

QUARTERLY REPORT
(OCTOBER – DECEMBER 1998)

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I. SUMMARY

During the 4th quarter, October – Decemeber 1998, the EPIQ TA team assisted USAID, MPWWR and WPAU with the completion of the preparation of the APRP Tranche III benchmarks. The Tranche III MOU between USAID and GOE was signed on 29 September 1998. There are eight water policy related benchmarks. Two of these benchmarks (rice and sugar cane) are joint benchmarks with the Ministry of Agriculture and Land Reclamation (MALR). The Tranche III water benchmarks were approved by the MPWWR Steering Committee at a meeting held on 1 September 1998.

The water policy benchmarks for Tranche III are:

- C.1: Main System Management Program Utilization
- C.2: Free Flowing Groundwater Management
- C.3: Branch Canal Water User Organizations
- C.4: Irrigation Advisory and Support Service
- C.5: Sugarcane Water Use Policies (MPWWR/MALR)
- C.6: Rice Water Use Policies (MPWWR/MALR)
- C.7: Intermediate Drain Water Reuse
- C.8: Water Quality Regulation--Law 48

Draft work plans for the Tranche III benchmark activities and studies were prepared.

A USAID/EPIQ/WPAU planning retreat was held in Ismailia, Septemeber 9-10, 1998, to discuss and refine the various work plans for the Tranche III benchmark activities and studies. The work plans will be formally presented to USAID and the MPWWR Steering Committee in a workshop scheduled for October 1998.

Implementation activities were started on most of the Tranche III benchmark support activities. Considerable progress was made on identifying branch canals for Benchmark C.3: Establishing Branch Canal Water User Organizations; finalizing the pilot activities at Sidi Gammae Canal in support of Benchmark C.6: Rice Water Use Policies; and identifying a model district for establishing a program on Benchmark C.7: Intermediate Drain Water Reuse.

The final draft report on the “Hydrogeology of Deep Aquifers in the Western Desert and Sinai” was completed and issued for comment and review.

A Winrock team visited the project from 4 – 6 August to carry out an administrative review.

II. ACCOMPLISHMENTS DURING THE REPORT PERIOD

Staffing

The EPIQ resident team has a technical consulting staff of ten persons and an administrative support staff of eight people. The team was supported during the period by short term local Egyptian TA that included Eng. Essam Barakat (participatory irrigation management specialist), Eng Hussein Elwan (irrigation management specialist), Doug Clark (EPIQ Project Coordinator) visited Egypt from 15-23 October and Mike Rock (Winrock home office technical coordinator) visited with the project team on 25 October.

Benchmark Support

The Memorandum of Understanding (MOU) between USAID and GOE for Tranche III was signed on 27 September 1998. The Tranche III memorandum has 29 policy benchmarks to be completed by 30 June 1999. The MPWWR has sole responsibility for accomplishment of six of the benchmarks. Two of these benchmarks, rice and sugar cane, are joint benchmarks with the Ministry of Agriculture and Land Reclamation (MALR). The Tranche III water benchmarks were approved by the MPWWR Steering Committee and HE Minister MPWWR.

The water policy benchmarks for Tranche III are:

- C.1: Main System Management Program Utilization
- C.2: Free Flowing Groundwater Management
- C.3: Branch Canal Water User Organizations
- C.4: Irrigation Advisory and Support Service
- C.5: Sugarcane Water Use Policies (MPWWR/MALR)
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- C.8: Water Quality Regulation-Law 48

The EPIQ team will be working with several of the APRP TA teams to support the accomplishment of the water benchmarks. The MSM TA team is taking the lead on C.1: Main System Management Program Utilization; the WPAU is taking the lead on C.8: Water Quality Regulation-Law 48; and the EPIQ team is taking the lead with support from WPAU and Greencom/WCU on the remaining six water benchmarks. RDI and PMU are working with EPIQ, WPAU and Greencom/WPAU on the rice and sugarcane benchmarks.

C.2: Free Flowing Groundwater Management

Dr. Tom Ley (task manager), Eng Saleh Nour, and Dr. F. Khattab have primary responsibility for this activity for the EPIQ team.

The work plan for this benchmark was completed, and presented to and approved by the Steering Committee at the Sharm El Sheikh workshop. A meeting was conducted with the director of the NWRC, director of the Research Institute for Groundwater (RIGW) and EPIQ

staff to discuss possible mechanisms for collaboration by the RIGW with EPIQ on the benchmark. Due to limitations on the EPIQ Task Order, no workable mechanism could be arranged.

An initial reconnaissance field trip to the Western Desert was conducted 7-10 October 1998. During this trip the work group accomplished the following:

- Visited the headquarters of the New Valley Irrigation Directorate (NVID) in Kharga to collect available information on the deep groundwater development and utilization in El Farafra Oasis. The NVID has jurisdiction over the free-flowing wells in El Farafra Oases. Contact was made with Eng. Abdel Salam Nagati, General Director of NVID.
- Site visits to the irrigation district office in Mut, Dakhla and drainage basins in El Dakhla Oasis.
- Site visits to each of the major reclamation areas in El Farafra Oasis: El Nahda, West Qasr El Farafra, and Sheikh Marzuk to assess problems with free-flowing wells in each area.
- Based on the site assessment selected West Qasr El Farafra as pilot study area for development of a model policy package.
- Developed a field data collection plan with Eng. Nagati and a team of local MPWWR staff.
- Met with the chief of the El Farafra city council to discuss the organization of a ground water user's association and made initial plans to conduct a focus workshop in El Farafra on the topic.

A second field trip to the Western Desert was conducted by the work group on 15-18 Nov 1998. During this trip the work group accomplished the following:

- Attended the National Academy of Science and Technology Conference on Deep Groundwater in the Western Desert in Kharga on 15 November.
- Conducted a detailed field site inspection of each free flowing well serving the West Qasr El Farafra pilot area on 17 November.
- Conducted a focus group workshop on 17 November to discuss free-flowing groundwater management issues and problems in the area. A total of over 60 were in attendance including 35 farmers. A questionnaire was developed for the workshop, which participants completed during the workshop. A draft summary report of the results has been prepared.
- Met with New Valley Agricultural Directorate (NVAD) staff in El Farafra to obtain cropping data for the Oasis for the past several years.

Technical and hydrogeologic data and historic well production data for the free-flowing wells serving the West Qasr El Farafra pilot area have been collected and analyzed.

Terms of reference for an expatriate groundwater management specialist were prepared and circulated to Winrock and various experts. The CV's of three qualified and interested consultants were obtained and submitted to the EPIQ Team Leader.

Terms of reference for a local Egyptian groundwater management specialist and a local Egyptian field measurement team were developed and approved. The groundwater management specialist and the field measurement team participated in the work group activities in El Farafra on 17 November, and have initiated field data collection activities in the pilot study area.

The terms of reference for local Egyptian sociologist/organizational specialist were developed. CV's for several candidates were obtained and reviewed.

The work group prepared future vision statements for groundwater policy development in Egypt for the 14-15 December 1998 APRP Future Vision Workshop in Cairo.

C.3: Branch Canal Water User Organizations

Dr. Robert Cardinalli (task manager) with local TA support from Eng. Essam Barakat is responsible for this activity for the EPIQ team.

The major accomplishments during the reporting period included:

- Preparation and completion of the benchmark draft work plan.
- Preparation of draft training program in Monitoring and Evaluation for IAS field agents and engineers to carry out the benchmark.
- Conducting a field survey of potential Branch Canals in Western and Eastern Delta and Upper Egypt for implementation of the benchmark activity. The sites visited included Sharkaiya (Qemry), Dakhaliya (Bahrel-Darhem), Kafr El-Sheikh (El Shakhawy Sharky, Saidi Gamaa, and Muftaah), Bahaira (Balaqtar and Kafla), Edfu (Abbadi), and Esna (El Raity).
- A report was prepared for the WPRP Steering Committee with recommendations for the pilot Branch Canals to be taken up for implementation of the benchmark activity.

C.4: Irrigation Advisory and Support Service

Dr. Robert Cardinalli (task manager) with local TA support from Eng. Essam Barakat is responsible for this activity for the EPIQ team.

The benchmark draft work plan was prepared.

C.5: Sugarcane Water Use Policies (MPWWR/MALR)

Dr. John Keith (task manager) and Dr. El-Sayed Mahdy with short term TA support from Eng. Hussein Elwan, have primary responsible for this activity for the EPIQ team. Dr. T. Ley is assisting. A joint working group with representatives from MPWWR, MALR, EPIQ, RDI and PMU was formed to study strategies on water management alternatives for sugar cane for Tranche II. For Tranche III activities this group has been expanded to include representatives from WPAU, GreenCom, and WCU. Dr. John Keith, EPIQ economist, chairs the working group. Members of the sugarcane working group include: Dr. J Keith (EPIQ), Dr. S. Mahdy (EPIQ), Dr. T. Ley (EPIQ), Dr. Jane Gleason (RDI), Dr. S. Hussein (RDI), Dr. A. Allam (MALR-SCRI),

Eng. H. Elwan (MPWWR), Eng. T. Raqabawi (MPWWR), Mr. M. Nour (PMU), Dr. A. El-Berry (MALR-AEnRI), Dr. Beheiry (MALR-AenRI), Dr. Tawakul Rizk (National Consulting Firm), Dr. Craig Anderson (USAID – observer) and Eng. M. Mabrouk (USAID).

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

- Participation in/chairing meetings on the planning and development of the Sugar Cane Pilot program.
- Assistance in finalizing verification of the Sugar Cane Benchmark for Tranche II.
- Participation in the preparation and development of the Tranche III benchmark for sugarcane.
- Participation in the process of review, selection, and identification of areas and sites related to the implementation of the sugarcane benchmark.
- Preparation of a draft work plan with assistance from the sugar cane working group for accomplishing the Tranche III benchmark.

Dr. John Keith (task manager) and Dr. El-Sayed Mahdy with short-term TA support from Eng. Hussein Elwan, have primary responsibility for this activity for the EPIQ team. Dr. T. Ley is assisting. A joint working group with representatives from MPWWR, MALR, EPIQ, RDI and PMU was formed to study strategies on water management alternatives for sugar cane for Tranche II. For Tranche III activities this group has been expanded to include representatives from WPAU, GreenCom, and WCU. Dr. John Keith, EPIQ economist, chairs the working group. Members of the sugarcane working group include: Dr. J Keith (EPIQ), Dr. S. Mahdy (EPIQ), Dr. T. Ley (EPIQ), Dr. Jane Gleason (RDI), Dr. S. Hussein (RDI), Dr. A. Allam (MALR-SCRI), Eng. H. Elwan (MPWWR), Eng. T. Raqabawi (MPWWR), Mr. M. Nour (PMU), Dr. A. El-Berry (MALR-AEnRI), Dr. Beheiry (MALR-AenRI), Dr. Tawakul Rizk (National Consulting Firm), Dr. Craig Anderson (USAID – observer) and Eng. M. Mabrouk (USAID). Eng. Abouk representing the WPAU, was included.

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

- Visits to proposed pilot sites in Naga Hammady (Near Qena) and Armante (near Luxor)
- Identification of specific sites in Wakf, Naga Hammady, and Armante
- Development of specific training packages for trainers, water engineers, and farmers as related to the implementation of improved irrigation techniques and water measuring and monitoring
- Participation in the training of trainers for the implementation of improved irrigation techniques
- Participation in the orientation and training of district engineers and other Qena Governorate water and agricultural personnel on water measurement, monitoring, and management

C.6: Rice Water Use Policies (MPWWR/MALR)

Dr. John Keith (task manager) and Dr. El-Sayed Mahdy with short term TA support from Eng. Hussein Elwan, have primary responsible for this activity for the EPIQ team. Dr. T. Ley is assisting. A joint working group with representatives from MPWWR, MALR, EPIQ, RDI and PMU was formed to study strategies on water management alternatives for rice for Tranche II. For Tranche III activities, this group has been expanded to include representatives from WPAU, GreenCom, and WCU. Dr. John Keith, EPIQ economist, chairs the working group. Members of the rice working group include: Dr. J. Keith (EPIQ), Dr. S. Mahdy (EPIQ), Dr. T. Ley (EPIQ), Dr. J. Gleason (RDI), Dr. S. Hussein (RDI), Dr. A. Tantawi (MALR-RRI), Eng. H. Elwan (MPWWR), Eng. T. Raqabawi (MPWWR), Mr. M. Nour (PMU) and Dr. Craig Anderson (USAID – observer). Dr. Fazi Naiem Mafouz, Director of the Agricultural Extension Sector, and Eng. Margoushy (WPQU) were added to the working group in October.

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

- Preliminary development of plans for the expansion of the pilot program to canals in each of the six rice-growing Governorates (approximately 100,000 feddans)
- Analysis of the water monitoring data collected during the Sidi Gammee pilot program
- Analysis of the agriculture and agricultural economic data collected during the Sidi Gammee pilot program

Development of detailed plans for 1999 activities and extension of those activities to 2000, in which short season rice varieties and the program developed on the Sidi Gammee pilot will be extended to all rice growing areas.

C.7: Intermediate Drain Water Reuse

Dr. Zhongping Zhu (task manager), Dr. Ibrahim Ellassiuti, Dr. Ahmed Fakhry Khattab, and Eng. Ragab Azim are responsible for this activity for the EPIQ team. Short term TA support is being provided by Eng. Hussein Elwan, a DRI water quality measurement team, and a MPWWR water measurement team. WPAU has also provided staff to support this activity.

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

- Assessment of drainage quantity and quality potentially available for intermediate reuse in Abou Hammad district and other districts in the Middle Bahr Bagar basin.
- Investigation of wastewater discharges and pollution loadings in the south Bahr Bagar basin (Qalubya and Belbeise drains).
- Investigation of drainage salinity constraints in newly reclaimed lands in the north Bahr Bagar basin (Salam Canal neighboring areas).
- Outreaches to Cairo Wastewater Organization (CWO), EEAA, and other agencies regarding sewage and industrial wastewater treatment in the northeast Cairo region.
- Preparation of local TA terms of reference and SOW to conduct environmental impact assessment of intermediate reuse in Bahr Bagar.
- Economic benefit evaluation of intermediate reuse in Bahr Bagar.
- Continuation of drainage monitoring in Abou Hammad.
- Site survey of the seven potential reuse pump stations in Abou Hammad.

- GIS (ArcView) application to Abou Hammad drainage reuse.
- Development of outlines and contents of the benchmark report.

C.8: Water Quality Regulation--Law 48

The lead for this activity is with WPAU. Dr. Ibrahim Elassiouti (EPIQ coordinator) and Dr. Zhongping Zhu are assisting. EPIQ will provide short term TA support for this activity through the EPIQ task order.

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

- Assisting WPAU in developing, modifying, and finalizing the benchmark.
- Assisting in preparing the draft work plan.

Studies

The terms of reference for the EPIQ task order is structured around a results package jointly designed by USAID and MPWWR which consists of integrated water policy and institutional reforms. To support this results package the EPIQ team will carry out a number of studies. The primary focus of the studies will be to develop future policy benchmarks. The studies currently being proposed for the Tranche III work period include:

- Management of Deep Groundwater
- Conjunctive Use of Shallow Groundwater
- Operations of Nile Water Delivery (Water Supply and Demand)
- Strengthening District Water Management Capability
- Agriculture Water Demand
- Water User Organizations in New Lands
- M&I Wastewater Treatment Economic Study

Draft work plans have been prepared for each of the proposed studies and are under review.

Management of Deep Groundwater

The work plan was revised and focused on activities to support the development of a possible Tranche IV Benchmark.

The terms of reference for an expatriate groundwater management specialist to conduct the study were finalized and consultants were contacted. The CV's of three qualified and interested consultants were obtained and submitted to the EPIQ Team Leader.

The terms of reference for a resource economist with groundwater experience to participate in the deep groundwater study were finalized and distributed to the Team Leader and Winrock. Dr. John Keith, EPIQ Resource Economist, has agreed to participate with the work group to analyze economic issues surrounding deep groundwater use and management.

Strengthening District Water Management Capability

The EPIQ team has engaged in several discussions regarding the nature and scope of this study. The impetus for this work comes from the EPIQ Task Order Project Implementation Plan Activity 3.2. At least two approaches have been suggested and discussed.

1. Studying the best ways to enhance district level performance by focusing on the appropriate role of branch canal water user associations in the operation and maintenance of the water delivery system at the district level, and the necessary ministerial institutional changes needed to allow efficient and effective system planning, operation and maintenance responsibility and accountability to develop at the district level.
2. Studying alternative operational strategies and procedures to strengthen district level water management, by focusing on operational procedures and infrastructure needed for water allocation and the adequate, equitable delivery of this irrigation water allocation. The feasibility of potential alternative improvements in water allocation and distribution including enhanced water measurement capacity, enhanced utilization of the main system management telemetry program, information system decision support, irrigation demand analyses, and integrated water budgeting at the district level would be addressed.

Various elements of both approaches have been discussed with MPWWR officials to obtain their input. Further development of the scope of this study is planned for the first quarter of 1999.

Agricultural Water Demand

A working group was formed to examine the structure of and the data used in the Agricultural Sector Model for Egypt (ASME) with respect to (1) estimation of agricultural water demand and the shadow value of water in irrigated agriculture, (2) projected or expected impacts of alternative policy changes, and (3) cropping pattern changes due to both policy and external perturbations. The working group was composed of Drs. Mansour, Siyam, Shaed (MALR), Bayoumi (MPWWR), Awatef (MALR Stat Center), Enders (MVE), Gleason, Hussein (RDI), Keith (EPIQ). Keith will head this working group. A small subcommittee, composed of Keith, Gleason, Awatef, Bayoumi, and Enders was formed to examine more particularly the objectives and technical aspects of the model and to develop a work plan to present to the working group.

Activities carried out by the EPIQ Team included:

- Formulation of the working group and subcommittee
- Identification of problems within the ASME including inconsistent results and constrained solutions
- Meeting of the subcommittee to discuss the problems
- Comparative analysis of the data base and model structure between the MPWWR version and MALR version of the model

Benefits from M&I Water Treatment

In order to provide a basis for economically efficient wastewater treatment, a review of the available economic studies of M&I pollution was accomplished. It was clear that no study to

date has focused on the social value of treating M&I effluents. A scope of work/level of effort proposal was prepared through which short term expatriate technical assistance can be obtained to provide this information.

Activities carried out by the EPIQ Team included:

- Reviewing the existing studies on M&I wastewater in Egypt
- Contacting expatriate experts with Egyptian experience regarding the data and analysis needs for a study of M&I treatment benefits
- Developing the scope of work for STTA to provide an evaluation of the benefits of wastewater treatment

TA Support

The EPIQ team has prepared SOWs to support the following TA activities:

- Local consultant (Dr. Fatama Ghory) for environmental regulation development (C8)
- Local consultant (Dr. Samia Galal) for environmental impact assessment (C7)

USAID and MPWWR have agreed to a third category of support under the EPIQ Task Order. This involves the use of the EPIQ funds to help bring in expatriate TA to assist MPWWR in a few potential policy related areas not directly addressed in the EPIQ task order and the initial implementation work plan. These include short term TA to support :

- Development of the MPWWR Main Information Center
- Preparation of MPWWR GIS Standards
- Establishment of an Irrigation Technology Center

TA support for these activities is under review by USAID.

Other Activities

Assisted USAID and Cairo TV film team on preparing footage of EPIQ activities in Balaqtar Canal, Delta Barrage, and Ismailiya headworks.

Jim McMeekin (RDI), expatriate computer specialist, carried out a review of the EPIQ, WPAU and Greencom/WCU computer facilities and installed a test copy of the Lotus Notes application called TAMIS on one of the EPIQ computers to allow the EPIQ team access to the APRP MALR project database.

Workshops

EPIQ sponsored a two day retreat in Ismailiya on September 9-10, 1998. The purpose of the retreat was to discuss draft workplans for the Tranche III benchmarks and studies to be carried out by EPIQ. Participants included the EPIQ team, Eng. Gamil Mahmoud and WPAU staff, Eng. M. Mabrouk (USAID), and Dr. W. Fahim (USAID). Steve Joyce (RDI) was the facilitator.

APRP/EPIQ Co-ordination

Close co-ordination between the EPIQ team and other units of APRP, USAID and MPWWR continued.

The EPIQ team worked directly with USAID, MPWWR, WPAU and other APRP units to finalize the Tranche III benchmark documents. The water policy Tranche III benchmarks were presented to and approved by the MPWWR Steering Committee in a meeting held on 1 September. The USAID Ag Policy Team, all the members of the MPWWR Steering Committee, representatives from EPIQ, and representatives from WPAU attended.

WPAU, Greencom/WCU, and USAID staff routinely accompanied EPIQ TA staff on field trips.

Members of the EPIQ WPRP team participated in the weekly APRP co-ordination meetings and the monthly PPC meetings.

Regular (weekly) water group co-ordination meetings were held at MPWWR. Participation included members from WPAU, EPIQ WPRP, MSM, and Greencom/WCU. These meetings focused on development of Tranche III benchmarks.

Regular Sugarcane and Rice Work Group meetings were held at APRP and MPWWR.

EPIQ team members participated in the USAID rountable discussion on Strategic Priorities for Agriculture and Water held held at the Nile Hilton Hotel on 17 August 1998. The purpose of the roundtable discussion was to explore with USAID the strategic priorities in the agriculture and water sectors for the years 2000–2004. Over 40 people including private sector CEOs and high-level public sector policy-makers attended. Dr. Saad Nasser (APRP project director), Dr. Richard Brown (USAID Mission Director), and Dr. Paul Deuster (associate Mission Director for Economic Growth) as well as the USAID Ag Policy team, the MPWWR Steering Committee, WPAU staff, the EPIQ WPRP team and other consultant and support groups working under the APRP umbrella attended the workshop.

Reports

The report titled “Hydrogeology of Deep Aquifers in the Western Desert and Sinai” was completed and issued as EPIQ WPRP Report No. 10.

A summary draft report describing the results of the El Farafra Focus Workshop on Free-Flowing Groundwater Management Issues and Problems was completed.

WRRP Tranche III Benchmark Workplan was issued as Report No. 12.

Administrative Issues

The EPIQ LAN network was installed.

Two additional vehicles were purchased. One was turned over to WPAU.

III. ACTIVITIES PLANNED FOR NEXT QUARTER

Staffing

Short term expatriate and local TA to support Tranche III benchmark activities and studies to be identified, approved and mobilized.

Visits are planned by Doug Clark (EPIQ Project Coordinator) and Dr. Mike Rock (Winrock technical coordinator).

Benchmark Support

C.2: Free Flowing Groundwater Management

The following activities are planned for the next quarter:

- Complete the analyses of the spatial and temporal distribution of free-flowing groundwater supplies and of irrigation and other uses in the study area. This will include analyses of data on current well discharge conditions as measured by the field team.
- Evaluate alternative strategies, including new well control technologies.
- Evaluate drainage practices and drainage water reuse.
- Work with the WCU to develop a public awareness campaign regarding both the problems inherent with the free-flowing wells and the scarcity of groundwater.
- Evaluate economic incentives and aids, such as credit, cost sharing, etc., for structural improvements (night storage, etc.) which can reduce water wastage.
- Continue developing a groundwater management association in the pilot area by assessing potential membership of users and other stakeholders, planning and conducting an initial general meeting of members, developing a plan for continuing association development
- Begin preparing draft report describing the recommended policy package and procedures for management of the free-flowing groundwater.

It is expected the expatriate groundwater management specialist and the local sociologist will be mobilized and fully participate in relevant work activities described above during the first quarter of 1999.

C.3: Branch Canal Water User Organizations

The following activities are planned for the next quarter:

- Prepare a SOW and work plan to assist MPWWR in carrying out the next steps in the implementation of the cost sharing activity outlined and approved in Tranche I.
- Identify TA to assist with this activity.
- Assist MPWWR with initiation of field programs on four branch canals (BCWUAs) for implementation of higher-level water user involvement.
- Assist MPWWR in developing MPWWR Action Team on apex water user organizations, and in planning study tour for Jan/Feb 1999.

- Develop and carry out Process Documentation training for IAS staff and district engineers working on the BCWUAs.
- Initiate study on practical implementation of establishing district WUA centers, and the required institutional management and support mechanisms.
- Develop and initiate integrated training package for IAS staff, district engineers and water users on techniques of participatory rural appraisal (PRA), field analysis, and progress/impact reporting.

C.4: Irrigation Advisory and Support Service

During the next quarter EPIQ will assist MPWWR with implementation of the Tranche III benchmark to fully institutionalize the Irrigation Advisory Service.

C.5: Sugarcane Water Use Policies (MPWWR/MALR)

The following activities are planned for the next quarter:

- Obtain final funding guarantees for, develop procedures for, and begin implementation of workplan for irrigation improvement on the sugar cane pilot areas
- Implement improved irrigation technologies on approximately 1,000 feddans in the Naga Hammady and Armante areas of the Qena Governorate
- Implement water measuring and monitoring facilities at the selected sites
- Provide on-the-job training to District Engineers for water monitoring and measuring and data analysis
- Implement a study of the alternatives for reducing water application rates on gravity flow irrigation of sugar cane in Aswan

C.6: Rice Water Use Policies (MPWWR/MALR)

The following activities are planned for the next quarter:

- Final on-site review of canals for the extension of the short duration variety program
- Draft of national plan for expansion of short season varieties to all rice growing areas
- Orientation and training of Rice Extension personnel and of local agricultural extension personnel regarding the short season variety package and the program for coordinated rice planting
- Orientation and training of the District Engineers in water measuring and monitoring
- Implement any canal improvements needed for the project
- Complete the analysis of Sidi Gammee pilot water monitoring and agricultural data, and the preparation of a report on the pilot
- Develop a coordinated plan for public/farmer awareness program creation for use in extending the short season variety package to all rice growing

C.7: Intermediate Drain Water Reuse

The following activities are planned for the next quarter:

- Continue harvesting and analyzing Abou Hammad drainage monitoring data
- Organize environmental impact assessment of intermediate reuse in Bahr Bagar basin
- Conduct sociological survey and study of intermediate drainage reuse in Abou Hammad district
- Prepare economic analysis and evaluation of intermediate drainage reuse in Abou Hammad
- Carry out in-team discussions and out-team consultations on policy recommendations to be concluded from the benchmark implementation
- Draft chapters of the benchmark report

C.8: Water Quality Regulation--Law 48

The following activities are planned for the next quarter:

- Prepare SOW and recruit short term TA to support this activity.
- Assist WPAU as required.

Studies

Management of Deep Groundwater Study

The separate terms of reference developed for an expatriate groundwater management specialist to participate in this study are being combined with the TOR for expat specialist needed for Benchmark C2. It is expected that this individual will be mobilized during the first quarter of 1999 and conduct work activities related to both the benchmark and the deep groundwater study. During this short term assignment, the expert will also work with Dr. John Keith, EPIQ Resource Economist in the study of economic and technical issues regarding deep groundwater. An expected output of the study is an initial policy framework for deep groundwater development, use and management that will be the basis of a Tranche IV benchmark.

Conjunctive Use of Shallow GW Study

The EPIQ team will:

- Finalize a work plan and terms of reference to carry out a study on shallow groundwater potential and utilization strategies.
- Identify TA requirements to support the study.

Nile Operations Study

The EPIQ team has:

- Developed a background paper on strategic Nile operation issues and a work plan to study these issues in collaboration with the Irrigation Sector and other related parties.
- Identified potential policy benchmarks to be generated from the study.

- Continued searching data / information and potential local short-term TA sources for the study.

Strengthening District Water Management Capability Study

The EPIQ team will discuss the parameters, scope and nature of this study with WPAU staff, Steering Committee members and MPWWR officials. A conceptual draft policy framework for strengthening district water management capability will be developed that will provide the basis for a possible Tranche IV benchmark, as well as future policy benchmarks after Tranche IV.

Agriculture Water Demand

The EPIQ team will:

- Review the structure of the ASME model, focusing on those parts which appear to have structural or data inadequacies
- Determine the changes required in the model in order that it is both representative of actual conditions and flexible enough to generate the needed information for estimating agricultural demands, examining crop rotations, and determine policy impacts
- Draft a report that describes the details the model, its structure, and its use for policy analysis for non-GAMS users.

Water User Organizations in New Lands

The EPIQ team will:

- Finalize a proposal for a study on options for participatory irrigation management in new areas (i.e. Toshka, El Salaam and North Sinai).
- Identify short term TA to assist with the study.

M&I Wastewater Treatment Economic Study

The EPIQ team will:

- Implement the SOW for the study
- Assist the STTA team in data collection and analysis where feasible and desirable
- Review the draft report from the STTA team
- Develop a plan for a presentation or symposium of the results from the study

TA Support

The EPIQ team will prepare SOW to support the following TA supported activities:

- Improvement of the MPWWR Main Information Center
- Preparation of MPWWR GIS Standards
- Establishment of an Irrigation Technology Center

Other Activities

Complete a “white paper” on private sector participation in irrigation management in Egypt.

Participate in APRP coordination meetings and workshops.

Conduct a workshop to present Tranche III benchmark workplans to USAID and MPWWR.

Provide support funds and participate in the MPWWR-sponsored Participatory Irrigation Management workshop scheduled for November 1998.

Reports

The following reports are expected to be completed during the next report period:

- Tranche III Benchmark work plan.
- Tranche III study work plan
- Hydrogeology of the Deep Groundwater Aquifers in the Western Desert and Sinai.

Administration

The following activities are planned for the next quarter:

- Correct deficiencies identified in the Winrock Administrative review.
- Hire a replacement for the local assistant administrator.

IV. PROBLEMS AND ISSUES

Due to personal health concerns of my family, I have continued a dialogue with Winrock, EPIQ/IRG and USAID concerning my resignation from the long-term TA team. Depending on employment opportunities in the US, it is possible that I may resign from the long-term team as early as February or March 1999, but not later than 30 June 1999. I have contacted a number of individuals as potential replacements and have asked them to submit their CV's. I have recommended to the team leader and Winrock officials that a replacement for my position on the long-term team should be mobilized by early Spring 1999.

C.5: Sugarcane Water Use Policies (MPWWR/MALR)

- Funding of the implementation of improved irrigation in sugar cane areas is dependent upon significant funding from MALR and MPWWR, which may not be forthcoming
- Identifying specific water measurement and monitoring areas depends also on the implementation, and may require revision should funding not be obtained

C.6: Rice Water Use Policies (MPWWR/MALR)

- Seed production and training of extension personnel depends on significant funding from either the MALR or the National Rice Campaign (FCRI)

Studies

Agriculture Water Demand

- Restructuring the existing model, should it be necessary, would require a significant expenditure of effort and time, in both STTA and LTTA
- Developing alternative approaches is limited by data and by the time required for analysis of water demands

M&I Wastewater Treatment Economic Study

- Data availability could be a limiting factor in the successful completion of the study

An internal administrative review was carried out at the EPIQ WPRP project office by Winrock home office staff. A plan of action was prepared for correcting deficiencies.

A mechanism for hiring MPWWR staff to carry out measurement activities continued to be a problem. Fortunately the field measurement teams agreed to continue their work on the rice pilot

in Sidi Gammee Canal pilot area and on the drainage monitoring in Abou Hammad District. Hopefully this issue will be settled during the planned visit of Doug Clark, EPIQ Project Coordinator, in October 1998.

Cooperation between EPIQ, USAID, MPWWR, WPAU, and other APRP TA units is excellent. HE Minister Public works sent letter of commendation to the USAID Mission Director commending the work done by USAID and the EPIQ team in helping to complete Tranche II benchmark activities.

Dr. Tom Ley has given notice that he may be leaving the project before completion of the contract in September 1999 for personal reasons. EPIQ has initiated a search for possible replacement candidates.

IV. IMPORTANT TRIPS, VISITS AND MEETINGS

Dr. El-Sayed Mahdy

**List of Mtgs., Trips, Visits 1/10 -
31/12/98**

Date	Location	Purpose	Persons Attending
4/10/98	APRP	Discuss sugar cane T3 planning	SCWG
5/10/98	Planning Inst.	Lecture for FAO training	
12/10/98	Elwan Office	Discussion of Sedi-Gamee data + preparation for T3 budget	T.Ley, H. Elwan, E. Mahdy
15-17/10/98	Sharm El-Sheikh	T3 Benchmark workshop	
19/10/98	PMU Office	Meeting with Eng. F. Afifi, chairman of SCC to discuss finance of T3 SC Benchmerk	Afifi, Nour, S. Hussein, Jane, Keith, Ley, Mahdy
22/10/98	Dr. Allam Office	SC BM activity	Max, Jane, Allam, Ibrahim, Nour, Keith, Mahdy
25/10/98	APRP	SCWG mtg. on T3 Benchmark activity	SCWG
27/10/98	FCRI	RWG mtg. on T3 Benchmark activity	RWG
27/10/98	WPRP-Conf. Room	Economic Analysis of Intermediate reuse	Keith, Assiouti, Zhu, Ragab, Mahdy
29/10/98	Desouk	Visiting the Policy test area	Keith, Ley, Groff, Mahdy
4-5/11/98	Luxor	Seminar on SC T3 pilot program jointly with RDI	SCWG
9-10/11/98	Sharkia & Ismailia	Intermediate Reuse BM activity	Zhu, Khattab, Assiouti, Ragab, Mahdy, Mohammed, Tarek.
16/11/98	APRP	Initial meeting of ASME working group	ASMEWG
16/11/98	Eng. Nasser Ezzat Office	SC BM finance	Eng. Ezzat, Keith, Mahdy
22/11/98	APRP	SCWG mtg. on T3 Activity	SCWG

24/11/98	MPWWR	Discuss initial reactions to model and objectives of sub-committee	ASME sub-committee (Hussein, Keith, Bayoumi, Ender, Monsour)
25/11/98	FCRI	Rice WG mtg. on T3 Activity	RWG
30/11/98	Agriculturalist club	RDI-Environmental workshop	Keith, Mahdy
1/12/98	MPWWR	Green.com Workshop KAP Survey	
2-3/12/98	Hurghada	RDI- T3 BM workshop	
5-7/12/98	Luxor	Training of trainers seminar for Ag. Extension personnel	Keith, Gleason, Joyce, 25 extension personnel
10/12/98	SCRI(Dr. Allam Office)	SCWG mtg. to discuss T3 Benchmark	SCWG
16-17/12/98	Luxor	Orientation Meeting for Irrig. Engineer in Upper Egypt pilot program	Fredericks, Ley, Mahdy, Keith, Allam, Mustafa, 25 water and ag personnel
22/12/98	FCRI	RWG mtg. to present initial data from Sidi Gammee and planning for T3 Benchmark	RWG

DATE	LOCATION	PURPOSE	PARTICIPANTS
Nov 9-10	Zagzig and Salam Canal neighboring areas in Bahr Bagar basin	Exploring intermediate reuse potential in the middle and northern Bahr Bagar areas	Dr. Z. Zhu (EPIQ) Dr. F. Khattab (EPIQ) Dr. I. Ellassiouty (EPIQ) Eng. R. A. Azim (EPIQ) Dr. S. Mahdy (EPIQ) Eng. M. Hamed (WPUA) Eng. Maher Khodary and other officials (Sharkia and Salhia)
Nov 21-24	Sham Sheikh	Participating Ministry's Nile Forecasting workshop	Dr. I. Ellassiouty (EPIQ) Dr. Z. Zhu (EPIQ) MPWWR & FAO officials NOAA/NWS consultants
Dec 7	Zagzig and Abou Hammad	Supervising site survey of potential pump stations, and investigating effect of Ismalia Canal seepage in drains in Abou Hammad drains	Dr. F. Khattab (EPIQ) Eng. R. A. Azim (EPIQ) Eng. Maher Khodary and other officials (Sharkia and Salhia)
Dec 6-7	Gabal El Asfar and Shoubra	Visiting three wastewater treatment plants in northeast	Dr. Z. Zhu (EPIQ) Dr. I. Ellassiouty (EPIQ)

DATE	LOCATION	PURPOSE	PARTICIPANTS
	Kheima	Cairo, and investigating pollution loading to Qalubya and Belbeise drains	Eng. M. A. Hady (CWO)
Dec 23	Zagzig and Abou Hammad	Collecting data of indicative crop patters and operating hours of two existing reuse pump stations	Eng. R. A. Azim (EPIQ) Dr. S. Mahdy (EPIQ)

DATE	LOCATION	PURPOSE	PERSONS MET
Oct 8	APRP	PPC Meeting	PPC; USAID Ag Policy Team; APRP TA COPs
Oct 16-17	Sharm El-Sheik	WPRP Tranche III Benchmark Workplan Workshop	MPWWR Steering Committee; USAID Ag Policy Team; EPIQ Team; WPAU Team; MSM Team; GeenCom/WCU COP; RDI COP; D. Clark (EPIQ Proj Coordinator)
Oct 18-23	Cairo	EPIQ Project Coordination	D. Clark (EPIQ Proj. Coordinator); T. Olson (USAID); C. Anderson (USAID); Eng Gamil (MPWWR); EPIQ TA Team; M. Allam (Nile Consultants)
Oct 22	NWRC	NWRC Project Coordination	Dr. M. El-Kady (NWRC); Dr. Fatma (RIGA); Dr. Shadden (DRI); J. Fredericks (EPIQ) & staff; D. Clark (EPIQ Proj. Coordinator)
Oct 25	Cairo	Winrock Project Coordination	M. Rock (Winrock tech coordinator); EPIQ TA Team; C. Anderson (USAID); Eng Gamil (MPWWR).
Dec 1	MPWWR	Seminar Presentation on Farmer Survey	GreenCom; WCU

DATE	LOCATION	PURPOSE	PERSONS MET
Dec 2-3	El Guna	APRP (RDI) Workplan Workshop	PMU;USAID Ag Policy Grp; RDI team; MVE team; FSI team; J. Fredericks (EPIQ); J. Keith (EPIQ); E. Mahdy (EPIQ)
Dec 6	Maadi	SO1 Meeting	P. Deuster (USAID);T. Olson (USAID); SO1 COP's; J. Fredericks (EPIQ).
Dec 8	MPWWR	Steering Committee Meeting	MPWWR Steering Committee; Eng. Gamil (Chairman); C. Anderson (USAID); Dr. Wadie (USAID); J. Fredericks (EPIQ)
Dec 8	MPWWR	APRP Benchmark Process	Wilma Gromley (TAG); EPIQ TA team
Dec 10	APRP	PPC Meeting	PPC; USAID Ag Policy Team; APRP TA COPs
Dec 10	MPWWR	Law 48 Coordination Meeting	Lujendijk (Dutch Consultant); Eng. Nasser (WPAU); J. Fredericks (EPIQ); Dr. Ellassouity (EPIQ)
Dec 14 -15	Nile Ramsis	Vision Statement Workshop	Dr. s. Nassar (PPC Chairman); P. Deuster (USAID); USAID Ag Policy team; APRP TA teams

Date(s)	Location	Purpose	Participants
4 October	APRP Dokki	APRP PMU Meeting (acting team leader)	APRP TA Teams
7 October – 10 October	Western Desert Oases	Field trip to Western Desert Oases: 7 Oct—Kharga area, 8 Oct—Dakhla area, 9-10 Oct—Farafra area	Dr. T. Ley (EPIQ) Eng. S. Nour (EPIQ) Dr. A. Khatlab (EPIQ) Dr. Z. Zhu (EPIQ) Eng. A. Nagati (MPWWR) and New Valley Irrigation Directorate (NVID) staff
15-17 October	Baron Hotel,	WPRP Tranche III Benchmark	MPWWR Steering

	Sharm El Sheikh	Implementation Workshop	Committee, WPAU, EPIQ and other water TA teams
22 October	NWRC	Meeting with Dr. Mona El Kady, Dr. Fatma Attia, Dr. Shaden Abdel Gawad to discuss collaboration of EPIQ and NWRC on benchmarks	Dr. J. Fredericks (EPIQ) Mr. Doug Clark (EPIQ) Dr. A. Khattab (EPIQ) Dr. Z. Zhu (EPIQ) Eng. S. Nour (EPIQ) Dr. T. Ley (EPIQ) APRP TA teams
25 October	MPWWR Library	APRP PMU Mtg.	APRP TA teams
15-18 November	Kharga, Farafra	Field trip to Western Desert Oases: 15 Nov—NAS Conference on Deep GW in the Western Desert, Kharga 16 Nov—travel to Farafra 17-18 Nov—Farafra area, pilot area inspection and focus workshop on 17 Nov	Dr. T. Ley (EPIQ) Eng. S. Nour (EPIQ) Dr. A. Khattab (EPIQ) Dr. J. Fredericks (EPIQ) Eng. T. Nada (WPAU) Eng. Dina (WCU) Eng. Dina (WCU) Eng. A. Nagati (MPWWR) NVID staff; NVAD staff; 35 farmers APRP TA teams
29 November	MPWWR Library	APRP PMU Mtg.	APRP TA teams
1 December	MPWWR Auditorium	Presentation of Farmer KAP Survey Results by Greencom and WCU	USAID APRP Group, MPWWR officials
14 December	Ramses Hilton, Cairo	APRP Future Vision Workshop	Paul Deuster, Dr. Saad Nassar, USAID APRP Group, APRP TA Teams
20 December	APRP Dokki	APRP PMU Mtg. (representing team leader)	APRP TA Teams

VI. STAFF LEVEL OF EFFORT

Name	Position	Arrival	Departure	Reporting Period (pm)	Cumulative (pm)
Expatriate Long Term TA					
Dr. Jeff Fredericks	Chief of Party	25 Jan 98	30 Sep 99	3	8.1
Thomas Burola	Administrative Officer	12 Jun 97	30 Sep 99	3	15.60

Name	Position	Arrival	Departure	Reporting Period (pm)	Cumulative (pm)
Dr. Thomas Ley	Senior Irrigation Engineer Acting Team Leader	20 Jun 97	30 Sep 99	3	15.33
Dr. Zhongping Zhu	Senior Water Resources Engineer	13 Jun 97	30 Sep 99	3	15.60
Dr. John Keith	Senior Water Economist	1 Feb 98	30 Sep 99	3	8
Dr. Robert Cardinali	Senior Sociologist	20 Mar 98	30 Sep 99	3	6.9
Egyptian Long Term TA					
Dr. Ahmed Fakhry Khattab	Co-Team Leader	1 Aug 97	31 Jul 99	3	14
Dr. Ibrahim Ellassiouti	Senior Water Resources Mgmt. Specialist	1 Aug 97	31 Jul 99	3	14
Eng. Saleh Nour	Senior Hydrogeologist	1 Sep 97	31 Aug 99	3	13
Dr. El-Sayed Mahdy	Economist	1 Mar 98	28 Feb 99	3	7
Eng. Ragab Abdel Azim	Drainage Engineer	1 Feb 98	31 Jan 99	3	8
Expatriate Short Term TA					
Eng. Essam Barakat	Senior Irrigation Participation Specialist	1 Jul 98	30 Sep 98		2.33
Eng. Hussein Elwan	Irrigation Management Specialist	1 Jul 98	30 Sep 98		
Dr. Safwat Abdel Dayem	Senior Drainage Specialist	1 Jul 98	31 Jul 98		1.0
Egyptian Admin Staff					
Karim Abdel Razik	Administrator	15 Sep 97	23 Sep 98	3	12.5
Foaz El Mona Fouad	Executive secretary	15 Sep 97	14 Sep 98	3	12.5
Jacqueline Rizk	Accountant	3 Aug 97	2 Aug 99	3	14
Amira Serry	Secretary	14 Dec 97	13 Dec 98	3	9.5
Mona Zakhary	Secretary	2 Jun 98	1 Jun 99	3	3
Kalid Mokhtar	Messenger	1 Oct 97	30 Sep 99	3	12
Akmed Mahmoud	Messenger	20 Nov 97	19 Nov 98	3	10.2
Saeed Maebed	Driver	12 Feb 98	11 Feb 99	3	7.8
Adel Moustafa	Driver	17 Feb 98	16 Feb 99	3	7.5
Ahmed Saeed	Driver	10 Aug 98	9 Aug 99	1.66	1.66

VII. STATUS OF FINANCES AND EXPENDITURES

Financial summary for 3rd quarter (1 July – 30 September 1998)

Category	Budget Amount (US\$)	Total through Last Period (US\$)	Expenditures This Period (US\$)	Cumulative Amount (US\$)	Remaining Amount (US\$)	Percent Expended (%)
Direct Labor	2,509,512	441,092	209,978	651,070	1,858,442	26
Labor Multiplier	2,760,463	478,635	229,219	707,854	2,052,609	26
Subtotal Labor Costs	5,269,975	919,727	439,197	1,358,924	3,911,051	26
Materials and Other Direct Costs	2,729,079	623,088	161,559	784,647	1,944,432	29
Total	7,999,054	1,542,815	600,756	2,143,571	5,855,483	27

VII. 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 (Final Draft)	August 1998
11	Quarterly Report (April-June 1998)	August 1998
12	WRRP Tranche III Benchmark Workplan	November 1998
13	Quarterly Report (July-September 1998)	Decemeber 1998