

START-UP WORKSHOP FOR THE IRRIGATION IMPROVEMENT PROJECT OF THE EGYPTIAN IRRIGATION MANAGEMENT SYSTEMS PROJECT

ISMAILIA, EGYPT

March 16-20, 1989

ISPAN Activity No. 637B

ISPAN Report No. 17



IRRIGATION SUPPORT PROJECT FOR ASIA AND THE NEAR EAST

Sponsored by the U.S. Agency for International Development



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Cornell University

Development Alternatives, Inc.

Harza Engineering Company

International Science and Technology Institute, Inc.

Training Resources Group

The University of Arizona

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EGYPTIAN IRRIGATION MANAGEMENT SYSTEMS PROJECT**

**ISMAILIA, EGYPT
March 16-20, 1989**

**Prepared for the USAID Mission to Egypt,
Office of Irrigation and Land Development,
under ISPAN Activity No. 637B**

by

**Dee Hahn-Rollins
and
Kathy Alison**

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ACRONYMS

AES	Agricultural Extension Service
APC	Agricultural Production and Credit Project, USAID
CIP	Commodity Import Program
GOE	Government Of Egypt
IAS	Irrigation Advisory Service
IIP	Irrigation Improvement Project
IMS	Irrigation Management Systems Project (USAID)
ISPAN	Irrigation Support Project for Asia and the Near East
LBII	Louis Berger International, Inc.
MALR	Ministry of Agriculture and Land Reclamation
MKE	Morrison-Knudsen Engineers, Inc.
MPWWR	Ministry of Public Works and Water Resources
NARP	National Agricultural Research Project, USAID
PDP	Project Development Project
PIL	Project Implementation Letter
RRNA	Robert R. Nathan Associates, Inc.
TA	Technical Assistance
TDY	Temporary Duty Assignment
UCA	Unit Command Areas
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development
WUA	Water User Association
WRC	Water Research Center

Chapter 1

INTRODUCTION

1.1 Background

In December 1988, USAID/Cairo requested the Irrigation Support Project for Asia and the Near East (ISPAN) to conduct a project start-up workshop for the Irrigation Improvement Project (IIP) in Egypt. The IIP component is the cornerstone of Egypt's Irrigation Management Systems (IMS) Project, which is sponsored by the U.S. Agency for International Development (USAID) and the Egyptian Ministry of Public Works and Water Resources (MPWWR).

Six of the 10 IMS sub-projects are scheduled to begin project activities during 1989. ISPAN was asked to conduct two start-up workshops for the Professional Development Project (PDP) and the Water Research Center (WRC) Project. These were held in January and February 1989. The IIP workshop, held March 16-20, 1989 in Ismailia, Egypt, was the third in this series of IMS start-up activities. Forty-six representatives from the Ministry, USAID, and the contract team participated in the workshop. Kathy Alison, ISPAN Human Resource Development Program Manager, and Dee Hahn-Rollins, a management consultant with Training Resources Group, facilitated the workshop.

In 1984, the Government of Egypt (GOE) initiated a national program to improve and rehabilitate irrigation canal networks in new as well as old lands in the Nile valley and delta.

The GOE's strong interest in the IIP stems from its concerns over the country's growing dependency on imported foodstuffs. To help counter this trend, the GOE is looking for ways to increase agricultural production and, at the same time, conserve water in the "old lands." The conserved water would provide more water for "new land" development or other uses.

The basic approach of the IIP is to integrate rehabilitation and improvement of the delivery system infrastructure with improvement of the farm delivery system and management practices. This includes the development of an Irrigation Advisory Service and Water User Associations that will interact with interdisciplinary teams regarding the feasibility, design, and operations and maintenance of these delivery systems.

With these improvements to physical works and the integration of farmers into the decision-making process, the objective of the program is to increase agricultural output within the improved systems, conserve water for use in expanding agriculture, and improve equity among farmers.

The primary project activities and inputs include 1) installation of measuring and control devices on main and branch canals; 2) mesqa improvements; 3) land leveling; and 4) advisory services that integrate inputs from agents of the MPWWR and Ministry of Agriculture and Land Reclamation (MALR) to improve

irrigation and agricultural practices, organize Water User Associations (WUA), and create an effective Irrigation Advisory Service (IAS).

Engineer Ahmed El Sawaf, undersecretary of the MPWWR Irrigation Improvement Project, is the project leader.

Morrison-Knudsen Engineers, Inc. (MKE) and Louis Berger International, Inc. (LBII) and their subcontractor, Robert R. Nathan Associates, Inc. (RRNA) are implementing the project as a joint venture with 14 resident staff who will be located in Cairo and at various project sites. The project team leader is Nolan L. Pike.

1.2 Terms of Reference

ISPAN was requested to provide two training specialists/facilitators to:

- Interview a cross-section of government representatives who will be working on the project, members of the contract team, and USAID staff to identify project start-up issues and needs
- Analyze the interview information to determine goals and issues and develop a workshop design and schedule
- Conduct a 4-day start-up workshop, providing facilitation processes using a mixture of full group and small group problem-solving activities based upon the general guidelines of the publication, "Facilitator Guide for Conducting a Project Start-up Workshop" (Edwards and Pettit, WASH Technical Report No. 41, March 1988)
- Produce a summary field report in draft before departure from Egypt with workshop results and agreements.

1.3 Interviews

Twenty-nine interviews were conducted in preparation for this workshop. The interviewees included 15 Egyptians in the MPWWR, IIP Headquarters in Cairo, Minya, and Tanta (including 5 General Directors). Twelve consultants from the technical assistance team and two USAID personnel were also interviewed. Questions were asked about their expectations for the workshop, the role each plays in the project, their perceptions about the overall goals of the project and what they believed to be the major concerns, and problems and issues facing the project.

The interview data were analyzed and used to guide the selection of workshop topics and the sequencing of the work sessions. Issues selected for workshop discussion and problem solving were the ones about which a majority of participants had questions or concerns.

A proposed workshop agenda, schedule, and list of issues with accompanying questions were presented to the workshop Steering Committee. This committee included IIP Project Director Engineer Sawaf, USAID Associate Mission Director Ed Stains, USAID Office Director of Irrigation and Land Development Joe Carmack, USAID Project Officer for IIP Dave Smith, and the technical assistance team leader from Morrison-Knudsen Engineers, Inc. Nolan Pike. The workshop design was finalized after their clearance.

1.4 Interview Findings and Issues Identified

In the pre-workshop interviews, most people were very positive about attending the workshop. They felt it would provide an excellent opportunity for them to meet people with whom they would be working closely. Several of the technical assistance team had arrived during the previous month and were anxious to meet and learn more about the project from their Egyptian counterparts. Many of the Egyptians had been working on the previous phase of the irrigation project and felt they had much to contribute to the start-up phase of this activity. Very few of those interviewed had ever attended this type of participatory project start-up workshop so they were curious about what to expect.

Issues and their accompanying questions were organized under two major categories. Those dealing with policy were grouped under Project Policy Issues. The remaining ones were grouped under Project Implementation Issues; these were developed into eight specific categories with the questions raised by the participants listed under the specific issues. The eight issues selected were the ones about which a majority of participants had similar questions or concerns.

Several questions of a policy nature were identified as unresolved, which raised concerns about their impact on the implementation of IIP.

1.4.1 Project Policy Issues

- Assumptions are being made based on the MacDonald feasibility studies that continuous flow designs will be implemented, but is this official policy?
- What does USAID mean when it says "80 percent of Water User Associations must be organized before construction can begin"?
- How will incentives be handled? How much and where will incentives come from? Are they available and from whom?
- What is the status of the ministerial decree on the interdisciplinary teams? What is the relationship between the Irrigation Advisory Service and these interdisciplinary teams?
- What will be the policy on cost recovery?
- How will the Irrigation Advisory Service be set up?

1.4.2 Project Implementation Issues

- **Technical Assistance Team--Roles and Responsibilities**
 - What are the specific roles and responsibilities of the TA team?
 - How will they develop a supportive relationship with their counterparts?
 - What is their relationship to the overall IMS Project (as stated in their job descriptions)?
 - How can their skills and expertise be made known and shared with other team members (both Egyptians and TA)?
 - Who is responsible for managing the vehicles?
 - How can the TA team get settled easily into the new culture?

- **Water User Associations and Irrigation Advisory Services**
 - Why are we forming these associations?
 - What strategies will we use to build and organize WUAs?
 - How can the TA team support this effort and what skills will they need?
 - Who will be responsible for organizing the WUAs?
 - What is the role of the IAS in developing WUAs?
 - What is the role of the interdisciplinary team in organizing the WUAs?
 - How will the WUAs be involved in cost recovery?
 - How will WUAs' organizing functions be coordinated with the construction phase?

- **Interdisciplinary Teams**
 - What are they and what are the reasons for them?
 - What is the makeup of these teams?

-- What is the role of the TA team sociologists and engineers in forming and training these teams?

■ **Feasibility Studies**

-- What are the next steps after the MacDonald feasibility studies have been approved?

-- Is there flexibility in how we use the MacDonald feasibility studies?

■ **Communications**

-- How are we going to establish effective communications links between headquarters and the field?

-- How are we going to develop a sense of being one team rather than three distinct groups (TA, USAID, and Egyptian)?

-- How are we going to learn from each other and use each other as resources?

-- How can we reduce the difficulty of getting decisions made, of a routine nature, on a day-to-day basis? How can we encourage greater delegation of authority and more sharing of information.

■ **Finances/Procurement**

How will the following be done and by whom:

-- Procure office furniture, equipment and supplies?

-- Order library and reference material both for headquarters and directorates?

-- Approve and disperse construction budgets?

-- Manage the operating expenses for vehicles?

-- Develop criteria for selection of construction contractors?

- **Language**

Inability of some members of the team to communicate in Arabic or in English hinders the ability of team members to work together effectively. Language also hinders some individuals' ability to study overseas.

-- What measures can be taken to improve language skills?

- **Project Workplan**

-- Can we accomplish the workplan in the 3-year timeframe?

-- How and when will everyone have an opportunity to provide input into the workplan?

Chapter 2

THE START-UP WORKSHOP DESIGN

2.1 Overview of the Workshop

As a concept and a process, the project start-up workshop has been designed to shorten the time needed to get a project up and running and to forestall implementation problems. This is accomplished by bringing the project's major stakeholders together in a retreat setting and systematically addressing the issues identified in participant interviews conducted prior to the workshop, providing uniform project information to all and developing and/or reviewing draft workplans for the first year of the project.

In the IIP workshop, four groups were involved:

- MPWWR/IIP Headquarters staff. This included Senior and First Undersecretaries for the Ministry as well as the Undersecretary for the IIP and headquarters staff, including engineers and social scientists.
- IIP Directorate staff. This included the General Directors from the six project areas, plus other directorate staff including engineers.
- MKE/LBII contract team. This included 12 of the 14 resident staff, plus the LBII backstop person. (The team consisted of field engineers and social scientists. See Appendix A for job description for field engineers.)
- USAID. This included the Associate Mission Director for Irrigation and Land Development, ILD Office Director, the IIP Project Officer and IAS Project Officer. Another Project Officer, who works with another component of the IMS project, participated for one day.

A total of 46 people participated in the workshop (see Appendix B). An interpreter was used to help translate project information throughout the workshop.

The workshop was designed as a series of team-building activities; the entire project team was given tasks to complete in mixed small groups with report-outs to the full plenary group. As recommendations and agreements were reached, they were recorded and typed up for final review and acceptance by the group. Copies of all workshop agreements were given to the participants prior to their departure.

The facilitators directed the process, giving instructions to the group, monitoring the small group work and discussions, and facilitating the full group agreement and discussion process.

2.2 Workshop Goals

The workshop was designed to meet the following goals:

- To exchange current information about the project that is essential to start-up.
- To achieve agreement on and commitment to project goals and activities.
- To provide an opportunity for the project team to become acquainted.
- To build an effective team and develop team spirit.
- To agree on the management roles and responsibilities of Morrison-Knudsen Engineers/Louis Berger International, Inc (contractors); USAID; and the Irrigation Improvement Project/MPWWR Headquarters and Directorate level.
- To agree on procedures for managing the project.
- To improve the ability of the team to work together effectively.
- To discuss and develop strategies for dealing with the most important issues that will affect the project.
- To review the current workplan and to get input for finalization of the plan.

2.3 Workshop Guidelines for Working Together

The group agreed to use the following guidelines during the workshop.

Begin each session on time
Actively participate, respect each other's opinions, and listen
Ask questions if you don't understand
Speak slowly and loudly
Only one person speaks at a time
Don't dominate the discussion; encourage others to speak
No smoking in the large meeting room
Enjoy each other.

2.4 Workshop Schedule

The workshop was organized as a 4-day event, with an opening session on Thursday evening, March 16, 1989. The workshop closed on Monday, March 20, at 2:30 pm. The schedule of activities included:

March 16, 1989

6 PM Workshop Opening:

Reception

Official opening and welcoming addresses:

Eng. Ahmed Sawaf, Undersecretary of the Irrigation Improvement Project (IIP/MPWWR)

Eng. Ahmed Mazen, Senior Undersecretary and Chairman of Irrigation Department/MPWWR

Nadia Makram Ebeid, UNDP Programme Officer

Edwin Stains, USAID Associate Mission Director

Introductions and Get-Acquainted Exercise

9 PM Opening Banquet

March 17, 1989

AM Welcome and agenda for Day 2

Goals, schedule, and guidelines for working together.

Project Information Panel and Questions (Panel members: Ed Stains, Eng. Sawaf, Joe Carmack, Nolan Pike)

PM Project Information (continued)

Overview of Interview Results

PM Discussion of Project Issues (small groups)

Project Policy Issues

Project Implementation Issues

Technical Assistance Team Roles/Responsibilities

Water User Associations and Irrigation Advisory Services

Interdisciplinary Teams

Feasibility Studies, Finances/Procurement, Language

March 18, 1989

AM Discussions and presentation of recommendations to full group

PM Presentations of recommendations (continued)

Expectations and agreements about how to manage the project

March 19, 1989

AM Discussions and presentations of management expectations from the four groups

PM Introduction of workplan assumptions

Review of draft workplan

March 20, 1989

AM Recommendations of modifications needed in workplan

Budget/procurement session

Review of agreements reached during workshop

Evaluation and closing remarks

2.5 Session Descriptions

In this section, a brief description is given of each session. The results of the sessions will be explained in the next chapter.

The Workshop Opening

This session began at 6 pm on March 16 with a reception and brief opening remarks from Eng. Mazen, Eng. Sawaf, Nadia Makram Ebeid, and Edwin Stains. Each person then introduced him/her self to the group. Following these brief introductions, a get-acquainted exercise was conducted. Participants were requested to interview someone they did not know well about their role in the project, their family, and how they like to work as a team. Pairs were then asked to join another pair and introduce each other. Following this get-acquainted exercise, the group attended an opening banquet.

Project Information Session

A panel consisting of Ed Stains (USAID), Eng. Sawaf (IIP), Joe Carmack (USAID), and Nolan Pike (MKE/LBII) presented an overview of the project. (See Appendix C for excerpts from the Project Paper and Implementation Letter No. 98.)

The presentations included the project history, goals, a vision for the future, and the relationship of the IIP project to the overall IMS project. The participants were asked to develop a list of two or three clarifying questions relating to project history and goals. Groups alternated in asking the questions and the appropriate panel members responded.

Overview of Interview Results

The facilitators presented the results of the individual interviews conducted prior to the workshop. (This information is above in Section 1.4.) The interview results were used to provide a framework and rationale for the issues discussions and project management sessions that followed.

Discussion of Project Issues

This session provided an opportunity for the group to discuss issues that had been identified during the interviews. The procedure was to ask participants to select an issue listed under project implementation that they were most interested in and work on that issue in a small group session.

The Project Policy Issues were addressed at the same time by a group of policy makers, including Eng. Mazen, the Senior Undersecretary; Eng. Helmy Mahmoud, First Undersecretary; Eng. Sawaf, IIP Undersecretary; Nolan Pike, Team Leader; and Joe Carmack, USAID.

The groups met for several hours into the early evening and again the next morning. After coffee break, each group made a presentation that included recommendations and discussions. The issues discussed included:

Project Policy Issues (Group 1)¹

Project Implementation Issues

Water User Associations and Irrigation Advisory Services (Group 2)
Interdisciplinary Teams (Group 3)
The Technical Assistance Team Roles and Responsibilities (Group 4)
Feasibility Studies (Group 5)
Finances/Procurement (Group 7)²
Language (Group 8)

¹ See Section 3.2.1 for recommendations.

² See section 3.2.2 for discussion of procurement plan and 3-month operating fund account.

Project Management

The objective of the project management session was to discuss and agree upon how project staff would work together. To open the session, an overview was presented. The steps of the session were:

- Facilitators present six key ideas of good project management.
- Small group task: By organizational groupings, develop a list of expectations of project management that the other three groups should meet.
- Representatives from each group present and clarify expectations.
- Organizational groups meet to discuss their reactions to the other groups' expectations.
- Groups agree on a set of working relationships among the four organizations in the full plenary session.

In the development of their expectations for each organization, the participants were asked to answer the following questions:

- How do you expect the other three groups to share project information with you? (How often, what kind of information?)
- What is the ideal working relationship you want with the other groups?
- What kind of written reports do you want and how often? In what form should they be?
- How do you expect to make decisions that affect the other three groups?
- How do you expect to monitor individual and overall project performance?
- To what extent will you involve the other two groups in planning project activities?
- What other expectations do you have of the other project groups?

As a result of this project, a number of agreements were reached between the groups. The results of the exercise are presented in the matrixes in Section 3.2.3.

Reviewing and Adjusting Draft Workplans

In this session, participants were given draft documents, Delivery System Design Assumptions, Mesqa System Design Assumptions, and the estimated staff requirements needed for the socioeconomic surveys that had been developed by the MKE/LBII technical assistance team before the workshop. (See Appendices D, E, and F). The team leader, Nolan Pike, also used flipcharts to present a proposed organizational chart for the IIP and a time line for project design and implementation.

Work groups were made up of Egyptian directors and engineers and U.S. technical assistance team members who will be working together in the future. USAID project officers also participated in the work groups.

The small group task was as follows.

- Review the three sets of assumptions, the proposed organizational chart, and the projected schedules for design and implementation.
- Analyze the assumptions to determine whether they are realistic and achievable.
- Discuss whether the plans address local practices and local needs.

Each group was asked to report its reactions to the assumptions, organizational chart, and time lines. The information from this session will be used to complete the development of MKE's inception plan, which is to be delivered to USAID by April 12, 1989.

Final Workshop Agreements and Summary

This session consisted of a review of the agreements that had been made during the workshop as well as decisions on issues that needed follow-up. Agreements were restated and follow-up actions were identified. Several committees were also formed to follow-up on unresolved issues. Copies of the products developed during the workshop were distributed to each participant.

Evaluation and Closing

The written workshop evaluation was distributed and completed by the participants. Eng. Sawaf and Ed Stains thanked the group for their participation and encouraged them to follow-up on the agreements made during the workshop. Eng. Sawaf also recommended that another workshop for the entire group be held in 4 months to check on the implementation of the project and to discuss issues that may have arisen.

Chapter 3

OUTCOMES AND AGREEMENTS

3.1 Overview of Outcomes

Participants' reactions in the evaluations and informal discussions indicated a high level of satisfaction with the workshop format. As stated earlier in this report, for many participants, this was their first opportunity to participate in this type of workshop and to discuss their questions about the project. The major outcomes of these discussions were:

- A clear sense of what the major unresolved issues are that need to be decided before USAID funding can occur.
- Policy makers attending the workshop made several agreements, which included establishing dates on which they would make decisions or provide reports to higher level authorities so they could make decisions about the unresolved policy issues affecting implementation of the project.
- A unique opportunity for key policy makers to spend an extended period of time together, talking and planning with each other as well as listening to the concerns raised by others who have to implement their decisions.
- General Directors and Egyptian engineers from the project areas had an opportunity to become better acquainted and discuss workplan assumptions with the TA consultant(s) assigned to their areas.
- A better understanding of IIP's history, purpose, and the desired outcomes for this effort and how IIP relates to other components within the Irrigation Management Systems Project.
- Taking the first step in building an effective team by developing a greater awareness of the different personalities and the potential contributions each member has to offer.
- Identified issues and differences that could have gone unrecognized until further into the project causing serious delays and hard feelings between the different entities within the team.

3.2 Specific Recommendations and Agreements

In this section, the specific recommendations and agreements addressing each issue are listed. For the full version of each issue group's original report, refer to Appendix H. The agreements reached among the four groups during the project management session are presented on four matrixes (see section 3.2.3).

3.2.1 Policy Issues

The following recommendations were made:

- **Continuous Flow.** A study will be made of the available studies and data regarding continuous flow and a report will be submitted to the Technical Advisory Committee by May 1, 1989, for an official decision regarding this issue. The workshop participants recommended that the Technical Assistance Committee and the High Committee remain flexible and work on a case-by-case basis. They may not want to recommend only one solution.

Action: Submit a report to the Technical Advisory Committee by May 1, 1989, for an official decision regarding continuous flow. Eng. Sawaf will be responsible for this action.

- **Establishment of 80 Percent of the Water User Associations.** USAID agreed to review the requirement that 80 percent of Water User Associations be established as this relates to mesqa-level and main and branch canal design and construction time frames. This review will also include IAS staffing patterns. A study group was formed by IIP staff and USAID. Eng. Sawaf will chair the group. Members are Hasan Shouman, Essam Barakat, Abdalla Saber Ali, Saad Kaid, Georges Tordjman, Max Lowdermilk, Dave Smith, and Terry Hardt.

Action: A study group will meet on May 26, 1989, at 8:30 am at IIP Headquarters in Shubra to make decisions regarding the issues identified above. (There was a suggestion that cakes be served.)

- **Incentives.** USAID funds cannot be used for incentives and overtime pay. Eng. Mazen agreed to negotiate with Ministry of International Cooperation about this issue.
- **Ministerial Decree on Interdisciplinary Teams and the Establishment of the Irrigation Advisory Service.** It was decided that a ministerial decree will be developed and submitted to Eng. Mazen for issuance.

Action: Eng. Sawaf will submit the decree to Eng. Mazen on March 27, and it will be issued on April 1, 1989.

- IIP Operation Fund. USAID will fund a local operating account in the Central Department of IIP. Eng. Sawaf will submit budget request to USAID. Dave Smith is available for advice.

Action: Eng. Sawaf will send a budget to USAID by May 31, 1989.

- Direct Irrigation. If direct irrigation is presently occurring, it is to be analyzed by IIP staff and Technical Assistance Committee on a case-by-case basis, with improvements to be made by IIP.
- Public Sector Contractors. The policy is that all firms may be invited to bid. However, preference should be given to private sector contractors because USAID requires a waiver to use public sector contractors. With a USAID waiver a public sector contract can be awarded, but permission for the waiver must be obtained from USAID before the contract is awarded to the public sector contractor. A request for a waiver must be well prepared and documented and presented to USAID by the MPWWR. After submitting the waiver request to USAID, it will take 4 to 6 weeks to approve the waiver.

Action: Eng. Sawaf will send a letter to General Directors advising them of this policy by March 30, 1989. (See Appendix I.)

- Temporary Local Hire. USAID will consider requests from IIP to employ temporary staff for unusual skills for limited periods of time. This requires, however, approval from a higher authority within USAID. Therefore, a definite commitment cannot be made at this time.
- Construction Reimbursement. "Complete Units." (See PIL 98 in Appendix C.) When a feasibility study for a unit command area is approved by USAID and before advertisement, the ministry can request an advance for a portion of construction costs.
- Quality Control. Director Generals are responsible for quality control. The technical assistance consultant (Area Engineer) will advise but not be responsible. USAID will monitor quality.
- Legalization of the Water User Associations. A committee was established to develop recommendations regarding the legal steps to take to legalize the WUAs. Eng. Hasan Shouman will chair the committee. The members of the committee are Essam Barakat, Max Lowdermilk, and a legal advisor to be named at later date.

Action: A draft will be prepared by August 31, 1989.

- **Cost Recovery.** An overall plan for cost recovery will be addressed in MKE's inception report. Eng. Sawaf will be responsible for future work and Dick Pond will be the contact person on the TA team.

3.2.2 Project Implementation Issues

The General Directors made the following agreements:

- **Next Steps To Be Taken Regarding MacDonald Feasibility Studies.** To develop a proposed implementation plan taking into consideration the following steps: 1) Divide project area into management units. 2) Decide if a socioeconomic study needs to be made. 3) If enough detail is available, move into design phase. If not, develop steps for conducting study. Remember if a socioeconomic study is planned, it should consider the following: design (physical structure), formation of WUAs, training for IAS staff, and developing indicators for baseline studies.

Action: Each General Director will meet with his staff during the week of March 26, 1989, to determine the next steps to be taken in his directorate. The meeting should include someone with a socioeconomic background/expertise. The proposed implementation plan will be sent to Eng. Sawaf as soon as possible to be reviewed and incorporated into MKE's inception plan, which is to be submitted to USAID.

- **Procurement Plan, Staffing Needs, and Workplan To Be Sent to IIP Headquarters.** The procurement plan should include whatever General Directors need to implement their workplan, i.e. equipment, vehicles, and other items (U.S. dollar items). Staffing needs should also describe ideas about what kind of training is needed. The workplan should cover a 6-month, 1-year, and 3-year timeframe.

Action: The General Directors agreed to send the above information to IIP Headquarters by April 12, 1989.

- **3-Month Operating Fund Account (local currency).** An interim request to be sent to IIP Headquarters. A list of all vehicles located in the directorate by make, model, license numbers. A list of all equipment, office supplies, and training equipment required for 1 year.

Action: The General Directors agreed to send the above lists to IIP Headquarters on or before April 15, 1989.

- IIP's Relationship to IMS Project. Eng. Sawaf will assign the technical office the responsibility for liaison function with the other components within the IMS project.

Other recommendations were made by the issue groups and will be taken into consideration in the future when these issues are addressed more fully. (Refer to Appendix H for full report on small group recommendations.)

3.2.3 Project Management Agreements

There are four distinct groups (IIP Headquarters staff, directorates, MKE/LBII contractors, and USAID) with major responsibilities for the successful completion of this project. To ensure that the project runs smoothly, six aspects of project management were considered and agreements reached by the four groups. The agreements of each can be found on the matrixes that follow.

3.2.4 Major Workplan Agreements

- Irrigation Advisory Services—IAS personnel should be under the direction of the General Directors.
- Movement of design teams—The group recommends not moving teams from one directorate to another.
- Option A—The majority believed they could accomplish implementation under the 4-year timeframe recommended in the MacDonald Feasibility Report (Option A). (See Appendices D and E.)
- Option 3—The majority supported option 3, which is option 1 (mesqa level) plus incorporating direct outlets into rehabilitated project command areas.

MATRIX 1
Management Expectations
Technical Assistance Team Expects of

Expectation	IIP Headquarters	USAID	Directorates
1. Sharing information	Counterpart interaction at every level. Team Leader communicates by memos and copies to teams.	Copies of documents and correspondence related to IIP. Regular meetings between Team Leader and Project Officer.	Regular contact between General Directors and Area Engineers. Copies of relevant documents submitted to G.D. At Mirya, more interaction between counterparts and IAS Team.
2. Ideal working relationship	Smooth, team approach-collaboration. Open communication, so no surprises.	Smooth and collaborative. Open communications.	Smooth and collaborative. Open communications.
3. Written reports	Copies of all technical reports. Team leader expects a report of decisions affecting IIP made at IMS level.	Relevant documentation. Contractor notices as soon as issued.	Pertinent information through Area Engineers.
4. Decision making	Technical: Tordjman and Coles make tentative decisions with counterparts to be discussed with Project Director.	Team Leader formulates recommendations and takes them to AID Project Officer.	Area Engineers make recommendations to General Directors.
5. Monitoring performance	Joint Venture Quarterly Reports. Project control through management information system Premavision-Primavera	Joint Venture Quarterly Reports. Project control through computerized MIS reports.	Comparison by Area Engineers of accomplishments vs. work program (base line).
6. Involvement planning	Dynamic process. Joint planning.	Regular weekly information meetings.	Intensive joint process.
7. Other	Involvement in activities. Frequent off-the-job contacts. Clear and frequent communications and feedback. 8 vehicles on temporary basis until ours are approved and procured.	Rapid/smooth approval of invoices and prompt settlement.	General Directors involve us continually in activities. Clear-frequent communications and feedback. Area Engineers need offices, vehicles, and facilities.

Agreements were reached on the above expectations.

MATRIX 2
Management Expectations
USAID Expects of

Expectation	IIP Headquarters	Technical Assistance Team	Directorates
1. Sharing information	Weekly meetings or as necessary with an agenda for 1 hour. Time/day negotiated by Sawaf and Dave.	Team Leader or Delegate attend weekly meetings or as necessary.	During monitoring.
2. Ideal working relationship	Formal and informal, professional, collaborative, cooperative. Open.	Formal and informal, professional, collaborative, cooperative. Open.	Formal and informal, professional, collaborative, cooperative. Open.
3. Written reports	Monthly Financial, Quarterly Reviews, physical report to be simple yet comprehensive.	Monthly Financial, Quarterly Review, Annual Work Plan.	Quarterly (construction) Financial to IIP Headquarters.
4. Decision making	Jointly, delegation of authority.	Jointly.	General Directors are authorized to spend money if it has been budgeted and approved.
5. Monitoring performance	Annual Work Plans, Quarterly Updates.	Annual Work Plan, Quarterly Updates.	
6. Involvement planning	Jointly	Jointly	In collaboration with IIP Headquarters.
7. Other budgets (local operations)	Timely submission of detailed budgets.		Provide data for IIP Headquarters.
Other relevant A.I.D. rules and regulations	Knowledgeable about relevant rules and regulations.	Knowledgeable about relevant rules and regulations.	
Other monitoring office	Computerized monitoring system		Provide data through IIP Headquarters for the IMS monitoring office.

Agreements were reached on the above expectations.

MATRIX 3
Management Expectations
Directorates Expect of

Expectation	IIP Headquarters	Technical Assistance Team	USAID
1. Sharing information	Telephone calls or personal meetings, periodic reports, monthly and quarterly reports.	Should be carried out through the Area Engineer through meetings (daily) and memoranda.	The relationship should be carried out through IIP Headquarters.
2. Ideal working relationship	Close and continuous cooperation between the directorates and headquarters. Information exchange should be performed and monitored as soon as possible. Quick response needed.	Technical assistance and transfer (training). Responsibilities must be clearly defined.	Same as above.
3. Written reports	Progress reports must be submitted to headquarters. Technical reports should be distributed to directorates periodically.	Area Engineer will report to the General Director on observed progress as necessary. Area engineers'/teams' proposals should be submitted for any modifications.	Same as above.
4. Decision making	Any decision for a particular area must be under the control of the General Director in cooperation with the Project Director (Eng. Sawaf). Decisions about technical issues should be made jointly between the Egyptian staff, area engineers, and the General Director. IIP Headquarters has to approve decisions.	Decisions will be made after discussions between the Area Engineer and the General Director. Area engineers will only make recommendations.	Same as above.
5. Monitoring performance	Monthly and quarterly reports sent to headquarters.	Monthly Reports to General Director of IIP. Progress related to workplan.	Same as above.
6. Involvement planning	Proposals should be approved by headquarters.	The Area Engineer will effectively contribute to the team.	

Agreements were reached on the above expectations.

MATRIX 4
Management Expectations
IIP Headquarters Expects of

Expectation	USAID	Technical Assistance Team	Directorates
1. Sharing information	<ul style="list-style-type: none"> • Weekly meetings • Linkage between computer systems 	Continuous	<ul style="list-style-type: none"> • Monthly meetings • Fax • Radio
2. Ideal working relationship	<ul style="list-style-type: none"> • Open relationship • No delay in answering questions 	Counterpart and team	Direct authority according to organization chart and approved roles and responsibility
3. Written reports	Progress reports from IIP to USAID. Evaluation and auditor reports from USAID to IIP.	<ul style="list-style-type: none"> • Inception Report • Monthly Report • Quarterly Review and follow-up reports. 	Monthly progress report from Director to IIP/Cairo. Provide data for Project Evaluation.
4. Decision making	Sharing ideas	Jointly	Sharing ideas
5. Monitoring performance	Reporting to Aid, field visits.	IIP team performance measured against work plan.	<ul style="list-style-type: none"> • Field visits • Reports • Guidance and recommendations.
6. Involvement planning	USAID review of the plans.	Direct involvement in preparing the plans	Preparation of proposed plan.
7. Other	Financial flexibility (A.I.D. has certain rules that have to be followed—but A.I.D. will help Project Director.	Two-way transfer of experience and technology.	More supervision for better quality control.

Agreements were reached on the above expectations.

3.3 Summary of Participant Evaluations

Thirty-eight of the participants completed the written evaluation. A complete evaluation report is provided in Appendix G. All of the goals of the workshop were evaluated as being achieved. On a scale of 1 (low) to 5 (high) participants rated the achievement of workshop goals as 4.1. The highest goal achievement was 4.76 (to provide an opportunity for the project team to become acquainted). This was followed by two goals at 4.28 (to exchange current information about the project that is essential to start up and to improve the ability of the team to work together effectively). Team building and development of team spirit was also rated highly as an area of achievement (4.18). Agreement on the management roles of the four groups received a favorable rating (4.10), followed closely by the discussion and development of strategies for dealing with the most important issues that will affect the project (4.09). The lowest rated goals were achieving agreement on and commitment to project goals and activities (3.74), agreement on the procedures for managing the project (3.86), and review of the current workplan (3.87).

Given the complexity of this project and the as yet unresolved issues regarding Water User Associations, the status of the ministerial decrees on interdisciplinary teams and the Irrigation Advisory Services, the acceptability of the MacDonald feasibility studies, and the work that still needs to be done on the workplan, the workshop seems to have been very successful for the participants.

When asked what was the most important benefit of the workshop, participants mentioned the following areas most frequently:

- Team building, getting acquainted, and the development of friendships between the different teams.
- Sharing of project information.
- Developing a better understanding of the contractor.
- Clarification of important issues.
- Familiarizing the General Directors about project specifics.

When asked what could be done to improve the workshop, several participants responded that the discussion of the workplan needed more time, as did the discussion about establishing 80 percent of the Water User Associations and the organization of the Irrigation Advisory Services. Other recommendations were that the assumption papers on the delivery system and mesqa system could have been distributed earlier. Other comments on what could be done to improve the workshop included "make sure individuals' inputs are their own and not imposed" and "getting decisions and commitments seemed very difficult."

One person suggested that the general discussions should have been led by an irrigation professional and that the minutes of the discussions should have been written by an irrigation specialist.

Finally, one person suggested that the translator could have been used more effectively and that strategic material should have been available in Arabic.

When asked what areas were left unresolved or needed special attention for follow-up, several of the group mentioned incentives. Other unresolved issues included:

- How the TA team will assist the General Directors in implementing their activities as outlined in the agreement.
- Decisions about the IAS, WUAs, and the number of farmers that can be effectively served at the mesqa level.
- How to achieve the efficient management of the project.
- What will happen if there are no ministerial decrees.
- Resolution of various issues upon which some feel strongly and do not agree.
- The directorate field staff will need to know more about IIP's goals. How will information from the workshop trickle down to them?

The group responded favorably as to the quality of the facilities and the arrangements. Most felt the arrangements were very good.

The facilitators received high marks from the participants. One participant wrote "any failure to meet workshop goals was no fault of the facilitators but a lack of consensus within the MPWWR." One person commented that the facilitators became too involved personally in technical matters during the general discussions instead of bringing a technical person to lead the discussions. Most respondents wrote "excellent," "outstanding," or "very good." One group member said "Wonderful. Couldn't have done a better or more professional job."

Chapter 4

RECOMMENDATIONS AND CONCLUSIONS

The detailed agreements and recommendations generated by the workshop participants represent long hours of work and tremendous effort. To ensure the work will not be wasted, people now have to commit themselves to honoring these agreements and considering the recommendations made. Therefore, it is important to follow up on these actions to make sure they are accomplished. Therefore, the facilitators recommend:

- IIP Headquarters monitor the agreements reached at this workshop on a weekly basis. A letter should be sent to the General Directors reviewing the agreements they made and encouraging them to submit the needed data as soon as possible.
- IIP Project Director, Eng. Sawaf, concentrate his attention on coordinating and organizing the policy discussion for which he is responsible, i.e., continuous flow, ministerial decree on interdisciplinary teams, and the establishment of the IAS, Water User Associations, Incentives, IIP Operation Fund, Cost Recovery.
- Organize activities to inform engineers (staff) at IIP Headquarters, as well as those in the directorates who did not attend this workshop, about what was discussed. Perhaps a visit could be arranged to each directorate by Eng. Sawaf and the interdisciplinary team.
- Hold a follow-up workshop in approximately 6 months (or following the completion of significant milestones) using ISPAN as a resource. The purpose of the workshop would be to review how well agreements were honored and review current workplans, lessons learned, and plans for future.
- Design and conduct 4- to 5-day management skills courses for senior and midlevel managers in IIP and IMS using adult learning methodologies, i.e., case studies, simulations, skill practice and video playback, and managerial skills inventories.

In conclusion, the facilitators are convinced that this project can have a successful start-up phase. Building on the team spirit that began in Ismailia, the team can be successful. But the group will have to define and work toward the same objectives. There is a definite need for the workshop participants to resolve their differences and to apply all their energy to honoring the agreements and commitments made at the workshop.

APPENDIX A

JOB DESCRIPTIONS FOR TA TEAM FIELD ENGINEERS

APPENDIX A

JOB DESCRIPTION FOR TA TEAM FIELD ENGINEERS*

Minimum Qualifications shall be:

- a. A BS level degree in Civil or Agricultural Engineering.
- b. Ten years experience in the design and implementation of irrigation-related water resources projects. Experience in developing countries is highly desirable.
- c. Thorough knowledge of computer applications in irrigated agriculture.
- d. A broad background in irrigation that includes on-farm irrigation, project planning, design, and construction.
- e. A working knowledge of Arabic is highly desirable.

General responsibilities shall be:

- a. Assist directorate staff in the planning and coordination and management of project activities.
- b. Assist the directorate staff in the preparation of plans of work for planning, design, and implementation.
- c. Provide technical assistance to the field staff in all phases of the planning, design, and implementation.
- d. Assist the General Director with the development of a training program for the directorate staff.
- e. Assist with the integration of planning and design with the sociological aspects of projects.
- f. Assist in the monitoring and management of construction activities to assure a high level of quality control.

NOTE: It is anticipated that one of the field engineers may be reassigned to construction engineering position with country-wide responsibility about one year after the contractor begins work. If this change is made, duties for this individual will be redefined.

* Source: Project Proposal, MKE/LBII.

APPENDIX B
LIST OF PARTICIPANTS

Appendix B

LIST OF PARTICIPANTS

1. Eng. Ahmed Mazen - Chairman of Irrigation Department and Minister's Representative.
2. Eng. Helmy Mahmoud - First Undersecretary.
3. Eng. Ahmed El Sawaf - Project Director and Undersecretary.
4. Eng. Salem Sayed Ahmed - General Director, Gharbia.
5. Eng. Abdel Aziz El Baz - General Director, Sharkia.
6. Eng. Saad Kaid - General Director, El-Minya.
7. Eng. Mohamed Abdel-Wahab Assal - General Director, Fayoum.
8. Eng. Hasan Shouman - General Director, Design (Cairo).
9. Eng. Mohamed Abdel-Aziz El-Sergani - Gen. Dir, Design, Esna.
10. Eng. Mohamed Mahmoud El-Attar - Gen. Dir., Design, W. Delta.
11. Eng. Ramsis Bakhoun - Chief, Design, Cairo.
12. Eng. Essam Barakat - National Coordinator, IAS.
13. Eng. El-Shennawi Abdel Ati - Agricultural Economist, Cairo.
14. Eng. Farouk Abdel Al - Sociologist, Cairo.
15. Eng. Ali Kamal - Computer Engineer, Cairo.
16. Mr. Ahmed El-Hamzawi - Accountant.
17. Mr. Nolan Pike - MKE/LBII Team Leader.
18. Mr. Robert Lowery - Administrator.
19. Dr. Max Lowdermilk - Senior Social Scientist.
20. Mr. Richard Pond - Agricultural Economist.
21. Dr. Edwin Shinn - Sociologist, El-Minya.
22. Mr. Georges Tordjman - Design Engineer, Cairo.
23. Mr. Anthony Gillman - Area Engineer, El-Minya.
24. Mr. Mark Schiele - Area Engineer, Zagazig.
25. Mr. Juan Gonzalez - Area Engineer, Alexandria.
26. Mr. John Cloward - Area Engineer, Esna.
27. Dr. Erroll Coles - Irrigation Engineer, Cairo.
28. Mr. Marcel Bitoun - Director of Water Resources and Irrigation/LBII.
29. Mr. Nabil Youssef - Logistics Facilitator/MKE.
30. Mr. Ed Stains - USAID Associate Mission Director.

31. Mr. Joe Carmack - USAID Office Director.
32. Mr. David Smith - USAID Project Officer.
33. Dr. Terry Hardt - USAID Project Officer.
34. Mr. Ali Khalifa - USAID Project Officer.
35. Mr. Carl Maxwell - USAID Project Officer.
36. Mrs. Nadia Makram Ebeid - UNDP Programme Officer.
37. Eng. Aly Rafie - First Under Secretary for Upper Egypt.
38. Eng. Abdel Raouf Abu Noor - Under Secretary for Minya.
39. Eng. Ramses Gad - Deputy Director, Minya.
40. Eng. Mahmoud Samih - Engineer, Sharkia.
41. Eng. Adel Hashem - Deputy Director, Gharbia.
42. Eng. Fayek Abdel Sayed - Deputy Director, West Delta.
43. Dr. Abdalla Saber Ali - Manager of Water Management, Minya.
44. Eng. Hanaa Rasmi - Engineer, Cairo Office.
45. Eng. Fayza Ayad - Engineer, Gharbia Office.
46. Dr. Mohamed Shafie Sallam - Director, Agr. Extension & Rural Development Research Institute.

Facilitators

- Ms. Kathy Alison - ISPAN Workshop Facilitator.
Ms. Dee Hahn-Rollins - ISPAN Workshop Facilitator.

Support Staff

- Mrs. Lorraine Pike - Administrative Support.
Miss Nairy Kamberian - Secretary.
Miss Weam Abdallah - Translator.

APPENDIX C

PROJECT DOCUMENTS

- I. Excerpt from Project Paper**
- II. Excerpt from Implementation Letter No. 98**
- III. A.I.D. Letter to Engineer Sawaf**

Appendix C

EXCERPTS FROM PROJECT PAPER AND IMPLEMENTATION LETTER NO. 98¹

I. Regional Irrigation Improvement Project (RIIP)

a. Background

The Government of Egypt (GOE) initiated, in 1984, a national program to improve and rehabilitate irrigation canal networks in new as well as old lands in the Nile valley and delta. The MOI's National Irrigation Improvement and Rehabilitation Program (NIIP) is based in part on the successful results of an earlier research project sponsored by USAID, entitled the Egypt Water Use and Management Project (EWUP). The concept of RIIP is to adapt the ideas generated in EWUP and develop them into practical plans that will be applicable for entire canal commands. Methodologies that are being developed in RIIP are for application in the national program.

The GOE's strong interest in NIIP stems from its concern over the country's growing dependency on imported foodstuffs. To help counter this ominous trend, the GOE is looking for ways to simultaneously increase agricultural production and conserve water in the "old lands." The conserved water would provide more water for "new land" development or other uses.

USAID concurs with the GOE's appraisal of this situation and its desire to upgrade the traditional system. Such an emphasis is consistent with the Mission's earlier funding of EWUP and its current funding of the IMS project.

This will include construction activities as well as technical assistance, acquisition of commodities, and training of personnel. To maximize the benefits of this anticipated expanded support, the MOI should formalize NIIP by decree, changing the name of the organization from the Regional Irrigation Improvement Project to a National Program. New key staff must be added to NIIP to support management, at field offices as well as headquarters, and to add personnel with capabilities in special categories of subjects (subject matter specialists) within Engineering as well as in other disciplines including Economics, Sociology, and Agronomy. MOI should create an autonomous fund for incentives under the control of the NIIP Director. Finally, the NIIP needs to develop a rational approach to investigate the opportunities for improvement in any canal command and prepare a technical and economic feasibility report on which USAID support for construction can be based. Elements of such a rational approach are suggested below.

¹ Source: USAID, Egypt: Irrigation Management Systems (263-0132), Project Paper Vol. II Annex F, pgs. 76-81

b. Objective

The basic approach in NIIP is to integrate the rehabilitation and improvement of the delivery system infrastructure with improvement of the farm delivery system and management practices. With these improvements to physical works and operational procedures, the objective of the program is to increase agricultural output within the improved systems, conserve water for use in expanding agriculture, and improve equity among farmers. The national purpose is to increase overall food production and decrease importation of food.

c. Proposed Activities

Specific elements of the program remain to be worked out as it evolves. But, a likely combination of improvements includes: (1) installation of measuring and control devices on mains and branches; (2) implementation of continuous flow in distributaries; (3) mesqa improvements, such as reconstruction to proper cross sections, lining to reduce seepage losses, installing turnouts and check structures, and installing low pressure pipes where slopes are very flat; (4) land leveling, whether of the precision land leveling (PLL) type or by less precise means; and (5) advisory services that integrate inputs from agents of the Ministry of Irrigation (MOI) and Ministry of Agriculture (MOA) to improve irrigation and agricultural practices, organize Water Users Associations (WUA), and create an effective Irrigation Advisory Service (IAS).

(1) A Rationalized Approach

Initiating a comprehensive program on a national scale requires careful planning and selection of alternatives--thus, the need for a rationalized approach. The approach centers on four elements, or phases, with feedback and interaction between them. It is envisioned that improvement activities in a given canal command will progress from one Unit Command Area (UCA) to another. This process will maximize the benefits of feedback and experience gained in each phase, within the particular UCA and successive ones within the command.

First, a process of problem identification must be established to determine the constraints of the irrigation system, and to clearly understand how it operates, not only of the distribution network, but the farm level as well. In this process, good points of the system as well as its problems will be identified. Because an irrigation system is essentially a composition of physical, agronomic, and socioeconomic systems, it is important to include professionals from each of the disciplines in the problem identification process.

Second, a feasibility study of potential solutions needs to be undertaken, including economic analyses of selected alternatives. It is possible that consistent sets of improvement measures can be devised and grouped into separate "packages" for consideration, each package being appropriate to attain certain levels of overall performance. The selection of a final alternative must be technically sound, economically viable, and socially acceptable.

Third, the improvement and rehabilitation must be completed according to the plans and specifications drawn up for the selected alternative, within adherence to specific goals and time schedules. Efficient project management is a key

requirement in this phase. To be successful, a manager must bring the right resources together at the right place and at the right times and with the least cost.

Fourth, a monitoring and evaluation program must be developed to assess the effects of the improvements. It is important to create a feedback process to the planning activities so that ineffective measures can be discarded for future consideration, while cost-effective measures can be retained for further use. Both the planning phase and the monitoring and evaluation activities will be conducted by the Project Planning Unit (PPU), a new group which will be formed within NIIP at headquarters and in regional offices.

(2) Implementation

The Assembly of Ministers has paved the way for NIIP by approving the program presented by the National Irrigation Improvement Committee. Plans have been formulated to establish a coordinating committee to bring together key MOI, MOA, and other decision makers at the national and governorate levels. Still another committee to address NIIP's technical needs will be created. The makeup of this technical committee has not yet been determined, but will probably include, besides the Under Secretary for NIIP, members of several institutes in the Water Research Center and Agricultural Research Center, Universities, MOA and other MOI units with relevant expertise.

No changes are foreseen in NIIP's position within the structure of the Irrigation Department during the life of this PPA. In time, however, the MOI anticipates that NIIP will be upgraded in status to that of an Authority. That would give NIIP greater administrative flexibility and more specific funding. Action on that issue has been deferred until the country's financial situation improves.

NIIP will need to cooperate with selected Institutes of WRC to seek solutions to particularly troublesome and persistent problems, and to take advantage of expertise and knowledge which the people in the Institutes have developed over a considerable period of time. The Research Institutes in Water Distribution and Irrigation Methods, Groundwater, Drainage, Hydraulics and Sedimentation, Water Resources, and Weed Control can be particularly helpful. Arrangement for cooperation with Institutes in the Agricultural Research Center (ARC) of MOA will also be made.

Division of responsibilities between headquarters and regional offices of NIIP will favor decision making on broad issues by the central staff, and decision making on local issues by the regional offices. Following this pattern, the Central Directorate will focus on the overall program, development of standard procedures and design components, program evaluation, training, troubleshooting, addressing new or complex topics, and administration. The regional offices will focus on data collection and problem identification, development of alternative solutions, preparation of detailed designs, advertising, awarding and administering contracts, extension and other farmer contacts, and monitoring of results.

The central office staff needs to be augmented by a broader range of disciplines than currently exists, including economists, agronomists, sociologists, and subject matter specialists (SMS), such as statistics and computer programming, independent of discipline. They will, for the most part, staff the new Program Planning Unit. Staff at the governorate levels will be comprised of engineers, sociologists transferred largely from local MOA offices, agricultural economists and agronomists also from MOA. They will work together in the emphasized project planning and evaluation effort, and focus on field and farmer contact.

The following canal commands are currently being studied as part of the RIIP:

<u>Governorates</u>	<u>Canal</u>	<u>CA (Feddans)</u>
Upper Nile		
Kena & Aswan	Redissia, Abadi	13,000
Sohag	Khour El Sahel	12,000
Assuit	Shamia, Okal	21,000
Middle Nile		
Minya	Serri Bachi	100,000
Beni Suef	Kaman, El Arous	5,000
El Fayoum	El Gark	52,000
Eastern Delta		
Sharkia	Saidia	39,000
Middle Delta		
Gharbia	Ahwaki	12,000
Kafr El-Sheikh	Bahr El Saeidi	42,000
Western Delta		
Behaira	Boloktor	11,000
Alexandria	Baheeg	30,000

d. USAID Support

USAID will finance Technical Assistance (TA) team to assist NIIP throughout the five-year program. Long-term positions in water resources management and irrigation engineering, construction engineering, irrigation, agronomy, economics, and sociology will be provided (approximately 38 person years). In addition, approximately 130 person months of short-term (TDY) expertise will be provided. Included among the TDY will be specialists in project planning, statistics, and computer programming. Some of them will be called in to help conceptualize and set up new activities and procedures, while others will be responsible for organizing key elements such as WUAs and the IAS, and develop in-country training programs.

Training for NIIP will be a combination of local and foreign activities. Local training will make use of existing programs initiated under EWUP and currently supported by the IMS Project. New programs will be developed and tested by NIIP before committing them to the NITI for routine offering. There will be considerable on-the-job training (OJT) for professional staff as well as technicians. Sociologists' contact with farmers and organization of WUA's will essentially be all OJT, as will technicians training in maintenance and operation of the system at the mesqa level. Some program and division leaders will be sent overseas for graduate degrees relevant to their positions. Others will be sent overseas for one-year non-degree academic programs pertaining to their specializations. During the five-year program, targets have been set for 480 person-months of local training, 380 person-months for non-degree overseas training, and 64 person-months for attaining graduate degrees.

USAID will support commodities for laboratories, surveying, office and data processing, transportation, instrumentation, communications, and construction and maintenance equipment.

In addition, USAID will make major input into the construction of the improved irrigation systems that are developed under the Project.

In summary, USAID proposes to support the costs of equipment purchase, imported supplies, technical assistance, training abroad, and construction. The GOE will cover construction activities, base salaries and incentives, travel per diem, local operating expenses, training staff and facilities in Egypt, and related expenditures.

Tables F23 and F24 provide the detailed annual budgets for the USAID and GOE contributions to RIIP.

Projected Expenditures and Obligations - USAID Funds (000's)

Table F 23

Category	Through FY 86		FY 87		FY 88		FY 89		FY 90		FY 91		Totals		Grand		
	\$ FX	\$ L/C	\$ FX	\$ L/C	\$ FX	\$ L/C	\$ FX	\$ L/C	\$ FX	\$ L/C	\$ FX	\$ L/C	\$ FX	\$ L/C	Total \$	Total \$	
1 Consulting Services																	
Resident (Long term)	660	0	650	125	1641	329	1165	271	1223	309	1275	352	6614	1386	8000		
Non Resident	171	0	150	0	501	0	476	0	495	0	515	0	2308	0	2308		
Local Consultants				75		80		75		60		30	0	320	320		
Sub Total	831	0	800	200	2142	409	1641	346	1718	369	1790	382	8922	1706	10628		
2 Training																	
Non Degree	40	20	100	10	385	30	400	30	419	40	437	50	1781	180	1961		
Degree (MS, PhD, etc)	0	0	10	0	130	0	149	0	0	0	0	0	289	0	289		
Local Training				30		40		50		50		40	0	210	210		
Sub Total	40	20	110	40	515	70	549	80	419	90	437	90	2070	390	2460		
3 Construction #1																	
	0	0	0	500	0	7813	0	15626	0	23438	0	30802	0	78179	78179		
Sub Total	0	0	0	500	0	7813	0	15626	0	23438	0	30802	0	78179	78179		
4 Commodities																	
Lab Equipment	0	0	90	0	173	0	14	0	15	0	15	0	307	0	307		
Survey	0	0	406	0	574	0	490	0	95	0	100	0	1659	0	1659		
Office & Computers	70	30	100	210	81	200	0	20	0	20	0	20	251	500	751		
Vehicles	120	0	200	0	772	0	852	0	55	0	57	0	2056	0	2056		
Const & Maintenance	0	0	150	0	800	0	737	0	49	0	51	0	1787	0	1787		
Instr. & Auto.	0	0	100	0	1147	0	1000	0	1000	0	486	0	3733	0	3733		
Communications	0	0	430	0	176	0	10	0	10	0	10	0	636	0	636		
Components & Replicats	0	0	50	0	220	0	0	0	0	0	0	0	270	0	270		
Sub Total	190	30	1520	210	3943	200	3103	20	1224	20	719	20	10699	500	11199		
5 Local Services																	
Administration RIIP	0	0	0	40	0	200	0	220	0	260	0	320	0	1040	1040		
Administration TA	0	130	0	230	0	290	0	340	0	400	0	540	0	1930	1930		
Sub Total	0	130	0	270	0	490	0	560	0	660	0	860	0	2970	2970		
6 Other																	
Invitational Travel	0	0	84	0	88	0	93	0	97	0	102	0	464	0	464		
Sub Total	0	0	84	0	88	0	93	0	97	0	102	0	464	0	464		
Combined Annual Totals	1061	180	2514	1220	6688	8982	5386	16632	3458	24577	3048	32154	22155	83745	105900		
Cumulative Totals	1061	180	3575	1400	10263	10382	15649	27014	19107	51591	22155	83745					
Project Obligation \$	9953	21700	25000	31600	17645	0	105900										

REGIONAL IRRIGATION IMPROVEMENT PROJECT

Projected Expenditures - GDE Funds(000's)

Table F 24

Category	Thru FY86	FY 87	FY 88	FY 89	FY 90	FY 91	Total
	\$ L/C	\$ L/C	\$ L/C	\$ L/C	\$ L/C	\$ L/C	\$ L/C
1 Consulting Services							
Resident (Long term)							0
Non Resident							0
Local Consultants		30	35	40	45	50	200
Sub Total	0	30	35	40	45	50	200
2 Training							
Non Degree	30	32	33	35	36	38	204
Degree (MS, PhD, etc)							0
Local Training							0
Sub Total	30	32	33	35	36	38	204
3 Construction							
	4000	5000	18000	26500	34500	46000	134000
							0
Sub Total	4000	5000	18000	26500	34500	46000	134000
4 Commodities							
Office Equip.	20	50	50	40	30	30	220
Tech. Equip.	40	100	100	100	90	90	520
Misc. Equip.	20	50	50	50	40	40	250
							0
							0
							0
Sub Total	80	200	200	190	160	160	990
5 Personnel							
Salaries	5000	5200	5800	7000	8400	10000	41400
Incentives	200	365	438	525	630	756	2914
Travel & Misc.	100	150	180	216	260	311	1217
Sub Total	5300	5715	6418	7741	9290	11067	45531
6 Other		150	180	216	260	311	1117
							0
							0
Sub Total	0	0	0	0	0	0	0
Combined Annual Totals	9410	10977	24686	34506	44031	57315	180925
Cumulative Totals	9410	20397	45073	79579	123610	180925	

II. Implementation Letter No. 98

D R A F T

March 16, 1989

Engineer Ahmed El Sawaf
Project Director
Irrigation Improvement Project (IIP)
Ministry of Public Works
and Water Resources (PWWR)

Subject: Procedures for Funding of Local Construction
Contracts
Irrigation Improvement Project (IIP)
Irrigation Management Systems (IMS)
Project No. 263-0132
Implementation Letter No. 98
Project Element No. 1

Dear Engineer Sawaf:

According to the description of this activity in the IMS Project Paper, "The IIP component will establish and field test an organizational structure within the PWWR capable of providing technical assistance, construction assistance, economic analysis, on-farm development assistance, and user involvement to remodel selected irrigation canal commands. The objective is to make the system more responsive to the needs of farmers and to assure that water is available in the quantities needed at the time it is needed to support increased agricultural output."

The purpose of this Project Implementation Letter (PIL) is to set forth the implementation criteria leading to AID funding of construction activities needed for renovation of selected canal command areas. This PIL establishes reporting and certification procedures, budgeting requirements and general guidelines for approval of Irrigation Improvement Project (IIP) construction activities.

Planning and Feasibility Studies

The first step in the process is the preparation of a comprehensive plan and feasibility study for each canal command area. This study should contain: (1) a description of the project area and location including crops and crop yields; (2) a soil survey and analysis; (3) problem identification; (4) formulation and analysis of the alternatives to solve the identified problems; and (5) an economic analysis of the alternatives. This plan should provide an implementation strategy including priorities.

The implementation strategy should break the area into manageable units or unit command areas (UCA) for more detailed planning, design, construction, and operation after renovation is completed. The studies prepared by the UNDP in eight command areas, the broad study of the Serry Canal prepared with assistance

under the CID contract, and the study by the Project Preparation Department (PPD) for the Gharaa Canal in Fayoum should satisfy these feasibility study requirements with little modification. Some work has been done in the Bahig Canal Command but in our judgment, much work remains to be done in this command area for an acceptable comprehensive plan.

The second step is to develop a more detailed plan for the respective UCA's. This should include a more detailed analysis of the problems, development of specific measures to be implemented to solve the problems of the UCA, cost comparison of alternative types of structures or measures to solve the problems, description of the implementation procedures and responsibilities and description of the operation and maintenance requirements and responsibilities of the UCA. USAID's commitment of funds for reimbursement of renovation costs will be based on the approved plan and cost estimate for the alternative selected.

The remaining steps are design, contracting, construction and finally operation and maintenance of the renovated system. These steps are not discussed in detail in this PIL.

Irrigation Advisory Service and Farmer Organizations

An Irrigation Advisory Service (IAS) consisting of PWR and MALR staff should be formed during the comprehensive planning stage and prior to finalizing the implementation plan in each UCA. The purpose of the IAS is to organize farmer groups and after implementation to provide advice and assistance to the farmers on the full range of issues in irrigation at the on-farm level and in the operation of the commands proposed for rehabilitation. Once organized, a dialogue must be maintained with the farmer groups for (1) their assistance in problem identification; (2) concurrence in selection of alternatives; (3) cooperation during implementation; and (4) involvement in the operation and maintenance of the renovated system. We also envision that the IAS and farmer organizations will form a critical link in the cost recovery program also discussed in this PIL.

The IAS should be sufficiently evolved to have formed active Water User Associations in more than 80 percent of the proposed area for construction. The IAS should have strong links with the Ministry of Agriculture and Land Reclamation. Farmer input should be incorporated into the entire process from initial planning through construction, design and implementation, and operation and maintenance.

Cost Recovery Program

A cost recovery mechanism must be designed and implemented. This is not a requirement for initial AID funding but could become critical in AID's decisions to fund this and similar programs in the future. Cost recovery is essential to assure the funding needed to operate and sustain the renovated systems in the future. It is essential that this program and its implications be explained to and understood by farmers in the renovation areas. This issue is covered in the Project Paper, the Grant Agreement and in previous correspondence.

Interdisciplinary Approach

The Project Paper and Grant Agreement both describe an interdisciplinary process, accepted by PWR and USAID, to be used in the implementation of this project.

An interdisciplinary approach involves agronomists, economists, sociologists and other specialists working together with engineers to solve the complex problems associated with delivery of irrigation water and irrigation of crops. To implement this program effectively using the interdisciplinary approach, teams including the disciplines listed above must be used to develop the comprehensive plan and the more detailed plans for the UCA's described above. Because PWWR has very few professional staff members other than engineers, establishment of an interdisciplinary organization and then staffing and training of the new professionals is urgently needed. The Grant Agreement requires establishment of an interdisciplinary organization, therefore this issue must be addressed satisfactorily to USAID before any funding can be disbursed for construction activities.

AID Approvals and Reimbursement Procedures

USAID will help finance construction improvements necessary to achieve the objectives of approved plans.

In accordance with the project Grant Agreement, through this PIL, USAID will reimburse the Ministry of Irrigation for eighty (80) percent of the actual L.E. construction cost, subject to the availability of funds, of each construction activity.

USAID will reimburse eighty percent of actual L.E. costs of completed subprojects or quantifiable elements² within the subproject. USAID reimbursement will not be based on contractor progress payments. Prior to reimbursement USAID will require documentation and evidence which will verify costs expended and a certification by MPWWR that the subproject or element has been completed in accordance with agreed on designs, specifications and other criteria. USAID will provide for inspection of the renovation on work under construction and final inspection of completed work on a sample basis. USAID will reimburse only for subprojects or elements which are complete, functional and constructed in accordance with approved plans and specifications.

Standard GOE competitive procurement processes will be used for contractor selection and contract award. Without prior written approval, the contractor must be a private sector entity to qualify for USAID funding.

USAID will monitor construction by making periodic site inspections to assist the PWWR in verifying that the work meets the GOE specifications. USAID will only fund construction which meets acceptable standards, and construction which is completed before the end of the project.

² Subprojects or quantifiable elements are defined as self-sustaining unites which are useful, desirable and functional in their own right, regardless of whether other subprojects or elements are completed. More specifically they might include a renovated section of main canal, a branch canal, a drain or section of drain serving a unit command area or a major structure such as a pumping station. Completion of a subproject or element means accomplishment of all work, earthwork and structures, planned for that particular subproject or element. Subprojects and/or elements will be defined following submittal of the detailed unit command area studies.

GOE Funding

The MPWWR will insure that sufficient funds are available to carry out the construction program. The PWWR will be responsible for paying the contractor's expense vouchers, and request reimbursement from AID, when subprojects or elements are completed.

Quality of Construction

USAID's concurrence with funding this activity is made with the understanding that the Ministry of Public Works and Water Resources will provide adequately trained staff and will take actions necessary to assure continued quality construction as per the provisions of the Grant Agreement. USAID will monitor this activity by making periodic on-site inspections to verify compliance with USAID-GOE agreements.

Certification Procedures

All requests for reimbursement will include the statement: "All construction is in full compliance with standard PWWR specifications and with plans and/or specifications specific to each structure. The work for which reimbursement is requested consists of all construction required to complete a subproject or quantifiable element. All structures are in accordance with AID marking regulations. The request for reimbursement is based on the actual cost of the work, taking into account any penalties or deductions applied by MPWWR to the contract."

IIP Project Director

Summary

Following is a summary of the steps necessary to execute this project in accordance with the Project Paper, the Grant Agreement and this PIL.

1. The Irrigation Improvement Department (IID) will prepare comprehensive plans for each area included in the IIP project which will be submitted to USAID for approval. Several of the UNDP assisted studies have been submitted and will be processed upon your concurrence with the conditions of this PIL.
2. IID will prepare more detailed analysis, plans and cost estimates for UCA's. These will be reviewed and approved by USAID and will be utilized to commit USAID funds for the reimbursement of construction costs.
3. PWWR will establish and staff an interdisciplinary staff as per the Grant Agreement.
4. IID will submit a budget with a request for funding, annually, along with an annual plan of operations. The annual plan will include the schedule for implementation, reflect the status of IAS and the establishment of farmer organizations, advise on the level of staffing to support the program and report the status of the overall program in each command area. USAID will commit funds to cover the construction subject to availability of funds through amendments to this PIL.
5. IID will design, construct and implement measures for renovation of the selected command areas in accordance with this PIL, the plans

described herein and the detailed designs in accordance with GOE bidding procedures.

PWR and USAID Concurrence

Please indicate your concurrence with the foregoing by signing below and returning one signed copy to USAID.

Sincerely yours,

William J. Carmack

Approved: _____

By: Engineer Ahmed El Sawaf
 Project Director

Date: _____

Clearances:

LEG: MWard _____

FM/FO/FA:HPangan (In Draft)

Drafted by:AGR/ILD:WJCarmack/jh _____

2/22/89

DOC JOE21 - DISK JOE89

III. A.I.D. Letter to Engineer Sawaf

March 16, 1989

Engineer Ahmed El Sawaf
Project Director
SR & RIIP
Ministry of Public Works
and Water Resources (PWR)

Dear Engineer Sawaf:

This is in response to your March 5, 1989 letter transmitting the feasibility reports for rehabilitation and improvement of water delivery systems for the eight commands studied by Sir M. MacDonald and Partners LTD.

We have reviewed the feasibility studies which include the following eight commands; Balaqto, Bahr El Saidi, Qa'wagi, Saidiya, Qiman el Arus, Iqal Shamia and Khor Sahel. The feasibility studies are of good professional quality and lay out general schemes for the renovation of command areas. While some of the renovation features have been developed in detail approaching final design, the studies are for the most part too general to identify specific problems and alternative solutions especially at the mesqa level. We note the favorable rate of return of the proposed activities.

USAID/Cairo approves the feasibility studies and encourages the Ministry to proceed with the more detailed studies called for under the project. We cannot at this time, however, commit AID funds for construction activities. The feasibility studies are too general to identify problems and solutions at all levels where interventions are anticipated. The multi-disciplinary approach to problem identification and solution has, of yet, not been instituted. The studies give little attention to problems at the mesqa level and do not address the social issues related to farmer involvement. Also, project plans and cost estimates are not detailed enough to satisfy AID requirements for the commitment of funds.

A project implementation letter describing procedures for funding of local construction contracts is currently being developed. We look forward to discussing the procedures with you in the near future.

APPENDIX D
DELIVERY SYSTEM DESIGN ASSUMPTIONS

Appendix D

DELIVERY SYSTEM DESIGN ASSUMPTIONS

Final Draft.....13/3/89.

1. The construction period for an average contract of LE4 to LE5 million is two (2) years after applying 2.40 inflation factor to the 1986-87 MacDonald Report estimates.
2. Bidding period allowed is three (3) months from issuance of the bid to the award.
3. The design period for each contract shall be 6 months.
4. USAID requires that WUA's for 80% of a command area shall be formed before the corresponding construction contracts are funded. Since GOE will fund contracts and then be reimbursed by USAID, this allows a maximum of 9 months to form the WAU's, e.g. 6 months for the design and 3 months for the bidding before the beginning of the construction contract.
5. Three schedules were developed based on the different assumptions of project duration.

The shift in the starting date of the MacDonald Feasibility Report from July 1988 to July 1989 has been taken to coincide with the IIP starting date.

- a. The first scheduled period was based on the MacDonald Feasibility Report from July 1989 to July 1993. Time schedules for non-MacDonald Feasibility Report areas were extended as follows:

Behig end of 1993
Serri Canal end of 1994
Bahr ei Gharag end of 1993.
 - b. The second schedule was based on 72 months and extends from July 1989 to July 1995.
 - c. The third schedule was based on 120 months and extends from July 1989 to July 1999.
6. Design drawings will be standardized but adapted to suit site conditions. Bid documents will be based on accepted standard procedures, according to Egyptian practice and modified to suit contract conditions.
 7. Project evaluation will start after the construction work has been completed.

8. The Behig Feasibility Study will not exceed six (6) months under assumption a (Item 5, above). All other project areas feasibility studies have been considered adequate (see USAID letter, PIL No. 105, 30 Jan 1989).
9. Design and field work will be undertaken by personnel recruited at directorate level if not already available, technical teams will consist of engineers, technologists, and administrative personnel.
10. Design teams can be moved from one directorate to another when required.
11. The number of working days in a year is taken as 200 working days, for the manpower calculations.
12. The surveying of the longitudinal profiles and the cross sections shall be carried out along all canals and drains;
 - a. the cross sections shall be made at intervals of not less than 40 per km for all sections requiring remodeling and at intervals of not less than 10 per km for all other sections,
 - b. for the leveling of the longitudinal profiles, the backsights and foresights shall not exceed 100m and shall be of the order of 50m,
 - c. all leveling shall comply with 3rd order standards. All leveling traverses shall be closed, e.g. leveling commences from one bench mark and proceeds to another. The closing error, in centimeters, shall not exceed the amount calculated by multiplying the square root of the distance, in kilometers, by a factor C=2.00.
13. Canal and drain longitudinal profiles and cross sections carried out by the directorate offices shall be used for design and estimation of quantities.
14. The time taken to complete the tasks required to design and implement bidding for each kind of structure and for the canals has been based on the provisional estimates shown below.

A proportional time factor for each category of work is used to determine the number of personnel required to complete the project tasks, which is derived from the total man-months for completing each category and is then divided into different disciplines (engineers, surveying, etc.).

	* per structure	
		** per km
1. <u>Canal Control Structures.</u>		
Radial gates, Distributors, etc.	100*	60*
Tail escapes,	50*	20*
2. <u>Canal Earthworks and Channel Improvements.</u>		
Surveying of canals,	2**	4**
Channel remodeling,	15**	10**
Excavation,	2.2**	0.5**
Bank raising,	2.3**	0.5**
Access roads,	2.5**	0.5**
Side slope protection,	1.0**	1.0**
Canal improvements,	2.5**	0.5**
New canals,	23**	10**
Parallel feeder canals,	23**	10**
3. <u>Other Canal Structures.</u>		
Culverts	50*	20*
Aqueducts	25*	20*
Mesqa offtakes,	0.5@	0.5@
Pump sumps,	0.5@	0.5@
Sakia improvements	0.5@	0.5@
4. <u>Drain Structures.</u>		
Measuring weirs,	50*	20*
Non-return structures,	50*	20*
Bridges/culverts,	40*	20*
Minor Drain junctions,	10*	10*
5. <u>Drainage Earthworks.</u>		
Surveying of drains,	2**	4**
Drain remodeling,	15**	10**
New drains,	23**	10**
6. <u>Supplementary Water Supply.</u>		
Drain re-use pump stations,	130*	130*

15. A contingency factor of 1.3 has been applied to the above values for contingencies, such as traveling to and from sites, downtime, and unaccounted loss of time.
16. Technical teams consist of 6 to 8 persons undertaking different tasks. The number of persons of each discipline on the team is selected according to the proportional time factors given in para. 17, below.
17. A basic team includes civil engineers, draftsmen, technicians and administrative persons who will undertake the following task:

Surveying: The survey component consists of a civil engineer (surveyor), one technician, and three laborers. This team will carry out surveys for locating structures and longitudinal profiles and cross sections of canals and other similar tasks.

Proportional time factor: 0.15.

Field Investigation: The field investigation component consists of civil engineer (hydraulics), civil engineer (structures), and civil engineer (geotechnics). Technicians will assist the civil engineers with the fieldwork. These personnel will deal with the hydraulic designs of the canals and structures, designing and detailing structures, and determining groundwater and foundation conditions.

Proportional time factor: 0.25.

Drafting and Final Design: Civil engineers shall adapt the standard drawings to suit site conditions and draftsmen to alter the drawings accordingly, including taking off and costing quantities. An administrative assistant (computer) and technicians will assist with this work.

Proportional time factor: 0.35

Specifications and Bid Documents: A civil engineer will draw up the specifications for the particular site and adopt the standard bid documents to comply with the specific conditions of the site. An administrative assistant (computers) will assist with the compilation of the documents.

18. Capital cost estimates are based on the amount given in the PIL (AID) No. 105 of January 30, 1989. The PIL estimates appear to be based on the MacDonald Report base capital cost, without escalation applied, at an exchange rate of \$1.0 = LEL.35. The capital cost is defined as the 1986-87 construction cost, in US dollars, plus 10% for engineering and administration and 10% of construction costs for contingencies.

Signed _____
Project Director.

Date _____

Signed _____
Team Leader.

Date _____

APPENDIX E
MESQA SYSTEM DESIGN ASSUMPTIONS

Appendix E

MESQA SYSTEM DESIGN ASSUMPTIONS

Final DRAFT 13 March 1989.

1. The construction period for a contract valued at LE 4 to 5 million will not exceed two (2) years after applying 2.40 inflation factor to the MacDonald Report estimates.
2. The bidding period allowed is three (3) months from the issuance of the bid to the award.
3. The design period shall be a minimum of 6 to 8 months.
4. USAID requires that WUA's for 80% of any command area shall be formed before the corresponding construction contract is funded. Since GOE will pay for the contracts and then be reimbursed by USAID, this allows for a maximum of 10 to 12 months to form the WUA's, e.g. 6/7 months for the design and 3 months for bidding before the beginning of the construction contracts.
5. Three schedules were developed based on different assumptions for project duration.
 - a. The first scheduled period was based on the MacDonald Feasibility Report from July 1989 to July 1993. Time schedules for non-MacDonald F/Report areas were extended as follows:

Behig end of 1993.
Serri Canal end of 1994.
Bahr ei Gharaq end of 1993.
 - b. The second schedule was based on 72 months and extends from July 1989 to July 1995.
 - c. The third schedule was based on 120 months and extends from July 1989 to July 1999.
6. Design drawings will be standardized but will be adapted to suit site conditions. Bid documents will be based on accepted standard procedures, according to Egyptian practice.
7. Project evaluation will start after the construction work has been completed.
8. The Behig Feasibility Study will not exceed six (6) months, under assumption 5a above. All other project areas feasibility studies have been considered adequate (see USAID letter, PIL No. 105, 30 Jan 1989).

9. All drainage work will be referred to the Drainage Authority for further action.
10. All direct diversion from the delivery system shall be improved as a part of the delivery system.
11. Design and field work will be undertaken by technical teams at directorate level if not already available, consisting of engineers, technologists, and administrative personnel.
12. Design teams can be moved from one directorate to another when required.
13. The number of working days in a year is based on 200 working days for these calculations.
14. Technical teams consist of 6 to 8 persons undertaking tasks and are composed of various disciplines according to the proportional time factor given in Item 16 below.
15. Technical and administrative personnel (staffing) shall be based on the following:
 1. Surveys and design shall encompass all mesqas and be conducted along 100% of the mesqa.
 2. All structures and other designs shall be based on standard designs adapted to the site conditions.
 3. Longitudinal profiles and cross sections shall be taken along all mesqas.
 4. Standard design specifications and bid documents shall be used for all contracts.
16. A basic team of civil engineers, draftsmen, technicians and administrative persons will undertake the following tasks:

Surveying: The survey component consists of a civil engineer (Surveyor), two staffmen, and two chainmen. This team will carry out surveys for locating structures and longitudinal profiles and cross sections of canals.

Proportional time factor: 0.25.

Field Investigation: The field investigation component consist of civil engineer (hydraulics), civil engineer (structures), and civil engineer (geotechnics). Technicians will assist the civil engineers with the fieldwork. These personnel will deal with the hydraulic designs of the canals and structures, designing and detailing structures, and determining groundwater and foundation conditions.

Proportional time factor: 0.25.

Drafting and Final Design: Civil engineers shall adopt the standard drawings to suit site conditions and draftsmen to alter the drawings accordingly. Taking off and costing quantities shall be completed. An administrative assistant (computer) and technicians will assist with this work.

Proportional time factor: 0.25.

Specifications and Bid Documents: A civil engineer will draw up the specifications for the particular site and adapt the standard bid documents to comply with the specific conditions of the site. An administrative assistant (computers) will assist with the compilation of the documents.

Proportional time factor: 0.25.

17. The time taken to complete the tasks required to design and implement bidding for each kind of structure and for the canals has been based on the following provisional estimates:

1. Preparation time	2 m/d per km.
2. Site Inspection and surveying,	5 m/d per km.
3. Final design,	10 m/d per km.
4. Specifications and bidding.	10 m/d per km.
Total mandays	27 m/d per km.

18. Allowing for contingencies, including traveling time, downtime, and other contingencies, a factor of 2 was applied to the above values.
19. Capital cost estimates are based on the amounts given in the PIL (AID) No. 105 of January 30, 1989. The PIL estimates appear to be based on the MacDonald Report base capital costs, without escalation applied, at an exchange rate of \$1.00 = LEI.35.

The capital cost is defined as the 1986-87 construction costs in US dollars, plus 10% for engineering and administration, and 10% for construction costs, for contingencies.

Signed: _____
Project Director

Date: _____

Signed: _____

Date: _____

APPENDIX F

**IMPLEMENTATION OF SOCIOECONOMIC FIELD SURVEY:
ESTIMATED TOTAL LABOR REQUIREMENTS**

Appendix F

IMPLEMENTATION OF SOCIOECONOMIC FIELD SURVEY: ESTIMATED TOTAL LABOR REQUIREMENTS

Assumptions:

1. Socioeconomic data will be used for design purposes, formation of WUAs, training of IAS staff and for base line data for project evaluation.
2. Design and the training for the study will be done by consultants and IAS staff.
3. Supervision and training of data collectors will be done by IAS staff and cooperative managers. A minimum of 35 to 40 IAS staff will be selected by April 15, 1989. These staff are shown on the estimates for IAS staff work sheets prior to the organization of WUAs.
4. Data collection will be done by experienced staff of the Village Coops, who will be paid on piece work based on completed data collection per farm of a specified standard and approval by the IAS supervisors.
5. Sampling: Eight to ten percent of the *mesqas* will be selected using map grids on a stratified basis: *mesqas* will be randomly selected at canal heads, middles, and tails on both left and right canal banks; two farms at *mesqa* heads and two at the tails will be selected purposively using farm size as a criterion. A total of about 1600 farm units will be selected. Estimates for the *mesqas* were made from the total *mesqa* command units in the project area.
6. Each interview and observations are targeted for one hour or less time and it is estimated that a Coop can complete about 40 interviews per week. Note that the Village Coops have some data and some of the interviewing will likely take place in the evenings or nights. Data collection will be done simultaneously by the cooperatives in the various directorates.
7. Data entry, analysis and reporting will be done by resident consultants and selected IAS staff with assistance from one short-term Egyptian and one expatriate computer expert. (See the attached breakdown of time and effort plus staff requirements.)
8. That adequate staff, funds, facilities, and computer hardware and software are made available plus adequate transportation for the office staff and field supervisors for the period of the study.
9. Survey staff estimates do not include staff needs for project monitoring and impact evaluation.

Work Plan and Estimated Staff Requirements for Project
Socioeconomic Survey
(March 26 - September 30, 1989)

ACTIVITIES	SCHEDULE	STATUS
1. Decision on sample size and method.	March 15, 1989	Done
2. Decision that Coops will collect data.	March 15, 1989	Done
3. Design and pretesting data collection instruments.	March 26 - April 29	
4. Revision, translation, printing of questionnaire.	April 30 - May 15	
5. Selection and training of supervisory staff.	by May 20 (ongoing)	
6. Arrangements with cooperatives and training data collectors.	by May 30 (ongoing)	
7. Data collection process.	June to August	
8. Data entry, analysis and reporting.	September	

ESTIMATED STAFF REQUIREMENTS:		PERSON-MONTHS
Resident consultants	3 (2/3 time)*	12
IIP Project Staff	2 (1/2 time)	6
PACER Soc./Econ.	6 (3 months)	18
IAS Field Supervisor	35 (4 months)	140
Computer Specialists	2 (2 months)	2
Data Collectors**	--	--
		—
		178

* Resident consultants and in-house IIP staff will be involved also in the design and implementation of the Bahig Feasibility Study during the socioeconomic studies.

** Coop. Managers will allocate the staff for interviews on a piece basis; data collectors will be paid on the basis of completed work of a specified standard.

ESTABLISHMENT OF IASs FOR PROJECT AREAS
TOTAL LABOR REQUIREMENTS

Basic Assumptions:

1. IAS staff will organize the water users and provide them with specified services.
2. One IAS staff member is needed for about 500 *feddans* or about 10 WUAs. A Directorate-level coordinator, a Directorate-level interdisciplinary team of two specialists, and one field supervisor for about 5000 *feddans* are required for supervision and technical support for the WUAs.
3. WUA initiation process and establishment will be phased to meet the construction and improvement requirements and will precede these activities by nine months.
4. A formally established WUA will meet the following criteria: water users have defined their roles and responsibilities and have elected their leaders; water users leaders are assisting in appropriate decision making regarding the improvement activities; WUAs meet on a regular basis for resolving issues and decision making.
5. There is top-level commitment for the IAS/WUA component and adequate staff will be mobilized, facilitated, trained and put on the job. (Along with this commitment IAS staff at all supervisory levels require suitable transportation.)
6. Total estimates of manpower for IAS/WUAs are the same for the different time assumptions for the construction activities but the periods of mobilization differ.
7. IAS manpower projections are made only for the *feddans* in the *mesqa* commands in the project area and not for the total commands which take water directly from branch canals, wells and other sources. In this respect the estimates are most conservative. Estimates are given for providing minimum services to these areas separately.
8. The estimates do not include the monitoring and evaluation of project impacts.
9. Adequate staff, funds and facilities will be made available.

IRRIGATION ADVISORY SERVICE FUNCTIONS*

1. Help provide adequate water control** to farmers' fields and improved methods of water control on farm.
2. Establish WUAs to assure effective farmer involvement and cooperation with the Department for improved operation, maintenance and management of the *mesqa* systems.
3. Develop functional linkages with the MOA extension service for improved agricultural productivity.
4. Develop a means for effective communication in decision making and planning for present and future irrigation rehabilitation efforts.
5. Help provide resources, training and technical assistance to water users for improved irrigation management techniques.
6. Provide a coordination and communication link for activities and information between the Irrigation Department and WUAs.

* Each of these functions is spelled out in terms of specific activities and can be provided.

** Water control is defined as the physical and management processes of delivery of water from the canals to the *mesqas*, field channels, farm fields and basins to meet the requirements of crops, reduce salinity levels and return flow of excess water.

APPENDIX G
IRRIGATION IMPROVEMENT PROJECT
WORKSHOP EVALUATION REPORT

APPENDIX G

IRRIGATION IMPROVEMENT PROJECT WORKSHOP EVALUATION REPORT

Following are the results of the written evaluation of the workshop. Thirty-eight participants completed the evaluation.

A. Workshop Goals

The goals of the workshop are listed below. The number following each statement indicates how well participants felt each goal was achieved during the workshop. The scale is from 1 (low, goal not achieved) to 5 (high, goal achieved very well).

1. To exchange current information about the project that is essential to start-up.
4.28
2. To achieve agreement on and commitment to project goals and activities.
3.74
3. To provide an opportunity for the project team to become acquainted.
4.76
4. To build an effective team and develop team spirit.
4.18
5. To agree on the management roles and responsibilities of Morrison-Knudsen Engineers/Louis Berger International, Inc. (contractor), USAID, and the Irrigation Improvement Project (IIP) Headquarters and Directorate level.
4.10
6. To agree on the procedures for managing the project.
3.86
7. To improve the ability of the team to work together effectively.
4.28
8. To discuss and develop strategies for dealing with the most important issues that will affect the project.
4.09

9. To review the current workplan and to get input for finalization of the plan.

3.87

B. Opinions and Feedback

Thirty-eight participants provided written responses to the following questions. These answers will help indicate if there are concerns that need to be addressed in follow-up activities. The number listed after the comment indicates the number of people who had the same or similar responses.

1. What do you think has been the primary benefit of this workshop?

- Team building, getting acquainted, strengthening friendship between different teams (16)
- Sharing information about the project (9)
- Clarification of important issues (3)
- Familiarizing of General Directors (3)
- Clear idea of project and contractor (3)
- Getting issues out in the open - frank discussions (3)
- Project goals and workplan (2)
- Attempt has been made to make IIP personnel aware of the dreadful complexities of the project. Probably many issues are unresolvable.
- Got project off dead center and moving forward
- Pointing group in same direction
- Interaction among General Directors
- Joint planning
- Introduction of team approval
- Evolving strategies
- Provided a base for more meetings
- Visiting Ismailia

2. What workshop activity could have been done better?

- Workplan needed more time (8)

- Discussion of 80% of WUA and IAS (3)
 - Translate in Arabic. Use of translator was spotty. The translator needs to know more about the project subject as well as facilitators. Strategic material needed in Arabic (2)
 - Delivery system and Mesqa system papers should have been given to us earlier
 - General discussion should have been led by an irrigation professional. Also, the minutes should have been written by an irrigation specialist
 - Sharing by A.I.D. team
 - Summary of agreements and next steps
 - TA team not sufficiently prepared to participate fully
 - Did as well as could be expected, given the diversity of backgrounds, time in country for TA team
 - Making sure individual's inputs were their own and not imposed
 - Getting decisions and commitments is like pulling teeth
 - Discussion of Workplan - goal of this session was not made sufficiently clear. Somewhat frustrating
 - Most staff feel IIP is a construction project, especially the Directorate Engineers. Need more explanation of IIP goals
3. Do you believe there are unresolved issues that should be dealt with in follow-up activities? What are they, and what should be done about them?
- Incentives (10)
 - Good, useful workshop. Do more periodically to help the project (2)
 - How the TA team will assist the General Directors in planning and implementing their activities as outlined in the agreement
 - WUA number problem and IAS should be based on number of farmers served at mesqa level
 - General Directors need more guidance and authority to perform their functions

- Training General Directors in how to conduct meetings
- How colleagues will learn computers, and also some members of MKE
- Need more work to develop a common understanding
- Efficient management of project. Training courses needed for upper and middle management
- More information on IAS
- What will happen if there are no ministerial decrees?
- Translate USAID jargon into rational English
- Various issues upon which some feel strongly and do not agree. I feel there was turf protecting and empire building influencing some. Also, American ways will not always be Egyptian ways
- How to develop and maintain interdisciplinary teams
- Directorate field staff need to know more about IIP's goals - will information from this workshop trickle down?
- No important issue has been forgotten, but will take more time for settlement and/or consensus

4. What comments do you have about the workshop arrangements and accommodations?

- Very good (16)
- Adequate (7)
- Good organization and accommodations
- Food left much to be desired
- Food great
- Super, but bed too soft
- Arrangements should be made by those giving workshop, not contractor
- OK, but things often move better if the coffee and tea are in the room on a continuing basis

5. What final comments do you have for the workshop facilitators on their performance?

- This was a good job - Helped us initiate the project - meet people - etc. Your patience, personality, good humor were great. Should use your translator more - select translator who knows subject area. Great! Come again - but it's a good start!
- Very good (11)
- Excellent/Outstanding (10)
- Any failure to meet workshop goals was no fault of facilitators but a lack of consensus within the MPWWR
- Thanks to the facilitators
- First-class professional performance
- Became too personally involved in technical matters during discussions instead of bringing a technical person to lead discussion
- Wonderful, couldn't have done a better or more professional job
- Excellent guidance and control over large group
- Pre workshop time should have included better briefing
- You worked too hard!
- Some meeting sessions induced stress and weariness. People didn't work well under these conditions

APPENDIX H
SMALL GROUP RECOMMENDATIONS

APPENDIX H

SMALL GROUP RECOMMENDATIONS

GROUP 1

Project Policy Issues

During the interviews, questions were raised about unresolved policy issues affecting the implementation of the Irrigation Improvement Project (IIP).

- Assumptions are being made, based on the MacDonald feasibility studies, that continuous flow designs will be implemented, but is this official policy?
- Further clarification is needed on what USAID means when it says 80% of Water User Associations must be organized before construction can begin in a project area.
- How will incentives be handled? How much will incentives be and where will they come from? Are they available and for whom?
- What is the status of the ministerial decrees on the interdisciplinary teams? What is the relationship between the Irrigation Advisory Service (IAS) and these interdisciplinary teams?
- What will be the policy on cost recovery?
- How will the IAS be set up?

Report of Policy Issues Discussion

1. CONTINUOUS FLOW - Study will be made of available studies and data submitted to TAC and MPWWR High Committee.

Permanent Advisory Committee

TAC: University, MOA and MPWWR (14 persons)
Head: Eng. Helmy Mahmoud

High Committee: Head: Eng. Essam Radi, Minister of PWRR and Representatives from TAC.

Eng. Sawaf will coordinate the study and data collection efforts and give results to TAC by May 1, 1989.

Workshop group advises: the TAC and High Committee should remain flexible and not recommend only one solution.

2. WUA FORMATION -80% - Definition of "established" has been agreed and 80% of AREA must have WUAs before construction. (Delivery systems may have less than 80% decision by USAID.) Definition of "established" will be distributed during workplan session.

3. INCENTIVES - Eng. Mazen will negotiate with Ministry of International Cooperation (MIC) after IIP presents justification of previous expenditures.

4. MINISTERIAL DECREE ON INTERDISCIPLINARY TEAMS (all IIP included) - The policy on interdisciplinary teams is not clear. Confusion centers around whether or not the interdisciplinary teams are the same as the IAS. Or does the IAS person become part of an interdisciplinary team? The policy group agrees that the interdisciplinary team is separate from the IAS.

A ministerial decree authorizing the formation of interdisciplinary teams has not been issued. Eng. Sawaf will coordinate developing the decree and submit it to Eng. Mazen.

March 24 - Develop decree; April 1 - Submit to Minister by Eng. Mazen

5. IIP OPERATIONS FUNDS - USAID will establish a fund in the Central Department. Operations fund will be set up by Eng. Sawaf and Dave Smith. By the end of May, Eng. Sawaf will send a proposal to USAID.

6. DIRECT IRRIGATION (from distribution canals) - To be analyzed on a case-by-case basis. There will be no direct irrigation from main canals. If direct irrigation is presently occurring, improvements must be made by IIP.

7. PUBLIC SECTOR CONTRACTORS - All firms may be invited to bid. Preference should be given to private sector contractors because USAID requires a waiver to use public sector contractors. With a USAID waiver a public sector contract can be awarded; however, permission to waive must be obtained from USAID before contract is awarded to a public sector contractor. A request for a waiver must be well prepared and documented and presented to A.I.D. by the Ministry of Public Works and Water Resources. USAID takes 4 to 6 weeks to approve the waiver after it is submitted.

8. TEMPORARY LOCAL HIRE - USAID will consider requests from IIP to employ temporary staff for unusual skills for limited periods of time. This, however, requires approval from a higher authority within USAID; therefore, a definite commitment cannot be made at this time.

9. CONSTRUCTION REIMBURSEMENT - "Complete Units" (see PIL 98) with A.I.D. advance to PWWR - When feasibility study for UCA is approved by USAID, and before advertisement, the Ministry can request advance for portion of construction cost.

10. QUALITY CONTROL - Director General is responsible for quality control. The Area Engineer will advise but not be responsible. USAID will monitor quality; if construction does not meet specifications, USAID will not reimburse.

March 24 - Develop decree.

GROUP 2

Water User Associations and Irrigation Advisory Services

Questions to be addressed:

- Why are we forming these associations?
- What strategies will be used to build and organize WUAs?
- How can field engineers support this effort and what skills will they need?
- Who will be responsible for organizing the WUAs?
- What is the role of the IAS in developing the WUAs?
- What is the role of the interdisciplinary team in organizing the WUAs?
- How will the WUAs be involved in cost recovery?
- How will WUA organizing functions be coordinated with the construction phase?

Recommendations

IAS And WUAs Group

- I. This workshop policy group should develop a specific recommendation for top-level commitment for IAS/WUAs that provides legal sanctions for IAS/WUAs, spells out roles and responsibilities and line of authority, and provides resources and support.
- II. Given the urgency of organizing WUAs, the following should be provided immediately:
 - IMS project director (Eng. Mazen) should provide official approval to carry out IAS activities.
 - Eng. Sawaf should provide adequate staff (including enumerators) to carry out socioeconomic surveys.
 - Transportation should be provided for IAS supervisors.
 - Office space and training space should be available for IAS staff at directorate level.

- Special short-term consultants should help with the following:
 - Development of training materials and field manuals.
 - Development of special videos for use with farmers.
- Video equipment for field use should be provided for use in training farmers.
- Operating budget. The IIP operating budget will fund the WUAs and IAS activities.

III. Irrigation Advisory Services Functions

- Help provide adequate water control to farmers' fields and improved methods of water control on farm.
- Establish WUAs to assure effective farmer involvement and cooperation with the Department for improved operation, maintenance and management of the mesqa systems.
- Develop functional linkages with the MOA extension service for improved agricultural productivity.
- Develop a means for effective communication in decision making and planning for present and future irrigation rehabilitation efforts.
- Help provide resources, training and technical assistance to water users for improved irrigation management techniques.
- Provide a coordination and communication link for activities and information between the Irrigation Department and WUAs.

NOTES: Each of these functions is spelled out in terms of specific activities and can be provided by Eng. Essam. Water control is defined as the physical and management processes for delivery of water from the canals to mesqas, field channels, farm fields and basins to meet the requirements of crops, reduce salinity levels and return flow of excess water.

IV. Farmer leaders of WUAs should be involved in decision making about planning design and implementation of the mesqa improvement program.

V. Functional communication linkages should be developed and maintained between WUAs and the Department of Irrigation related to water delivery, O&M, future improvement activities, etc.

VI. A functional link should be established with the MOA/extension agent related to training and support of extension activities in on-farm irrigation practices.

VII. Special committee of PWWR and MOA, USAID, and a representative of the consultants should be organized to work out the specific role of Ag. extension agent to meet IIP goals.

VIII. A clear set of criteria that defines the establishment of a WUA should be approved at this workshop.

IX. MKE/LBII and MPWWR should provide a clear guidance statement as to what types of cost-recovery methods they will approve.

X. A special study should be authorized to determine specific means and levels of cost-recovery feasibility, taking into account the following:

- Mechanism and rate of repayment.
- Government-controlled low product prices.
- Availability of farmers to help construct on-farm systems.
- Collection of assessments from the users themselves for regular O&M of the mesqa/pump sets.
- Eng. Sawaf will meet with MKE team and IIP staff to follow-up on the cost-recovery recommendation.

XI. Field engineers, social scientists, and IAS staff should work together closely as a team in:

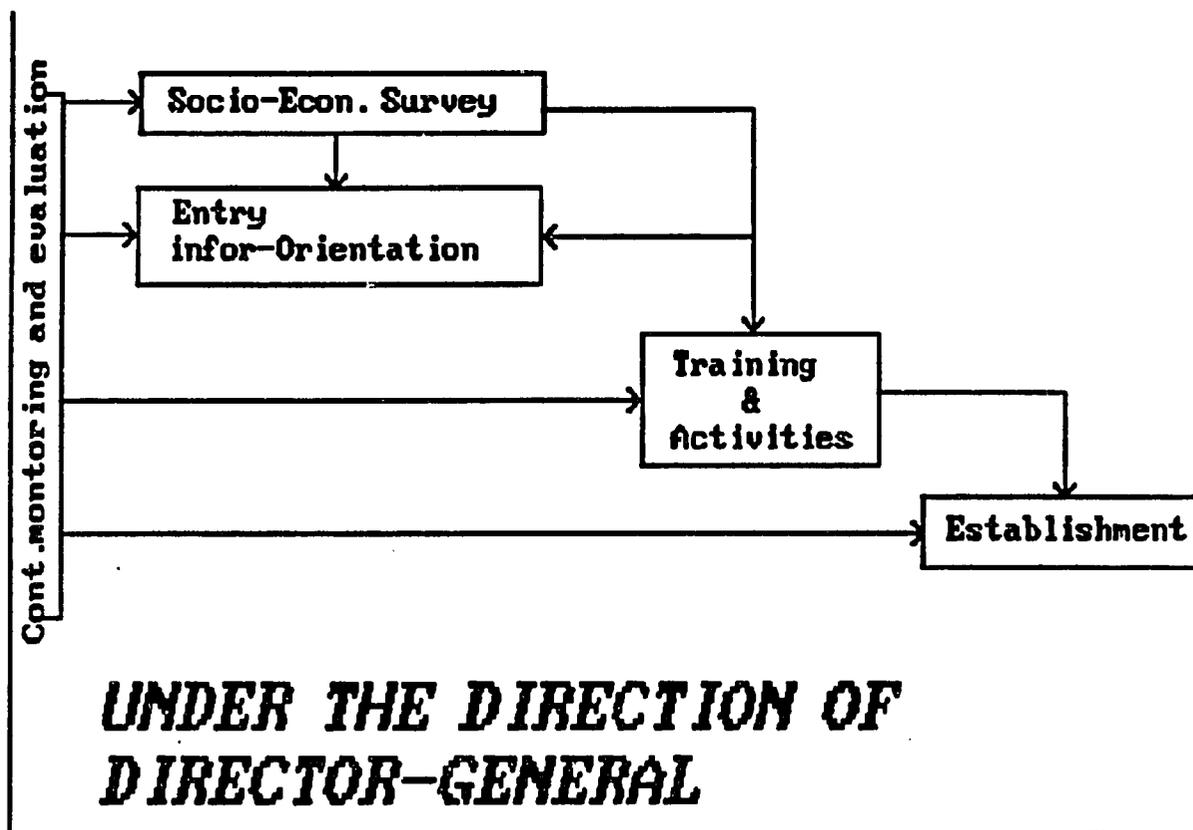
- Sharing and using data.
- Problem solving.
- Planning.
- Meeting with and consulting with WUA leaders.

XII. Specific benefits should be provided to IAS staff to assure high-quality performance, such as the following:

- Financial.
- Award certificates for excellent services at all levels of IAS.

- Training and other professional development opportunities.
- Opportunities for promotion.

XIII. There should be 4 basic stages in the organization of WUAs, as shown below:



XIV. The roles of the IAS interdisciplinary team should be the following:

- Training of field supervisors.
- Providing technical support to IAS field staff.
- Developing/implementing training programs for IAS staff and WUAs.
- Continuous monitoring and evaluation.
- Reporting.

GROUP 3

Interdisciplinary Teams

What are the interdisciplinary teams and what are the reasons for them? What is the makeup of these teams? What is the role of the TA team sociologists and engineers in forming and training these teams?

The teams include the following specialists working together:

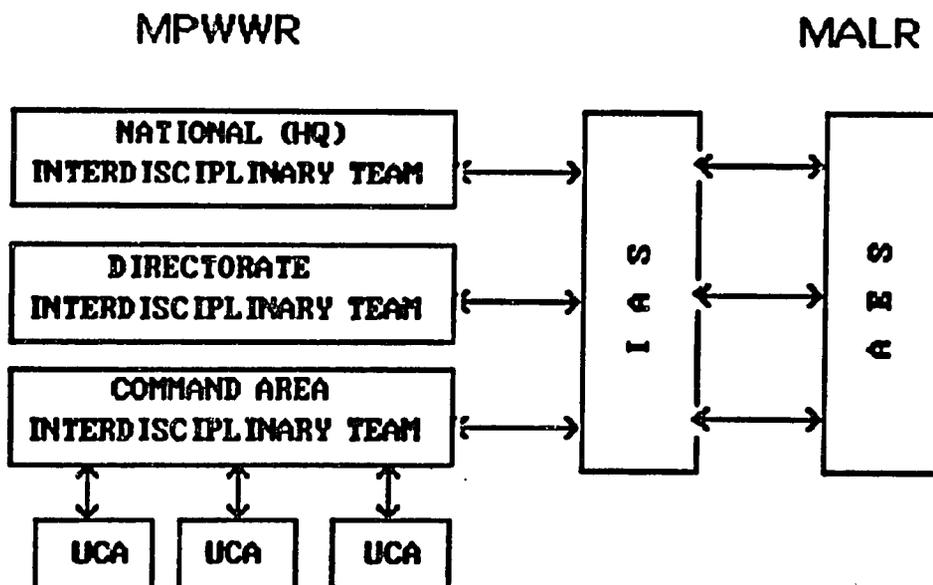
- Engineers
- Agronomists
- Economists
- Sociologists
- Other specialists

The role of the interdisciplinary teams is to solve the complex problems associated with -

- Delivery of irrigation water.
- Irrigation of crops.

These teams must also develop comprehensive plans for the UCAs.

It is recommended that IAS be a collaboration between MPWWR and MALR, as illustrated below.



The role of the TA team in forming and training interdisciplinary teams should be to advise and assist in -

- Selection of team members.
- Training (formal, on-job).
- Team-building activities.
- Monitoring.

GROUP 4

Technical Assistance Consultant Roles/Responsibilities

Questions to be addressed:

1. What are the specific roles and responsibilities of the TA team?
2. How will they develop a supportive relationship with their counterparts?
3. What is their relationship to the overall IMS project (as stated in their job descriptions)?
4. How can their skill and expertise be made known and shared with other team members (Egyptian and U.S.)?
5. Who is responsible for vehicles?
6. How can the new team get settled easily into the new culture?

Report Out:

- Central Office (Cairo Headquarters).
- Governorates (six).

See charts at end of group's report.

1. Specific Roles and Responsibilities

A. This issue is important because -

- Everyone should understand the role of the TA team.
- The TA team must be able to appraise the technical knowledge and level of staff for training and task distribution.

B. Recommendations on role definition:

- (1) In the Central office, the TA team will advise on how to improve existing designs.
 - The PWR is interested in changing from upstream control to downstream control. TA team could provide guidance.
 - TA team should develop a working relationship with Egyptian counterparts.

(2) At the Governorate level, the Area Engineer's principal task will be to serve as a technical advisor to the General Director.

- TDY scopes of work should be developed by team leader with input from area engineers.

2. Supportive Relationship between TA Staff and Egyptian Staff

A. This issue is important because without it the project will fail.

B. Recommendations on role definition:

(1) In Governorates

- The Area Engineer works first with the General Director. They develop the plan together and then divide the functions.
- Then, the Area Engineer works with the staff to develop answers, which are submitted to the General Director for approval.
- Area engineer is responsible for training staff.

3. Relationship to Overall IMS Project

A. Important because all the outputs of the other components are useful to solve IIP problems. Also, IIP can identify issues to be explored by other components (support role).

B. Recommendation

- Issues raised would be taken to IMS by component project director (Eng. Sawaf).

4. How Can Skills and Expertise of TA Team Be Made Known to and Shared With Other Team Members (Egyptian and U.S.)?

A. This issue is important because -

- Egyptian team members need to know to whom questions should be addressed when help is needed.
- Area engineers need to know where to go when they need specialized expertise.

B. Recommendations:

(1) Two ways to share knowledge:

- Day-to-day
- Formal relationships (lectures, workshops, visits to various governorates by other staff)

(2) Outside expertise can be sought from:

- Other ministries (AGR., etc.)
- Private Egyptian sector (PACER, etc.)
- MKE-LBLL TDYs.

5. Responsibility for Vehicles and Other Project Equipment

A. Funds for O&M are required (not now existing).

B. Provide mechanism for -

- Establishing a sufficient budget for O&M of vehicles and other equipment.
- Providing budgeted funds on a regular basis (to governorate as well as HQ).

Question: Should the area engineers be involved in the financial management?

No, It should be the financial manager.

6. How Can the New Team (TA) Settle Easily in the New Environment?

A. This issue is important because the effectiveness of the team members depends on their adaptation to local conditions.

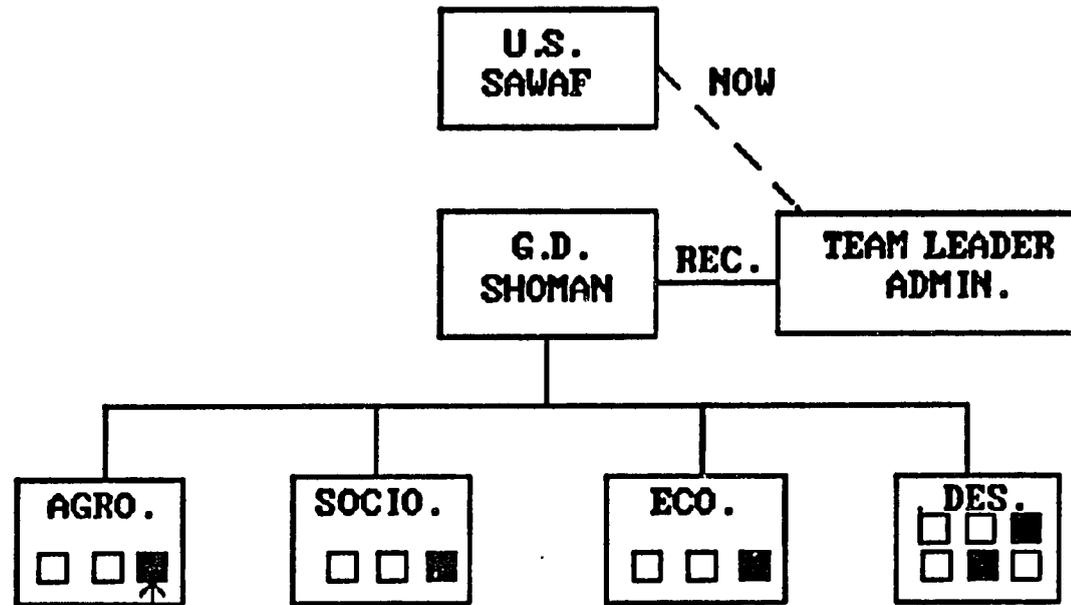
B. Recommendations:

(1) Depends to a large extent on the personality of individual team members.

(2) To Help:

- Open discussions of common problems.
- Seminars and workshops.
- Each Area Engineer should invite other Area Engineers and local staff to visit and exchange views on common experiences.
- Language problem: Organize English courses for Egyptian staff.
- Provide assistance in finding housing when appropriate.
- Social relations: Easy to establish within Egyptian context.

**Chart1: CAIRO H.Q. Recommended
-Working Relationship with TA team**



**TDY
ALL FINAL DECISIONS WILL BE DISCUSSED
WITH PROJ. DIR. (UNDER SECR.)**

**Chart2: Governorate Level
Working Relationship With Area Engineer**

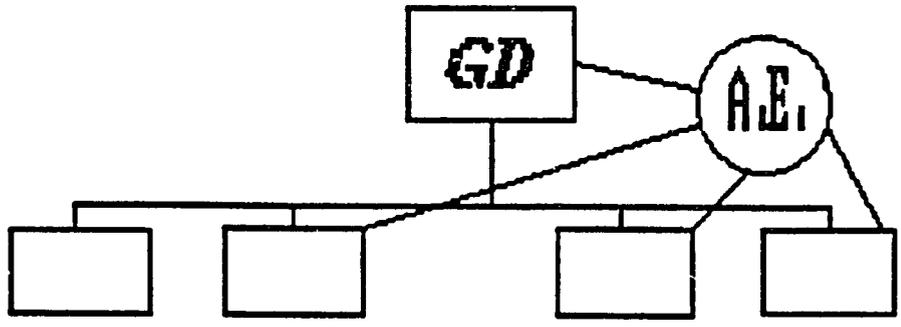


Chart3: INTERNAL T.A. TEAM ORG.

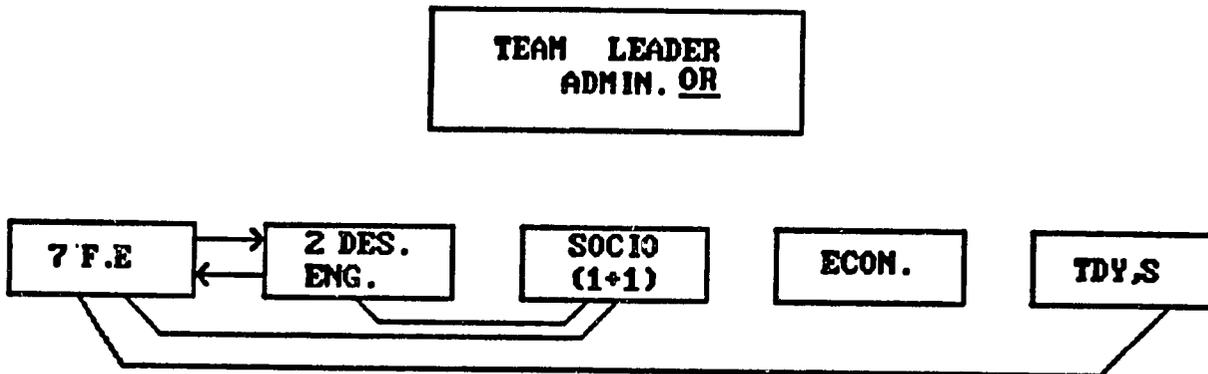
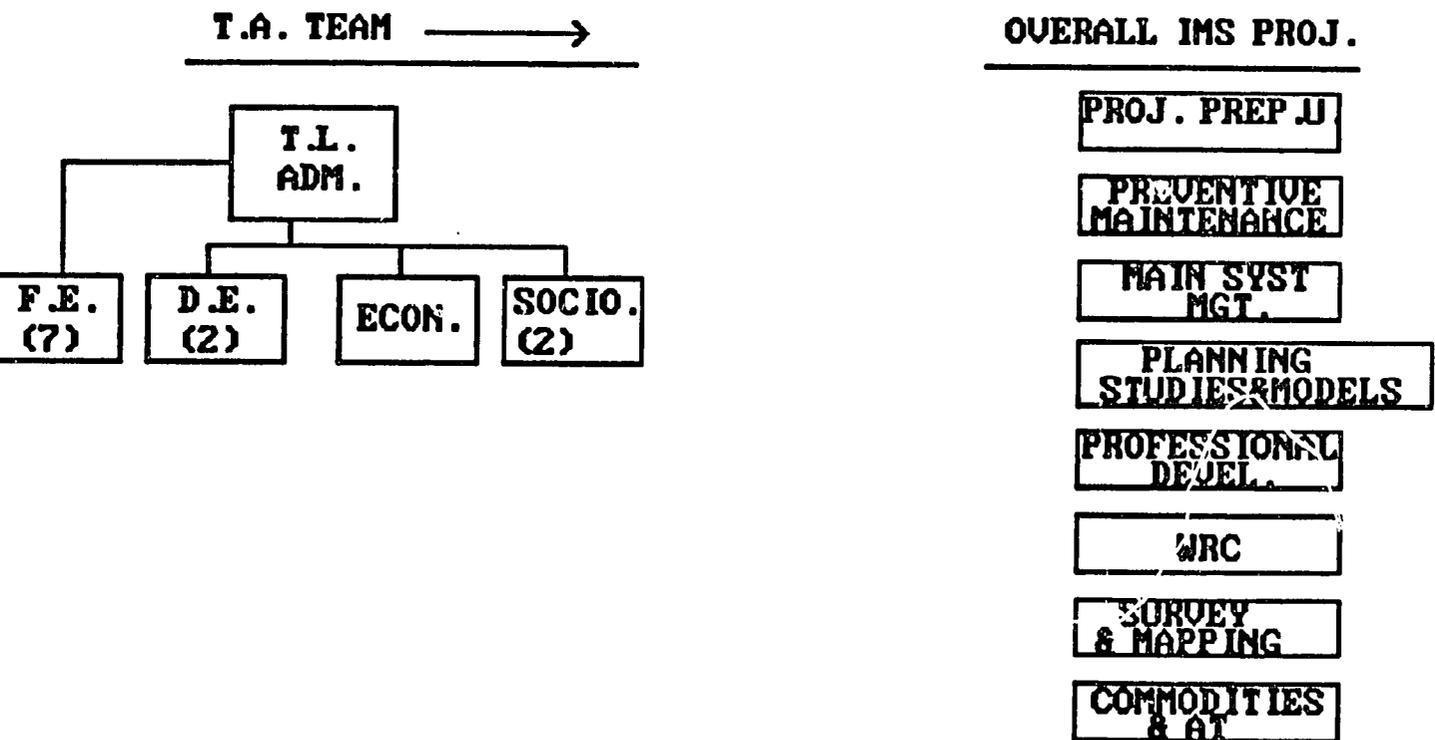


Chart4: Relationship between TA & IMS committee



GROUP 5

Feasibility Studies

What are the next steps after the feasibility studies have been approved?

Is there flexibility in how we use these feasibility studies?

Recommendations From Group

A. Why is this issue (feasibility study) important?

- In general, the feasibility study provides the basis for design.
- It is important to the success of the project that the feasibility study bring to light and solve problems faced by the farmers and estimate the project benefits.
- Sets priorities for design and construction itself.

B. Next steps:

- Detailed designs, issuance of tender documents, construction of the main and branch canals.
- The need for feasibility studies should not stop project progress.
- Items requiring more research should be studied further.
- Detailed designs of IIP are already under way in the regional offices, as are tender documents and specifications that have been developed with the help of the Headquarters office.
- Designs are being prepared according to proposals presented in the MacDonald feasibility study.

GROUP 7

Operating Funds Account

An operating account is available to the IIP offices in Cairo from USAID.

1. Funds will be available to operate and purchase the following:

- Benzin coupons - vehicles.
- Maintenance and repair - vehicles.
- Office equipment for Cairo and all Directorates including:
 - photocopy machines
 - facsimile machines
 - telephones (installed by project)
- Office supplies, including:
 - computer paper
 - photocopy paper
 - other small supplies (pencils, clips, books of account, binders, etc.)
- Training supplies:
 - tape decks
 - tapes - English language

2. On or before 15 April 1989 the following information must be available to the Project Director-Cairo:

- A list of all vehicles located in Cairo and the Directorates by make, model, license numbers.
- A list of all office equipment required for the coming year (see above).
- A list of all office supplies required for the coming year (see above).
- A list of all training supplies required for the coming year (see above).

3. Once these lists are received, a cost estimate will be prepared and presented to USAID. On approval, a revolving operating account will be established and funds issued to IPP offices-Cairo.

Responsibilities for the Administration of the Operating Account

1. Until the Permanent Revolving Fund is established (maximum three months), MKE/LBII will fund and administer vehicles and office supplies.
2. Once the account is established, the IIP offices in Cairo will fund and administer all operating costs.

Manner of Operation

1. Assume that there are 70 vehicles spread throughout Cairo and the Directorates.
2. Assume that each vehicle uses 375 litres of Benzin per month - 29.25 litres.
3. Assume that each vehicle needs maintenance of LE 300 per month - LE 21,000 per month.

With These Assumptions in Mind

1. Offices of IIP in Cairo will purchase 100 Benzin coupon books.
 - Issue one Benzin coupon for each vehicle each month (or as necessary) - 70 books.
 - Retain 30 books in inventory at all times to issue to the Directorates as used books are returned.. Total cost of 100 books - LE 26,250.
2. Issue LE 3000 for maintenance and repairs to Cairo offices and Directorates. Total cost - LE 21,000.
3. Retain LE 52,750 in the IIP Cairo offices to purchase additional coupon books, as needed, and office supplies.

(Total Operating Funds assume LE 100,000 for operation of vehicles and office. This fund will be increased to purchase office furniture and equipment once requirements are known (15 April 1989).

Offices of IPP Cairo must prepare cost report each month, submit to USAID, and receive replenishment of funds thereby keeping the fund at LE 100,000 or established amount.

GROUP 8

Language Issue

Inability of some members of the team to communicate in Arabic or in English hinders the ability of team members to work together effectively. Language also hinders some individuals' ability to study overseas. What measures can be taken to improve language skills?

1. A need exists to improve English language skills.

Apart from the obvious need to communicate, IIP staff should be able to benefit by overseas study and in order to do so participants must satisfy USAID language ability requirements.

2. Training facilities are limited.

Language training facilities approved by USAID appear to be limited to Cairo and Alexandria. Time for attendance is limited and clearly it is not feasible/practical to export staff from distant Governorates to attend the existing courses.

3. Recommendations:

- Alternative sources of instruction should be sought.
- Course should be formal and based on different levels of instruction and be presented in the Governorates.
- The course/instruction should be at two levels: primary and intermediate.
- The courses should have suitable technical content.
- Courses should be provided at suitable times in order that both senior and junior engineers/other staff can attend, e.g. afternoon sessions.
- Course should be compiled by AUC/British Council or other professional organization.
- Course should include the use of audiovisual methods.
- Consider the use of local teachers in universities/colleges to provide instruction under supervision of a TDY instructor (local or expatriate) or the organization used to compile the course.
- Course/funding should be requested from USAID for instruction and materials.

- Consider that instruction (in colloquial Arabic) be given to all project expatriates.
 - Tapes in Arabic are available from U. of Michigan.
 - Joe Carmack will provide more information.
- Computer training/language is needed.

Questions Raised During Large Group Discussion

- Can we receive information/materials from WRC? Materials are available through manual card index. Computerized access will not be available until end of year.
- Can we use A.I.D. information system to get materials on design? Yes. Information system is on 10th floor of USAID. Also Librarian at A.I.D. will assist you in finding resources. Librarian will also come to project.
- Coordinate with AUC for language training (include NARP and APC groups) at Governorates. IIP will have to share costs. Access through Eng. Fahim.
- Language cassettes can be provided through project. Needs should be identified at Governorate level.

APPENDIX I

FOLLOW-UP LETTER FROM ENG. SAWAF TO GENERAL DIRECTOR

RE: WORKSHOP AGREEMENTS

APPENDIX I

FOLLOW-UP LETTER FROM ENG. SAWAF TO GENERAL DIRECTOR
RE: WORKSHOP AGREEMENTS

DRAFT

Dear General Director,

I am writing to follow up on the agreements we made together in Ismailia. The workshop was very successful and now we have to work very hard to accomplish the agreements we set.

The General Directors are responsible for three of the agreements. I am reviewing them in this letter so you will be able to provide IIP headquarters with the data we need.

1. Each directorate needs to identify the next steps to be taken after the MacDonald feasibility study by developing a proposed implementation plan. In doing your plan take into consideration the following steps:

- a) Divide project area into management units.
- b) Decide if a socio-economic study needs to be made.
- c) If you have enough detail, move into design phase.
- d) If not, develop steps for conducting study.

Remember, if you plan a socio-economic study it should consider the following: design (physical structure), formation of WUAs, training for IAS staff, and developing indicators for baseline studies.

You agreed to meet with your staff during the week of March 26, 1989 to do the above steps. The meetings should include someone with a socio-economic background. Your proposed plan needs to be sent to me as soon as possible to be reviewed and incorporated into MKE's inception plan which is then submitted to USAID. The area engineers and my staff here at headquarters will be available to work with you on developing this plan.

2. Each directorate needs to submit a procurement plan, staffing needs and workplan to IIP headquarters by April 12, 1989. The procurement plan should include whatever you need to implement your workplan, i.e., equipment, vehicles, and other items (U.S. dollar items). Staffing needs should also describe ideas about what kind of training is needed. The workplan should cover a 6 month, one year and three year time frame.

3. You need to submit an interim request for a three month operating budget. We need a list of all vehicles located in your directorate by make, model and license numbers. Also a list of all equipment, office supplies and training equipment you will need for one year. This request needs to be sent to IIP headquarters on or before April 15, 1989.

Page two - Sawaf

I also want to remind you about the information we discussed at the workshop regarding public sector contractors. The policy is all firms may be invited to bid. However, preference should be given to private sector contractors because USAID requires a waiver to use public sector contractors. With a USAID waiver a public sector contract can be awarded, but permission for the waiver must be obtained from USAID before the contract is awarded to the public sector contractor. A request for a waiver must be well prepared and documented and presented to USAID by the MPWWR. After submitting the waiver request to USAID, it will take 4 to 6 weeks to approve the waiver.

I look forward to receiving your proposed implementation plan, procurement plan and interim budget. Thank you for your cooperation.

Sincerely,

Engineer Sawaf