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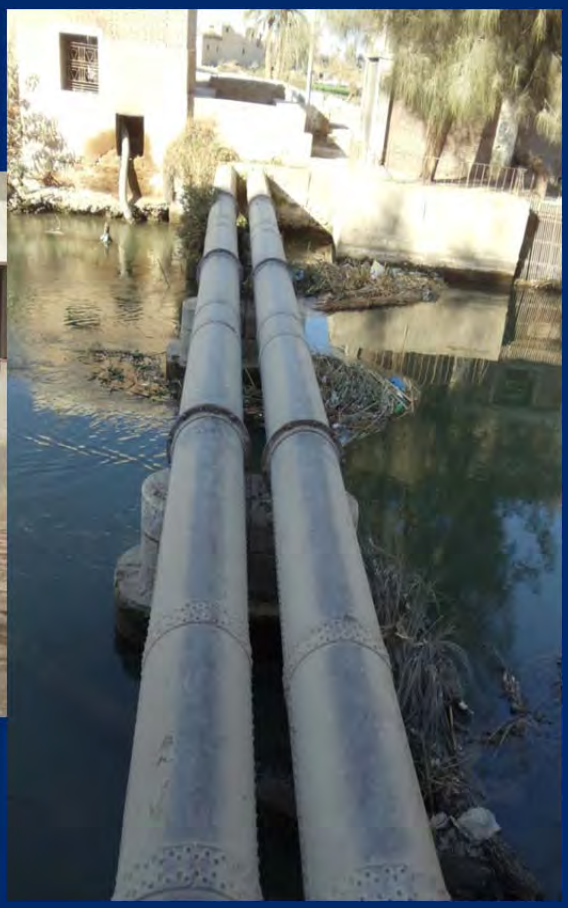
MID-TERM EVALUATION REPORT: INTEGRATED WATER RESOURCES MANAGEMENT II

Implementation Assessment, Findings and Recommendations



May 2011

USAID/EGYPT
Office of Sustainable Resource Management

MID-TERM EVALUATION REPORT: INTEGRATED WATER RESOURCES MANAGEMENT II

IMPLEMENTATION ASSESSMENT, FINDINGS AND RECOMMENDATIONS

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ACRONYMS

AUC	American University of Cairo
BCWUA	Branch Canal Water User Association
DCOP	Deputy Chief of Party
DQA	Data Quality Assessment
FWUOP	Fayoum Water User's Organization Project
GIS	Geographic Information System
GOE	Government of Egypt
GTZ	Gesellschaft fuer Technische Zusammenarbeit (German Technical Cooperation)
GW	Groundwater
IAS	Irrigation Advisory Service
IIIMP	Integrated Irrigation Improvement and Management Project
IQC	Indefinite Quantity Contract
IRG	International Resources Group
IWMD	Integrated Water Management District
IWRM	Integrated Water Resources Management
IWRM I	Integrated Water Resources Management Project I
IWRM II	Integrated Water Resources Management Project II
LIFE	Livelihood and Income for the Environment
LOE	Level-of-effort
M&E	Monitoring and Evaluation
MALR	Ministry of Agriculture and Land Resources
MIC	Ministry of International Cooperation
MISD	Matching Irrigation Supply and Demand
MOH	Ministry of Health
MSEA	Ministry of State for Environmental Affairs
MWRI	Ministry of Water Resources and Irrigation
NGO	Non-Governmental Organization
PMP	Performance Management Plan
PSD	Productive Sector Development
RWMO	Regional Water Management Organization
SOW	Scope of Work
USAID	United States Agency for International Development
WUA/O	Water Users Association/Organization
WW	Wastewater

EXECUTIVE SUMMARY

In January 2010, USAID/Egypt conducted a mid-term evaluation of the Integrated Water Resources Management II (IWRM II) project implemented by the International Resources Group (IRG). The primary objectives of the project are to increase water efficiency and productivity, improve water quality and provide a more equitable allocation of water resources. The evaluation assessed the performance of IWRM II over the past two years to validate results and provide recommendations for the remaining two years of the project. The approach taken by the evaluation team was primarily a review of project and MWRI documentation as well as field visits with interviews of various stakeholders responsible for different aspects of implementation including IRG, the Ministry of Water Resources and Irrigation (MWRI), and representatives from branch canal water user associations (BCWUAs).

IRG implemented the IWRM II project under two primary project components: water users and water suppliers. Each project component has four tasks with associated objectives outlined in Table 1. Additionally, the project has three cross-cutting tasks which support all major activities.

Table 1 IWRM II project components with associated tasks and objectives

Project Component	Task	Main Objective
Water Users	1.1 Formation and development of BCWUAs	Form and activate functional and sustainable BCWUAs
	1.2 Sustainable local financing for canal and drain maintenance	Improve equitable allocation of water resources through decentralized water management and increased participation by building capacity and through supporting awareness of cost-sharing
	1.3 Improvements in water productivity and efficiency	Reduce water use for crop production by shifting to or expanding production of high-value crops with lower water use requirements and to make better use of water saving practices and technologies
	1.4 Wastewater reuse	Provide increased efficiency to water resources through improved economic returns to treated wastewater
Water Suppliers	2.1 Regional water management organizations	Assist MWRI and other donors to create organizations with the responsibility and required authority to enhance decentralized water management decision-making at the regional level
	2.2 Formation and development of IWMDs	Establish IWMDs for decentralized water management decision-making and improved services to increase water productivity, efficiency, equitable allocation, and improved water quality

Project Component	Task	Main Objective
	2.3 Establishment of information management systems for sustainable water resources management	Establish information management systems at district and directorate levels to improve water allocation systems and procedures as well as increase knowledge of water resources use and availability
	2.4 Capacity-building of MWRI personnel	Assist MWRI in providing graduate-level training opportunities for its employees to improve management of water resources
Cross-Cutting	Monitoring and evaluation	Provide project stakeholders with the information needed to track and manage project progress and assess its impacts
	Communication	Support all major activities – improve capacity-building, increase understanding and support for institutional reform and the integrated water management concept
	Gender	Increase awareness of the importance of gender equitable approaches in all aspects of water resources management

In general, the evaluation team found that the integrated water management approach has been successful in improving communication between water users and irrigation districts as well as improving the quality and flow of information pertaining to water allocations. All levels of MWRI and water users demonstrate a sincere commitment to a participative and decentralized approach for water management. However, lack of coordination and follow-up with key project counterparts including the Ministry of Agriculture and Land Resources, the Holding Company for Water and Wastewater and on key issues related to legal status of BCWUAs, RWMO establishment and student recruitment has resulted in the project not meeting expectations in five out of eight tasks and in all three of the cross-cutting components. An abbreviated summary of the evaluation results together with recommendations going forward is given in Table 2.

Table 2 Summary of evaluation results and recommendations

Task	Meeting Expectations	Performance	Main Recommendations
1.1 Formation and development of BCWUAs	Yes	BCWUAs have been formed to cover branch canals but greater effort needs to be placed on capacity-building	- Prioritize training to include organizational and technical training - Monitor governance and institutional capacity
1.2 Sustainable local financing for canal and drain maintenance	No	Amendment to Law 12 1984 was drafted but not yet passed and no other significant progress has been made on required deliverables	- Immediately wrap-up ongoing financing work, cease further activity and remove remaining activities from contractor scope of work.

Task	Meeting Expectations	Performance	Main Recommendations
1.3 Improvements in water productivity and efficiency	No	Task not adequately staffed after dismissal of DCOP. MWRI decree has reduced rice cultivation but project has not provided sufficient training on alternative crops and irrigation methods	- Increase farmer training on high-value crops and modern irrigation methods - Create agricultural extension materials for new crops - Increase coordination between MWRI and MALR
1.4 Wastewater reuse	No	Feasibility study was completed but other deliverables remain unsatisfied	- Cease all further activity and remove task from scope of work
2.1 Regional water management organizations	No	Despite efforts to move this forward, no significant progress has been made	- Cease all further activity and remove task from scope of work
2.2 Formation and development of IWMDs	Yes	IWMDs have been formed resulting in management efficiency and improving communication between MWRI and water users	- Develop institutional performance criteria and assess capacity - Reassess training capacity and develop IWRM training materials
2.3 Establishment of information management systems	Yes	Task is proceeding well although some project objectives data are not being captured or analyzed	- Collect additional data with direct relevance to project objectives - Analyze data being collected to understand and improve water management
2.4 Capacity-building of MWRI personnel	No	Only 20 candidates out of a total of 50 are enrolled in a Master's program and none have finished; communication of this opportunity was poor and many districts were unaware of its existence	- Facilitate current students to finish studies in a timely manner - Do not add any more candidates into the program as there is not enough time
Monitoring and evaluation	No	Project measuring process indicators but not outcome and institutional or governance indicators	- Develop an ongoing system of M&E updated annually - Quantify water productivity and efficiency - Develop and apply process, outcome and institutional indicators
Communication	No	Communication outputs do not match stakeholder needs	- Revise communication plan seeking stakeholder input
Gender	No	Project is not fully committed to achieving the expected outcomes from the Year 1 Work Plan	- Provide training opportunities which do not exclude female members of BCWUAs due to time and/or location - Provide specialized training to female members of BCWUAs who have been designated domestic representatives

Sustainability of project outcomes is a major risk faced by the new IWMDs and related BCWUAs. Without positive and tangible results (water delivery improvement, irrigation system improvements, etc.) from the new model of management and continued cooperation between users and MWRI, association members are likely to lose interest in participation. Additionally, more effort to build capacity of district office staff and fledgling associations is needed in order to maintain the spirit of cooperation and mobilize resources for system maintenance, rehabilitation and improvement.

1. INTRODUCTION

In January 2009, USAID/Egypt contracted with the International Resources Group (IRG) to implement the Integrated Water Resources Management II (IWRM II) project as a 4-year, task order award under the Water II IQC with an approximately $10 million ceiling. USAID/Egypt conducted a mid-term evaluation of the IWRM-II project in January 2010 to assess performance, validate results, capture lessons learned and provide recommendations for program adjustments. This report summarizes results from the evaluation.

2. BACKGROUND

Over the last two decades, USAID has assisted the Government of Egypt (GOE) in placing more control of decision-making concerning irrigation water management in the hands of farmers. Design of the IWRM Program (Phases I and II), was based on the results of several earlier USAID programs, most notably the Agricultural Policy Reform Program – Water Policy Activity (1997-2002), which focused on a number of benchmarks or specific reform actions. Following positive results from these programs, USAID designated funding from the Red Sea Sustainable Development and Improved Water Resources Management Project for the so-called "bridging project" – Improved Water Management Component (2002-04) – which field-tested the concepts of integrated water management districts (IWMDs) and branch canal water user associations (BCWUAs) that formed the basis for the design of the IWRM program.

The IWRM I program (2004-2008) has assisted the Ministry of Water Resources and Irrigation (MWRI) in implementing integrated management of water resources at the district level in the directorates of New Zifta (Gharbiya), West Sharkeya, East and West Qena, and Aswan. IWRM directly supports GOE's National Water Resources Plan 2017. IWRM I was successful in increasing farmer participation in water management and decentralizing decision-making authority in Upper Egypt and portions of the Nile Delta. Based on the results of IWRM I and MWRI's support of these management reforms, USAID/Egypt initiated IWRM II, a second phase of the program to expand the project to a larger number of districts in East Nile Delta and broaden the impact of integrated water resources management.

The purpose of the IWRM II (2009-2012) is to replicate the positive IWRM I experience in different areas of Egypt while adding more explicit focus on improved water management outcomes. IWRM II is working in a number of districts in the East Nile Delta to establish IWMDs and BCWUAs in order to decentralize water management authority and improve efficiency and productivity of water use. IRG is to work with MWRI and other government entities, including the Ministry of Agriculture and Land Reclamation (MALR), the Ministry of State for Environmental Affairs (MSEA), and the Ministry of Housing (MOH) as well as water users including farmers and their associations throughout the East Delta region.

3. IWRM II PROJECT OBJECTIVES

IRG's Annual Work Plan Year 1 (January – December 2009) has listed the following overall goals for IWRM II:

- Increased productivity of water resources (as measured by value added per quantity of water consumed);
- Increased efficiency of water resources (as measured by quantity of water consumed per feddan or 0.42 hectares of cultivated land, or other similar measure);
- More equitable allocation of water resources; and
- Improved water quality.

IRG is working to meet these goals by addressing implementation activities under two primary project components: water users and water suppliers. Each project component has four tasks with associated objectives and there are three overall cross-cutting tasks which support all major activities. Table 3 provides a project breakdown of components, tasks, and objectives.

Table 3 IWRM II project components with associated tasks and objectives

Project Component	Task	Main Task Objective
Water Users	1.1 Formation and development of BCWUAs	Form and activate functional and sustainable BCWUAs
	1.2 Sustainable local financing for canal and drain maintenance	Improve equitable allocation of water resources through decentralized water management and increased participation by building capacity and through supporting awareness of cost-sharing
	1.3 Improvements in water productivity and efficiency	Reduce water use for crop production by shifting to or expanding production of high-value crops with lower water use requirements and to make better use of water saving practices and technologies
	1.4 Wastewater reuse	Provide increased efficiency to water resources through improved economic returns to treated wastewater
Water Suppliers	2.1 Regional water management organizations	Assist MWRI and other donors to create organizations with the responsibility and required authority to enhance decentralized water management decision-making at the regional level
	2.2 Formation and development of IWMDs	Establish IWMDs for decentralized water management decision-making and improved services to increase water productivity, efficiency, equitable allocation, and improved water quality
	2.3 Establishment of information management systems for sustainable water resources management	Establish information management systems at district and directorate levels to improve water allocation systems and procedures as well as increase knowledge of water resources use and availability

Project Component	Task	Main Task Objective
	2.4 Capacity-building of MWRI personnel	Assist MWRI in providing graduate-level training opportunities for its employees to improve management of water resources
Cross-Cutting	Monitoring and evaluation	Provide project stakeholders with the information needed to track and manage project progress and assess its impacts
	Communication	Support all major activities – improve capacity-building, increase understanding and support for institutional reform and the integrated water management concept
	Gender	Increase awareness of the importance of gender equitable approaches in all aspects of water resources management

4. EVALUATION METHODOLOGY

The program evaluation assessed the past performance of IWRM II task activities from inception of the program in January 2009 through to the present and sought to provide recommendations on possible strategies for improving its effectiveness over the remaining two years of the contract base period. The scope of work (SOW) for the evaluation is provided in Appendix A.

Evaluation Team (in alphabetical order)

- Scott Christiansen – Agriculture expert (USAID/Washington)
- Thomas Kaluzny – Water engineer (USAID/East Africa)
- Jonathan Lautze – Water resources expert (USAID/Washington)
- Victoria Mitchell – Program officer (USAID/Egypt)
- John Pasch – Team leader/coordinator (USAID/Egypt)
- Soad Saada – Environment and gender expert (USAID/Egypt)
- Amani Selim – Monitoring and evaluation expert (USAID/Egypt)

Objectives

The evaluation had the following objectives:

- Evaluate project effectiveness and impact in achieving its stated objectives;
- Identify opportunities for improved activity implementation within the project scope and timeframe;
- Reevaluate and clarify expected outcomes; and
- Identify critical obstacles impeding implementation and provide recommendations on a way forward.

The evaluation addressed five key areas of performance:

1) Validity of Hypothesis (Strategy) – Evaluated the validity of the development strategy guiding IWRM II activities and either confirmed or recommended revision;
2) Confirmation of Results – Reviewed the IWRM II Performance Monitoring Plan (PMP) and additional documentation to determine what valid results were achieved and the expectations for achievement of indicator targets;
3) Responsive to Stakeholder Needs – Reviewed project activities for responsiveness to the needs of partners and BCWUAs;
4) Sustainability of Actions – Evaluated sustainability of program activities and the likelihood of replication of practices and management approaches implemented under the program; and
5) Lessons Learned – Identified lessons learned from the first two-years of implementation.

Approach and Limitations

The approach taken by the evaluation team was primarily a review of project and MWRI documentation as well as field visits with interviews of various stakeholders including IRG, MWRI (4 of 8 directorates and 11 of 45 districts), and representatives from approximately 143 BCWUAs. Evaluation team members also interviewed the Holding Company for Water and Wastewater officials and the American University of Cairo (AUC) as part of the review process for Tasks 1.4 and 2.4 respectively. A breakdown of sites visited is given in Appendix B.

The team reviewed project documentation including work plans, progress reports, data collection tools and methodology, etc. Reviewed documents are listed in Appendix C. While on site visits, the team also reviewed IWMD database management systems and documentation regarding the establishment of BCWUAs.

Two other donor funded integrated water management programs exist in Egypt focused on improving water management through a strategy of decentralization and formation of water users associations: The Dutch Fayoum Water User Organization Project (FWUOP) and the World Bank Integrated Irrigation Improvement and Management Project (IIIMP). The evaluation team visited and interviewed individuals involved in these other programs to understand their approach and methodologies.

The evaluation was limited in its scope due to time constraints. Only IWMDs within project areas of IWRM I and II were assessed – no comparisons between integrated versus non-integrated districts were made which would have resulted in a stronger evaluation.

5. Project Component – Water Users

Task 1.1 Formation and Development of Branch Canal Water User Associations

Task Objective

Form and activate functional and sustainable BCWUAs to increase productivity, efficiency, equitable allocation, and improved quality of water resources.

Expected Results and Outputs

The Task Order SOW describes the following expected results:

- Increased participation of rural residents in water management decision-making;
- Improved operation and maintenance (O&M) of water conveyance infrastructure;
- Improved quality of local water resources through better management of locally generated liquid and solid wastes; and

- Established and operating BCWUAs in all branch canals in the governorates of Sharkiya, Damietta, Dakahliya, Ismailiya and Qualubiya.

The SOW further describes required deliverables under this task as:

- Within the East Nile Delta Region support the creation of district advisory teams that will take the lead in working with farmers to form new BCWUAs; and
- Assist district advisory teams and newly formed BCWUAs to install management systems, develop services for members, and train staff.

Findings

BCWUAs have been formed and are in various stages of development with some associations more active than others. District water advisory teams were established and are taking the lead in helping farmers to form BCWUAs; however, some districts have limited technical staff available for this task which restricts interactions between water advisory team members and BCWUAs.

BCWUAs have been formed to cover the entire project area of the Eastern Delta. Some associations had only recently been established, however, even though the project is into its third year of implementation. According to association members with whom the evaluation team met, many of these new associations have not received substantial training related to organizational activation and management. Associations have been provided some initial organizational training supporting elections and drafting of internal regulations. More training for association members was requested at almost every field site visited – with some requests for training that targets farmers coming from the district office staff. Further training planned under the project will focus on organizational activation. Anecdotal evidence suggests that some BCWUAs are active while others are considered "weak". IRG does not measure governance capacity nor the level of activation among the established BCWUAs.

Water Advisory Teams have been formed in each of the irrigation districts to support establishment of BCWUAs. Based on the success of BCWUA formation (i.e. 624 established in approximately 2 years), the Water Advisory Teams appear to have been effective.

The project has issued a guidance document (2008) which outlined the criteria for the establishment of BCWUAs; however, these criteria were not followed uniformly in the formation of BCWUAs and the approach for arriving at a total of 624 associations was not clear. Many BCWUAs have geographic areas that are significantly larger than recommended by the guidelines. The evaluation team was informed that this was due to the preponderance of larger farms in newly reclaimed areas using modern irrigation methods; however, a clarification to the guidance is expected to address this point. The guidance document was scheduled to be revised although an updated version has not yet been produced.

BCWUAs are represented by three types of beneficiaries: agricultural, domestic residential areas and industrial users. The evaluation team found that representation of these beneficiaries among the associations is not systematic. For example, industrial users may be represented by one

individual for multiple industries within the area of coverage or each industrial user will have its own representative. Domestic users were represented by one or two female board members of a BCWUA.

Task Performance

The performance of Task 1.1 against project and task objectives is meeting expectations in that BCWUAs have been formed to cover branch canals. However, formation of the associations is only part of the task with greater effort yet to be placed on capacity-building to ensure that they are effective and sustainable. Training has focused more on district needs such as water level/flow measurements but less on farmer needs such as the marketing of high-value crops which the project is promoting for water conservation and to increase water efficiency.

Recommendations

- Training for BCWUAs needs to be prioritized to include organizational, administrative and management training soon after the establishment of the associations as well as technical trainings on canal maintenance, water level monitoring, modern irrigation methods, etc. in order to improve the likelihood of BCWUA sustainability.
- The project needs to monitor the level of activity and functionality for a representative sampling of BCWUAs in order to measure their governance capacity over time which can help identify issues related to the sustainability of the associations.
- The project also needs to establish criteria to use to measure institutional capability, performance, and sustainability of BCWUAs.

TASK 1.2 SUSTAINABLE LOCAL FINANCING FOR CANAL AND DRAIN MAINTENANCE

Task Objectives

Improve equitable allocation of water resources through decentralized water management and increased participation among all rural inhabitants in such management by building MWRI and water users' capacity, and through supporting awareness about cost-sharing and management transfer at all levels.

Expected Results and Outputs

The Task Order SOW describes the following expected results:

- Increased farmer contributions to the costs of irrigation system O&M and rehabilitation; and
- An equitable, locally controlled fee system to sustainably finance branch canal and drain maintenance.

The SOW further describes required deliverables under this task as:

- Draft a ministerial decree to allow BCWUAs to collect and program resources for branch canal O&M;

- Develop a system within BCWUAs for farmers to share in the cost of branch canal O&M and rehabilitation; and
- Develop a plan for complete transfer of branch canal maintenance responsibility to the BCWUAs.

These required deliverables were adopted in IRG's work planning with the draft decree to be completed at the end of Year 1, guidelines for BCWUA cost-sharing to be completed at the end of Year 2 and transfer of maintenance responsibility and financing to the BCWUAs to occur in Year 3.

Findings

The BCWUAs have no legal standing; therefore, associations cannot formally collect funds from members for the purposes of irrigation system maintenance and rehabilitation. The IWRM II Task Order called for the drafting and passage of a ministerial decree that would allow BCWUAs to collect funds; however, the contractor selected to draft an amendment to Law 12 of 1984 that would provide full legal standing to the associations. The proposed amendment was approved by the Minister of Water Resources and Irrigation and sent to the cabinet for approval. Presently, no legislative action has been taken to approve this amendment to Law 12.

While the passage of this amendment to Law 12 is an important project goal and is supportive of BCWUA sustainability, lack of legislative action has become a cause for inaction on this task. Progress has appeared to stop on the development of a system for cost-sharing. The project work plans (Years 1 and 2) called for significant progress on the development of cost-sharing guidelines and procedures by Year 2 of the project; however, little evidence of progress on this task was made available to the project team. The failure to pass the Law 12 amendment was offered as the reason for this inactivity but a cost-sharing system could have been developed in parallel to the legislative process specifically drawing on past experience with the farmers' own cost-sharing initiatives in Egypt and even other international experience. No alternatives for achieving sustainable local financing for canal and drain maintenance have been presented by the contractor, MWRI or other stakeholders.

Discussions with members of the BCWUAs revealed that very few were aware of the project's role in facilitating and formalizing cost-sharing options. In addition, BCWUA members made it quite clear that they have high expectations for MWRI financial contributions to irrigation system operation, maintenance and rehabilitation. In general, BCWUA members seemed prepared to provide in-kind and financial support (the level of support depends on the wealth of the BCWUA members) for basic maintenance and repair but were depending on MWRI and/or USAID for financing major capital works.

The evaluation team was provided with many examples of how the BCWUAs are working together (and even informally pooling funding in some cases) in order to maintain canals and drains, repair mechanical equipment and construct minor civil works. While this type of cost-sharing among farmers existed prior to the project, BCWUA members explain that the formation and function of

the association supports more cost-sharing activities than what previously occurred. Without a baseline of cost-sharing experience or documentation of present cost-sharing activities it is not possible to confirm this assertion.

Task Performance

The performance of Task 1.2 against project and task objectives is not meeting expectations. A draft amendment of Law 12 of 1984 was submitted to the cabinet in Year 1 of the project; however, no other significant progress has been made on required deliverables while draft legislation has been pending.

The BCWUA's ability to share costs with one another and with the MWRI is critical to the sustainability of the BCWUAs. If they are unable to manage resources for the betterment of their water distribution and drainage systems, members are likely to lose interest in the associations. The joint development of annual maintenance plans between the BCWUAs and the integrated water management districts is a positive step toward collaboration; however, more resource leveraging around the implementation of these plans is necessary.

Recommendations

- With the recent dissolution of the parliament and the schedule for elections at least 6 months away, it is unlikely that an amendment to Law 12 will be completed in a timely manner with respect to IWRM II implementation. It is therefore recommended that the project immediately wrap-up this activity with general recommendations for informal cost-sharing and leveraging. Remaining activities under this task should be removed from the project scope of work and planned resource allocations should be reprogrammed. It is anticipated that canal and drain maintenance will remain the responsibility of MWRI at least for the remaining project implementation period.

TASK 1.3 IMPROVEMENTS IN WATER PRODUCTIVITY AND EFFICIENCY

Task Objectives

Encourage farmers to reduce water use for crop production by shifting to or expanding production of high-value crops with lower water use requirements and to make better use of water saving practices and technologies thereby increasing productivity and efficiency of water use.

Expected Results and Outputs

The Task Order SOW describes the following expected result:

- Project-assisted farmers shift to high-value, lower water-consuming crops and make better use of water saving practices and technologies.

The SOW further describes required deliverables under this task as:

- Develop and disseminate information on alternative high-value crops including water consumption, potential economic returns and risks, cultivation practices, and marketing;

- Encourage increased collaboration among MWRI, MALR district level staff, and farmers concerning issues of crop selection and farm-based water conservation;
- Introduce new technologies to save water; and
- Conduct training and outreach to farmers in the BCWUAs on alternative crops and water saving irrigation technologies.

The approach for implementing Task 1.3 was revised from the work plan in Year 1 to Year 2. The Year 2 Work Plan represents the task activities as described in the three phases below with the first two considered in the mid-term evaluation:

1) *Preparation Phase:* Included data collection and baseline survey for eight directorates in the East Delta Region. The project established a database on crops currently growing in the project area and determined their water use requirements, crop production profiles, and productivity rates in Year 1.
2) *Pilot Area and Demo Sites:* In Year 1, the pilot BCWUA was selected, a pilot action plan was prepared, and interested farmers were identified. During Year 2, IWRM II implemented the remainder of the activities initially focusing on summer season 2010 followed-up with winter season 2010/11 (Year 3).
3) *From Pilot to Regional Dissemination:* Expansion of the activity within East Delta Region during Years 3 and 4. Note: funds proposed for carrying out demonstration site activities for Task 1.3 have not been approved by USAID and this phase is not a part of this evaluation.

Findings

IWRM-II is helping MWRI concentrate on efficiency of water delivery. From the available evidence, the project allocated more level of effort to improving water productivity by reducing water consumption rather than increasing crop production. However, for the longer-term, a major challenge will be to shift from the narrow focus on water efficiency to the broader objective of water productivity (i.e. producing the maximum crop yield with as little water as necessary).

The evaluation team was given a working draft of a report that shed some light on what the project has accomplished in terms of plant water productivity and the results are positive and negative – reporting on things that worked and those that did not. These mixed results can be justified due to the nature of a pilot effort in a limited project zone. Nevertheless, the report results are interesting and demonstrate the need to summarize the findings and use the lessons to concentrate on future efforts.

Cooperation between MWRI and MALR has been historically weak although the two ministries have been cooperating though the Matching Irrigation Supply and Demand (MISD) program which targets water releases from the High Aswan Dam to match crop pattern data resulting in more accurate delivery of needed water to districts.

The evaluation team noted that many farmers requested specific training on marketing for alternative high-value crops (e.g. value chain infrastructure, contracting for buyers, etc.). One association chairperson mentioned that their attempt at the high-value crop of sesame failed primarily because they did not receive needed support from the project.

Task Performance

The dismissal of the Task 1.3 Team Leader (and Deputy Chief of Party) early in Year 1 appears to have resulted in a slow start to this activity that has not been completely overcome. While the Task 1.3 leader was replaced, the task order key personnel position originally envisioned to lead this activity has not been filled having an apparent negative impact on implementation across the entire project.

The MWRI issued a decree to reduce areas grown to rice which requires much greater quantities of water than other crops. The reduction of rice cropping area does indeed reduce water use in the system, enabling water to be saved or reallocated to expand irrigation into uncultivated lands. The project did not adequately educate farmers to alternatives to full irrigation of crops – such as deficit irrigation, supplementary irrigation, or other modern irritation techniques.

The MISD program encourages cooperation albeit rudimentary, whereby a summary of crop data is delivered to MWRI every 15 days without any checks on the accuracy of the data. IRG is not taking advantage of the IWRM II project objectives which are common to both ministries to expand meaningful cooperation in a multitude of ways.

Recommendations

- Under the IWRM II project, increase coordination between MWRI and MALR district level staff with the BCWUAs. The aim of coordination should be that MWRI helps to achieve desired timing, equitable and efficient delivery of water while the MALR helps farmers to create associations for contract growing of specialized high-value crops.
- Increase farmer training on marketing of high-value crops such as forecasting crop purchase prices in markets, obtaining quality sources of seed from reputable sellers, and sourcing up-to-date lists of commercial purchasers who buy high value herbs, spices and vegetables.
- Create extension materials (in cooperation with MALR) for good agricultural practices related to the new crops including development of a diversified suite of appropriate species that are recommended for specific areas of the Nile Delta. These materials will help farmers to balance their mix of crops to avoid risk of market downturns or sudden infestations by insects or disease on a particular crop.

TASK 1.4 WASTEWATER REUSE

Task Objectives

Provide increased efficiency to water resources through improved economic returns to treated wastewater.

Expected Results and Outputs

The Task Order SOW describes the following expected result:

- Increased economic returns to treated wastewater, either as reflows into drainage canals and the Nile River or as inputs into the cultivation of crops and/or plants, in accordance with existing or revised wastewater reuse standards.

The SOW further describes required deliverables under this task as:

- Prepare a feasibility study that elaborates alternative uses for treated wastewater (including the irrigation of crops or trees grown in desert lands adjacent to existing wastewater treatment plants or transport back to main river channels through drainage canals), determines costs and benefits of alternatives, and recommends a strategy for maximizing economic returns to treated wastewater;
- If the feasibility study determines that treated wastewater should be used for crop production) then work with relevant GOE organizations and interested private investors to negotiate project terms and conditions, obtain required permits, and monitor implementation; and
- Assist in the formation of new public private partnership agreements.

Findings

The project has produced a feasibility study as one of the required deliverables; however, the Egyptian Holding Company responsible for wastewater management stated that the study was not of direct use to them. The evaluation team did not determine that the study has been applied in practice and the formation of new public private partnerships does not appear to have succeeded for a variety of reasons.

Progress in this task can be characterized as stalled primarily due to a lack of strong coordination and collaboration between the IWRM II project and the Holding Company. Upon investigation, the Holding Company does seek support on other issues which do not align with the goals of the project. Additionally, there is a logistical issue that strains the viability of implementing wastewater reuse as part of this project – the options for expanding wastewater reuse are located in Upper Egypt while the project focus area is the Eastern Delta.

Task Performance

Work under this task has delivered on the production of a feasibility study. Nonetheless, task performance does not meet expectations. The feasibility study has not had much of an impact and the task's other deliverables remain unsatisfied. Furthermore, the focus on wastewater reuse is somewhat disconnected from the other project components due to the geographic discontinuity between this task and the project's primary focus area of the East Delta.

Recommendations

Consider closing this task and re-allocating support to a project that focuses explicitly on wastewater reuse. Wastewater reuse activities could be subsumed into other USAID water and wastewater projects.

6. PROJECT COMPONENT – WATER SUPPLIERS

TASK 2.1 REGIONAL WATER MANAGEMENT ORGANIZATIONS

Task Objectives

Assist the MWRI and other donors to create organizations with the responsibility and required authority to enhance decentralized water management decision-making at the regional level in the East Delta region.

Expected Results and Outputs

The Task Order SOW describes the following expected results:

- Devolution of responsibilities for system development, rehabilitation, and O&M to new regional authorities; and
- At least one regional authority created with the responsibility and required authority to improve water resource management within the region.

The task order further describes required deliverables under this task as:

- Develop a business plan for an autonomous, self-financing, regional organization covering the East Nile Delta Region that would be responsible for management of all resources within the region; and
- Work with the MWRI and other donors to implement the approved plan including the drafting of decrees, organization documents, systems development, and training.

These required deliverables were adopted in the contractor work plans with business planning to occur at the end of Year 1 through Year 2 of the project and Regional Water Management Organization (RWMO) establishment and business implementation to be conducted in Years 3 and 4.

Findings

The concept of RWMOs was introduced as part of the MWRI policy development work supported by GTZ. The previous phase of USAID's IWRM work did not consider RWMO in the integrated management design. In IWRM I, the irrigation directorate served as the regional management entity between the MWRI at the national level and the integrated districts. Nevertheless, the Task Order SOW embraced the concept of RWMOs as a new integrated regional management unit.

Through Year 1, the project team worked actively to bring clarity to the approach for establishing an RWMO. Meetings and discussions were held at various levels of the MWRI to identify options for moving forward with the activity. Early on, when clear direction on RWMOs was not available, the project decided to proceed with project implementation by coordinating with irrigation directorates and governorates as the regional counterparts (i.e. the same approach as IWRM I).

To date, clear policy guidance and authorization for the establishment of RWMOs is not available from the Ministry. Therefore, this task has not made any significant progress against stated objectives although this lack of progress does not appear to have had any adverse effects on other IWRM II tasks (other than being a management distraction).

Task Performance

No significant progress has been made toward establishing an East Nile Delta Regional Water Management Organization. The project team appeared to have made their best efforts to move this task forward; however, implementation has been delayed due to a lack of guidance from the MWRI on how to approach formation and establishment of RWMOs.

Recommendations

Cease all further project activity related to this task and reallocate resources as appropriate. The time remaining in the project is not adequate to complete this activity; however, should MWRI move forward with the implementation of RWMO's the IWRM II project shall remain flexible to support if time and resources permit.

TASK 2.2 FORMATION AND DEVELOPMENT OF INTEGRATED WATER MANAGEMENT DISTRICTS

Task Objectives

Establish Integrated Water Management Districts (IWMDs) for decentralized water management decision-making and improved water services to increase productivity, efficiency, equitable allocation, and improved water quality of water resources.

Expected Results and Outputs

The Task Order SOW describes the following expected results:

- Formation of integrated management units, including IWMDs and/or Integrated Water Management Directorates, throughout the East Nile Delta Region;
- Streamlined internal communications and reduced redundancies within districts; and
- Improved services to BCWUAs.

The SOW further describes required deliverables under this task as:

- Prepare business plans for the new districts based on the experience in the five directorates assisted under IWRM I;
- Assist the MWRI in installing systems and procedures developed under IWRM I within the new districts;
- Provide computer equipment and software (as per the procurement plan);
- Assist MWRI in training new IWMD staff; and
- Provide limited follow-up support for the 27 IWMDs and five irrigation directorates created under the previous LIFE/IWRM program.

Findings

Under the IWRM project, formation of IWMDs was initiated with a series of administrative steps and actions to combine previously separate irrigation and drainage inspectorates, which were under the management of a regional directorate, into an integrated district with four distinct departments (administration; water management and distribution; maintenance; and planning, follow-up and water advisory). The IWRM project has been extremely successful in facilitating this process achieving the project goal of establishing 45 integrated districts in the East Nile Delta.

According to project documentation, formation of IWMDs aimed to improve management efficiency within the MWRI and to support greater water user participation in decision-making by creating a more accessible and streamlined platform for irrigation system management and maintenance. While all of the IWRM II districts are newly formed, the project is already seeing positive impacts on its implementation effort. In visits to the field, BCWUAs and districts consistently reported that communications between water users and MWRI had dramatically improved since formation of the integrated districts and associations. Additionally, the management reorganization, equipment and software provision, and training has significantly improved data collection and sharing across different departments of the Ministry. The quality and format of data also appears to be improved with IWRM project inputs providing an important foundation for informed decision-making regarding water allocations.

Task activity over the remaining implementation period will focus on training and capacity-building of district staff. The need for training and experience among district staff was confirmed by the evaluation team visits to districts. Some tools are in place to support the work of district staff including computers and monitoring equipment. However, the evaluation team observed that the planning, follow-up and water advisory sections in each district were generally well-equipped while other sections of the office often lacked even a single computer to support their work.

The project also helped to put in place systems for O&M and planning. O&M and business plans were generally in place at the IWMDs visited although depth and quality of plans varied. District staff did not appear to have completely embraced these plans as implementing tools to guide their daily work. Some O&M plans were developed collaboratively with BCWUAs while others were developed by district staff with minimal user input although this was usually due to the nascent formation of BCWUAs in those districts.

Irrigation district and directorate offices clearly provide a significant job opportunity for women in management, technical and administrative positions. Most integrated districts have at least one woman serving as a section head and the evaluation team was informed that the overall percentage of female employees in IWMDs is approximately 40 percent. While the relatively high representation of women in the district office work force may not be attributable to the efforts of the IWRM project, the project should recognize the significant role women play in district

operations and plan training and capacity-building that provides greater opportunity to utilize this human resource.

Task Performance

Overall the task has achieved its objective to form IWMDs and is meeting performance expectations. Task order expected results are largely being met on schedule with districts and water users already remarking on the resulting efficiency in management and improved communication between MWRI and water users. Business plans are in place but have not been operationalized. Similarly, equipment and information management systems have been established, but additional training and capacity-building will be required to support sustainability of these tools and systems. Training and capacity building activities supporting equipment and system sustainability have been presented to MWRI by the contractor and planned for implementation in the remaining months of the project.

The project is following up on a limited basis with integrated districts established under IWRM I. However, the degree to which this follow-up is either supporting those districts or informing implementation in IWRM II is unknown as follow-up details are not provided in formal project documentation.

Recommendations

- Develop institutional performance criteria for assessment of capacity, functionality and performance of IWMDs and collect baseline data. Integrate criteria with MWRI M&E system and continue measurement of these criteria through life of project and beyond.
- Reassess training and capacity-building needs for IWMD staff to identify or confirm priority training that supports sustainability and full functionality of the integrated districts. Consider balancing priorities across different district departments. Link training to improvement of institutional performance criteria (see first recommendation above). Funds permitting, implement revised training program.
- Prepare IWRM training materials (e.g. curriculum, manuals, software, etc.) for transfer to MWRI's own training program with the goal to institutionalize IWRM within the Ministry's core training program.
- Provide documentation of IWRM I district follow-up in future project reporting – summarize performance of IWRM I irrigation districts and identify sustainability issues and challenges based on established criteria. Apply institutional performance criteria (see first recommendation above) to baseline district performance.

TASK 2.3 ESTABLISHMENT OF INFORMATION MANAGEMENT SYSTEMS FOR SUSTAINABLE WATER RESOURCES MANAGEMENT

Task Objective

The goals of the information management system task are improved water allocation systems and procedures at district and directorate levels as well as increased knowledge of water resources use and availability.

The Task Order SOW describes the following expected results:

- Improved water allocation systems and procedures at both district and directorate levels; and
- Increased knowledge of water resource use and availability for both surface and groundwater resources – quantitatively and qualitatively.

The SOW states that the contractor shall implement the Matching Irrigation Supply and Demand (MISD) Program in all districts and directorates in the East Nile Delta Region. The SOW further describes required deliverables under this task as:

- Assist MWRI in the selection of water monitoring and distribution staff within each IWMD;
- Train staff in water allocation systems and software;
- Procure and install computer equipment;
- Establish water resources databases;
- Establish digital mapping capacity; and
- Investigate the potential to monitor water flows at the branch canal level by selecting pilot canals to test flow measurement tools and assessing results and developing guidelines for branch canal flow monitoring.

Findings

The project has made important progress under this task and database development can indeed be considered one of the project's highlights. Inspection of data compilation as part of field surveys to various district offices revealed that data are in fact being routinely collected and filed electronically in a systematic way. Discussions at the governorate and at MWRI in Cairo confirmed that the data collected in districts are passed up to higher levels providing a potentially important platform for improved decision-making.

The current relationship between the MISD and IWRM II projects appears mutually beneficial. IWRM II has opened new areas for implementation of MISD while MISD has helped to collect key data on cropping patterns and convert it to information on water demand.

While the data that are currently being collected by IWMDs provide important insights, they do not give a direct indication of the key project objectives of water efficiency and productivity. The data that are currently compiled each month (i.e. water delivered, targeted water delivered, number of complaints, violations, farmer satisfaction) provide an important picture of water management in each district. Additionally, important progress has been made in calibrating water levels to flow rates at the branch canal level which will provide a key platform for improving water management in those canals. Nonetheless, data collected could be expanded and analyzed to include the project objectives of efficiency and productivity.

For example, water efficiency is the quantity of water delivered relative to crop water requirements which is not being calculated. Agricultural water productivity is the agricultural production/output relative to water consumed which is not being determined. Agricultural productivity data are not collected even though crop data are used as the basis for calculating the water demands and targets that are shown in the set of data that are collected each month.

Task Performance

Performance under this task is meeting expectations. The project could make better progress in meeting the broader data needs as mentioned above concerning the degree to which the deliverables directly enable measurement of progress toward the overall project objectives. Nonetheless, this task can be considered to be proceeding well.

Recommendations

- Collection of additional data with more direct relevance to project goals and of broader relevance. In particular, collecting data on cropping patterns and crop yield and determining a district's collective crop water requirement for a particular time frame, so that it can be compared against the water consumed.
- Analysis of the collected data. A system is clearly in place for collection of valuable data; however, analytical scrutiny of a voluminous and growing set of data to identify and understand temporal trends and spatial variation in conditions is absent. The capacity-building component of the project could include training in data analysis to help understand and improve water management in Egypt.

TASK 2.4 CAPACITY-BUILDING OF MWRI PERSONNEL

Task Objectives

Assist MWRI in providing graduate-level training opportunities for its employees to increase productivity, efficiency, equitable allocation, and improved water quality of water resources.

Expected Results and Outputs

The Task Order SOW describes the following expected result:

- Improved practices for recruitment, training, and retention of qualified staff.

The SOW further describes required deliverables under this task as:

- Assess the needs for Master's degree training for up to 50 qualified staff of MWRI, focusing on staff who will be assigned to management positions in the East Nile Delta Region;
- Identify appropriate local institutions and programs for graduate level training for the selected individuals with at least 50% of approved training conducted at AUC; and
- Administer approved training programs including payment of fees.

Findings

The project has not identified a sufficient number of suitable candidates to enroll in Master's degree programs at both AUC and other Egyptian universities. Only 20 candidates are enrolled in the program, 45% female and 55% male, despite the program's target of 50 students. The IWRM II first year work plan calls for 12 students to be trained at AUC but this number was later reduced to 8.

Multiple reasons were given for the shortfall in student enrollment. Some issues were unavoidable such as staff shortages in the district offices may have precluded staff from taking leave to return to

school and some women may have difficulty leaving their family if one of the participating universities was not located in close proximity to their residence. Additionally, many students enrolled in AUC had difficulty meeting the English language requirements and were required to attend intensive English language courses in order to meet a certain standard before beginning coursework. Those issues aside, challenges to finding students will occur if many potential candidates are unaware of the program's existence. Discussions at local MWRI districts indeed revealed that many staff were unaware that Master's study was available to them under IWRM II, causing the evaluation team to deduce that communication of this opportunity to MWRI's field offices was poor.

Dr. Edward Smith, a professor in environmental engineering and an advisor at AUC, is directly involved with the Master's students from MWRI. He informed the evaluation team that many students were not as successful as they might otherwise be due to the fact that they are not devoting themselves to their studies on a full-time basis. He informed us that the candidates are sometimes worried about the possibility of losing their job if they take a leave of absence. In addition, some students did not take a full-time leave of absence due to the nature of their job responsibilities and the likelihood that there is no other staff member to replace him/her for two or more years. This dual demand on the candidate's time leads to a negative effect on their performance in the program.

Linkages between student job responsibilities and his/her research as a Master's student appear to be lacking. Also, some students enrolled in AUC who originally had decided upon completing a thesis changed to the non-thesis Master's option. These two matters could be further explored through a survey of students' job responsibilities and their graduate studies, the results of which could then feed into the program courses of study.

Finally, it was not clear to the project evaluation team whether the training needs assessment (which was to be performed in the first 6 months of the project) was indeed successful in identifying Masters level training needs for staff that will be assigned to management positions in the East Nile Delta region as originally planned.

Task Performance

Performance of Task 2.4 against project and task objectives does not meet expectations. Only 36 candidates for Master's study have been identified by MWRI personnel out of a total expected of 50. Out of these 36 candidates, only 20 have actually been enrolled in graduate study programs. Two of these 20 enrolled students have completed their course of study.

IRG set a target for Year 2 of 50 accepted candidates with an actual number of 20 thereby achieving only 40% of the initial project established target. (The project has since adjusted their target downward.) Concerning the number of Master's candidates graduated with degrees by the end of Year 2, the target was 0 and the actual was 0. Further, any identified students who have not yet enrolled are unlikely to complete their degree program prior to project completion.

Recommendations

- Do not pursue additional Master's degree candidates. Remaining resources under this Task should be reallocated. Consideration should be given to MWRI recommended short- or medium-term training opportunities relevant to the IWRM II goals and objectives. Candidates should be selected from district offices.
- The MWRI should permit staff accepted into a Master's program to take a leave of absence from their position to pursue the Master's degree full-time or alternatively, facilitate a part-time program which allows the student to designate a large percentage of his/her time to research or coursework applicable to his/her position in the Ministry and the rest of the time to his/her regular job responsibilities (e.g. 50% coursework/research, 50% job duties).
- IRG should survey currently enrolled Master's students on needs and expectations for their Master's studies as well as current and expected future job functions. These survey results could then be used to shape a course of study that is more applicable to their positions in the MWRI along with a research component that is directly related to their job functions and could have an immediate, positive impact for their office.

7. PROJECT COMPONENT – CROSS-CUTTING ISSUES

MONITORING AND EVALUATION

Implied Objective (Annual Work Plan Year 1)

The purpose of the cross-cutting Monitoring and Evaluation (M&E) component of the project is to provide IWRM II Project stakeholders with the information needed to track and manage project progress and assess its outcomes and impacts.

Expected Results and Outputs

According to IRG's approved Annual Work Plan Year 1 (January – December 2009):

- Review the applicable USAID Strategic Objectives and Program Components and IWRM II project tasks and objectives;
- Review indicators used during IWRM I and illustrative indicators proposed for IWRM II, together with project tasks and objectives, and develop a set of indicators to track and assess IWRM II activities;
- Develop a comprehensive Performance Monitoring Plan (PMP) that identifies indicators and benchmarks for determining progress and outlines approaches and methods to be used in the M&E process;
- Conduct a baseline survey of farmers in the East Delta to establish pre-project conditions, and periodic client satisfaction surveys across the 45 IWMDs to assess quality of irrigation service;
- Work with Task 2.3, which aims to establish information management systems at the district level, to harmonize outcome indicator information needs with data being generated and stored in IWMD information systems;
- Establish implementation performance targets for Years 1, 2, 3, and 4 of the contract and clearly identify responsibilities for data collection and reporting;
- Compute values of outcome indicators at appropriate intervals and discuss results with project stakeholders; and

- Identify an appropriate institutional home for an ongoing system of performance monitoring within the Ministry.

Findings

Efforts to monitor IWRM II activities are reflected in the development of the databases discussed under Task 2.3. Some outcome indicators related with improved water efficiency and productivity have been developed in the project PMP, but most are not yet measured at this stage of the project. Monitoring of IWRM I activities appears to be more anecdotal and not quantitative. Additionally, evaluation of Phase II activities seems minimal at this point.

An evaluation was conducted of BCWUAs that were formed under Phase I shortly after completion of the program. The purpose of the evaluation was to determine the level of participatory water management by assessing: the level of participation by each BCWUA in the operation and maintenance of branch canals and drainage system within its service area; and the level of cooperation (i.e. exchange of information and consultation) between the MWRI and the BCWUA. While the outcomes reflect positively on the project, there are several limitations to the report. Many questionnaires were formulated to measure events that occurred in the previous 12 months during a timeframe which would have overlapped substantially with the project implementation period. Therefore, those results provide minimal information about project sustainability. More importantly, comparative data were missing such as from a baseline of the area or from other non-project areas within the region. A more robust and ongoing system of M&E is clearly needed.

For IWRM II, a baseline survey covering 45 IWMDs was conducted which is an extensive geographic coverage. Additionally, farmers also completed a perception-based questionnaire about the quantity and quality of irrigation services, which is more directly aligned with project goals. The survey does generate values for yield derived from production of different crops but this information is found only in the annex. Aggregated yield could be divided by the water delivered or consumed to serve as a baseline and this figure should be updated each year which would provide an indication of impacts that directly responds to the project's objectives. Other indicators (e.g. head versus tail analysis, aggregate area of land cultivated) may also be helpful.

Task Performance

Performance in this task does not meet expectations. This task has delivered on many of the process indicators; however, it has failed to deliver on many of its outcome indicators and does not appear to be making progress toward them. The project is not currently prepared to apply outcome indicators to measure progress toward at least three of its four intended outcomes. The project has been inhibited in measuring outcome indicators due to delays in completing calibration of hydraulic structures at 138 sites and delays in making data reporting systems fully functional.

Recommendations

- Develop an ongoing *system* for M&E that is updated annually. Such a process could be applied to Phase I given the insights it should generate for Phase II. An ongoing M&E system should also be applied to Phase II.
- Complement and/or cross-check project M&E efforts with other data collection and ranking efforts underway. For example, Ragab Abdul Aziz is said to be overseeing an exercise whereby districts are ranked according to several criteria.

- Remember that the goal is to assess project impact but also to understand variation; therefore, the project should monitor temporal and spatial variations.
- Combine agricultural data with water data to measure productivity and efficiency:
  - Productivity: Combine i) data on the agriculture yields per directorate contained in the annex of the field survey of 45 IWMDs, and ii) data on water delivered and consumed per directorate. Monitor change over time and explore smaller scales as well such as districts.
  - Efficiency: Combine water delivered and consumed at various scales with the aggregated crop water requirements at those same scales. Also, consider the degree to which drainage water is used.
- Create a short and simple a set of additional indicators to address two identified gaps in the current indicator set: 1) quality and timeliness of data collected under the IWRM II program; and 2) institutional capacity of IWMDs and BCWUAs.

PUBLIC AWARENESS, EDUCATION AND COMMUNICATION SUPPORT

Goal and Objectives (Communication Plan, May 2009)

According to the project Communication Plan, the overall goal of the communications activities is:

> *Increased awareness, motivation, and action by all stakeholders and beneficiaries in organizing integrated water management systems at the district level and irrigation directorate and ultimately transfer of innovative technologies to water users that result in increased water saving and incomes.*

Specific objectives stated in the Communications Plan include:

- Through greater awareness of the IWRM II and expressed benefits of forming WUAs, more BCWUAs are formed and become operational;
- Through information provided by the IWRM II about fee collection and money management, BCWUAs prepare to sustain their own financing for O&M;
- Through effective technology transfer, water users are improving water use efficiency by selecting and growing high cash and low water consuming cops;
- Through effective communications and raising awareness, investors and private sector encouraged investment in reusing treated wastewater for agriculture;
- Through awareness raising, IWRM II assists in development of at least one RWMO;
- Through awareness raising and materials support, IWMDs are formed and operational; and
- Through awareness raising and materials support, information management systems are established in the IWRM II region and are helping track proper water management.

Expected Results and Outputs

The Year 1 Annual Work Plan for IWRM II and the Communications Plan provide a detailed list of "public awareness products" proposed to be delivered under the project as well as planning level detail of specific activities. The products described include: print materials (fact sheets, brochures, newsletters, etc.), videos, multi-media tool-kits and various workshops and press events.

Findings

The evaluation of communications activities was based on observations of progress toward communications objectives stated above. The evaluation team did not perform an in-depth review of individual communications activities, outputs and deliverables; however, interviews and field visits provided insight regarding the impact of communications and public awareness activities..

In general, the evaluation team found that, at this stage of the project, the communication tools produced have had more impact in raising awareness of IWRM with MWRI staff than with association members and farmers. The project has invested considerable time and expense in developing additional materials targeting water users; however, based on feedback from the BCWUA members met in the field, these materials have not yet achieved the desired impact on awareness of IWRM concepts and approaches at this point in the project. During field visits, most of the BCWUA members the evaluation team met with had either never seen any of the project communication tools or were seeing them for the first time that day. This may be a function of the timing of communication tool roll-out; however, it was a clear indication that more communication work with BCWUA members and farmers is required. With respect to the BCWUA members who did review the communications materials provided (flyers and booklets), many indicated to the evaluation team that the concepts and messages regarding IWRM approaches and the utility of BCWUAs were abstract from their current concerns and issues regarding water management. This indicated to the project team that more activation of the communication tools may be required.

The format of the Communication Plan submitted in May 2009 is useful to understand what messages were developed for which beneficiaries and what tools would be used to convey those messages; however, the plan itself seems to have been developed without full participation of targeted groups and it has not been updated annually as the Year 1 Annual Work Plan stated would occur. It's understood that the IWRM II communications plan was based on communications activities developed and implemented in IWRM I, but lessons learned from IWRM I and local variations in water user concerns are not captured in the IWRM II communications plan. Indeed, the outdated plan made it difficult for the evaluation team to follow progress on the communications activities and to understand how implementation feedback was being incorporated in ongoing and planned activities.

The evaluation team observed that the project had invested significant human resources in communications activities above what was planned at the beginning of the project. An expatriate communications manager was engaged for a period of more than a year to help push forward the communications activities. There is little doubt that this additional LOE allocated to the communications activities helped to accelerate production of deliverables.

Performance

The importance of communication and awareness for the success of the IWRM II project is appreciated by the evaluation team. Based on the experience from IWRM I, the task has been successful in continuing to raise awareness among MWRI officials and managers. Planned activities to roll-out and activate additional communications tools are expected to have similar success with BCWUA members. Unfortunately, the evaluation team had great difficulty in understanding the approach to communications as presented in the project documentation. The communications plan was not updated as originally planned and staffing resources have been dramatically increased from

the original project approach. This raised a concern with the evaluation team that the project may have been under-resourced from the beginning or that the communications and awareness scope has somehow expanded. While this activity is a cross-cutting task of IWRM II, it is clearly a costly component and, as such, deserves a commensurate level of project management attention including documentation of task planning and resources applied.

Recommendations

- Revise communication plan to reflect current task status, challenges and stakeholder needs. Use focus groups where possible to understand non-MWRI (BCWUA) stakeholder concerns and issues. Include life-of-project budget which shows includes costs of materials and associated project labor required to develop and disseminate.
- Integrate development of agricultural technology communication and awareness tools with Ministry of Agriculture communications formats and approaches. Prepare all agricultural extension materials in close cooperation with appropriate Ministry of Agriculture officials. Coordinate with Ministry of Agriculture to disseminate materials to farmers.

GENDER

Implied Objective (Annual Work Plan Year 1)

Increase awareness of the importance of gender equitable approaches in all aspects of water resources management and irrigation and among all users through the development of training materials and by other means.

Expected Results and Outputs

According to IRG's approved Annual Work Plan Year 1 (January – December 2009):

- Use gender disaggregated baseline data for use in tracking the success of project interventions to increase gender equity across all tasks;
- Include training materials to develop awareness of gender equitable policies and practices across all tasks, including suggestions for best practices and case studies where possible;
- Hold training-of-trainer workshops to broadly disseminate approaches to increasing gender awareness and equity among all stakeholders;
- Compile informal quarterly reports on progress of incorporating cross-cutting agenda into tasks;
- Liaise with local NGOs and Community Development Associations to develop awareness regarding water quality management, including solid and liquid waste disposal and reuse, particularly among female stakeholders;
- Hold focus group discussions with female engineers to identify ways to increase their numbers within the Ministry; and
- Hold focus group discussions with male engineers to determine their perspectives regarding obstacles to increased female participation.

However, the Annual Work Plan Year 2 (January – December 2010) has removed the above expected results and outputs and has instead stated that, "Gender equity is not pursued as a separate project component."

Findings

Most female members of BCWUAs typically represent domestic users, which generally makes sense since women are most often responsible for household water use. Additionally, women association members are able to visit these female head of households to provide messages on activities that align with project objectives such as water conservation and domestic solid waste management. However, women comprise other sectors of society including farming and they should also be present as agricultural representatives. Additionally, the evaluation team most often met with chairmen of the BCWUAs who were primarily men; therefore, women were rarely present when the evaluation team met with BCWUAs.

Female engineers and data managers were present at all directorate and district offices that were visited and appeared to have relevant and active roles on the technical teams. While senior district engineers and directors were mostly male and took the lead in presenting their project work, the junior female engineers were encouraged to contribute content. The evaluation team did not learn of any focus group discussions with female or male engineers regarding gender awareness and issues.

In terms of training, the evaluation team was told by one group of BCWUA chairmen that women did not attend because they were not invited. Others expressed a problem for women to attend trainings at certain times of the day or locations which are considered inappropriate for women.

Performance

The performance of this project component against stated Year 1 expected results and outputs has not met expectations. IRG has not fully committed to achieving the expected results and outcomes from the Year 1 work plan and have, in fact, removed such initiatives from the Year 2 work plan.

Female engineers were present and active in district and directorate offices but the project has not liaised with them as had been planned. The BCWUAs have female members and even a few chairwomen but the project needs to fully engage them as a key resource for their communities.

Recommendations

- Women in BCWUAs have been excluded from some training sessions due to not being invited or not being able to attend due to time and/or location; therefore, the project should make every effort to have trainings in a location and at a time that is also suitable to female members and the project needs to ensure that female members are not underutilized.
- Female members of BCWUAs have been tasked with representing and working with domestic beneficiaries. Therefore, the project could empower this role while advancing its objectives by providing trainings that target only female members. This training-of-trainers would then focus on water conservation and water quality management including solid and liquid waste disposal.
- Assess the training needs of directorate and district level female engineers in order to provide required training in suitable accessible locations.
- Undertake expected results and outputs as outlined in Annual Work Plan Year 1 (January – December 2009).

8. OTHER EVALUATION COMPONENTS

DEFINITION OF IWRM

Definition of IWRM: USAID defines IWRM as "a participatory planning and implementation process, based on sound science that brings stakeholders together to determine how to meet society's long-term needs for water and coastal resources while maintaining essential ecological services and economic benefits." A key tenet of IWRM is conventionally considered to be its focus on integration of different water uses (domestic, agriculture, industry, environmental, etc.). Further, it is generally considered a quite broad and encompassing term. While this project hits on an important aspect of IWRM (greater participation through decentralization), its focus is overwhelmingly on one sector: agriculture. Although other sectors and aspects of IWRM are touched on, they are peripheral.

IWRM Definition and IWRM II project: The broad nature of IWRM and specific nature of this project might call for a title and set of objectives that more closely reflect the project's focus and deliverables. Title suggestions, or more broadly branding opportunities for a program of projects focused on issues in IWRM II, could include decentralization, participation, and sustainable institution-building. If such a re-orientation is undertaken, it may be prudent to focus the objectives on ensuring sustainability of newly formed WUAs, which would provide a longer-term basis for the greater productivity and efficiency sought in the current project.

Pinpointing the focus of IWRM II: As it stands now, the project's aim and scope may be somewhat diverse and ambitious. The project's working hypothesis is that institution-creation and greater participation will improve water productivity and efficiency. Creating institutions that sustain themselves is, in and of itself, no small task. Creating institutions that foster outcome improvements (e.g., enhanced efficiency or productivity) in the absence of incentives or complementary hardware to improve may in fact be over-ambitious. In the framework of IWRM II, the registration of BCWUAs to enable mobilization of financing was a significant incentive for participation according to BCWUA members. Unfortunately, this task (Task 1.2) has been derailed by a protracted and uncertain legislative process and lack of follow-up on financing alternatives. Given the slow progress in certain components of the project (wastewater reuse, Regional Water Management Organizations), pragmatic revisions may focus on closing certain under-performing components and re-directing project funds to strengthen better-functioning components while improving measurement of impacts and sustainability of progress made under the project.

PROJECT COMPARISON WITH FWUOP AND IIIMP

Common Threads: IWRM II, FWUOP and IIMP: The IWRM I and II projects have not been undertaken in isolation. Two other donor funded projects have been active in Egypt: i) The Dutch funded Fayoum Water User Organization (FWUO) Project, and ii) The World Bank funded Integrated Irrigation Improvement Project (IIIMP). There are clearly certain elements common to all three

approaches. All place key focus on decentralization through development of Branch Canal Water User Associations (BCWUAs) and ensuring upward integration to the scale of district and beyond. Similarly, all broadly highlight overarching goals of raising water productivity and efficiency while ensuring equity and sustainability. Further, the steps taken in the process of BCWUA creation are broadly similar across the different projects.

Variations in Geographic Coverage and Depth: There are nonetheless important differences across the three approaches. Perhaps the most obvious distinction relates to the geographic area of coverage. IWRM I and to a greater degree IWRM II appear to spread relatively small resources over a relatively large area compared with the approaches of the other donors. The FWUO project, for example, spent about 12 years (1994-2006) focused on 2 districts in Fayoum governorate, then in three years (2007-2009) expanded to cover the remaining 7 districts in the governorate. The IIIMP, with a budget of some $305million, currently focuses on just 11 irrigation districts (totaling 450,000 feddan) as part of a project that will endure for almost a decade (2006-2014). By contrast, with only 4 years and a budget of $10 million, IWRM II is aiming to establish BCWUAs in some 45 districts (2.2 million feddan) in just 4 years, which are distinct from the 27 districts covered in IWRM I. While efforts to stretch resources for the greatest benefit are certainly meritorious, one simultaneously wonders whether there is a tradeoff between quantity of area covered and quality of coverage. It may be, for example, worthwhile to consider striking a balance between geographic area covered and ensuring that project impacts are properly measured and sustained in areas that are covered.

Table 4 Comparison of integrated water management projects

	# Districts	Years
IWRM I	27	4
IWRM II	45	4
FWUOP	9	12
IIIMP	11	9

Involvement of Irrigation Advisory Service: Related to the previous point, it appears that the pace at which IWRM II established BCWUAs exceeded the capacities of the Ministry of Water Resources and Irrigation's (MWRI) Irrigation Advisory Service (IAS). As a result, IWRM II undertook to establish its BCWUAs without the IAS. It appears that both the FWUO project and IIIMP have undertaken institutional developments that are coordinated and supported by the IAS, which could help to promote BCWUA sustainability and more cross-disciplinary perspective on the BCWUA development process. Nonetheless, the precise effect of the IAS is not entirely clear, and there may simultaneously be merit to avoiding IAS involvement in the process of creating BCWUAs. Whichever the case, it may be prudent to give more comprehensive thought to use of the IAS: What is the value of IAS? Should a standard approach be utilized throughout Egypt, whereby the IAS either is or is not a part of decentralization? Or alternatively, is it viable for some parts of Egypt to make use of the IAS in decentralization while other parts of the country do not?

Hardware and infrastructure to complement institutions: A final difference relates to hardware aspects of the three projects. In IWRM II, there is no resources allocation for hardware (e.g., field level irrigation improvements, tractors for clearing canals). In the FWUO project, by contrast, seed funding was provided in various ways to BCWUAs for small works activities. In IIIMP, some 85 % of project budget is allocated to provision of new infrastructure for more efficient and sustainable water management. Further, communities are able to collect and manage their own funds by operating at the mezqa level. People affiliated with other projects highlighted the potential to promote stakeholder buy-in through provision of complementary hardware improvements to the software of improved institutions.

PROJECT MANAGEMENT

The evaluation did not specifically examine the consultant's project management but rather focused on project performance. Nevertheless, in this regard, the evaluation team had some observations of project management issues which have had significant negative impact on project performance.

Staffing: The original IWRM II staffing plan identifies several positions which were either never filled or were filled only partially. Of particular note is the Deputy Chief of Party (DCOP) position. While initially filled, the position has remained empty for more than 18 months. This is particularly concerning since the DCOP had both management responsibilities and a technical leadership role for half of the project tasks. Without this key position filled other project staff members have taken on more responsibilities than originally planned limiting their ability to follow-up on critical issues and generally leaving project staff stretched too thin.

Presumably a short-staffed project should have excess budget; however, a quick review of the quarterly financial reports does not indicate significant savings. The hiring of a full-time, expatriate communications manager for a period of one year was not in the original budget and may explain why the project does not show significant salary savings. Nevertheless, this increased emphasis on communications support did not overcome technical staffing shortfalls that may have negatively impacted task performance.

Work Planning and Reporting: In general, the evaluation team found the work plans presented by the project to be vague and difficult to follow as a working document to guide implementation. Expected results and outputs were generally presented on a task by task basis for the life-of-the project. Annual expected results and outputs are not clearly discussed in annual work plans. Much of the text in the second and third year draft plans is copied identically from the Year 1 plan. The management of the project as well as the communication between the contractor, USAID and the various stakeholders would benefit from a more rigorous and detailed work planning process that identified specific activities to be undertaken in the coming year, the timing of those activities and the specific deliverables and outputs that will be expected on an annual basis.

8. CONCLUSIONS

In general, the evaluation team found that the integrated water management approach conceived by the Ministry and promulgated with the assistance of the IWRM project has been successful in improving communication between water users and irrigation districts and improving the quality and flow of information pertaining to water allocations. The project is achieving success in several important tasks including the formation and development of BCWUAs and IWMDs (Task 1.1 and Task 2.2) and the establishment of information systems (Task 2.3). Undoubtedly, these improvements, if sustained, will have a positive impact on the efficiency of water use in these districts.

However, lack of coordination and follow-up with key project counterparts including the Ministry of Agriculture and Land Resources, the Holding Company for Water and Wastewater and on key issues related to legal status of BCWUAs, RWMO establishment and student recruitment has resulted in the project not meeting expectations in five out of eight tasks and in all three of the cross-cutting components. An abbreviated summary of the evaluation results together with recommendations going forward is given in Table 2. Findings upon which these results were based along with greater detail concerning project performance and recommendations were given in the body of this report. An abbreviated summary of those evaluation results together with recommendations going forward is given in Table 4.

Table 5: Summary of evaluation results and recommendations

Task	Meeting Expectations	Performance	Main Recommendations
1.1 Formation and development of BCWUAs	Yes	BCWUAs have been formed to cover branch canals but greater effort needs to be placed on capacity-building	- Prioritize training to include organizational and technical training - Monitor governance and institutional capacity
1.2 Sustainable local financing for canal and drain maintenance	No	Amendment to Law 12 1984 was drafted but not yet passed and no other significant progress has been made on required deliverables	- Immediately wrap-up ongoing financing work, cease further activity and remove remaining activities from contractor scope of work.
1.3 Improvements in water productivity and efficiency	No	Task not adequately staffed after dismissal of DCOP. MWRI decree has reduced rice cultivation but project has not provided sufficient training on alternative crops and irrigation methods	- Increase farmer training on high-value crops and modern irrigation methods - Create agricultural extension materials for new crops - Increase coordination between MWRI and MALR
1.4 Wastewater reuse	No	Feasibility study was completed but other deliverables remain unsatisfied	- Cease all further activity and remove task from scope of work

Task	Meeting Expectations	Performance	Main Recommendations
2.1 Regional water management organizations	No	Despite efforts to move this forward, no significant progress has been made	- Cease all further activity and remove task from scope of work
2.2 Formation and development of IWMDs	Yes	IWMDs have been formed resulting in management efficiency and improving communication between MWRI and water users	- Develop institutional performance criteria and assess capacity - Reassess training capacity and develop IWRM training materials
2.3 Establishment of information management systems	Yes	Task is proceeding well although some project objectives data are not being captured or analyzed	- Collect additional data with direct relevance to project objectives - Analyze data being collected to understand and improve water management
2.4 Capacity-building of MWRI personnel	No	Only 20 candidates out of a total of 50 are enrolled in a Master's program and none have finished; communication of this opportunity was poor and many districts were unaware of its existence	- Facilitate current students to finish studies in a timely manner - Do not add any more candidates into the program as there is not enough time
Monitoring and evaluation	No	Project measuring process indicators but not outcome and institutional or governance indicators	- Develop an ongoing system of M&E updated annually - Quantify water productivity and efficiency - Develop and apply process, outcome and institutional indicators
Communication	No	Communication outputs do not match with stakeholder needs	- Revise communication plan seeking stakeholder input
Gender	No	Project is not fully committed to achieving the expected outcomes from the Year 1 Work Plan	- Provide training opportunities which do not exclude female members of BCWUAs due to time and/or location - Provide specialized training to female members of BCWUAs who have been designated domestic representatives

Additionally, the evaluation team assessed the following key areas of performance and had the following findings:

- Validity of Strategy: Decentralization and increased participation improved communication and water management but impact on efficiency/productivity is unclear.
- Confirmation of Results: Project M&E system makes it difficult to identify changed outcomes and measure the strength of institutions established.
- Responsive to Stakeholder Needs: Appears to respond to stakeholders although more attention needs to be given to BCWUAs.

- Sustainability of Actions: Phase I sustainability not formally determined; local financing and decentralization of budget authority appear critical to sustainability.

All levels of MWRI and water users demonstrate a sincere commitment to a participative and decentralized approach for water management. However, the project has struggled with implementation on some tasks such as reuse of treated WW, capacity-building, and productivity. Additionally and more importantly, sustainability of actions is the major risk faced by the new IWMDs and BCWUAs. Without positive and tangible outcomes resulting from the new model of management and cooperation between users and MWRI, association members are likely to lose interest in participation. More effort to build capacity of district office staff and fledgling associations is needed in order to maintain the spirit of cooperation and mobilize resources for system maintenance, rehabilitation and improvement.

Overall, the IWRM II project has made important progress in several key areas but there is still significant need for the project to adjust and redirect their efforts in terms of implementation. Activities need to be strengthened in well-performing project areas while IRG can cease or stop future activities in other areas that are not performing or are peripheral. Furthermore, IRG needs to make a stronger effort to document the impact from the project which requires a robust M&E system to provide clear and systematic guidance on project progress and outcomes.

ANNEX A. IWRM-II EVALUATION SCOPE OF WORK

Scope of Work
Program Performance Evaluation
LIFE - Integrated Water Resources Management II

January 2011

Introduction

In January 2009, USAID/Egypt contracted with the International Resources Group (IRG) to implement the Integrated Water Resources Management II (IWRM II) project as a 4-year, Task Order award under the Water II IQC with an approximately $10 million Task Order ceiling. In order to evaluate performance, validate results, capture lessons learned and inform necessary program adjustments, USAID/Egypt is planning to conduct a mid-term evaluation of the IWRM-II project.

IWRM II is funded under the Livelihoods and Income for the Environment (LIFE) Assistance Agreement (2630290) with the Government of Egypt.

Background

Over the last two decades, USAID has assisted the Government of Egypt (GOE) in placing more control for irrigation water management decision making in the hands of farmers. Design of the Integrated Water Resource Management (IWRM) Program (Phases I and II), was based on the results of several earlier USAID programs, notably the Agricultural Policy Reform Program – Water Policy Activity (1997-2002), which set a number of "benchmarks" or specific reform actions. Following positive results in the achievement of these benchmarks, USAID designated funding from the Red Sea Sustainable Development and Improved Water Resources Management Project for the so-called "bridging project" – Improved Water Management Component (2002-04), which field tested the IWMD and BCWUA concepts and formed the basis for the design of IWRM program. In addition, several components were added to address water quality issues, through pilot projects of promising technologies.

Since its inception in October 2004, the IWRM I Program has assisted the Ministry of Water Resources and Irrigation (MWRI) in piloting integrated management of water resources at the district level in New Zifta Directorate (Gharbiya), West Sharkeya Directorate, East and West Qena Directorates and Aswan Directorate. IWRM directly supports the government's National Water Resource Plan. Development of grassroots participation in water resource decisions is a significant contribution of the program to improving civil society and local democratization. IWRM I was successful in increasing farmer participation in water management and decentralizing decision-making authority in upper Egypt and portions of the Delta. Based on this success and MWRI's support of the management reforms, USAID/Egypt initiated a second phase of activities to broaden the impact of integrated water resources management specifically in the Nile Delta.

The purpose of the IWRM II (2009 – 2012) is to build on the successful IWRM I experience in improving water management at the field level IWRM II is working in a new location in Egypt in order to achieve similar results. The IWRM II program will establish integrated water management districts and branch canal water users associations in order to decentralize water management authority and generally improve efficiency and productivity of water

use. The contractor is to work with: the Ministry of Water Resources and Irrigation (MWRI); other government entities, including the Ministry of Agriculture and Land Reclamation (MALR), the Ministry of State for Environmental Affairs (MSEA), and the Ministry of Housing (MOH); and water users, including farmers, their associations throughout the Eats Delta region, and private investors.

To help the evaluation team prepare for the evaluation, several key project documents are included as attachments to this SOW:

- Attachment A contains the contract scope of work.
- Attachment B contains IWRM II project work plans for year 1 (January 2009 –December 2009) and Year 2 (January 2010 to December 2010) of the project.
- Attachment C contains the final performance monitoring plan (PMP) for the IWRM II project.

Evaluation Objectives

- To evaluate the effectiveness and impact of IWRM II activities in achieving the contract stated objectives to:
    - Increase productivity of water (as measured by value added per quantity of water consumed)
    - Increase efficiency of water resources use (as measured by quantity of water consumed per feddan of cultivated land)
    - Achieve more equitable allocation of water resources
    - Improve water quality
- To identify opportunities for improved activity implementation within the limits of the Task Order scope of work and the remaining project implementation period.
- To reevaluate and clarify expected project outcomes in order to provide all IWRM II stakeholders (Ministry, USAID and farmers) with clear vision of sector reforms and changed conditions at the end of the project. This analysis will be used to manage stakeholder expectations and help conceptualize plans for additional complementary activities.
- To identify critical obstacles impeding the implementation of the program as originally designed and recommend approaches for overcoming or circumventing these obstacles.

Scope of Evaluation

The evaluation team is tasked to examine the past performance of IWRM II activities from inception of the program in January 2009 through the present. While the evaluation should evaluate past performance, USAID/Egypt is also interested in forward-looking recommendations on possible strategies for improving the effectiveness of the IWRM II program over the remaining two years of the contract base period.

The performance evaluation will address five key areas of performance:

- **Validity of Hypothesis (Strategy) –** The team will evaluate the validity of the development hypothesis guiding IWRM II activities and either confirm the hypothesis or recommend revision. The development hypothesis is not explicitly stated in the task order scope of work; therefore, the evaluation team will need to define
- **Confirmation of Results –** The team will review the PMP (Attachment C) for the IWRM II project and additional documentation of results achieved (interim performance reports, DQAs, studies, reports etc.), and comment on the validity of results and the expectations for achievement of indicator targets.
- **Responsive to Stakeholder Needs –** The team will review the breadth and depth of IWRM II activities and comment on how these activities are responsive to the needs of partners and users association stakeholders. This analysis necessarily looks beyond the IWRM II contract scope of work at the broader priorities for water resources management in Egypt and especially those priority issues lacking adequate attention from other donors and multi-lateral lending institutions.
- **Sustainability of Actions –** The team will evaluate and comment on the sustainability of IWRM II activities. Recommendations to improve sustainability are expected in the evaluation summary. Also, as IWRM II is

intended to be catalytic in the replication of best practices, the evaluation team is requested to provide comment and recommendation on opportunities to improve likelihood of replication of practices and management approaches implemented under the IWRM II program.

- **Lessons Learned –** The evaluation team will identify lessons learned from the first two-years of implementation and distill these lessons into clear guidance for the remaining period of implementation. Lessons learned may include both technical and implementation/management guidance.

In addition to the performance assessment, the evaluation team is asked to examine several key questions pertaining to the IWRM II program in detail:

- What capacity building accomplishments have been achieved within the MWRI and the BCWUAs? Is capacity development on track with sustainability requirements of the IWRM framework?
- Does the IWRM II program continue to support the long-term water management vision of the Ministry of Water Resources and Irrigation? Are there any gaps in support for the Ministry's vision?
- Did the training provided by the IWRM II program address the needs of the MWRI staff and BCWUA members? Is the IWRM II training program integrated with other training efforts of the MWRI? What was the quality and impact of the training provided?
- Have gender issues been addressed adequately in this project? Was gender addressed in the training plan and other aspects of program implementation? What impact has the program achieved on empowering women to better perform their work and advance their careers?

Evaluation Team Members (Roles and Responsibilities)

Jonathan Lautze – Water resources expert. Technical team member to provide expert analysis of program approach and implementation.

Scott Christiansen – Agriculture expert. Technical team member to provide expert analysis of program approach and implementation.

Amani Selim – Monitoring and evaluation expert. Program team member to provide guidance on evaluation approach, enquiry and program implementation and impact.

Soad Saada – Environment and Gender Expert. Program team member to provide guidance on evaluation approach, enquiry and program implementation and impact.

Thomas Kaluzny – Water Engineer. Technical team member supporting analysis and documentation.

John Pasch – Team leader/coordinator. Responsible for management of evaluation process, logistics and evaluation report delivery.

Expected Evaluation Results

The team is expected to provide a summary of results to the USAID/Egypt in the form of an out-briefing and an evaluation report responsive to the scope of work stated above. The out-briefing will be scheduled in Cairo on or about January 20, 2011. A draft report will be prepared by the evaluation team and submitted to the USAID/Egypt/PSD prior to team departure from Cairo. The final report should be completed and submitted to PSD by January 28, 2011.

ANNEX B. DAILY EVALUATION SCHEDULE

USAID Mid-Term Evaluation
Agenda (January 4-20, 2011)

Date	Location	USAID Group	Time	Attendees	Address	Contact Person
Tuesday, 4 January	USAID office	A&B	10:00am	USAID – IRG		
Wednesday, 5 January	MWRI, 9th floor	A&B	12:00pm 1:00pm 2:00pm-3:00pm	USAID-IRG-S.C. members Irrigation Sector-WD-Telemetry-Channel Maintenance.WCU - MIC-GW		
Thursday, 6 January	Abo Kebeer IWMD	A	9:00am	Dr. Wadie, District Staff & BCWUAs	Abo Kebeer District, Elmoaahda St.	Dr. Wadie Fahim 0123548853
	Belbeis IWMD	B	9:00am	Eng. Maher, District. Staff & BCWUAs	Belbeis District, Portsaid St.)	Eng. Maher Khodary 0121057593
Sunday, 9 January	Fayoum project	A&B	10:00am 11:am 1:00pm	Fayoum CD&GIS unit S. Fayoum District Tattoum & Mohamed Sons BCWUAs		Eng. Nagwa El Khashab 0106165102
Monday, 10 January	Birket El Sabaa IWMD	A&B	10:00am	Ibraheem Abd Elfatah (DD), District Staff, BCWUAs	Birket El Sabaa City beside Birket El Sabaa Local Council Office	Ayman Shedeed 0127417305
Tuesday, 11 January	Ismailia Irrigation US & DG	A&B	10:00am 11:00am	Abd Elfatah Ateia (US), Saied Abd Elaziem (DG)	Irrigation & Drainage Complex El Sheikh Zaied Compound	Ayman Shedeed 0127417305
	Ismailia IWMD	A	11:20am	Ahlam Aly (DD), District Staff,	Ismailia City beside Elsuez	Ayman Shedeed

Date	Location	USAID Group	Time	Attendees	Address	Contact Person
				BCWUAs	Canal Intake, Nefesha compound)	0127417305
	E. Elbohairat IWMD	B	11:20am	Elsaied Fathy (DD)	Ismailia City beside Elsuez Canal Intake, Nefesha compound)	Ayman Shedeed 0127417305
Wednesday 12 January	Damietta Irrigation US & DG.	A	9:00am 10:00am	Zenab Elraies (US), Mohamed Abo Elfotooh (DG)	Irrigation Complex Building beside the Damietta Governorate Building	Albyoumi Aly 0128530319
	Faraskour IWMD	A	11:00am	Abd Elrahman Faried (DD)	Faraskour City beside the Central Hospital	Albyoumi Aly 0128530319
	San Elhagar IWMD	B	9:00am	Saad Elsaied (DG) Hesham Tawfik (DD)	Feriad Village	Saad Elsaied 0128472827
Thursday, 13 January	Dakahlia					
	Dakahlia Irrigation US & DG	A	9:00am 9:30am (RO) 9:30am 10:30am (US)	Wahdan Mohamed (US) Nabeeh Sogare (DG)	Dakahlia complex Building, Zaghlool St.	Albyoumi Aly 0128530319
	Deyarb Negm IWMD	A	11:30am	Abd Elfatah Elbaz	Deyarb Negm District beside the Post Office	Akmal Badie 0105260644
	Cairo					
	MWRI	B	11:00am	Dr. Tarek Kotb (DG) & Eng. Ibraheem Mohamed	MWRI Building 11th floor	Eng. Ibraheem Mohamed 0106038943
Monday, 17 January	Sharkia					
	Sharkia Irrigation US & DG	A	9:30am-10:00am (RO) 10:00am11 1:00am (US)	Ahmed Ibraheem (US) Elsaied Rizk (DG-Salhia) & Elsaied Ahmed (DG-Elsalhia)	Irrigation & Drainage Complex Building beside Elmabara Hospital	Ayman Shedeed 0127417305

Date	Location	USAID Group	Time	Attendees	Address	Contact Person
	Abo Hammad IWMD	A	11:30am	Elsaied Mansour (DD)	Abo Hammad District in front of Elsamak Bridge	Ayman Shedeed 0127417305
	Menya Elkamh IWMD	A	1:30pm	Anwar Nageeb Hussein	Minia Elkamh City, Elraie District St.	Soha Mostafa 0101734702
Monday, 17 January	Qualubia					
	Kafr Shoukr IWMD	B	10:00am 11:30pm	Ahmed Mohamed Ahmed (DD)	Meet Eldrage beside Kafr Shoukr Police Station.	Ayman Shedeed 0127417305
	Toukh IWMD	B	12:00pm 2:00pm	Fawzy Khater (DD)	Ahmed Abd Elaziz St. beside Toukh District Police Station	Ayman Shedeed 0127417305
Tuesday, 18 January	HCWW	A&B	10:00am			
	AUC	A&B	12:30pm			
Thursday, 20 January	Debriefing	MWRI, USAID A&B & IRG	TBD			

Notes:

USAID Team A:

Amani Selim
Victoria Mitchell
Jonathan Lautze
Scott Christiansen

USAID Team B:

Soaad Saada
John Pasch
Thomas Kaluzny

ANNEX C. LIST OF DOCUMENTS REVIEWED BY THE EVALUATION TEAM

1. USAID Contract No: EPP-I-00-04-00024-00: Integrated Water Resources Management II (IWRM II)
2. IWRM II Annual Work Plan Year 1 (March 2009) including Year 1 Training Plan and Life of Project Procurement Plan
3. IWRM II Annual Work Plan Year 2 (December 2009) including Year 1 Training Plan and Life of Project Procurement Plan Update
4. IWRM II Performance Monitoring Plan Report No. 6 (July 2009)
5. IWRM II Quarterly Report Year 1: 1st Quarter (April 2009)
6. IWRM II Quarterly Report Year 1: 2nd Quarter (July 2009)
7. IWRM II Quarterly Report Year 1: 3rd Quarter (October 2009)
8. IWRM II Annual Report Year 1: January 2010
9. IWRM II Quarterly Report Year 2: 1st Quarter (April 2010)
10. IWRM II Quarterly Report Year 2: 2nd Quarter (July 2010)
11. IWRM II Quarterly Report Year 2: 3rd Quarter (October 2010)
12. Economic Feasibility of Alternative Crops with Potential for the Reuse of Treated Wastewater (May 2009)
13. IWRM II Communication Plan (May 2009)
14. IWRM I BCWUA Assessment (July 2009)
15. Farmer Baseline Survey (July 2009)
16. MWRI Training Needs Assessment (July 2009)
17. Feasibility of Wastewater Reuse (June 2010)
18. Livelihood and Income from the Environment (LIFE) Evaluation Report (June 2008)
19. Report of the integrated management of water in Fayoum governorate: A performance review and future perspective, November 2010
20. Introducing High Value/Low Water Consumption Crops to East Delta Farmers: Findings and Lessons Learned from Pilots Summer Season 2010 (Preliminary Draft)

ANNEX D. LIST OF EVALUATION QUESTIONS

Central Ministry Staff Questionnaire

Thank you for participating in this evaluation. The main purpose of the evaluation is to find out how useful has this project been to the farmers. USAID is the agency funding this project and would like to continue providing assistance to farmers and expand to other governorates in Egypt. The information collected is highly confidential and will not be identified individually.

1. Name:
2. Association Name:
3. Address:
4. Telephone number:

_____

5. How do you see the IWRM project and decentralization in terms of the broader ministry vision?

6. Do you have targets for improved water productivity? (Is improved water productivity a goal of MWRI?) Do you have water allocation targets for the future?

7. How highly prioritized are IWRM and related projects on the ministry's agenda?

8. What are results of IWRM I? Is this improving WRM outcomes in Egypt? How?

9. What is successful WRM in Egypt (how do you define success, what are criteria)? What is successful district? What is successful branch canal?

10. Based on phase I process, what do you see as challenges to IWRM II sustainability?

11. What are you doing that supports or complements IWRM I and/or IWRM II projects (or more broadly all 3 decentralization/WUA projects)?

12. What are the concerns raised by the minister's requested evaluation on WUA/O projects?

13. What are the differences, strengths, challenges among the 3 different programs?

14. How much responsibility does ministry have to monitor IWRM I and IWRM II?

15. Has training been absorbed institutionally? Has it been relevant? What is its value? Is there a better way to build capacity?

16. Given the constraints on funding due to delays on legalization of BCWUAs, what measures can be taken to enhance effectiveness without legalization?

17. Have gender issues been addressed adequately in this project?
    Was gender addressed in the training plan and other aspects of program implementation?

18. What impact has the program achieved on empowering women to better perform their work and advance their careers?

Irrigation Directorate/Engineering Unit Staff Questionnaire

Thank you for participating in this evaluation. The main purpose of the evaluation is to find out how useful has this project been to the farmers. USAID is the agency funding this project and would like to continue providing assistance to farmers and expand to other governorates in Egypt. The information collected is highly confidential and will not be identified individually.

1. Name:
2. Association Name:
3. Address:
4. Telephone number:

    _____

5. In the absence of calculations, if you have to assess now, what is your expert assessment about the change in water productivity or efficiency as a result of IWRM implementation?

6. Do you have targets for improved water productivity etc? Do you have water allocation targets for the future?

7. What is successful WRM in a Governorate (name some important criteria)? What is successful district? What is successful branch canal WUA?

8. Given the constraints on funding due to delays on legalization of BCWUAs, what measures can be taken to enhance effectiveness without legalization?

9. What data or information is needed as input to a system for monitoring project impact or BCWUA/District WRM effectiveness?

10. How much money/capital is managed by BCWUAs in your directorate? Has the amount of money being managed been increasing or decreasing? How open and participative are decisions related to how this money is utilized?

11. In what aspects are BCWUAs effective in your directorate? In what aspects are BCWUAs less effective? What are some of the principal criteria you would utilize to measure effectiveness?

12. Have gender issues been addressed adequately in this project?
    Was gender addressed in the training plan and other aspects of program implementation?

13. What impact has the program achieved on empowering women to better perform their work and advance their careers?

Questionnaire for farmers in two pilots

Thank you for participating in this evaluation. The main purpose of the evaluation is to find out how useful has this project been to the farmers. USAID is the agency funding this project and would like to continue providing assistance to farmers and expand to other governorates in Egypt. The information collected is highly confidential and will not be identified individually.

1. Name:
2. Association Name:
3. Address:
4. Telephone number:

    _____

5. What changes have you made as part of the project?

6. Has your production changed? Has this lead to changed income? By approximately how much on an annual basis?

7. If you have made changes, can you describe your incentives or motivations for making changes? (How much was dictated from above v. being personally driven?)

8. Can you estimate your change in water use, if any? (How much less water are you using?)

9. What have been some of the challenges associated with managing the transitions that have been made?

10. Has sufficient seeds and fertilizer been provided? By whom?

11. Has enough Technical Assistance been provided?

Water users Questionnaire

Thank you for participating in this evaluation. The main purpose of the evaluation is to find out how useful has this project been to the farmers. USAID is the agency funding this project and would like to continue providing assistance to farmers and expand to other governorates in Egypt. The information collected is highly confidential and will not be identified individually.

1. Name:
2. Association Name:
3. Address:
4. Telephone number:

إستبيان لمستخدمى المياه

نشكرك للمشاركة فى هذا التقييم والذى يهدف إلى تحديد مدى استفادة المزارعين من هذا المشروع الذى قامت الوكالة الأمريكية للتنمية الدولية بتمويله والتى ترغب فى إستمرار مساعدتها لهم والتوسع فيه فى محافظات أخرى، مع ملاحظة أن هذه المعلومات سرية للغاية ولن يتم الإفصاح عن شخصيتك0

1- الأسم :_____
2- إسم الجمعية:_____
3- العنوان:_____
4- رقم التليفون:_____

5- Are you a landowner? How long have you owned this land? How long have you rented this land?

هل أنت مالك الأرض؟ منذ متى؟ ومنذ متى قمت بتأجيرها؟

6- What are the crops that you plant? In summer? In winter?

ما هى المحاصيل التى تقوم بزراعتها ؟ صيفا أم شتاء؟

7- How did you learn about the BCWUA? How long have you been a member?

متى سمعت عن رابطة مستخدمى المياه؟ ومنذ متى أصبحت عضوا فيها؟

8- Are you a member in any other association?

هل أنت عضو فى أى رابطة أخرى؟

9- What encouraged you to participate in the BCWUA?

5- ما الذى شجعك على الإنضمام لرابطة مستخدمى المياه؟

10-How were you elected in the BCWUA board?

هل تم إنتخابك فىمجلس إدارة الرابطة؟

11- How many members are there in your BCWUA?

ما هو عدد أعضاء الرابطة التى تنتسب لها؟

12- What are your current roles as a board member?

ما هى مهامك بصفتك عضو مجلس إدارة؟

13- What training have you received from the project? What did you benefit from the training?

ماهو التدريب الذى حصلت عليه من المشروع؟ وما الذى أستفدته منه؟

14- Are there any differences/ benefits that water users experienced after establishment of BCWUA?

هل هناك مزايا أو إختلاف أحس به مستخدمى المياه بعد إنشاء الرابطة؟

15- What major activities has the association engaged in to serve water users?

ماهى الأنشطة التى تقوم الرابطة بها لخدمة مستخدمى المياه؟

16- What major activities does the association plan to engage in to serve water users?

ماهى الأنشطة التى تخطط الرابطة للقيام بها لخدمة مستخدمى المياه؟

17- As a member in the BCWUA, do you have more information about your canal, how is this information transferred to other water users on the canal?

بصفتك عضوا فى الرابطة هل لديك معلومات أكثر عن قناة المياه؟ وكيف يمكنك نقلها إلى المستخدمين الآخرين؟

18- Does the association have an office or a place for regular board meetings? Who bears the expense?

هل لدى الرابطة مكتب أو مقر دائم لإجتماع مجلس الإدارة؟ من الذى يتحمل التكاليف؟

19- Does your association plan to engage in other non-water related activities?

هل تخطط رابطتك للمشاركة فى أنشطة أخرى لا تتعلق بالمياه؟

20- How different is your relationship with the irrigation district compared to previous years?

كيف إختلفت علاقتك بمديرية الرى عن السنوات السابقة؟

21- How many meetings has the BCWUA board held since establishment?

كم عدد الاجتماعات الداخلية اللى قام بها مجلس إدارة الرابطة من أول إنشاء الرابطة ؟

22- How many meetings have been held between the board and IWMD since the association establishment?

كم عدد الاجتماعات التى تمت بين مجلس إدارة الرابطة وبين ممثلى هندسة الري من أول إنشاء الرابطة ؟

23- How many meetings (formal/informal) has the board held with their Water Users Representatives?

كم عدد الاجتماعات الرسمية أوالغير رسمية التى تمت بين مجلس الإدارة و أعضاء اللجنة التمثيلية للرابطة ؟

24- What do you gain from the meetings?

ما الذى إستفدته من هذه الإجتماعات؟

25-What major activities does the association engage in to serve water users?

ماهى أهم الأنشطة اللى قامت بها الرابطة لخدمة المستفيدين؟

26- Do you expect the BCWUAs to participate in improving the efficiency of water distribution, use and equity? How?

هل تتوقع من الرابطة أن تشارك فى تحسين كفاءة توزيع وإستخدام المياه والعدالة فى ذلك؟ وكيف؟

27- Do you expect they can participate in increasing crop yields and farmers income?

هل تتوقع منهم المشاركة فى زيادة المحاصيل ودخول المزارعين؟

28- What kind of support do you need as a BCWUA to achieve sustainable outcomes?

ما هو الدعم الذى تتوقعه من الرابطة لتحقيق نتائج مستديمة؟

29- In what aspects is the BCWUA effective? In what aspects is the BCWUA less effective? What are some of the principal criteria you would utilize to measure effectiveness?

ما هى جوانب الكفاءة فى الرابطة؟ وماهى جوانب القصور؟ وماهى العوامل الرئيسية لقياس هذه الكفاءة؟

30- How much money/capital is managed by the BCWUA? Has the amount of money being managed been increasing or decreasing? How open and participative are decisions related to how this money is utilized?

ما هو حجم رأس المال الذى تتعامل به الرابطة؟ وهل تتم زيادة هذا المبلغ أم يتناقص؟ وما مدى إنفتاح الحوار ومستوى مشاركتكم فيه لجهة مناقشة سبل إستخدامه؟

31- What do you see as the future of your BCWUA? What are the challenges to sustainability? What can be done to enhance the likelihoods of BCWUA sustainability and effective sustainability?

كيف ترى مستقبل الرابطة؟ وماهى التحديات التى تواجه إستمرارها؟ ومماالذى يمكن عمله لزيادة إحتمال الإستمرار والحفاظ على كفاءتها؟

32- Given the limited arrival of funds that were envisioned associated with legalization of BCWUAs, what measures can be taken in place of this legalization? In the current legal situation, with no mechanism to manage funding, what do you do?

بعد ملاحظة محدود التمويل الذى سيتاح للرابطة بعد تقنينها ما هى الإجراءات التى يمكن إتخاذها بعد هذا التقنين؟ وما الذى يمكنك القيام به فى ضوء الوضع القانونى الحالى حيث لا توجد آلية لإدارة التمويل؟

Questions concerning women participation in BCWUAs

الأسئلة المتعلقة بمشاركة المرأة فى رابطة مستخدمى المياه

1. Do you have women board members in your BCWUA, and how many?
هل يضم مجلس إدارة الرابطة سيدات؟ وكم عددهن؟

2. In what activities do women board members participate?
ماهى الأنشطة التى تشارك فيها عضوات مجلس إدارة الرابطة؟

3. Do women, as board members, interact with their water users' representatives in terms of information exchange, complaints, raising awareness activities?
هل تتعامل السيدات بصفتهن عضوات فى مجلس الإدارة مع مستخدمى المياه فيما يتعلق بتبادل المعلومات والشكاوى والأنشطة التى تهدف إلى رفع الوعى؟

4. Are BCWUA members convinced that women should participate as board members, and that their participation is beneficial?
هل أعضاء الرابطة مقتنعون بضرورة مشاركة السيدات كعضوات فى مجلس الإدارة وبأن مشاركتهن نافعة؟

Questions to Women BCWUA members

أسئلة للسيدات العضوات فى رابطة مستخدمى المياه

5. What problems or constraints, if any, do women face concerning their adequate participation in BCWUAs, and what is needed to activate their role within these associations?
ماهى المشاكل أو العوائق التى تواجهها السيدات (إن وجدت) لناحية كفاءتهن للمشاركة فى الروابط ؟ وماالذى يلزم لتفعيل دورهن داخلها؟

6. Did the project address these constraints? How
هل يعالج المشروع تلك العوائق؟ كيف؟

7. Are you aware of any project activity that specifically addresses women's participation, women's roles and so forth
هل أنت على دارية بأى نشاط محدد يتناول مشاركة السيدات ودورهن وما إلى ذلك؟