out with cost estimations and implementation schedule. - Include in the Transfer agreement | Offices jointly with the WUAs | | | | | |
| | C.5.2 - O&M activities implemented effectively. | C05060 & C05070 | Prepare annual surveys to measure 1) the degree of satisfaction of the farmers with the: - operation of the irrigation system (C05060) - maintenance of the irrigation system (C05070) - WUA performance (It is suggested to ask at random some 20- 30 farmers through a questionnaire to be filled) (C07070) 2) the degree of satisfaction of the government staff with respect to performance of WUA (Survey to be carried out among the government staff of the concerned regional office working with the WUA in question) (C07080) | JVA WUA Administration and Regional Offices jointly with the WUAs | √ | √ | June | | |
| C.7 - The level of service provision is improved | C.7.2 - Farmers of the WUA and government staff of the irrigation agency are satisfied with the performance of the WUA | C07070 & C07080 | Conduct annual surveys | JVA WUA Administration and Regional Offices jointly with the WUAs | √ | √ | | | |
| | | | C07070 | Undertake the necessary actions to increase the degree of satisfaction of the government staff with respect to performance of the WUA | JVA (to rehabilitate the network according to plans) | | √ | Degree of satisfaction to reach 80% | Degree of satisfaction to reach 88% |
| C.6 - Improved | C.6.2 - Improved | C06080 | Increase the fees collection rate | | √ | √ | Collect 15% | Collect 15% | Collect |



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| Outcome | Output | Indicator(s) | Action | Required Support from | Applicable for | | 2015 | 2016 | 2017 |
|---|---|--------------|---|-----------------------|----------------|--------|----------------|----------------|--------------------|
| | | | | | WUA 41 | WUA 91 | | | |
| control of all technical and financial activities | control of the total annual cost | | | | | | of the balance | of the balance | 25% of the balance |
| C.6 - Improved environmental conditions | C.6.1 - Improved environmental practices | D06010 | Prepare environmental awareness programs (meeting, field visits) to address pollution due to nocive materials such as: used plastics of green houses, pesticides packages etc. and possible means to remove them. The plan is to be adopted as part of the annual work plan | | | | | Annual | Annual |



Annex 4: List of Proposed System Refinements

Refinements to the computer application (to be undertaken by CIHEAM during this phase of the contract)

1. **Add unit** to all the indicators in the evaluation reports
2. The outcomes and the outputs for the Evaluation reports “REGIONAL_B04_1_2009-2013” and “REGIONAL_B04_3_2009-13” do not correspond to the indicators.
3. The outcomes and the outputs for the Evaluation reports “REGIONAL_B08_1_2009-2013” and “REGIONAL_B08_3_2009-13” do not correspond to the indicators. **Correct outcome for B.8 is:** “A monitoring and evaluation (M&E) system provides inputs for the evaluation of PIM/IMT program and improving the performance of WUAs”. **While the correct output for B8.1 is:** “M&E system is defined and operative”.
4. **Redefine indicator N09040** “Percentage WUAs where rehabilitation works on irrigation systems was actually completed with respect to those planned during last year” **to read as follows** “Percentage of the WUAs where rehabilitation works on irrigation systems was actually completed with respect to the total number of WUAs legally registered”. **This is needed in order to avoid a zero score when the rehabilitation is completed and no more plans for rehabilitation are underway. Modify formula accordingly.**
5. The outcomes and the outputs for the Evaluation reports “REGIONAL_B09_1_2009-2013” and “REGIONAL_B09_3_2009-13” do not correspond to the indicators. **Correct outcome for B.9 is:** “Reduced cost of operation and maintenance and greater availability of water in the irrigation systems transferred to WUAs”. **While the correct output for B9.1 is:** “Rehabilitation needs in the irrigation systems transferred to the WUAs are identified and works undertaken”.
6. **C02012: Add validation rule to the indicator**, since the number of registered farmers in the WUA could not be more than the farmers.
7. **The formula in the indicator P06160 should be corrected**, whereby the denominator should become a numerator and vice versa)

Further Changes-changes in the system Ssettings to suit the local conditions (to be Undertaken by Jordan)

1. **De-score the following indicators:**
 - a. Since the irrigation areas in the Jordan Valley; initially managed by WUAs under the PIM model, are getting progressively managed under the IMT model, this results in decreasing areas under PIM, when the desired result in the M&E system is suggested to correspond to increasing areas. This affects the scoring in the relevant indicators (**N01010, N01020**). **It is therefore suggested that these indicators are de-scored**). Only **N01030** which evaluates the increase in the total areas operating under both PIM and IMT should be considered.
 - b. The above argument also applies on indicator **N01040 and N1050**; whereby, the Cumulative Number of WUAs Established under the PIM model of the PIM/IMT program may be decreasing as more WUAs previously operating under PIM start to operate under IMT. **It is therefore suggested that these indicators are de-scored.**
2. **Deactivate indicator P04020:** According to JVA, the increase in the number of on- farm reservoirs is not an indication of the dissatisfaction of farmers with water distribution. This is a reflection of on-farm management, and the fact that JVA cannot operate after certain hours due to military constraints.
3. **Change the scoring criteria of the following indicators**
 - a. **Change the scoring for N04030** to become 2 if the Percentage of the Number of Actual Training courses carried out for the WUAs leaders and staff with respect to those Planned is greater or equal to 80%, 1 for values < 80% and >= 60%, and 0 if less than 60%



- b. **Change the scoring criteria for P03060:** “Water delivery efficiency - pressurized irrigation system”. Score 2 should be assigned to efficiency $\geq 80\%$, score 1 for efficiency between 60% and 80% and zero for efficiency equal to or below 60%
- c. **Change the scoring criteria for P03081** Score 2 should be assigned to cropping intensity ≥ 2 , score 1 for intensity between 2 and 1.5 and zero for intensity equal to or below 1.5

Refinements to the M&E System involving possible changes in the approach (that can be accommodated by CIHEAM beyond SWIM life)

1. All the indicators that measure percentages in the changes (decrease and/or increase) in the values of two consecutive years need to be revised, as it is not clear whether they represent a ratio or percentage change. **Examples on these indicators include but are not limited to:** [M3020N&R](#), [M3040N&R](#), [M3050N&R](#), [M05080N&R](#), [M05090](#), [N01010](#), [N01020](#), [N01030](#), [N01040](#), [N01050](#), etc.. **To review all such indicators to clarify them or change semantics as applicable.**
2. The indicator [A04010](#) related to “*The legal framework was assessed/revised during the implementation period to ensure its suitability for the legal establishment of the WUAs*” **should be more specific** and hence revised to account for the intended meaning of the indicator (i.e. it should refer to specific WUA related law). **Also check/review all related indicators:** [A04011](#), [A04012](#), [A04013](#), [A04021](#), [A04022](#), [A04023](#), [A04024](#), [A04025](#), [A04026](#) and [A04027](#).
3. **Clarify how to calculate indicator B03031 at the National &Regional levels.** Suggest adding the following: “Training days is calculated by multiplying the no. of days by the number of staff trained”.
4. **Redefine indicator C06150:** “Water Users Payment Rate during last year” **to read as follows** “Percentage of the total farmers that did not pay during last year. **Modify formula accordingly.**
5. **C02070: Change** “auditing committee” to “auditing/monitoring committee”.
6. **C04011 & C04012: Add a note to the definition to clarify that the actual and desired interval in days between two consecutive irrigations is measured at the farm turnout.**



Annex 5: Data that need verification by JVA

| Indicator | Applicable to | |
|---------------------------|---|--|
| | WUA 41 | WUA 90 |
| N03320 | Investigate the difference in the number of training days between the North directorate and Karameh. | |
| B05051 | There is no electronic accounting system. Change the logical answer and score accordingly | |
| C01010 | The transfer agreement has been signed between the WUA and JVA since 2010. Change the logical answer to yes and the score accordingly | |
| C01011 | The statute is in place since 2010. Change the logical answer to yes and the score accordingly | |
| C01012 | The number of registered farmers is > than the total number of farmers. Actual number of registered farmers is 135 | |
| C03022, C03072 and P03072 | Check water allocations (C03022) and crop water requirements (C03072) as the water allocations in 2012 was more than the crop water requirements (in the case of WUA91) | |
| P03060 | | Efficiency in 2012 is more than 100% . Check data |
| C04011 & C04012: | Correct data to reflect the interval between two irrigations at the farm turnout | |
| C05010 | | An operation guideline already exists. Change logical answer to "Yes" and the score accordingly. |
| C05020 | Maintenance guidelines are not prepared. Change Logical answer to "No" and the score accordingly | |
| C05040 | Annual Operation Plan is not prepared. Change Logical answer to "No" and the score accordingly | |