

**Ministry of Public Works and Water Resources  
US Agency for International Development  
Agricultural Policy Reform Program  
Environmental Policy and Institutional Strengthening Indefinite Quantity Contract**

**APRP - Water Policy Reform Activity  
Contract PCE-I-00-96-00002-00  
Task Order 807**

**QUARTERLY REPORT**

**(APRIL– JUNE 2000)**

**Report No. 31**

**August 2000**

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**Water Policy Reform Program**

**International Resources Group**

**Nile Consultants**

**Winrock International**

**QUARTERLY REPORT**  
(APRIL-JUNE 2000)

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## I. SUMMARY

The EPIQ Water Policy Reform Program (Contract PCE-I-00-96-00002-00, Task Order 807) is responsible for advising and providing technical assistance to the Ministry of Water Resources and Irrigation (MWRI) of the Government of Egypt (GOE) with respect to improved policy assessment and planning, improved irrigation system management, and improved private sector participation. EPIQ is part of the USAID Agricultural Policy Reform Program (APRP). EPIQ team members are currently implementing work plan activities related to the Tranche IV Benchmarks.

During the 2nd quarter, April to June 2000, the EPIQ TA team worked with USAID, Ministry for Water Resources and Irrigation (MWRI), Ministry of Agriculture and Land Reclamation (MALR), Water Policy Advisory Unit (WPAU) and the other Agriculture Policy Reform Program (APRP) TA units on the implementation of the Tranche IV water policy benchmark activities. The other TA units include the Program Management Unit (PMU), Monitoring, Verification and Evaluation Unit (MVE), and the Reform Design and Implementation Unit (RDI).

The Memorandum of Understanding (MOU) for Tranche IV was signed on 20 September 1999. The Tranche IV water policy benchmark implementation work plan was reviewed and approved by the Steering Committee at a meeting held on 1 December 1999. The MOU includes five water policy benchmarks. These are:

- C.1. Reducing Mismatch of Irrigation Deliveries
- C.2. Urban Wastewater and Drainage Reuse
- C.3. Water Management at the Directorate Level
- C.4. Irrigation Management Transfer
- C.5. Revision of Law 12

The MWRI has sole responsibility for four of these benchmarks (C.2, C.3, C.4, C.5). The remaining benchmark (C.1 Mismatching) is a joint benchmark with the MALR. Four of the benchmarks are multi-year benchmarks, which means they will require partial completion in Phase 1 (December 2000) and final completion in Phase II (December 2001). Two of the benchmarks are being coordinated by WPAU (C.3, C.5), two of the benchmarks are being coordinated by EPIQ (C.2, C.4); and EPIQ/RDI/PMU are jointly coordinating one benchmark (C.1).

### Specific Accomplishments:

C.1. Reducing Mismatch of Irrigation Deliveries: An organizational chart on MISD data transfer process was prepared. A workshop on water monitoring and flow measurement was conducted at the MWRI Training Center, 6<sup>th</sup> October City. Database software was developed for agricultural crop data and plans were made for conducting a joint MALR/MWRI computer and database training program for personnel of the five pilot districts. Meetings were held in each of the four governorates with governorate and district personnel for water monitoring, data collection and transfer, and establishing the requirements for the agricultural crop database.

C.2. Urban Wastewater and Drainage Reuse: An interministerial water quality task group which meets bi-weekly has been established with active membership from the five ministries and agencies responsible for water quality issues: National Organization of Potable Water and Sanitary Drainage of Ministry of Housing and Reconstruction and Urban Development, Afforestation Department and the Soil, Water, and Environmental Institute of Agriculture Research Center of Ministry of Agricultural and Land Reclamation, Environmental Health Department of Ministry of Health and Population (MOHP), Compliance Office of Ministry of Environmental Affairs, and General Economic Organization for Potable Water and Sanitary Drainage in selected Governorates. Cooperation within MWRI includes: Egyptian Public Authority for Drainage Projects, Dakahlia Irrigation Directorate, and Drainage Research Institute of the National Water Research Center. Several workshops were held including a training course on wastewater irrigation organized by MOHP and World Health Organization. A water quality measurement program was started in the West Delta El Salaam Canal region. Draft policy reports by each task member are under preparation.

C.3. Water Management at the Directorate Level: WPAU is taking the lead on this benchmark. Pilot implementation programs continue in Qena Directorate in Upper Egypt, and Sharkyia Directorate in Lower Egypt. The on-going program includes calibration of water level/flow discharge relationships at 43 sites (19 in Sharkyia and 24 in Qena). Training courses in “Flow-Measurement Techniques” were given to MWRI water-management teams in Sharkyia and Qena. Three new telemetry sites were established in Sharkyia.

C.4. Irrigation Management Transfer: The IMT working group, made up of MWRI representatives from EPIQ, WPAU, Mechanical and Electrical Department, Irrigation Advisory Service, Drainage Authority, and Horizontal Expansion Sector, continued to meet on a regular basis. A number of separate assessment exercises were initiated: 1) a physical assessment of the irrigation and drainage systems on the pilot areas to determine what improvements would be required prior to handing over O&M responsibilities to the private sector entities; 2) a MWRI staff training needs assessment for the IMT program; 3) an analysis of gaps and overlaps in irrigation and drainage performance that IMT could help to overcome; and 4) an assessment of institutional changes needed within MWRI once IMT is implemented. Multiple stakeholder focus group meetings were held in all the selected pilot program areas.

C.5. Revision of Law 12: WPAU is taking the lead on this benchmark. A Law 12 review committee was established to review and make initial recommendations for modifying Law 12. Several high level meetings were held with key MWRI officials. The EPIQ/WPAU TA team prepared a draft background document, describing Law 12 and the need for revisions. Various sectors within MWRI have provided their written suggestions for restructuring the existing law.

### **Other Activities/Important Events**

Dr. Wadie Fahim Makarious was appointed USAID Cognizant Technical Officer for the EPIQ WPRP project.

Dr. Larry G. King, Senior Irrigation Engineer, arrived to begin a long-term expatriate technical assistance assignment.

Adrian Hutchens, Senior Water Resource Economist, arrived to begin a long-term expatriate

technical assistance assignment.

## **II. ACCOMPLISHMENTS DURING THE REPORT PERIOD**

### **Staffing**

The EPIQ resident team has a technical consulting staff of eight people and an administrative support staff of seven people.

Dr. Larry G. King, Senior Irrigation Engineer, arrived in Cairo on 2 May 2000 to begin a long-term expatriate technical assistance assignment. Adrian Hutchens arrived on 2 June 2000 to begin a long-term expatriate technical assistance assignment as Senior Water Resource Economist.

The LTTA and STTA staffing list for the quarter is shown in Section VI: Staffing

### **Benchmark Support**

#### **C.1. Reducing Mismatching of Irrigation Deliveries (MWRI/MALR)**

Dr. Larry King, Senior Irrigation Engineer, has primary responsible for this activity as task manager for the EPIQ/WPRP team with support from EPIQ team members Dr. Ragab Abdel Azim, Irrigation Engineer, and Dr. El-Sayed Mahdy, Water Resource Economist, and part-time TA support from Eng. Hussein Elwan, Head of Central Directorate for Water Distribution, MWRI, and Eng Sanaa Abdel Rashid (CDWD/MWRI). Eng. Tarek Nada, Eng. Mohamed Hamed, and Eng. Mohamed Elmargoshi of WPAU provide further technical assistance on a part-time basis. The joint working group has representatives from MWRI, MALR, EPIQ, RDI and PMU, WPAU, as well as the Under Secretaries, General Directors, Inspectors, and District Engineers for the five selected pilot Districts from the four governorates of Sharkaya, Beheira, Beni Seuf and Qena/Luxor. While the formal title of this benchmark is Reducing Mismatch of Irrigation Deliveries, the working group has adopted the title Matching Irrigation Supply and Demand (MISD) to emphasize to positive aspects of this activity.

Activities carried out by the EPIQ team during the report period were:

- An organizational chart was developed for the MISD data transfer process. This chart shows the paths of data transfer at the district, governorate, and central levels in both ministries including persons responsible at all levels. This chart has been very helpful to the working group in understanding the details of the data transfer process and furthering the cooperation of all involved in these activities within both the MALR and MWRI. The chart has also helped the working group explain activities to other individuals and groups not directly involved in this process.
- A formal MISD water group workshop was held on 10-11 April at the MWRI Training Center, 6<sup>th</sup> October City, focusing on water monitoring and flow measurement. A total of 25 MWRI staff attended including representatives from each of the four governorates and the five pilot districts.
- The EPIQ/WPRP team assisted the APRP team to develop a database for the agricultural data with the assistance of Dr. Jim McMeekin, a database expert hired by

DAI on a short-term TA assignment. This effort also included planning a joint MALR/MWRI computer and database training program for personnel of the five pilot districts.

- Meetings were held in each of the four governorates with governorate and district personnel to follow-up on the water monitoring program established last quarter (Beni Suef 15 May and 7 June, Qena 23-24 May, Sharqyia 29 May, Beheira 30 May).
- Meetings were held in each of the four governorates with governorate and district personnel to follow-up on the data collection and transfer program (Beni Suef 15 May and 7 June, Qena 23-24 May, Sharqyia 29 May, Beheira 30 May).
- Meetings were held in each of the four governorates with governorate and district personnel to establish requirements for the agricultural database being developed for use on desktop computers (Beni Suef 15 May and 7 June, Qena 23-24 May, Sharqyia 29 May, Beheira 30 May).

## **C.2: Water Quality and Drainage Reuse**

The EPIQ water quality task group members, Dr. Zhongping Zhu (task manager), Dr. Ibrahim Ellassiouty, and Dr. Ahmed Fakhry Khattab; with the participation of WPAU engineers, Tarek Nada and Mouhamed Hamed; assisted by the short-term expatriate economist consultant, Mr. Adrian Hutchens; and supported by local specialists, Eng. Hussein El Atfy (MWRI), Dr. Hesham Kandil (MWRI), Eng. Yehia Abdel Aziz (MWRI consultant), Dr. Siham Hendy (MOHP), Dr. Mamdouh Riad (MALR), Eng. Magda Gaballa (NOPWASD), Eng. Mohsen Mamdouh (NOPWASD), and Dr. Ahmed Gamal Eldin (MEA), are responsible for this activity.

Activities carried out by the EPIQ team during the report period were:

- The Environmental Health Department of Ministry of Health and Population, represented by Dr. Seham Hendy in this benchmark task group, monitored the effluents of Mansoura wastewater treatment plant, drainage waters in Faraskour, Serw, and Hadous drains, and mixed flows at selected sites along the Salaam Canal. This was the first time an overall inspection of the water microbial conditions in Salaam Canal region had been conducted.
- Task representatives of five cooperating Ministries produced six individual reports to address the various wastewater irrigation issues and policies.
- EPIQ wastewater task group kept close contact with the Harza Engineering Company on the status of Middle Egypt Wastewater Master Plan and the in-situ drainage treatment pilot activities conducted by Harza.
- EPIQ wastewater task group carried out an investigation field trip to Amman to better understand the Jordanian wastewater irrigation experience.
- Through IIE-DT2, a California wastewater irrigation study tour was prepared and setup.

## **C.3: Water Management at the Directorate Level**

The lead for this activity is with WPAU and MSM. EPIQ is providing STTA support for this activity through the EPIQ task order.

The major accomplishments during the reporting period included:

- Conducting 54 flow measurements at Sharqyia.
- Conducting 46 flow measurements at Qena.
- Reviewing results of the flow measurement program.
- Conducting training for Sharqyia Directorate staff on flow measurement techniques.
- Conducting training for Qena Directorate staff on flow measurement techniques.
- Installation of three new telemetry sites in Sharqyia Directorate.

#### **C.4: Irrigation Management Transfer**

Dr. Robert Cardinalli (task manager) with support from Eng. Mohamed Nasser Ezzat (WPAU) is responsible for this activity. Two additional WPAU engineers joined the IMT group (Eng. Amira Abdel Hady and Eng. Moemen El Sharkawy). Short term local TA was provided by Eng. Abdel Rahman Shalaby (Senior Institutional Policy Specialist) and Eng. Essam Barakat (Senior Participatory Irrigation Management Specialist).

The major accomplishments during the reporting period included:

- A Steering Committee meeting was held on 16 May, at which time the work plan was revised and updated in light of the initial series of field investigations. The work plan and four pilot areas were approved and recommended to the minister for affirmation.
- Formal ministerial concurrence was received on the Steering Committee decision regarding the IMT pilots and work program.
- Focus group meetings and field investigations to pilot branch canals in Beheira, Nubereia, Sharkaiya, and Dakhalaiya governorates were carried out by members of the IMT working group.
- The benchmark-working group continued its formal meeting schedule. The group members include: the EPIQ Senior Sociologist (task manager), and representation from the WPAU (Eng. Nasser Ezzat, Eng. Amira el Hady, Eng. Moamen el Sharkawy), MED (Eng. Ali Khalil Mohammed), IAS (Eng. Essam Barakat), EPADP (Dr. Mahmoud Moustafa), and Horizontal Expansion sector (Dr. Tarek Abdallah Ahmed).
- Four stakeholder focus group workshops were held involving farmers and ministry officials from the four pilot areas: Bahr El Sagheer (Mansoura), El Shebab (Sharkaiya), South Tahrir (Beheira), and Beni Abed (El Minya). The summary results of these focus group meetings have been issued and circulated, and are very encouraging in terms of the popular acceptability of the objectives of the benchmark.
- Presentation of EPIQ Tranche III results and methodology on BCWUA formation strategy to IIP workshop on WUA federation development under the IDA/KfW project. The EPIQ strategy as outlined in Tranche III Report 17 was adopted by the attendees of the workshop.
- A staff training needs assessment was initiated by the EPIQ Institutional Policy Consultant.
- An analysis of gaps and overlaps in irrigation and drainage performance that IMT could help to overcome was undertaken by the EPIQ Institutional Policy Specialist.
- An initial assessment of institutional adjustments and changes needed within MWRI once IMT is implemented was conducted by the EPIQ Institutional Policy Specialist in consultation with the chairmen of EPADP and the Irrigation Department.

- A Physical Assessment exercise was conceived and developed to determine what improvements would be required prior to handing over O&M responsibilities to the private sector entities. It was agreed to utilize the expertise and experience within the MWRI to conduct the assessment. The EPIQ Institutional Policy Specialist and Senior Irrigation Engineer have overall technical responsibility for the information gathering, field investigations, analysis and reporting on recommendations to the Steering Committee. The major work to be carried out is at the South Tahrir (Beheira) site, where major infrastructure changes are anticipated. Secondly, the site at Bahr el Sagheer will require attention, and lastly the New Shebab and Beni Abed systems will require the least attention since they are systems recently constructed, and improved, respectively.
- Participation by MWRI Communications Center staff in IMT staff was agreed upon, and will focus on recording on videotape of special events, development of communication and training materials and public awareness campaign strategy for IMT.
- Preparations for an IMT socio-economic baseline survey were completed during this period. A local sociologist (Prof. Mohamed Mohieddin) was identified to oversee and conduct the data collection, analyze and report on the findings, and make recommendations for any further data collection needs.
- The IMT Working Group continues to assist the Law 12 Working Group through recommendations regarding present and possible future constraints to IMT, methods and strategies to overcome the identified constraints, and concrete legal amendment recommendations.

### **C.5: Revision of Law 12**

The lead for this activity is with WPAU (Eng. Sarwat Fahmy and Eng. Nasser Ezzat). Dr. Ibrahim Ellassiouty (EPIQ coordinator) is assisting. EPIQ has provided short-term TA for this activity through the EPIQ task order (Eng. Ahmed Maher-local irrigation engineer, Eng. Yehia Abdel Aziz-local drainage engineer, and Dr. Mohamed Badran-local legal advisor). Three WPAU engineers are supporting the Law 12 group (Ghada Khalil, Amira Abdel Hady, and Moemen El Sharkawy).

The major accomplishments during the reporting period included:

- Reviewing all articles of Law 12, Law 213 and their executive regulations.
- Providing assistance to the task committee in the review of Law 12 and coordinating between all the involved parties.
- Preparing a background report entitled, “Revision of Law 12 of 1984 on Irrigation and Drainage”
- A meeting was held on 13 April to discuss the changes in Law 12 as presented by MWRI key officials; to reach agreement on the way Law 12 be restructured in order to include the new areas and concepts related to improved water management; and to decide on the next steps to be taken in order that the modified law would obtain a broad-based feedback from other interested stakeholders. Speakers representing different MWRI departments presented their views about the changes proposed.
- A meeting was held on 3 May to discuss and revise modified law 12 (Draft 2) as prepared by WPAU/EPIQ work group and based on feedback from the participants

of the Review Committee. A total of 17 officials participated in the meeting including representatives of concerned sectors and departments of MWRI.

- A meeting was held in Port Said on 28-29 June to discuss and revise modified Law 12 (Draft 3) as prepared by WPAU/EPIQ work group based on feedback from the participants of the Review Committee from the 3 May meeting and to plan for the next step concerning stakeholders participation. A total of 27 persons participated and including Eng. G. Mahmoud (WPAU), Eng. S. Fahmy (WPAU), Dr. J. Fredericks (EPIQ), Dr. A. Khattab (EPIQ), Dr. I. Ellassiouty (EPIQ), Eng. A. Maher (MWRI Consultant), Eng. Y. Abdel Aziz (MWRI Consultant), Dr. M. Badran (EPIQ), Eng. A. Morsi (MWRI), Eng. M. Fathi (MWRI), Eng. A. Shalaby (MWRI), Eng. R. Bakhoun (MWRI), Eng. M. El Khodary (MWRI), Dr. D. El Qousy (MWRI), Eng. A. Moneim (MWRI), Dr. F. Abdel Rahman (MWRI) and other representatives from concerned sectors and departments of MWRI. Dr. Amr Moussa (RDI) acted as facilitator for the meeting.

### **Studies/Implementation Activities**

The terms of reference for the EPIQ task order is structured around a results package, jointly designed by USAID and MWRI, consisting of integrated water policy and institutional reforms. To support this results package, the EPIQ team is able to carry out studies that support policy reform or have the potential of leading to future policy benchmarks. The EPIQ team is also involved in supporting select activities that relate directly to implementation of previous water policy benchmarks.

### **Impact assessment**

Adrian Hutchens will be coordinating this activity with support from Dr. Elsayed Mahdy. Meetings to prepare for coordination activities for conducting the impact assessment were initiated between EPIQ, USAID, and MVE. Those activities are continuing with the objective of producing an EPIQ water policy impact assessment work plan.

### **Sugarcane Water Use Policies (MWRI/MALR)**

Activities during the quarter included:

- Field visits were made to the Qena Governorate to observe sites having improved (land laser-leveled to a sloped plane and perforated pipe distribution system) and unimproved irrigation systems on sugar cane.
- Determined that the best approach to evaluating the effects of the improved irrigation system on water applied to sugar cane is to compare fields with the pipe systems to those without such systems.
- MWRI purchased 5 new water flow meters, Hydro-Flow Model 2200, Fixed Insertion Vortex Flowmeter, Manufactured by Fluidyne, Longmont, Colorado, USA, and supplied by Green Valley Company.

### **GIS Survey**

The study to assist MWRI in establishing a policy on GIS standards and data continued. The study is expected to provide a baseline survey on hardware and software being used by MWRI for GIS activities.

## **Tranche V Preparation**

Work continued on developing the Tranche V water policy benchmarks. Seven benchmark topics have been proposed and are under review:

1. Model Water Management District
2. Enhancing Public Awareness to Apply MWRI Policy Changes
3. Strengthening the MWRI Environmental Management Capabilities
4. Pollution Control and Wastewater Treatment in the Nile Valley
5. Policy to manage rainfall and flash floods
6. Promoting the Use of Clean Energy for Irrigation in New Lands
7. Introducing Modern Irrigation Systems through the Private Sector

## **Workshops**

EPIQ sponsored a MISD water group workshop on 10-11 April at the MWRI Training Center, 6<sup>th</sup> October City focusing on water monitoring and flow measurement. A total of 25 MWRI staff attended including representatives from each of the four governorates and the five pilot districts participating in the benchmark pilot activities.

EPIQ TA team participated in the APRP Tranche IV and Tranche V Review workshop held in Sharm El Sheikh from 10-11 May. Participants included select members of the PPC, USAID APRP, USAID EE, the APRP TA teams, and implementers from various ministries and the private sector. Implementers from MWRI included Eng. Ali Morsi, Eng. Abdel Rahman Shalaby, Eng. Yehia Abdel Aziz, Eng. Hussein Atfy, and Eng. Hussein Elwan. The APRP TA teams gave formal presentations on the status of Tranche IV benchmarks and on the benchmarks being proposed for Tranche V.

## **APRP/EPIQ Coordination**

Close coordination between the EPIQ team and other units of APRP, USAID and MWRI continued.

Members of the EPIQ WPRP team participated in the weekly APRP coordination meetings and the PPC meetings.

Regular water group coordination meetings were held at MWRI. USAID Ag policy water staff, WPAU, and EPIQ WPRP participated.

Regular meetings of the mismatch, waste water, IMT and Law 12 working groups were held throughout the quarter. There were also numerous field trips and meetings with governorate and district level personnel.

An MWRI Steering Committee meeting was held on 16 May. The purpose of the meeting was to review the Irrigation Management Transfer work plan status, update the work plan as needed for the benchmark activities, and to discuss the recommendations made by the IMT Benchmark working group. MWRI Steering Committee members attending the meeting were: Eng. Gamil Mahmoud (Chairman of the Steering Committee), Eng. Ali Morsi Batt (Head of the Irrigation Department), Dr. Mona El-Kady (Head of the National Water Research Center), Eng. Ramsis Bakhoum (Head of the Irrigation Improvement Sector), Dr. Bayoumi Attaiya (Head of the Planning Sector), Eng. Hussein El Atfy (Head of the Central Directorate for H.E. Technical Office), Dr. Craig Anderson (USAID Ag. Policy Unit), and Dr. Jeffery Fredericks (EPIQ Chief of Party). Representatives from EPADP, WPAU and EPIQ as well as Dr. Wadie Fahim (USAID) and Eng. Mahmoud Mabrouk (USAID) also attended. Dr. Robert Cardinalli (EPIQ Sr. Sociologist) presented an overview of the benchmark including the main objectives, verification indicators, work group members, benchmark status, activities to date (meetings, field trips, focus groups, etc.) and recommendations of the work group at this point in time, as well as the next steps through the end of Phase I (i.e. December 2000).

A PPC meeting was held on 2 April to discuss the new USAID strategy, monitoring plan for Tranche IV, status of Tranche IV implementation, and the midterm assessment report. Dr. Saad Nassar chaired the meeting, which was attended by PPC members, USAID Ag Policy staff, and the APRP TA team members.

An SO16 Chief of Party meeting was held at the Sofitel Hotel in Maadi on 1 June. The purpose of the meeting was to update on the new USAID Mission strategy, present a description of Egyptian Economic issues. The meeting was chaired by Roberta Mahoney (USAID, AD/EG). Participants included Dick Brown (USAID mission director), SO16 USAID staff, USAID Ag policy team, and COPs.

## **Reports**

The following report was issued: EPIQ Report No. 30: “Quarterly Report (Jan. – March 2000)”

### **III. ACTIVITIES PLANNED FOR NEXT QUARTER**

#### **Benchmark Support**

##### **C.1: Reducing Mismatch of Irrigation Deliveries**

The following activities are planned for next quarter:

- Conduct joint MALR/MWRI training on basic computer use and database including data entry and report preparation for delivery to the irrigation district. This training will involve both agricultural and irrigation personnel at the district level.
- Conduct periodic workshops for MWRI district level people on water monitoring, water demands, data analysis, etc.
- Follow-up on crop and water data collection, analysis, and transfer.
- Establish desktop computers with printers, modems, internet access, and email accounts in each of the five pilot irrigation districts and establish a program of regular electronic data transfer to Cairo offices.
- Provide the necessary training and technical support to the pilot districts in use of the computers in the MISD program.

##### **C.2: Water Quality and Drainage Reuse**

The following activities are planned for next quarter:

- Conduct the California wastewater irrigation study tour in August.
- Continue to revise, and finalize the six reports from the five involved ministries in September.
- Draft the benchmark's policy summary document during September-October.
- Design, and prepare pilot policy implementation programs in selected regions in September.

##### **C.3: Water Management at the Directorate Level**

WPAU is taking the lead on this benchmark. EPIQ will assist as necessary.

The following activities are planned for the next quarter:

- Perform 117 flow measurements at Sharqia Directorate.
- Perform 144 flow measurements at Qena Directorate.
- Continue review of the results of the flow measurement program.
- Begin identifying the mathematical formula type suitable for each individual flow measurement site in order to convert water levels to flow rates and volumes; calibrate these sites and estimate the hydraulic parameters.

#### **C.4: Irrigation Management Transfer**

The following activities are planned for the next quarter:

- The benchmark working group, under the leadership of the EPIQ IMT task manager will continue to meet regularly and report to the Steering Committee.
- Study of the indigenous resource base, socio-economic conditions, pre-implementation criteria and assessment of land classifications and tenureship patterns will be undertaken July-September. This will be completed as part of the IMT Socio-Economic Survey.
- The assessment on the secondary-level irrigation technical rehabilitation requirements will be completed for the four pilot canals.
- A system for the M&E activities of the IMT benchmark by the Irrigation Department will be developed by the EPIQ team for the second, i.e. implementation, phase of the benchmark work plan.
- Final arrangements for an international study tour, most likely to USA/Mexico, during the third quarter of 2000 will be made, including itinerary, participants, and budgeting. Funding for the study tour will be provided by the USAID umbrella-training project, IIE/DT-2.

#### **C.5: Revision of Law 12**

The following activities are planned for the next quarter:

- WPAU/EPIQ will make a final review of the law based on the comments of the working group meeting in Port Said on June 28-29, 2000.
- The revised edition of the law will be distributed among the MWRI key officials for final comments.
- The proposed amended law along with an explanatory memorandum justifying the changes proposed would be submitted to the Minister of Water Resources and Irrigation.
- Stakeholders that deal with other water related laws will be contacted to discuss changes proposed in Law 12 in order to avoid any conflict or overlap among different laws.
- An analysis and review will be completed, with stakeholder's participation, of the modification needed for Law 12 of 1984 by 31 Dec. 2000 (Benchmark Verification Indicator).

#### **Studies and Other Activities**

##### **Sugarcane Water Use Policy Implementation (MWRI/MALR)**

The following activities are planned for next quarter:

- Complete the installation of the new water flow meters on sugar cane fields both with and without "improved" (laser land leveling and perforated pipe) irrigation systems and begin a water application data collection program that will extend for a minimum of one full year.

- Ensure that crop yield data are taken for each of the monitored sugar cane fields and that these data are available to the EPIQ MISD team.
- Conduct periodic field inspection tours to the sites with flowmeters to ensure proper operation of the meters so accurate water application data are obtained that will allow valid comparison of the improved and unimproved irrigation systems.

### **GIS Study**

Complete the study being carried out by MWRI.

### **Other Activities**

Assist USAID, DT2, WPAU, and MWRI in evaluation of training needs to support the policy reform program.

#### **IV. PROBLEMS AND ISSUES**

No problems at this time.

Dr. Wadie Fahim Makarious was appointed USAID Cognizant Technical Officer for the EPIQ WPRP project effective 23 May. He is replacing Eng. Mahmoud Mabrouk who left USAID to pursue a masters program at Utah State University.

## V. IMPORTANT TRIPS, VISITS AND MEETINGS

DATE	LOCATION	PURPOSE	PARTICIPANTS
Weekly	APRP Dokki/ MWRI	APRP Coordination Meeting	USAID; APRP TA Teams
Weekly	MWRI	Law 12 Working Group meeting	Eng. S. Fahmy (WPAU) Eng. N. Ezzat (WPAU) Dr. I. Ellassiouty (EPIQ) Eng. A. Maher (MWRI consultant) Eng. Y. A. Aziz (MWRI consultant) Dr. M. Badran (EPIQ)
Weekly	MWRI/ EPIQ, MOHP, MALR, MEA, NOPWASD, EAAA	Waste Water Reuse (WWAR) Working Group meeting	Z. Zhu,(EPIQ) Dr. Ellassiouty (EPIQ) Dr. Khattab (EPIQ) Dr. Seham (MOHP) Dr. Riad (MALR) Dr. Gamal (MEA) Eng. Magda (NOPWASD) Eng. Mohsen (NOPWASD) Eng. Atfy (MWRI) Dr. H. Kandil (MWRI) Eng. Y. Abdel Aziz (MWRI)
Weekly	MWRI	IMT Working Group Meeting	Dr. R. Cardinali (EPIQ) Eng. Nasser Ezzat (WPAU) Eng. Essam Barakat (IAS) Eng. A.R. Shalaby (MWRI consultant) Dr. Tarek Abdallah (Horiz. Expansion) Dr. Mahmoud Moustafa (EPADP) Eng. Ali Khalil (MED) Eng. Amira el Hady (WPAU) Eng. Moamen el Sharkawy (WPAU)
Weekly	MWRI/APRP	MISD Working Group Meeting	L. King (EPIQ) E. Mahdy (EPIQ) R. Azim (EPIQ) Eng. Elwan (MWRI) Eng. Sanaa (MWRI) J. Gleason (RDI) M. Nour (PMU)

<b>DATE</b>	<b>LOCATION</b>	<b>PURPOSE</b>	<b>PARTICIPANTS</b>
			Eng. Tarek (WPAU)
As required	IIE-DT2 Cairo Office	Meetings to organize California wastewater irrigation study tour.	Z. Zhu (EPIQ), J.Fredericks (EPIQ) G. Olson (EPIQ) Samar Mohy (DT2)
April 2	APRP/Cairo	PPC Meeting	PPC USAID Ag Policy Team APRP TA COPs
April 5-6	Port Said	IIP Farmer Participation Workshop	Dr. R. Cardinalli (EPIQ) Eng. Ali Morsi Batt (MWRI) Eng. Yehya A. Aziz (Water Boards Project) 40 senior MWRI officials and project officers from IIP; reps from World Bank, Dutch Aid, IFAD, UNDP, & KfW
April 10-11	MWRI Training Ctr., 6 <sup>th</sup> October City	Water Monitoring Workshop	J. Fredericks (EPIQ) R. Azim (EPIQ) E. Mahdy (EPIQ) Eng. Tarek (WPAU) Eng. Hamed (WPAU) Eng. Elmargoshi (WPAU) Eng. A. M. Shalabi (MWRI) Eng. Elwan (MWRI) MWRI staff from Sharqyia, Beheira, Beni Suef, Qena/Luxor
Apr 11	MWRI/EPIQ Office	WWAR discussions on crop restriction using wastewater	Z. Zhu (EPIQ) Dr. Elassiouty (EPIQ) Dr. Mohamed Abdel El Niam (MALR-ARC)
Apr 12	Mansoura and Salaam Canal	WWAR water monitoring	Eng. Nada (WPAU) Eng. Hamed (WPAU) MOHP Monitoring Team
April 17 – 20	Qena	MSM Flow Measurement Training Course	Eng. S. Abu Zeid (MSM) Eng. A. Hafez (MSM) Qena MWRI water management and flow measurement staff (40 persons)
April 24	MWRI / Cairo	IMT coordination meeting with Mechanical & Electrical Dept. chairman	Dr. R. Cardinalli (EPIQ) Eng. A.R. Shalaby (MWRI consultant) Eng. MD. Askar (MED)
April 24	MWRI / Cairo	Meeting with World Bank and	Dr. R. Cardinalli (EPIQ)

<b>DATE</b>	<b>LOCATION</b>	<b>PURPOSE</b>	<b>PARTICIPANTS</b>
		KfW on IIP project mid-term evaluation results and recommendations	Dr. Ashok Subramaniam (World Bank)
April 26	MWRI / Cairo	Follow-up meeting with IFAD Preparatory Mission for support to the IAS	Dr. R. Cardinali (EPIQ) Eng. Essam Barakat (IAS) Dr. Selam Gafsi (IFAD) Dr. Parvis Hekmat, (IFAD)
Apr 27	MWRI/EPIQ Office	WWAR task group discussion workshop	WWAR task group Dr. Mohamed Abdel Naim (MALR)
April 29-30	Zagazig, Sharkiya	MSM Flow Measurement Training Course	Eng. S. Abu Zeid (MSM) Eng. A. Hafez (MSM) Sharkiya MWRI water management and flow measurement staff (11 persons)
May 3	MWRI/Cairo	Discuss revision of Law 12 (Draft 2)	Law 12 work group Eng. A. Shalaby (MWRI) Eng. A. Morsi (MWRI) Eng. M. Fathi (MWRI) Eng. M. El Khodary (MWRI) Dr. D. El Quosy (MWRI) Eng. A. Moneim Shalaby (MWRI) Dr. F. Attia (MWRI) Eng. K. Shehata (MWRI)
May 10-11	Sharm El-Sheik	APRP Tranche V Workshop	PPC USAID Ag Policy Team APRP TA teams Implementers
May 15	MWRI/Cairo	APRP WPRP briefing	Allen Hurdus (USAID/W) EPIQ Team
May 15	Beni Suef	MISD field trip	L. King (EPIQ) E. Mahdy (EPIQ) R. Azim (EPIQ) J. Gleason (RDI) Eng. Elwan (MWRI) Staff of Gov. & Dist. (MWRI) Dr. Ibrahim (MALR) Staff of Gov. & Dist. (MALR)
May 16	MWRI/Cairo	Steering Committee Meeting on IMT	Steering Committee Members Eng. Gamil (Chairman)

<b>DATE</b>	<b>LOCATION</b>	<b>PURPOSE</b>	<b>PARTICIPANTS</b>
			C. Anderson (USAID) Dr. Wadie Fahim (USAID) Eng. Mabrouk (USAID) J. Fredericks (EPIQ) R. Cardinalli (EPIQ) Eng. Shalaby (MWRI) Eng. M. Fathy (EPADP) Eng. N. Ezzat (WPAU)
May 23	MWRI/Cairo	IMT Socio-Economic Baseline Survey coordination meeting	Eng. Essam Barakat (IAS) Dr. Mohamed Mohieddin (consultant) Dr. Robert Cardinalli (EPIQ)
May 23-24	Luxor and Isna	MISD and sugar cane monitoring field trip	MISD Working Group, Eng. Kreisha (MWRI) and staff MALR Cairo & Qena staff
May 29	Sharkia	MISD field trip to discuss ag. database requirements	L. King (EPIQ) R. Azim (EPIQ) J. Mcneekin (RDI) Sherif (RDI) Eng. Tarek (WPAU), Dr. Ibrahim (MALR) Sharqyia MALR MWRI pilot project staff
May 29	South Tahrir / Damanhour	IMT focus group meeting with stakeholders	Dr. R. Cardinalli (EPIQ) Eng. A. R. Shalaby (MWRI) Eng. Essam Barakat (IAS) Under Secretary Irrigation Directors: IAS, EPADP, MED 27 stakeholders
June 1	Maadi	SO1 COP Meeting	R. Brown (USAID) R. Mahoney (USAID) USAID SO1 Staff SO1 COPs
June 3-5	Qena	MSM Water Management group Field Trip	Eng. S. Abu Zeid (MSM) Eng. A. Hafez (MSM) Dir. Gen. and MWRI water management and flow measurement staff
Jun 6-8	Amman, Jordan	Field trip to Jordan for wastewater	Z.Zhu (EPIQ) Dr. Elassiouty (EPIQ)

<b>DATE</b>	<b>LOCATION</b>	<b>PURPOSE</b>	<b>PARTICIPANTS</b>
		irrigation experience	Dr. Seham (MOHP)
June 11	MWRI/Cairo	Discussion with IIP regarding the phased IIP staff training programs to India, Nepal and Pakistan	Dr. R. Cardinalli (EPIQ) Eng. Terry Spencer (IIP) Eng. H. Shouman (IIP)
June 12	El Shebab Canal / Zagazig	Focus Group meeting at El Shebab Canal with stakeholders, to prioritize concerns and IMT interventions	Dr. R. Cardinalli (EPIQ) Eng. A.R. Shalaby (MWRI) Dr. Larry King (EPIQ) Eng. Moamen (WPAU) Eng. Amira el Hady (WPAU) MWRI Under Secretary, Dept. Dir. Gen EPADP, MED, IAS and IIP 32 stakeholders including WUA chairmen
Jun 13	MWRI/EPIQ Office	Discuss in-suite drainage treatment with Harza Engineering / Cairo	Z. Zhu (EPIQ) Dr. Khattab (EPIQ) D. Robinson (Harza)
June 14	MWRI / Cairo	IMT meeting with district engineer of South Tahrir on physical assessment.	Dr. R. Cardinalli (EPIQ) Eng. AR Shalaby (EPIQ) Eng. Ali Khalil (MED)
June 18	MWRI/Cairo	Meeting of MWRI Committee Farmer Participation in Water Management	Dr. R. Cardinalli (EPIQ) Dr. Fatima Abdel Rahman (GWS) Eng. Yehya Abd. Aziz (Water Boards) Eng. Jan Bron (Water Boards) Eng. Robert Bloch (Fayoum) Eng. Ahmed Moustafa (EPADP) Ms. Amira Saleem (Dutch Embassy) Eng. Ramsis Bakhoum (IIS)
June 19	APRP/Cairo	PPC Meeting	PPC USAID Ag Policy Team APRP TA COPs
June 19	Mansoura	IMT Focus Group Meeting at Bahr el Sagheer Canal with stakeholders	Eng. Essam Barakat (IAS) Eng. A.R. Shalaby (Min. Office) Dr. Tarek Abdallah (Horiz. Expansion) Eng. Ali Khalil (MED)

<b>DATE</b>	<b>LOCATION</b>	<b>PURPOSE</b>	<b>PARTICIPANTS</b>
			Eng. Moamen el Sharkawy (WPAU) Under secretary Irrigation Dept Directors General of EPADP, MED, and IAS
Jun 20	Salaam Canal	Water sampling at Hadus drain and Salaam Canal.	Eng. Nada, Eng. Hamed (WPAU) MOHP Monitoring Team
June 20	MWRI / Cairo	IMT meeting with MWRI WCU	Dr. R. Cardinalli (EPIQ) Dr. Hesham (MWRI)
June 21	South Tahrir	IMT Physical Assessment Team coordination visit.	Dr. Larry King (EPIQ) Eng. AR Shalaby (EPIQ) Eng. Ali Khalil (MED) Eng. Elaine Kolta (Planning) Eng. Wahhba Soleiman (ID Design Dept.) Eng. Khalid Badr (MED) Under Secretary Irrigation Dept. Beheira Gov. Local Engineers at South Tahrir 8 principal irrigators of South Tahrir
June 24	Sharkiya	MSM Water Management group Software Installation	Eng. S. Abu Zeid , Eng. A. Hafez (MSM) Eng. M. Warraky (under secretary, Sharkiya ) and MWRI water management and flow measurement staff
June 25-26	El Minya	IMT Focus Group Meeting of pilot area of Beni Abed branch canal.	IMT Working Group
June 27	MWRI	IMT Socio-Economic Baseline Survey Planning Meeting	Dr. R. Cardinalli (EPIQ) Mr. Adrian Hutchens (EPIQ) Dr. S. Mahdy (EPIQ) Dr. MD. Mohieddin (Consultant) Eng. Essam Barakat (IAS)
Jun 28	Port Said	APRP Fishery Workshop	Zhu (EPIQ)
June 28	MWRI / Cairo	IMT Physical Assessment Team	Dr. Larry King (EPIQ)

<b>DATE</b>	<b>LOCATION</b>	<b>PURPOSE</b>	<b>PARTICIPANTS</b>
		Strategy Meeting.	Eng. AR Shalaby (EPIQ) Eng. Ali Khalil (MED) Eng. Elaine Kolta (Planning) Eng. Wahhba Soleiman (ID Design Dept.) Eng. Khalid Badr (MED)
June 28-29	Helnan Hotel, Port Said	Law 12 meeting	Eng. G. Mahmoud (WPAU) Dr. J. Fredericks (EPIQ) Dr. A. Khattab (EPIQ) Eng. S. Fahmy (WPAU) Dr. I. Elassiouty (EPIQ) Eng. A. Maher (EPIQ) Eng. Y. Abdel Aziz (EPIQ) Dr. M. Badran (EPIQ) Dr. Amr Moussa (RDI) Key officials from the sectors and departments of MWRI (27 persons).

## VI. STAFF LEVEL OF EFFORT

### Resident Staff

Name	Position
<b>Expatriate</b>	
Dr. Jeff Fredericks	Chief of Party
Greg Olson	Administrative Officer
Dr. Zhongping Zhu	Senior Water Resources Engineer
Dr. Larry King	Senior Irrigation Engineer
Adrian Hutchens	Senior Water Economist
Dr. Robert Cardinalli	Senior Sociologist
<b>Local Egyptian</b>	
Dr. Ahmed Fakhry Khattab	Co-Team Leader
Dr. Ibrahim Elassiouti	Senior Water Resources Mgmt. Specialist
Dr. El-Sayed Mahdy	Economist
Eng. Ragab Abdel Azim	Drainage Engineer

### Short Term Staff during the Report Period

Name	Position
<b>Expatriate</b>	
Jeremy Salucka	Technical Editor
Kristin Kent	Technical Editor
<b>Local Egyptian</b>	
Abdel Rahim El-Mahdy	Interpreter/Translator
Hussein Elwan	Irrigation Management Specialist
Sanaa Abdel Rashid	Water Data Analysis Specialist
Yehia Abdel Aziz	Senior Water Quality Specialist
Hussein El Atfy	Senior Water Policy Specialist
Dr. Hesham Kandil	Senior Water Quality Specialist
Siham Hendy	Senior Public Health Specialist
Dr. Mamdouh Riad	Senior Forestry Specialist
Magda Gaballa	Senior Wastewater Treatment Specialist
Mohsen Mamdouh	Senior Wastewater Treatment Specialist
Ahmed Gamal Eldin	Senior Environmental Specialist
Amr Hafez	Telemetry Specialist
Alaa Hassan	Computer Software Specialist
Soliman Abu Zeid	Senior Water Management Specialist

Name	Position
Abdel Rahman Shalaby	Senior Institutional Policy Specialist
Essam Barakat	Senior Participatory Irrigation Management Specialist
Ahmed Maher Ghydan	Senior Irrigation Specialist
Dr. Mohamed Badran	Legal Specialist
Dr. Mohamed Rami Mahmoud	Water Policy Information Specialist

## VII. STATUS OF FINANCES AND EXPENDITURES

### Financial summary for 2nd Quarter 2000 (April- June 2000)

	<b>Itemized Budget</b>	<b>Prior Claimed</b>	<b>Current Claim</b>	<b>Claims to Date</b>	<b>Remaining Balance</b>	<b>Budget Claimed</b>
Direct Labor	\$6,795,261	\$3,587,295	<b>\$385,656</b>	\$3,972,951	\$2,822,310	58%
Travel and Transportation	\$778,889	\$196,719	<b>\$2,512</b>	\$199,232	\$579,658	26%
Per Diem	\$205,162	\$163,253	<b>\$0</b>	\$163,253	\$41,909	80%
Allowances	\$1,146,087	\$728,663	<b>\$8,157</b>	\$736,821	\$409,266	64%
Other Direct Costs	\$1,392,823	\$932,993	<b>\$147,100</b>	\$1,080,094	\$312,730	78%
<b>Total</b>	<b>\$10,318,222</b>	<b>\$5,608,924</b>	<b>\$543,426</b>	<b>\$6,152,350</b>	<b>\$4,165,872</b>	<b>60%</b>

Source: IRG Invoice #35,#36,#37

## VIII. LIST OF REPORTS

No.	NAME	DATE
1	APRP Tranche II Policy Benchmark Background Documentation	August 1997
2	Project Implementation Plan	October 1997
3	Annual Technical Progress Report (7 May-31 Dec 1997)	January 1998
4	Annual Work Plan (Jan.-Dec 1998)	April 1998
5	Quarterly Report (Jan.-March 1998)	April 1998
6	Assessment of Egypt's Rice Policy and Strategy for Water Management	June 1998
7	Egypt's Irrigation Improvement Program I. Performance Assessment II. Proposed National Strategy	June 1998
8	National Policy for Drainage Water Reuse	June 1998
9	Water User Association Formation Outside the Irrigation Improvement Program Area	June 1998
10	Hydrogeology of Deep Aquifers in the Western Desert and Sinai	August 1998
11	Quarterly Report (April-June 1998)	August 1998
12	WRRP Tranche III Benchmark Work Plan	November 1998
13	Quarterly Report (July-September 1998)	December 1998
14	Quarterly Report (October-December 1998)	January 1999
15	Quarterly Report (January-March 1999)	May 1999
16	Policies and Procedures for Free-Flowing Groundwater Management in Egypt's Western Desert	June 1999
17	Establishment of Branch Canal Water User Associations in the Egyptian Irrigation System	June 1999
18	Institutionalization of the Irrigation Advisory Service in the Ministry of Public Works and Water Resources	June 1999
19	Water Saving Through Utilization of Short Duration Rice Varieties: National Policy Package, 1999-2000	June 1999
20	Intermediate Drainage Reuse in Bahr Bagar Drain Basin	June 1999
21	Revision of Law 48 of 1982 for the Protection of the Nile River and its Waterways from Pollution	June 1999
22	Short Duration Rice Variety Pilot Program Results	July 1999
23	Quarterly Report (April- June 1999)	August 1999
24	Tranche IV Water Policy Benchmark Implementation Plan (FY 99/00)	November 1999
25	Quarterly Report (July - September 1999)	November 1999
26	Rice Water Use Policy Phase1: Water Monitoring and Evaluation Program with Appendices	December 1999
27	Review of the Agricultural Sector Model of Egypt (ASME97): 1999 Version	December 1999
28	Quarterly Report (October-December 1999)	January 2000
29	Annual Report (January - December 1999)	February 2000
30	Quarterly Report (January- March 2000)	May 2000