

**IRRIGATION MANAGEMENT SYSTEMS PROJECT
SUSTAINABILITY WORKSHOP**

**APRIL 21-23, 1994
PORT SAID, EGYPT**

ISPAN Report No. 62

ISPAN

IRRIGATION SUPPORT PROJECT FOR ASIA AND THE NEAR EAST
sponsored by the U.S. Agency for International Development

ISPAN

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Prepared for the USAID Mission to Egypt
under ISPAN Activity No. 769G

by

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and
Claudia Liebler

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CHAPTER	PAGE
ACRONYMS	iii
EXECUTIVE SUMMARY	v
1. INTRODUCTION	1
1.1 Background	1
1.2 Terms of Reference	1
1.3 Interviews	2
1.4 Interview Findings and Major Issues Identified	2
2. THE IMS WORKSHOP DESIGN	5
2.1 Overview of the Workshop	5
2.2 Workshop Objectives	6
2.3 Workshop Guidelines for Working Together	6
2.4 Workshop Schedule	6
2.5 Session Descriptions	8
3. WORK SESSION OUTCOMES AND PRODUCTS	13
3.1 Overview of Outcomes	13
3.2 Specific Outcomes and Products	13
3.2.1 The Future of the MPWR	14
4. CONCLUSIONS AND RECOMMENDATIONS	19
APPENDIX	
A. List of Participants	23
B. Work Session on Sustainability	25
C. Work Session on Action Plan Development	47
D. Senior Management Group Report	71
E. Workshop Evaluation	75

EXECUTIVE SUMMARY

The Irrigation Management Systems (IMS) Project is at a critical transition point. In anticipation of the scheduled completion date of 1995, the ten component activities must increase their level of coordination and cooperation to ensure that the units can be successfully assimilated into the Ministry of Public Works and Water Resources and become productive, sustained parts of the Ministry.

Underlying these broad issues of cooperation, coordination, and sustainability are unresolved issues that must be dealt with to achieve expected project outcomes. The availability of adequate local operating budgets; provision of sufficient staffing, salaries, incentives, and training for staff; and decisions on cost recovery (cost sharing) are all pending issues that must be addressed to achieve the overall project purpose of strengthening the Ministry's capabilities for planning and design, operation, and maintenance of the Nile River system.

These issues were the topics of discussion and deliberation at the IMS Workshop held at Port Said, April 1-4, 1994. The workshop brought together all key personnel affiliated with the IMS: Project Directors, Team Leaders, U.S. Agency for International Development (USAID) Project Officers, Ministry of Public Works and Water Resources (MPWWR) Senior Management, and USAID Senior Management.

The workshop was designed and conducted by facilitators Taya Levine and Claudia Liebler from the Irrigation Support Project for Asia and the Near East (ISPAN). Before the workshop, the facilitators interviewed 29 of the 32 participants to identify the key issues to be discussed at the workshop. The agenda for the workshop revolved around the following areas:

1. Building a project-wide identity and view of the future

Over the last year, IMS staff has begun to develop more a project (versus component) identity. Taking collaborative actions and exploring areas of cooperation have helped in this regard. However, staff members still need to move beyond component-specific sustainability strategies to create a picture of what the future might look like for the IMS Project as a whole. During the workshop, participants met in mixed groups to identify the project benefits of IMS by listing the specific results the project expects as of September 1995.

2. A strategy for sustainability

In preparation for the workshop, each component was asked to develop a sustainability plan. The plans were distributed to everyone before the workshop. It became clear from the interviews and a review of the plans that the staff members were approaching sustainability differently. A clearer project-wide understanding called for a common definition and sustainability framework.

During the workshop, a sustainability framework was introduced, and participants were asked to focus less on strategies to sustain the component functions and activities and more on identifying

the most valued project outputs and then developing a strategy for how they could be continued into the future. The output, a rationale for their selection and strategies for sustaining them, was presented to everyone. Participants were encouraged to make suggestions to improve the strategies, and issues to be addressed by senior management were identified.

As a result of this review process, participants discussed how to build capacity to sustain new technologies and how to create time to complete project deliverables for long-term capacity building and problem solving. They also considered ways of strengthening senior and mid-level management of project functions, the availability of GOE (Government of Egypt) - funded local operating budgets for trained staff, additional training needs, travel and per diem costs, and equipment and maintenance costs.

3. Action Planning and commitment to follow through

Identifying specific steps for implementing the sustainability strategies was an important activity of the workshop. This identification process was accomplished in component groups. Senior managers also met to consider what actions they need to take to pave the way for resolution of issues that emerged during discussions. Agreements and plans that typically emerge from workshops require a great deal of monitoring and commitment to implement. With this need in mind, staff members were encouraged to be as specific as possible in their plans and to identify someone who would be responsible for monitoring the implementation of each strategy, ensuring a greater probability of follow through.

ACRONYMS

AUC	American University/Cairo
CM	Channel Maintenance
CSU	Colorado State University
COAM	Central Organization for Administration Management
DSU	Decision Support Unit
ESA	Egyptian Survey Authority
EMS	Egyptian Modified Agricultural System
GIS	Geographical Information System
GOE	Government of Egypt
GPS	Global Positioning System
HAD	High Aswan Dam
HCC	High Coordinating Committee
IAS	Irrigation Advisory Service
ICAM	Irrigation Command Area Model
IFB	Invitation for Bidders
IIP	Irrigation Improvement Project
ILD	Irrigation and Land Development Office, USAID
IMS	Irrigation Management Systems (Project)
ISPAN	Irrigation Support Project for Asia & the Near East
MFS	Monitoring, Forecasting and Simulation
MIC	Ministry of International Cooperation
MIS	Management Information System
MKE	Morrison-Knudsen Engineers, Inc.
MPWWR	Ministry of Public Works and Water Resources
MSM	Main Systems Management
NARP	National Agricultural Research Project

Chapter 1

INTRODUCTION

1.1 Background

The Irrigation and Land Development Office of the USAID Mission in Cairo requested the Irrigation Support Project for Asia and the Near East (ISPAN) to conduct a workshop for the Irrigation Management Systems (IMS) Project, a \$340 million umbrella project with nine major components plus a miscellaneous fund for monitoring, workshops, and the like. The intent of the IMS workshop was to come to a clear understanding of what should and can be sustained out of the IMS Project and to lay the foundation for successful sustainability.

The workshop was also designed to provide key component personnel with the opportunity to review their sustainability plans and begin to focus on the most important benefits or outputs of IMS to sustain. The final outcome of the workshop was to be the development of an Action Plan based on a uniform set of factors outlined during the workshop sessions.

Thirty-five individuals attended the IMS workshop held in Port Said, Egypt on April 1-4, 1994. See Appendix A for a list of participants. Two ISPAN consultants, Taya Levine, a management consultant with Training Resources Group, and Claudia Liebler, an independent consultant, facilitated the workshop.

1.2 Terms of Reference

ISPAN was requested to provide two senior facilitators with skills in workshop design, implementation, and consultation. The assignment for the facilitators was as follows:

1. Review literature, interview MPWWR, Irrigation and Land Development Office (ILD), and contractor staff to define problems and constraints on achieving project sustainability, including Government of Egypt contributions; staff and staff training; staff motivation; operations and maintenance; integration and coordination of IMS components; sharing of data within IMS components and within the Ministry; cost recovery; accountability; and other issues as identified.
2. Analyze the interview results and develop a series of issue statements that can be discussed at the workshop in order to agree on what USAID and the Ministry expect to achieve when the IMS Project is completed, and to agree about the current status of the IMS Project. Discuss these issues with representatives of MPWWR and ILD staff before the start of the workshop.
3. Design the IMS workshop, including overall objectives, design and agenda, and handouts and flipcharts.

4. Conduct the IMS workshop with the purpose of getting agreement on a future plan of action.
5. Draft an Action Plan that addresses problems and constraints with an emphasis on the sustainability of the activities following completion of the AID-funded project.

1.3 Interviews

The facilitators conducted 20 interviews to identify the key issues for development of the workshop agenda. The interviewees included nine staff members of the MPWWR, five of the remaining technical assistance team advisors, and six USAID personnel. Interviewees were asked what they saw as the key issues regarding the sustainability of the component activities with which they were affiliated. In addition, ISPAN facilitators asked the interviewees about obstacles they could foresee in regard to these key issues. Finally, the interviewers asked what was the most important issue the participant wished to discuss in order to make progress toward sustainability.

The interviews generated clear and consistent themes that were used to construct the workshop agenda and discussion questions. The ISPAN consultants analyzed the data and developed work sessions that would allow further discussion and work related to sustainability to be done.

1.4 Interview Findings and Major Issues Identified

Most of those interviewed agreed that a workshop to focus completely on strategies for sustainability would be helpful, although some were uncertain about what the specific objectives and products should be and whether a component level or project-wide focus would be most useful.

Three key issues emerged from the interviews conducted with Project Directors, contract technical advisors, USAID project officers and managers, and MPWWR senior officials. Everyone was concerned with building more of a project-wide identity and a view of the future, developing a common understanding of what is meant by sustainability, and discussing and agreeing on sustainability plans and steps.

1. Building a project-wide identity and view of the future.

In spite of the real progress toward coordination and cooperation that had been made since the 1993 workshop, the ten components of IMS continue to operate quite autonomously without much of an IMS Project identity. The components share no sense of the future beyond the life of the project and what the project-wide sustainability strategy needs to be. Attention has focused primarily on how to integrate the ten IMS components into the Ministry with no project priorities for sustainability. It is not clear which of the many project outputs most needs to be sustained and which will end as the project closes out.

2. Developing a common understanding of the meaning of sustainability.

During the interviews it became clear that project staff had very different understandings of what was meant by sustainability, both in the broader development context as well as in how the IMS Project was defining the term. A common language and framework that could be used to facilitate this important work was needed. There was a focus on sustaining IMS Project functions rather than looking at the outputs the functions were meant to produce.

The idea that the outcomes need to be valued enough by someone (farmers, Directorates, Ministry officials, citizens) in order to be sustained was not being considered. The focus was on sustaining everything rather than on selecting the most valued outputs or on building a marketing strategy to increase demand.

Component staff had approached their plans for sustainability from different directions. Some focused primarily on what would happen to their component after IMS. Others saw their own plans as tools to guide actions and work priorities over the next year. The issue of how much to focus on short-term performance versus long-term capacity building is very real. For some components, the priority is fulfilling contractual obligations. However, preserving what has already been built or installed so that it can be sustained is also critical.

3. Discussing and agreeing on specific plans and steps for sustainability.

Participants were looking forward to the workshop as their first opportunity to share their plans and assess their viability. Given the heavy focus now on implementation, there was a need to identify steps that can and should be taken to balance implementation with the provision for sustainability during the time remaining in the project. Interviewees wanted to focus on what could be accomplished in realistic terms and what should be the next steps. In addition, interviewees addressed a number of very specific sustainability issues that needed the input of senior management:

- Adequate budget and human resources
- Retention of qualified personnel
- Adoption of policies that support sustainability
- Building capacity to run systems and technologies
- Organizational changes to identify a home for certain services
- Integration of IMS outputs into ongoing activities of MPWWR.

Chapter 2

THE IMS WORKSHOP DESIGN

2.1 Overview of the Workshop

The workshop was designed to provide an opportunity for senior Ministry officials, IMS Project components, and USAID staff to discuss progress in working toward sustainability of IMS component activities and identify the issues that need to be resolved to achieve successful sustainability.

The workshop design provided opportunities for identifying the most valued outputs of the IMS Projects to be sustained, with presentations on strategies to achieve sustainability from each component Project Director. Various group configurations, including component teams as well as mixed groups, ensured that the best thinking and creativity of Project Directors, Technical Advisors and USAID Project Officers, and MPWWR and USAID managers was brought to bear in these important and sometimes difficult discussions.

The IMS Project components are heavily engaged in implementation of project activities and some, more than others, are concerned about their ability to fulfill project commitments before September 1995. A sufficient number of unresolved issues about implementation make focusing on what lies beyond the end of the IMS Project a challenge. The workshop provided a forum for beginning to think about the long-term issues that exist as a result of the IMS Project inputs and to consider the steps that need to be taken to bolster the chances of the benefits of the IMS Project to be continued once donor assistance is ended. To provide more context and content for the discussions, USAID and the High Coordinating Committee had requested that each component prepare a sustainability plan. These were circulated to everyone before the workshop began and were used as resource material for the work session on sustainability.

The agenda of the IMS workshop held in 1993 was modified and did not achieve the originally intended objective of developing a future vision of the Ministry beyond the life of the IMS Project. It is not surprising that this vision, then, was the first agenda item for the workshop. The workshop sessions moved the participants and their thinking first to the big picture, a project-wide identity, then toward specific steps in an Action Plan to realize that bigger picture agenda. The intense workshop, which accomplished a lot of work done in a short time, is the first of many needed steps in the process of sustaining the benefits achieved by the IMS Project.

The IMS Monitoring Office provided an excellent staff of support personnel, which made it possible to distribute transcribed copies of all products generated from group work to all participants before the end of the workshop.

The ISPAN consultants facilitated the workshop process, guiding the full group discussions, encouraging participation of all group members, monitoring and providing assistance to small

group work and discussions, pressing for clarity and understanding of all content generated by participants, and generally keeping things on schedule.

2.2 Workshop Objectives

The workshop objectives were as follows:

- Develop a picture of the outputs and benefits that have been provided by IMS, including those that have enhanced the Ministry's ability to operate and maintain the Nile River System
- Review and discuss sustainability plans of the IMS components
- Develop specific steps necessary to support and ensure the implementation of the sustainability plans.

2.3 Workshop Guidelines for Working Together

To create a workshop climate for participation, full exploration of issues and mutual problem solving, the group agreed to follow these general guidelines for working together:

- Start on time
- Listen for understanding
- Have only one person speak at a time
- Don't dominate discussions
- Encourage others' participation
- Speak loudly and clearly
- Don't smoke in this room
- Ask for an interpretation or additional clarity if language creates a problem for understanding
- Wear casual, comfortable clothes.

2.4 Workshop Schedule

The two-day workshop began with an opening session on Thursday evening, April 21, 1994 and adjourned at 5:00 p.m. on Saturday, April 23, 1994.

THURSDAY, April 21

6:00 p.m. Welcome/Introductions

6:20 p.m. Opening Activity

7:20 p.m. Workshop Overview

- Schedule/Objectives
- Guidelines for Working Together

8:00 p.m. Reception

FRIDAY, April 22

8:30 a.m. Schedule/Agenda

Opening Remarks

- Eng. Gamil Mahmoud
- Clem Weber

9:00 a.m. Work Session on the Future of MPWWR

- Small Group Work

10:15 a.m. Report Outs and Large Group Discussion

11:30 a.m. LUNCH

2:00 p.m. Work Session on Sustainability

- Presentation on Sustainability Framework
- Small group analysis of Sustainability Plans

5:00 p.m. Close of Day

SATURDAY, April 23

8:30 a.m. Sustainability Work Group Presentations

Main System Management

Planning Studies & Models/Monitoring, Forecasting and Simulations, Management Information Center

Irrigation Improvement Project/Project Preparation Department

Water Research Center

12:15 p.m. LUNCH

1:15 p.m. Presentations (cont'd)

Professional Development

Preventive Maintenance

Survey & Mapping (Egyptian Survey Authority-ESA)

3:30 p.m. Work Session on Action Planning

4:30 p.m. Ministry Management Report

5:00 p.m. Closure and Evaluation

2.5 Session Descriptions

In this section, each session is briefly described. The results of the issues discussions and Action Plan development will be explained in the next chapter.

Opening Session of the Workshop

The workshop began with introduction of the facilitators, followed by an activity to allow participants to think about the future outcomes of the IMS Project. The task given to every table group was to imagine that the Cairo newspaper, *Al-Ahram*, will run a special edition on the IMS Project on October 1, 1995. Each table group was asked to be creative in thinking about what good news they would want reported on that date, after the end of the project. What would the headlines be? What stories would be featured? What photographs? Each table was given paper and asked to create the front page of the *Al-Ahram Special Edition on IMS*. Participants then walked around the room and viewed each other's work. Comments and reactions highlighted the positive tone, the amount of good news to tell, and the great humor with which people undertook the task!

The facilitators reviewed the workshop objectives, agenda, and guidelines for working together. A reception followed at the conclusion of this session.

Work Session on the Future of MPWWR

Engineer Gamil and Mr. Weber made brief opening remarks, each highlighting his commitment to a continued and productive relationship between MPWWR and USAID. While last year the analogy of a "marriage" of components was used, this year the metaphor of "family" set the tone for discussing how to ensure the many "children" (activities) of the IMS Project are well taken care of into the future. Mr. Weber noted that like any marriage, there are some rough times but with commitment and open communication, we can get through it.

The purpose of this session was to begin the process of thinking more about the big picture, rather than about component level issues. The shift in thinking from project implementation

objectives to focusing on the outcomes of achieving those objectives can be a difficult one. The work of sustainability involves a clear examination of the benefits and outputs derived as a result of project inputs and then a careful assessment of the steps necessary to ensure sustainability of those outputs.

This activity asked participants to focus on the benefits and outputs to be realized as a result of IMS and to develop a clearer picture of the Ministry and the IMS expertise, experience, and activities embedded within it. Mixed groups were tasked to clearly identify the specific results of IMS activities—both in terms of what end users in the field are able to do or how they benefit by IMS projects, and how the Ministry will benefit from the increased capacity in terms of the services and resources it can provide as of September 1995.

Each group posted its work, and a discussion of reactions/comments and issues to be addressed ensued. The product of this work was a list of benefits and outputs, with a clear sense of what will be a better foundation for looking at what should and can be sustained.

Sustainability Framework

The facilitators presented five Factors for Successful Sustainability. The factors provided the framework for the assessment of sustainability plans developed by each component project. The factors presented were:

FACTORS FOR SUCCESSFUL SUSTAINABILITY

1. Only the most valued outputs are sustained.

Not all project activities need to be or should be sustained. Sustainability should focus on the continuance of benefits or outputs. Demand must be created for the goods and services that are offered as a direct result of project activities.

2. Building long-term capacity is given as much attention in the final phase of the project as short-term performance.

Pressure can be strong to meet contract deadlines to the harm of lasting impact. Time spent only on meeting planned targets means there is little thought given to what needs to be done to lay the foundation for sustainability beyond the life of the project.

3. Commitment at policy level to sustaining development activities is evidenced by supportive incentives and the minimizing of disincentives.

Policies that create the conditions for sustainability must be developed and made operational. Examples include the provision of adequate budget resources, human resources and compensation, and training programs adequate to recruit and retain qualified personnel.

4. Approaches and technologies introduced during the project can be supported and maintained with the resources likely to be at hand after the project.

The ability to sustain often rests on the resources available for the recurrent costs of operation, maintenance, renewal, replacement, and upgrading of technologies in use.

5. A range of options for funding sustained activities is considered.

To reduce total dependency on government funds, financial viability can be realized through supplemental funding sources such as user fees, charges for services, and the identification of other national or international donor resources.

Work Session on Sustainability

The purpose of this session was to have participants assess the sustainability plans that have been developed, in the context of both what was envisioned out of the morning's activity and in the context of what it takes for successful sustainability. The product of their work was a presentation on sustainability of the key outputs/benefits in their component area.

This work session brought focus and compelled some serious decision making about what can and should be sustained and what it will take to do so. Component groups (Project Director/TA/USAID Project Officer) met with relevant MPWWR Senior Management to identify a priority set of outputs to be sustained out of the component activity and a strategy for realizing sustainability.

PROJECT COMPONENT GROUP TASK

- 1. Using the questions below, review and discuss your sustainability plan in the context of the factors for successful sustainability.*
- 2. Prepare a report on your plan that indicates the three to five of the most valued outputs, the rationale for sustaining them, and the strategy to ensure sustainability. You will present your report tomorrow morning.*

Only the most valued outputs are sustained.

- 1. Given the activities to be sustained as outlined in your plan, what demand or need exists to suggest these are the most valued outputs to be sustained?*
- 2. What could be done to increase the demand or value of the outputs offered by your project activities to enhance the prospects of sustainability?*

Building long-term capacity is given as much attention in the final phase of the project as short-term performance.

- 1. How will your plan result in a long-term capacity to continue the benefits or outputs generated during the IMS project?*

2. *What changes do you need to make in your plan to increase the degree of long-term capacity focus? (Moving beyond completion of the implementation phase)*

Commitment at policy level to sustaining development activities is evidenced by supportive incentives and minimizing disincentives.

1. *What supportive incentives (at the Ministry and Directorate levels) are currently in place to support or facilitate the sustainability of the development activities?*
2. *What disincentives need to be minimized, or policies need to be developed and operationalized to support and facilitate the sustainability of the benefits or outputs from your project?*

Approaches and technologies introduced during the project can be supported and maintained with the resources likely to be at hand after the project.

1. *What conditions are in place to ensure the ongoing operation, maintenance, and commitment to utilize the technologies and approaches introduced through your project after the project is complete?*
2. *What can be done to improve the probability of adequate support of these technologies?*

A range of options for funding sustained activities is considered.

1. *How has your plan considered other funding mechanisms to supplement expected levels of government support?*
2. *What other possibilities are there for alternative funding for sustained activities?*

Reports were prepared for presentation on Saturday morning. At the conclusion of each presentation, when each output to be sustained was presented with the strategy to do achieve sustainability, participants were asked to contribute their ideas about other issues and strategies to consider. Issues were also identified that need MPWWR Senior Management attention. The reports and comments generated during discussion appear in their entirety in Appendix B of this report.

Work Session on Action Planning

Recognizing that this workshop is part of an ongoing process of working toward sustainability, this session was designed to ensure that practical, realizable steps are taken to move forward. It also factored in an opportunity to discuss the feedback and suggestions offered by the group when the presentations were made earlier in the day.

Participants were asked to use the strategies that were developed in the previous session to identify what specific first steps will begin to implement their strategies. The component groups reconvened and were given the following task:

1. *Identify the three priority steps to be taken to begin implementation of your sustainability strategy.*

2. *Determine by when these steps will be taken, and by whom.*
3. *Discuss how you will address the issues raised in response to your report.*

The Action Plans developed appear in their entirety in Appendix C of this report. Copies of the plans were distributed to the members of each group.

Report from Senior Management

While the component groups were working on their Action Plans, the Senior Management Group was convened to prepare a report to the group about the issues raised during the presentations that warrant Senior Management attention. The Senior Management Group's discussion agenda was the following.

Discuss the following questions and reach agreement on:

- *Which of the issues raised during the sustainability plan presentations will receive your priority attention in the next three months?*
- *What steps will you take to ensure the remaining issues are addressed or resolved?*
- *When and how will you communicate with IMS personnel about your progress on sustainability actions?*

Eng. Gamil Mahmoud reported on behalf of the Senior Management Group and that report appears in its entirety in Appendix D of this report.

Workshop Evaluation and Closure

Engineer Gamil made very appreciative and supportive comments regarding the hard work done by participants during the workshop. Participants then completed an evaluation of the workshop. Results of the workshop evaluation appear in Appendix E.

Chapter 3

WORK SESSION OUTCOMES AND PRODUCTS

3.1 Overview of Outcomes

On the basis of the evaluation results, reactions to the workshop were positive. When asked "what could have been done better" in the workshop, the main issue was the need for more time.

Principle benefits of the workshop mentioned in the evaluations included the following:

- "Better understanding of what should be sustained and how to preserve the valuable achievements of the IMS"
- "Having an overall look at all components of IMS"
- "Gave us the truth about what is happening/needs to happen"
- "A chance to discuss sustainability issues on a broader level for all components"
- "Developing a common awareness of constraints affecting IMS component sustainability of gaining some commitment from management to address the problems"
- "Clear picture for future of this important project"
- "Key project staff focussing on sustainability, i.e., thinking about it."
- "Caused all of us to focus on the future"

(See Appendix E for complete evaluation results.)

3.2 Specific Outcomes and Products

Each session involved a step in the process of focusing on priority sustainability agendas. The work product of each session was used as a foundation for the next task to be done. This section includes the products of each session, and illustrates the progression of thinking and evolution of a strategy for sustainability for the coming months.

3.2.1 The Future of the MPWWR

During this session, mixed groups developed exhaustive and comprehensive lists of the benefits and outputs of the IMS Project that will be realized when the project formally comes to an end in September 1995. Below is a composite list of the many benefits/outputs identified by the working groups.

GROUP A:

BENEFITS AND OUTPUTS OF IMS

- Country-wide telemetry
- Electronic Maintenance facility
- Pilot Automation Project (Serry)
- Improved irrigation system operating procedures
- Capability to prepare feasibility studies to international standards
- Functioning preventive maintenance in six Directorates
- Enhanced capability to address water quality issues
- Monitoring, forecasting, and simulation modeling for Upper Egypt
- Mathematics Modeling center
- Ministry-wide MIS center
- GIS laboratory for planning activities
- Ministry-wide computer facility
- Capability to plan, design, and implement irrigation improvement projects
- Well-trained staff (researchers) capable of doing professional studies and researches

GROUP B:

BENEFITS AND OUTPUTS OF IMS

PM

- Concept of preventive maintenance introduced and implemented in six Governorates
- Maintenance management handbooks completed and distributed

IIP

- Comprehensive program for irrigation improvement developed and implemented to include:
 - Continuous flow controlled by down stream automatic gates
 - One point lift station with raised lined mesqas and low pressure pipelines
 - Water user associations formed
 - Irrigation advisor service established
 - Cost-sharing program begun

PPD

- Unit capable of preparing studies (technically and economically, environmental) acceptable to international donors

MSM

- 800 stations installed and capable of transmitting water level data whenever needed to support improved water management
- Serry Canal pilot automation project completed

PS&M

- National forecasting system established
- Models and decision support developed for planning water resource management
- MPWWR into management system established

SR

- 20,000 small structures completed

S&M

- Database of cropping patterns, soil condition, canals of drains completed for Delta
- 1:50,000 scale mapping of green Egypt north of Beni Suef completed
- Agricultural Land (95 percent) in Behira of Sharquia registered
- Modern map production plant completed and equipped. Staff trained to produce digital maps

- Two model cadastral offices equipped, staff trained, procedures developed; expansion to Assiut of Sohag in progress

WRC

- See Dr. Abu Zied

PD

T.C. Center operational

GROUP C:

BENEFITS AND OUTPUTS OF IMS

- Capable staff in Ministry Directorates (electronics, computers, software, MOMS)
- Large quantities of new equipment in place
- Maintenance workshops and labs established
- Training facilities in place
- 1,000 legal Water User Associations (WUAs) established to operate and manage improved messages
- New canal water control structures, roads, and so forth for better maintenance
- Less down time on irrigation system
- Increased productivity, lower costs, land savings
- Establish irrigation advisory service
- TOT training of trainers
- Improved availability of maps to help planning and implementation
- Better water management and irrigation systems

GROUP D:

BENEFITS AND OUTPUTS OF IMS

- Establishment of legalized functioning WUAs to manage water distribution, operation, and maintenance at the mesqa level
- Upgrading of training for MPWWR personnel through academic participation and OTS using modern techniques

- Structure replacement activities, 19,000 + replaced personnel trained in constructing techniques and quality control
- Preventive maintenance centers established and functioning at six Governorates; personnel trained in the operation of the centers
- MFS project is part of the DSU providing supply information, local forecasting and long-range information to Lake Nasser
- Planning Distribution Model (PDM) operation and functioning
- Modernization of ESA facilities using latest technology
- 6th of October training center operating and functioning
- Project Preparation Department (PPD) functioning and is operating
- Modernization of Water Research Center's (WRC's) institutes laboratory equipment
- Huge amount of equipment and facilities supplied through the IMS to MPWWR without which the Ministry could have practiced a severe handicap

GROUP E:

BENEFITS AND OUTPUTS OF IMS

- Increased capability in the following areas:
 - Irrigation structure design, construction, and maintenance
 - Working closely on the farm level and increased farmer participation in decision making process through WUAs
 - In performing feasibility studies for MPWWR's project
 - Providing skilled staff to the other Arabian countries
 - Training of highly professional specialist staff
 - Understanding complexities of water resources management under multiple constraints
 - In planning optional strategy for water management (High Aswan Dam [HAD] reservoir and Irrigation system)
 - Understanding hydrological process in Nile Basin
 - Forecasting flow into HAD
- Providing MPWWR and other users with high quality maps with New Techniques.

Chapter 4

CONCLUSIONS AND RECOMMENDATIONS

Progress has clearly been made on sustainability since the last workshop. However, more needs to be done so that all personnel can filter the decisions and actions of the next year through a sustainability framework. Staff will need to ask itself frequently, "How does what I am doing today contribute to building long-term capacity to sustain project benefits in the future?" Understanding what it takes to sustain a preventive maintenance capability, for example, requires a multidisciplinary perspective that staff whose professional background and training is in technology and not in human resource or institutional development, cannot be expected to automatically acquire. Cultivating this perspective takes time and the input of everyone. All of us must learn a lot about sustainability, and this effort will require our best creativity and willingness to consider the many options available to us.

The specific issues are abundantly clear and have been on the sustainability agenda since the last workshop. The following are six key issues:

- Retention of qualified staff.
- Securing budget and human resources.
- Building the capacity to operate and use new systems and technologies.
- Adoption of policies that will support sustainability (e.g., the legalization of the WUAs).
- Working out the necessary arrangements to create organizational homes for IMS activities.
- Ensuring the integration into Ministry functions of certain component activities.

During the workshop, participants began to further clarify their concept of sustainability. Rather than assuming that all functions and services of IMS components would be sustained, they shifted their focus from services and functions to outputs. The outputs of a project are what should be considered for sustainability. Participants also began to consider that perhaps not all project benefits are valued and important enough to be continued or that given the policy or organizational environment, it may be unrealistic to expect that certain outputs can be continued. If Project Directors and senior management are willing to look thoughtfully and realistically to the future, informed decision making can occur. Being able to accurately assess the current policy environment can help form strategies for the future.

One more year remains in the IMS Project—time enough to take quite a lot of action toward sustainability, particularly if priorities are set and maintained. During this last year of the IMS Project as the pressure to meet project targets intensifies, a focus on short-term performance may

overshadow the need to build long-term capacity. It will be important to manage these two conflicting priorities if USAID and the MPWWR want to avoid a situation in which expensive equipment and systems fall into disrepair or are unable to be used because the capacity, motivation, or incentives are not present. The challenge is to maintain a balance between the two so that a legacy can be left behind that will make all who have been a part of the IMS family proud.

The following recommendations focus on a process to keep moving forward with actions for sustainability.

1. Successful sustainability requires strong leadership to guide and focus efforts.

This is a critical time for leadership in the IMS Project. If both USAID and the High Coordinating Committee are willing to adopt sustainability as the priority for the next year, much can be accomplished. They must take the lead by issuing overall project guidance, by following up on the actions they agreed to take during the workshop, and by proactively working with each project component. Open and frequent communications during this transition can be immensely helpful in keeping alive a sense of belonging to a larger IMS team and project-wide sustainability effort.

a. Pay attention to transitions in leadership.

Over the next several months there will be a number of transitions in leadership both within USAID and MPWWR. As new leaders come on board it will be important to brief them and work closely with them in the first months of their tenure so that they understand the sustainability agenda and the role they must play in moving it forward.

b. Provide overall guidance to IMS staff.

Leaders must also continue to refine their thinking about the most valued project outputs that should be sustained. Not all project components should be integrated into the Ministry. Not all services should continue to be provided in the same way as they have been under the project. Keeping everyone focused on outputs rather than components will help to make successful sustainability decisions.

c. Move forward with senior management actions.

Senior managers must follow through on the priority actions they agreed to take during the workshop and communicate the status of their efforts to everyone. This communication will set the tone for action and progress toward sustainability and allow component level staff to move forward with the actions that are within their control.

d. Monitor component sustainability plans.

Giving general project-wide guidance on how project staff should spend its time during this last year of the IMS will ensure that the foundations required for sustainability are built. Making the sustainability plans for each component a regular

agenda item for discussion at Steering Committee, High Coordinating Committee, and USAID Project Officer/MPWWR Project Team meetings will underscore the seriousness of the effort.

2. A sustainability study should use IMS expertise.

A sustainability study or task force could provide additional ongoing attention to the effort that IMS has made through its workshops, the drafting of the sustainability plans, and other actions taken. If the proposal for the study is adopted, it will be important to make sure that it builds upon the work that had already been accomplished.

A first step, as suggested during the workshop would be to get input from each of the project components in the actual drafting of the Scope of Work. Many of the answers for sustainability already reside with the IMS team so that using a participatory rather than an expert approach to the study would be most appropriate. USAID and IMS staff should use such a study as an opportunity to continue to learn together about facilitating conditions and actions that are necessary for sustainable development. A multidisciplinary team that includes one member with an institutional/human resource background and another with a technology transfer focus would be useful.

3. Plan an end-of-project celebration/event.

The IMS Project has a rich history of stories and accomplishments that deserve to be acknowledged in an end-of-project event. It might take the form of a lessons learned seminar or simply a celebration to honor an important transition. Events of this sort help to bring meaning to the efforts of many who have devoted a part of their professional lives to the realization of IMS project objectives. They can also serve to make others aware of the contribution the project has made.

Appendix A

LIST OF PARTICIPANTS

MPWWR

1. Eng. Gamil Mahmoud, Chairman, IMS High Coordinating Committee
2. Prof. Dr. Mahmoud Abu-Zeid, Chairman, Water Research Center
3. Eng. Ahmad El Sawaf, Head, Irrigation Sector, Irrigation Department
4. Eng. Mahmoud Hassan, Chairman, Drainage Authority
5. Eng. El Sayed Hassan, Head, Expansion and Projects Sector, Irrigation Department
6. Eng. Farouk Soaida, Head of MPWWR, Upper Egypt
7. Eng. Ahmed Maher, Head, Irrigation Sector
8. Eng. Mosaad M. Ibrahim, Chairman, ESA
9. Eng. Ali Aboul Seoud, Head of Technical Central Directorate, Minister's Office
10. Eng. Talaat Tehmer, Head of Planning and Follow-up MPWWR
11. Eng. Soliman Abou Zeid, Project Director, Main System Management Component
12. Eng. Yehia Abdel Aziz, Project Director, Irrigation Improvement Project Component
13. Eng. Ibrahim Hassan, Preventive Maintenance Component Representative
14. Dr. Bayoumi Attia, Project Director, Planning, Studies and Models/Monitoring, Forecasting and Simulations Component
15. Eng. Abdel Atty Allam, Project Director, Professional Development
16. Eng. Kamal Enany, Project Director, PPD
17. Eng. Noshi Shaker, Project Director, MIC
18. Eng. Aimen Abou Regela, Office Chairman of Planning Sector
19. Eng. Ahmed Bayoumi, Head Technical Department, PD Component
20. Eng. Sarwat Fahmy, Chief, Monitoring Office, IMS Project
21. Eng. Mahmoud Abbas, Deputy Chief, Monitoring Office, IMS Project

USAID

21. Mr. Clemence Weber, Office Director, AGR/ILD
22. Mr. David Smith, Project Officer, ILD
23. Mr. Russel Backus, Project Officer, ILD
24. Mr. Donnie Harrington, Project Officer, AGR/ILD
25. Mr. Charles Houston, Project Advisor, ILD
26. Dr. Wadie Fahim, Project Management Specialist
27. Mr. Tarek Shata, Project Management Assistant
28. Mr. Tarek Bekhit, Project Specialist
29. Mr. Shawky Boctor, Project Engineer
30. Ms. Hanaa Khedr, Secretary, ILD

CONSULTANTS

31. Mr. Carroll Hackbart, Team Leader, MKE/LBII, Irrigation Improvement Project
32. Mr. Leo Busch, Team Leader, USBR, Planning Studies and Models Component
33. Mr. Andrew Tczap, Team Leader, Harza, Main System Management Project
34. Dr. Frank Hanigan, Team Leader, Geonex, Survey and Mapping Component
35. Mr. Miheil Angelic, Chief Technical Advisor, MFS, Planning Studies and Models Component

FACILITATORS

36. Ms. Taya Levine, ISPAN
37. Ms. Claudia Liebler, ISPAN

SUPPORT PERSONNEL

38. Mr. Hassan Abou Elmagd, Accountant
39. Eng. Ali Kamal Omar, Computer Specialist
40. Ms. Doaa Amin, Secretary
41. Ms. Soha Mohamed, Secretary

Appendix B

WORK SESSION ON SUSTAINABILITY

This work session used the Factors for Successful Sustainability as a basis for analysis of sustainability plans developed by each component to date. Component groups (Project Director/TA/USAID Project Officer) met with relevant MPWWR Senior Management to identify a priority set of outputs to be sustained out of the component activity and a strategy for realizing sustainability.

The product of this analysis was the identification of three to five of the most valued outputs of the component project activities to be sustained, a rationale for sustaining the outputs and a strategy to sustain each one. This output was shared with the large group in the form of presentations. During the presentations, the large group offered ideas and input about issues/strategies to be considered as the sustainability plan moves forward. In addition, issues that require Senior Management attention were identified. Below are the presentations given, followed by the input and feedback offered by the group and the issues requiring Senior Management attention.

1. MAIN SYSTEMS MANAGEMENT PRESENTATION

OUTPUT TO BE SUSTAINED:

Data Management System

RATIONALE:

Historical data are required for monitoring, planning, and model calibration.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Continue to optimize/upgrade system to meet users' needs.
- Plan for upgrading staff capabilities.
- Tie staff incentives need to performance.

=====

OUTPUT TO BE SUSTAINED:

Improved Flow Measurement

RATIONALE:

Accurate flow measurement required for calibration of regulators to convert level to flow. Needed by MSM, PSM, IIP, Planning Sector, and WRC.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Ministry must assign responsibility to ensure program is carried out.
- Upgrade staff capabilities through training.

=====

OUTPUT TO BE SUSTAINED:

Data Collection System—200 Meteor Burst, 630 VDCCS

RATIONALE:

Accurate, timely data is key to water management & planning for increased water use efficiency.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Ensure accuracy of data before turnover.
- Plan awareness campaign about the need for and benefit of the data system.
- Perform effective maintenance.
- Monitor benefits of the system.
- Provide incentives for directorates who use system to improve water management.
- Tie staff incentives to performance and work requirements.
- Plan for upgrading staff capabilities.

=====

OUTPUT TO BE SUSTAINED:

Electronic Maintenance Facility and Preventive Maintenance

RATIONALE:

System requires continuous attention or all MSM outputs will be lost. This capability must be in place by September 1995.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- MPWWR must provide staff, transport, and budget in timely manner.
- Upgrade staff capabilities on continuing basis.
- Budget foreign exchange requirements for spare parts and system replacement.
- Tie staff incentives to performance.

=====

Suggestions for MSM:

- Clearly identify the policies and procedure, of the Ministry that need to be changed or that have an effect on sustainability.
- Establish a sense of priorities to be included in the plan; what is most important?
- Explain title of output "Improved Flow Measurement"; what is the result of having improved flow measurement?
- Establish a centralized organization for MSM.
- Encourage better interaction with end users as a part of sustainability plan.
- Develop criteria for "improved management" so that benefits can be demonstrated and begin measuring performance against these criteria.
- Look at how to sustain the quality, not just quantity of outputs.

MSM Issues that need Senior Management attention:

- Ensure Maintenance and Operations organization approval.
- Review organizational responsibilities and clarify roles about flow measurement. Who is/will be responsible? A separate, centralized service responsible for data collection and flow management is critical to the sustainability of the MSM outputs.
- Make decisions that upgrade staff capabilities and provide for appropriate staff incentives.

2. PLANNING STUDIES & MODELS/MONITORING, FORECASTING AND SIMULATIONS/MANAGEMENT INFORMATION CENTER PRESENTATION

OUTPUT TO BE SUSTAINED:

Planing Distribution Model and its supportive submodels

RATIONALE:

- Urgently needed by policy planners (PPs) and decision makers (DMs) to evaluate alternatives and strategies of national water policies.
- Assist better water allocation.
- Provide tool to identify proper mass salt balance.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Demonstrate capabilities of the model to Pps and Dms.
- Publicize the outputs.
- Allocate adequate/necessary funds for hardware/software maintenance continued training and local consultancy.
- Establish mechanism for securing continuous flow of data and information.
- Marketing of technology locally and abroad.

=====

OUTPUT TO BE SUSTAINED:

HAD (High Aswan Dam) operational models

RATIONALE:

- Satisfying the need for matching supply and demand.
- Testing and evaluating supply alternatives with different release scenarios.
- Using it as a tool for providing potential annual power curve.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Establish a facility at the HAD authority for using the model (and provide training).
- Demonstrate capabilities of the model to Pps and DMs.
- Publicize the outputs.
- Allocate adequate/necessary funds for hardware/software maintenance continued training and local consultancy.
- Establish mechanism for securing continuous flow of data and information.
- Market technology locally and abroad.

=====

OUTPUT TO BE SUSTAINED:

Monitoring, Forecasting, and Simulation System

RATIONALE:

- Need to provide a system for real-time monitoring of hydrometeorological conditions over the whole Nile basin
- Need to provide short-term and long-term forecast of inflows at Aswan
- Help PPs and DMs to evaluate different scenarios for Basin-wide water resources development

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Promote cooperation with Nile countries using MFS capabilities of technology.
- Look for external funds for expanding MFS system to other Nile countries.
- Demonstrate capabilities of the model to PPs and DMs.
- Publicize the outputs.
- Allocate adequate/necessary funds for hardware/software maintenance continued training and local consultancy.
- Establish mechanism for securing continuous flow of data and information.
- Market technology locally and abroad.

=====

OUTPUT TO BE SUSTAINED:

Management Information Center

RATIONALE:

- Need to organize data flow to provide timely information to PPs, DMs.
- Need to communicate a whole exclusive information with similar center in other ministries and cabinet IDSC.
- Need to coordinate and exchange information among different sub-centers (Nodes) within the Ministry.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Provide periodic reports and bulletins to end users.
- Provide office automation services of E-Mail to PPs , DMs and minister’s office cabinet and other ministers.
- Demonstrate capabilities of the model to PPs and DMs.
- Publicize the outputs.
- Allocate adequate/necessary funds for hardware/software maintenance continued training and local consultancy.
- Establish mechanism for securing continuous flow of data and information.

=====

OUTPUT TO BE SUSTAINED:

Decision Support Unit

RATIONALE:

A need for an organizational structure to integrate and apply different planning tools/models within the Ministry

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Highlight importance of DSU and its products for solving a variety of water management issues in the country.
- Demonstrate capabilities of the model to PPs and DMs.
- Publicize the outputs.

- Allocate adequate/necessary funds for hardware/software maintenance continued training and local consultancy.
- Establish mechanism for securing continuous flow of data and information.
- Market technology locally and abroad.

=====

Suggestions for PSM/MFS/MIC:

- Identify end users of outputs offered by Planning and Distribution Model and develop strategies to better link end users with outputs.
- Produce high-quality products to ensure demand is there to support sustainability.
- Identify the funds necessary to ensure sustainability before the end of IMS and after.

PSM/MFS/MIC Issues that need Senior Management attention:

- Allocate funding to sustain outputs .
- Issue a decree from the Ministry to allow the sale of services (marketing of outputs) to outside buyers.
- Consider steps senior management can take to play a facilitative role in increasing the flow of necessary information.
- Support communication links with other Nile countries to sustain the MFS. Give your full support!

3. IRRIGATION IMPROVEMENT PROJECT/PROJECT PREPARATION DEPARTMENT PRESENTATION

OUTPUT TO BE SUSTAINED:

Ability to plan, design, and implement irrigation improvements using new technology (continuous flow, down stream control, telemetry)

RATIONALE:

The IIP improvements are needed for proper operation and management of the water delivery system for improved production and improved efficiency.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Establish NIIP authority.
- Provide adequate, trained staff.
- Retain experienced staff.
- Provide incentives.
- Monitor delivery and mesqa systems.
- Adopt steady and canals computer programs.
- Provide funding to complete implementation of Irrigation Improvement Project (IIP).
- Legalize WUAs, cost recovery.
- Retain David Smith!!

=====

OUTPUT TO BE SUSTAINED:

Cost recovery at mesqa level

RATIONALE:

Cost recovery is necessary to help the MPWWR finance the costs needed to improve the old irrigated lands.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Adopt the cost recovery law by the parliament.
- Monitor the implementation of the cost recovery system by the MPWWR.

=====

OUTPUT TO BE SUSTAINED:

Water User Associations (WUAs)

RATIONALE:

Necessary for operation and maintenance of mesqas and water management at mesqas and farm level.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Legalization of WUAs
- Technical assistance from IAS
- Program to improve mesqas
- Monitoring of WUA activities

=====

OUTPUT TO BE SUSTAINED:

Feasibility studies capability

RATIONALE:

Studies are needed for all improvement projects to determine feasibility and to plan the improvement.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Adequate staffing
- Retain trained staff
- Training program
- Incentives
- Adopt COMMOD computer programs
- Study priorities by MPWWR

=====

OUTPUT TO BE SUSTAINED:

Irrigation Advisory Service (IAS)

RATIONALE:

Need to organize WUAs and to provide technical assistance to help WUAs to operate and maintain their mesqas and improve on farm water management

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Establish NIIP authority with home for IAS.
- Provide adequate trained staff.
- Retain experienced staff.
- Provide incentives.
- Monitor Irrigation Advisory Service (IAS) + WUA activities.
- Adapt COMMOD computer program.
- Continue to develop on farm water management programs.

=====

Suggestions for IIP / PPD:

- Publicize capabilities of PPD outside the Ministry.
- Include strategy for continuous flow as part of sustain ability plan.
- Monitor and evaluate effects on groundwater and drainage as a part of the sustainability plan.
- Consider whether this technology is appropriate for all six million + feddan areas, or should other technologies be considered?
- Develop criteria to establish priorities among IIP activities.
- Indicate how you will address changing cropping patterns.
- Include on-the-job training for IAS after startup of each subproject.

IIP/PPD Issues that need Senior Management attention:

- Measure and moderate outputs compared with project objectives.
- Develop new criteria for entitlement to water (related to changing cropping patterns issue).
- Determine what will be the home for IAS.
- Decide whether funds generated by cost recovery can be used for new projects.

4. WATER RESEARCH CENTER PRESENTATION

OUTPUT TO BE SUSTAINED:

Trained Personnel

RATIONALE:

Need by MPWWR, other users of water resources

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Interact with users.
- Disseminate results.
- Twinning with national and international similar institutions.
- Support returnee research programs.
- Provide additional training through TDYs, sabbaticals for technical exchanges.
- Organize national and international seminars and conferences.
- Supplementary Funds from: MPWWR, USAID, CLIENTS.

=====

OUTPUT TO BE SUSTAINED:

Facilities

RATIONALE:

Needed by researchers, consulting firms, other research institutes

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Keep them well maintained and up to date.
- Promote availability and capability and encourage proper use.
- Bonus System.
- GOE Funds-USAGE FEES.

=====

Suggestions for WRC:

None

Issues that need Senior Management attention:

None

5. PROFESSIONAL DEVELOPMENT PRESENTATION

The Training Center strives to achieve and maintain leadership of the principal training unit in MPWWR by serving its clients to the highest professional standards in training, adult education, and the latest irrigation and drainage technologies through courses in management, technical, mechanical/electrical, computer, promotion, English language, and one day, one-subject seminars.

OUTPUT TO BE SUSTAINED:

T.C at 6 October City

New Facility : 10-Acre area

- 8 classes-8 labs
- 5 experimental fields
- kitchen, laundry, restaurant
- conference hall-300 persons-6 languages
- hotel-250 beds
- play grounds-swimming pool

Organization Structure Capable to:

- Training Needs Assessment
- Revision of Courses
- Developing new courses-Annual Calendar
- Brochures-Course Catalog
- Follow up-Evaluation-Feedback

RATIONALE:

The capabilities of the Training Center are needed by MPWWR and other agencies to provide necessary training and skill development.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Offering good programs
- Marketing within MPWWR and outside
- Cone-Career for Training/MPWWR
- Good management for the facility to keep it efficiently operated
(Hotel-Security-Cleaning-Maintenance)
- Revision of courses according to training needs assessment every three years to meet the development and new technologies
- Staff handbook
- Policies for training that support use of the Center

Supportive ways to minimize disincentives :

- *Issue new rules for increasing incentives that realized satisfaction for both:*
 - *36 flats*
 - *20 flats*
 - *10 units**and that encourage the staff to live around the facility.*
- *Create chances to the staff for promotion by upgrading the level of the T.C.*

Strategy to support and maintain new approaches or technologies :

- *Communication and exchanging experience with other centers (Local-Intern).*
- *Using new methods & materials for enhancing training:*
 - *Labs-Audio visual*
 - *Experimental Fields*
- *Off-shore training + attending conferences.*
- *Seminars-workshop.*

Funding Options

GOE:

MPWWR (including training budget for other sectors)

Ministry or Public Sector

Other ministries

Outside:

Current training for IMS components by T.C. is appreciated

African countries

Arab countries

Problems:

- Transportation (AOD/ 6 cars)
- Providing necessary hotel supporting facilities (T.V. 100-Refrig. 100-Swimming pool facilities)
- First Aid (Amb.-Doctor)
- Furniture for staff housing
- Funds for off-shore training

=====

Suggestions for PD:

None

PD Issues that need Senior Management attention:

- 1) Ensure the funds are allocated for the future

6. PREVENTIVE MAINTENANCE PRESENTATION

Keep the irrigation system in good running condition by maintaining:

- Gates, aqueducts, syphons—water control structures
- Banks—agricultural area protection & each product transport

- Bridges, intake, regulators—increase the period required to replace
- Weed control

Manufacture new structures- gates

OUTPUT TO BE SUSTAINED:

New equipment in place

RATIONALE:

Keep the system in good operation condition.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Improve the effectiveness and the use of the equipment, by sustaining:
 - 1- Workshops.
 - 2- Spare parts warehouse.
 - 3- Use of management handbook.
 - 4- Computerized management tools.
- Incentives for extra production.
- Train and follow up equipment use monitoring.

=====

OUTPUT TO BE SUSTAINED:

Maintenance workshops in six Governorates

RATIONALE:

Keep equipment and structures in good repair.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Right-sizing staff
- Train staff if requirements
- Increase scope of services

=====

OUTPUT TO BE SUSTAINED:

Spare parts warehouse

RATIONALE:

Keep spare parts quickly available.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

Improve contact between main warehouse and Governorate warehouse

=====

OUTPUT TO BE SUSTAINED:

Maintenance management handbook and computerized management tools

RATIONALE:

Management of maintenance needs to be based on MPWWR standard guidelines, procedures and systems.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

- Issue Ministerial decree to:
 - Enforce use of the maintenance management handbook
 - Use EMS & spics systems
- Workshops to:
 - Present the systems
 - Present results after application

=====

Suggestions for PM:

- Give evidence of success and effectiveness of the project as part of the sustainability plan.
- Be clear about your criteria for success. How will you define success?

PM Issues that need Senior Management attention:

- How can we expand PM activities to other Governorates?
- Are funds being allocated to support spare part purchase and training?
- How effective this project has been? Are the new tools being used?

7. SURVEY AND MAPPING (ESA) PRESENTATION

ESA PRODUCTS AND SERVICES

Products: (partial cost recovery possible)

Base maps- 1:500-1:5000 - large scale to become digital

1:10000-1:25000 - focus digital orthophoto

1:50000-1:2000000

Publications- Islamic calendar

National ATLAS

Names Gaze Heer

Digital data- geographic land base

Services:

Mandated - (no cost recovery possible)

- Maintenance of the National Datum and Geodetic Nets
- National Boundary Surveys

Contracts - (Implies for Fee or Cost Recovery)

- Support of Siquel El-Ainee Program
 - Cadastral Maps
 - Survey Books
 - Property surveys for land transfer
 - Cadastral Map maintenance
- Support for land expropriation program.
 - Surveys

- Legal work
- Contract surveying and mapping projects.
- S&M, GIS consulting for GOE.

OUTPUT TO BE SUSTAINED:

Geodetic Survey Capability

- Trained staff
- Modern Equipment
- Geodetic Network
- WGS-84 Datum

RATIONALE:

Geodetic Network is required for all surveys.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

Immediate

- ensure adequate maintenance of survey equipment and vehicles.

Long-Term

- develop sufficient qualified supervisors of managers
- upgrade professional qualifications of staff.

=====

OUTPUT TO BE SUSTAINED:

Base map Production Capability (priority)

- Small Scale (1:50,000 - 1:2,000,000)
- Medium Scale (1:10,000 - 1:25,000)
- Large Scale (1:10,000 - 1:25,000)
- Digital Geographic data

RATIONALE:

- Availability of good maps fundamental to orderly and efficient development
- Survey of 30 organizations shows large latent demand for maps at all scales
- Survey of potential users of GIS technology revealed large demand for digital data.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

Immediate

- Ensure adequate maintenance of digital and other mapping equipment.
- Expand training programs to provide replacements for departing staff.

Long-Term

- Develop sufficient qualified supervisors of managers.
- Upgrade professional qualifications of staff.

=====

OUTPUT TO BE SUSTAINED:

Enhanced Cadastral Capability

- Cadastral Map Production (New Maps)
- Survey Book Production
- Cadastral Map Maintenance (New Maps)

RATIONALE:

- Completion of Agricultural Cadastre is national priority.
- Potential Savings to GOE through reduced legal disputes over encroachment and illegal urbanization is significant.
- Fundamental to land use planning and management
- Support orderly and efficient land transfer.

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

Immediate

- Ensure maintenance of survey equipment and vehicles.
- expand current training programs to provide replacements for departing staff.
- Commence operations in Assiut & Sohag following IMS - S&M model.
- Implement new per diem/incentive scheme.
- Obtain approval and funding of 10-year plan.

Long-Term

- Develop qualified supervisors of managers.
- Upgrade professional qualifications of staff.

=====

OUTPUT TO BE SUSTAINED:

WPG GIS

- Cropping pattern
- Solid conditions (water logging and salinity)
- Canals of drains

RATIONALE:

Data are essential for effective water management

STRATEGY TO ACHIEVE SUSTAINABILITY OF OUTPUT:

Immediate

- increase staff to complete work more quickly.
- expand coverage to include Nile Valley (Cairo to Beni Svef) of Fayoum.
- ensure maintenance of digital equipment and software.

Long-Term

- expand to cover entire Nile Valley (requires funding of additional CIR Photography).

- develop maintenance procedures for current system. (requires agreement on update cycle; added CIR photography to support update cycle).
- integrate with digital Agricultural Cadastre on a Governorate by Governorate basis as Agriculture Cadastre is completed

=====

Issues Affecting Level of Sustainability (Outside of IMS and S&M)

- Ability to attract or retain suitable personnel
- Qualifications of available supervisors and managers
- Ability to modernize support activities (finance, administration, purchasing, and the like)
- Rate of introduction of new procedures technology throughout organization
- Job planning, cost estimating, tracking skills.

Rationale

True sustainability requires growth and expansion, not maintenance of the status quo.

Strategy

Immediate

- Complete strategic plan
- Implement recommendation of strategic plan to the degree possible without seeking outside approval
- Examine and reformulate ESA by-laws as needed

Long-Term

- Seek technical assistance to bridge supervisor gap
- Seek approval for strategic plan recommendations requiring outside approval
- Seek Technical Assistance for:
 - Admin. modernization
 - Development of training department
 - Resolution of unaddressed technical issues

Suggestions for S&M/ESA:

None

S&M/ESA Issues that need Senior Management attention:

What will be done to ensure staff is retained/trained?

Appendix C

WORK SESSION ON ACTION PLAN DEVELOPMENT

To ensure that achievable, practical steps could be taken to move forward toward sustainability, specific Action Plans were developed to sustain the outputs identified in the previous work session. The plans for each output appear below.

1. MAIN SYSTEMS MANAGEMENT ACTION PLAN

OUTPUT: **New procedures to effectively use data for water distribution and planning**

STRATEGY:

- 1) Awareness campaign oriented toward Directorate water distribution engineers
- 2) Incentives to Directorates who reduce water use
- 3) HQ issue policies and procedures for more intensive management of water distribution to Directorates. (These will be based on use of telemetry data to match actual demands.)

ACTION PLAN:

Steps to be taken	By When	By Whom
1- A) assign task force to develop policies and procedures for intensive management	15 May 94	Eng. Gamil Mahmoud
B) Task force report	1 July 94	Task Force leader
2- Prepare written suggestion regarding incentives to Directorates who reduce water use	1 July 94	Project Director & Team Leader
3- Obtain ministerial decree issuing documents 1 & 2	1 Sept. 94	Eng. Gamil Mahmoud

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of use of data for water distribution and planning: **Project Director and USAID Project Officer**

MSM

OUTPUT: Improved Flow Measurement

STRATEGY:

- Assign responsibility to ensure program is carried out.
- Upgrade staff capabilities through training.

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Issue directive to Directorates to assign staff; prepare schedule, perform measurement in accordance with schedule and transmit results to HQ and MSM Project Director	15 May 94	Head, Irrigation Sector
2) Update needs assessment regarding water measurement and carry out appropriate training to upgrade staff capabilities	30 June 94	PD Project Director

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Improved Flow Measurement: MSM Project Director & Head, Irrigation Sector

MSM

OUTPUT: **Electronics Maintenance Facility & Preventive Maintenance**

STRATEGY:

- MPWWR provide staff, transport and budget in timely manner.
- Train new staff in a timely manner.
- Upgrade staff capabilities on continuing basis.
- Budget foreign exchange requirements for spare parts and system replacement.
- Staff incentives tied to performance.

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Monitor allocation of new posts required and report to higher authority if schedule not met	Ongoing	Project Director
2) Assign task force to prepare long-term financial plan for local funds and foreign exchange requirements	Task force completes plan by 30 Sept. 94	Eng. Gamil
3) Prepare staff incentive plan for telemetry staff including all Directorate and HQ	1 August	Proj. Director

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Electronics Maintenance Facility & Preventive Maintenance: **Project Officer**

MSM

OUTPUT: Data Collection System (200 Meteor Burst, 630 vdc) and Data Management System

STRATEGY:

- 1) Ensure accuracy before turnover.
- 2) Conduct awareness campaign re: need/benefit.
- 3) Perform effective maintenance.
- 4) Monitor benefits.
- 5) Provide incentives for Directorates who use system to improve water management.
- 6) Tie staff incentives to performance and work requirements.
- 7) Plan for upgrading staff capabilities.
- 8) Continue to optimize/upgrade to meet user needs.
- 9) Plan for upgrading staff capabilities.
- 10) Tie staff incentives to performance.

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Valid accuracy at telemetry data during each subsystem Provisional Acceptance Test	Ongoing	Project Director / TA staff
2) Assign task force to prepare project monitoring plan and implement plan	Task force formed - 1/8 Implementation - ongoing	Eng. Gamil Mahmoud
3) Monitor and ensure staff training and resources are available for maintenance program(repair and preventive)	Ongoing	Project Director

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Data Collection System: Project Director

**2. PLANNING STUDIES & MODELS/MONITORING, FORECASTING
AND SIMULATIONS/MANAGEMENT INFORMATION CENTER
ACTION PLAN**

OUTPUT: Planning Distribution Model and its supportive submodels

STRATEGY:

- 1) Establish mechanism for securing continuous flow of data and information.
- 2) Publicize the outputs.
- 3) Allocate adequate/necessary funds for hardware/software maintenance, continued training and local consultancy.
- 4) Demonstrate capabilities of the model to PPs, DMs.
- 5) Market technology locally and abroad.

ACTION PLAN:

Steps to be taken	By When	By Whom
<p>1) A ministerial decree to establish a committee involving:</p> <ul style="list-style-type: none"> - Irrigation sector - Drainage R.I. - Groundwater R.I. - Nile Water R.I. - representatives from Ministries of Agriculture and Housing. <p>Tasks of the committee must secure continuous flow of data and guarantee its quality and supervise the applications</p>	<p>End of May 94</p>	<p>Chairman of HCC</p>
<p>2) Recruit local consultant to develop a plan for achieving items 1,2, and 5 above</p>	<p>End of September 94</p>	<p>Project Director</p>
<p>3) a 5-year plan for handling the hardware and software and maintenance of PSM equipments and funds required</p>	<p>End of June 94</p>	<p>Project staff</p>

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of PDM: Project Director

PSM/MFS/MIC

OUTPUT: HAD Operational Models

STRATEGY:

- 1) Establish a facility at the HAD Authority for using the model (and provide training).
- 2) See 1-5 from PDM strategy.

ACTION PLAN:

Steps to be taken	By When	By Whom
<p>1) Establish a task force with representatives from: -High Aswan Dam Authority -Ministry of electricity and PSM project</p> <p>The Task Force must secure continuous flow of data and supervise case-studies and application of the models</p> <p>2) Refer to item 2 of the first output</p>	<p>End of Aug 94</p>	<p>Chairman of HCC</p>

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of HAD operational models: **Project Director**

PSM/MFS/MIC

OUTPUT: **Monitoring, Forecasting & Simulation System**

STRATEGY:

- 1) Promote cooperation with Nile countries using MFS capabilities and technology.
- 2) Look for external funds for expanding MFS system to other Nile countries.
- 3) See 1-5 from PDM strategy.

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Prepare MFS Phase III regional country project proposal	May 1994	Project Director of FAO CTA
2) Organize international planning work shops training seminars of Nile countries	October 1994 and May 1995	Project Director of CTA with assistance of USAID, Government and FAO
3) Contract local experts for		Project Director of CTA
a) software maintenance of MFS system	a) June 94	
b) Hardware maintenance of MFS system	b) August 95	
4) Integrate MFS products into HAD operating models	December 95	Project Director and HAD Activity

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of MFS System: National Project Director

PSM/MFS/MIC

OUTPUT: **Management Information Center**

STRATEGY:

- 1) Provide periodic reports and bulletins to end users.
- 2) Provide office automation services of e-mail to PPs, DMs and Minister's office.
- 3) Respond promptly to inquiries from the cabinet and other ministries.
- 4) See 1-5 from PDM strategy.

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Recruit a long-term consultant to assist in the implementation of project activities (including the update of the needs assessment)	End of May 94	Project Director and USAID
2) Recruit system analysis specialists and programmers	End of Aug 94	Project Director
3) Purchase hardware and software needed immediately	End of July 94	Project Director

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of MIC: **Project Director**

PSM/MFS/MIC

OUTPUT: **Decision Support Unit**

STRATEGY:

- 1) Highlight importance of DSU and its products for solving a variety of water management issues in the country.
- 2) See 1-5 of PDM Strategy

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Identify the role of the DSU and its functions and responsibilities	Nov. 94	Sector heads and Project Director
2) Issue a ministerial decree illustrating the tasks and responsibilities of the DSU	Jan 95	Chairman of HCC

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of DSU: Chairman of the HCC

3. WATER RESEARCH CENTER ACTION PLAN

OUTPUT: **Trained Personnel**

STRATEGY:

- 1) Interaction with users
- 2) Dissemination of results information
- 3) Twinning with national and international institutions
- 4) Support of returnee research programs
- 5) Provision of additional training through TDY's, sabbaticals for technical exchanges
- 6) Organization of national and international seminars and conferences

7) Supplementary funds: MPWWR, USAID, Clients

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Arrangement for institute directors meeting to strategize and submit proposal	June 1994	General Secretary
2) Consideration by Board of Directors	June- July 1994	Chairman
3) Implementation of actions by Chairman of WRC	August- Sept 1994	Chairman

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Trained Personnel: WRC Chairman

WRC

OUTPUT: Facilities

STRATEGY:

- 1) Well maintained and up-to-date
- 2) Promote availability and capability and encourage proper use
- 3) Bonus system
- 4) GOE Funds - Usage fees

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Institute director prepare maintenance plan	July 1994	Directors
2) Prepare proposal by admin. & finance department of center to be submitted to board of directors (Bonus System)	July 1994 (preparation) August 1994 (board of Directors)	Director of administration and financial department chairman
3) Information and Documentation Department prepare brochure to advertise special services and availability of facilities	December 1994	Director of Information

In order to ensure that the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Facilities: WRC Chairman

4. PROFESSIONAL DEVELOPMENT ACTION PLAN

OUTPUT: Training Center at 6 October City

STRATEGY:

- 1) Develop capability to do TNA, develop course catalogs and annual calendar.
- 2) Develop and revise courses.
- 3) Conduct follow-up, evaluation and feedback.

ACTION PLAN:

Steps to be taken	By When	By Whom
Sign contract for management for facility	July 94	Aty / Ministry
Communicate with other centers outside.	During July 94	Aty / USAID
Conduct off-shore training for the staff	September 95	Aty / USAID
Marketing - Brochure - Course catalogue - Visits outside (Asia - Africa)	July 94	

5. PREVENTIVE MAINTENANCE ACTION PLAN

OUTPUT: New Equipment in Place

SUB OUTPUT: Keep the system in good operation condition.

STRATEGY:

- 1) Improve the efficiency and the utilization of the equipment by sustaining:
 - a. Workshops
 - b. Spare parts warehouse

- c. Use of management handbook
 - d. Computerized management tools
- 2) Provide incentives for extra production
 - 3) Provide training and follow-up monitoring of equipment utilization

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Assign adequate staff	Now	Project Director
2) Conduct ongoing training	Yearly training plan	Project Director and training Directorate
3) Make funds available	Yearly budget	Undersecretary for maintenance
4) Establish an award mechanism	Yearly budget plan	Project Director
5) Evaluate annual report	Yearly budget	Project Director
6) Generate revenue from doing work for others	Now	Undersecretary for maintenance

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of New Equipment in place: **Project Director**

PM

OUTPUT: Maintenance Workshops in Six Governorates

STRATEGY:

- 1) Right sizing staff
- 2) Train staff in requirements
- 3) Increase scope of services

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Delegate authority to the Project Director	By Dec. 94 (included in the ministerial decree)	Minister
2) Generate revenue by providing services to others	By Dec. 94	Minister
3) Follow-up the training newsletter of different training institutions	Now	Project Director
4) Monthly report to the undersecretary for maintenance, quarterly to the chairman and bi-annually to the Ministry	Now	Project Director

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Maintenance Warehouses in six Governorates: **Undersecretary for Maintenance**

PM

OUTPUT: Spare parts in the Warehouses

STRATEGY:

- 1) Improve contact between main warehouse and Governorate warehouse

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Design computer network system	May 94	Chief of Mechanical Department
2) Include funds to be included in 94-95 budget to establish the system	May 94	Project Director
3) Detail system for communication	May 94	Chief of Mechanical Dept
4) Keep computer network system in place	November 94	Contractor

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Spare Parts in Warehouses: Deputy Project Director

OUTPUT: Maintenance Management Handbook & Computerized Management Tools

STRATEGY:

- 1) Issue ministerial decree to:
 - Use handbooks
 - Use EMS & SPICS systems
- 2) Workshops to:
 - Present the systems
 - Present results after application

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Develop an evaluation report to present the positive impact	By July 94	Consultant
2) Draft a ministerial decree	By August 94	Project Director in cooperation with legal department
3) Develop a milestone plan to achieve the goal	By Sept. 94	Project Director
4) Issue Ministerial decree	By Dec. 94	The Minister

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Maintenance Management Handbook & Computerized Management Tools:

Chairman of Irrigation Department

6. SURVEY AND MAPPING/ESA ACTION PLAN

OUTPUT: **Geodetic Survey Capability**

STRATEGY:

- 1) Ensure adequate maintenance of survey equipment and vehicles.
- 2) Develop sufficient qualified supervisors and managers.
- 3) Upgrade professional qualifications of staff.

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Include cost of maintenance in ESA Budget request for FY 94- 95	Done- Jan 94 Awaiting MOF approval	ESA F&A Department
2) Refocus efforts of TA staff from production supervision to training of supervisors	Ongoing	TA Team Leader
3) Request additional technical assistance for training of supervisors and help in resolving technical problems uncovered by IMS-S&M	Done April 94	Chairman ESA
4) Submit letter to Central Agency for Organization requesting policy changes on personnel wanting to depart Egypt to work overseas	1 June 94	Chairman ESA
5) Include in strategic plan the concept of ESA as a contract labor supplier for overseas projects	31 October 94	F. Hanigan

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through Who will be that person?

Sustainability of Geodetic Survey Capability: **Frank Hanigan**

S&M/ESA

OUTPUT: Basemap Production Capability

STRATEGY:

- 1) Ensure adequate maintenance of digital and other mapping equipment.
- 2) Expand training programs to provide replacements for departing staff.
- 3) Develop sufficient qualified supervisors and managers.
- 4) Upgrade professional qualifications of staff.

ACTION PLAN:

Steps to be taken	By When	By Whom
1) Include cost of maintenance in ESA's FY 95-96 Budget	Jan 1995	ESA F & A Department
2) Refocus efforts of TA staff from production supervision to training of supervisors	Ongoing	TA Team Leader
3) Request additional technical assistance for training of supervisors and help in resolving technical problems uncovered by IMS-S&M	Done April 94	Chairman, ESA
4) Submit letter to Central Agency for Organization requesting policy changes on personnel wanting to depart Egypt to work overseas	1 June 94	Chairman, ESA
5) Include in strategic plan the concept of ESA as a contract labor supplier for overseas projects	31 October 94	Frank Hanigan

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Basemap Production Capability: **Frank Hanigan**

OUTPUT: Enhanced Cadastral Capability

STRATEGY:

- 1) Ensure maintenance of survey equipment and vehicles.
- 2) Expand current training programs to provide replacements for departing staff.
- 3) Commence operations in Assiut & Sohag following IMS/S&M model.
- 4) Implement new per diem/incentive scheme.
- 5) Obtain approval/funding of 10-year plan.
- 6) Develop qualified supervisors and managers.
- 7) Upgrade professional qualifications of staff.

ACTION PLAN:

Steps to be taken	By When	By Whom:
1) Include cost of maintenance in ESA budget request for FY 94-95.	Done - Jan 94 Awaiting MOF approval	ESA F&A Dept.
2) Refocus efforts of TA staff to training of supervisors.	Ongoing	TA Team Leader
3) Request additional technical assistance for training of supervisors and resolving technical problems uncovered by IMS-S&M.	Done - April 94	Chairman, ESA
4) Submit letter to Central Agency for Organization requesting policy changes on personnel wanting to depart Egypt to work overseas.	1 June 94	Chairman, ESA
5) Include Strategic Plan concept of ESA as a contract labor supplier for overseas projects.	Done - April 94	Frank Hanigan
6) Implement new ESA per diem/incentive scheme.	1 May 94	Chairman, ESA
7) Begin contacting GOE and international donors for support of ten year cadastral plan.	1 May 94	Chairman, ESA

Sustainability of Enhanced Cadastral Capability: **Frank Hanigan**

S&M/ESA

OUTPUT: WPG GIS

STRATEGY:

- 1) Increase staff to complete work more quickly
- 2) Expand coverage to include Nile Valley
- 3) Ensure maintenance of digital equipment and software
- 4) Expand to cover entire Nile Valley
- 5) Develop maintenance procedures for current system
- 6) Integrate with digital agricultural cadastre on a Governorate-by-Governorate basis as agriculture cadastre is completed

ACTION PLAN:

Steps to be taken	By When	By Whom
Add 15 personnel to Crop and Soil Mapping Group	15 May 94	Chairman , ESA
Expand coverage to Beni-Suef	1 July 94	Crop and Soil mapping Group of IMS- S&M
Include cost of maintenance in ESA's FY 95-96 Budget	1 Jan 95	ESA F&A
Contact WPG and MPWWR regarding expansion coverage of Q/S to Aswan	1 Jul 95	Chairman ESA

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of WPG/GIS: **Frank Hanigan**

7. IRRIGATION IMPROVEMENT PROJECT/PROJECT PREPARATION DEPARTMENT ACTION PLAN

The IIP component held its own sustainability workshop one week before this session, and the detailed Action Plan developed at that time appears below. It was determined to be counterproductive to ask them to go through this level of planning again so soon after generating their plan.

OUTPUT: Feasibility Studies

STRATEGY:

- 1) Capabilities of PPD should be published outside of Ministry for hire.
- 1) Adequate Staffing
- 2) Retain trained staff
- 3) Training Program
- 4) Incentives
- 5) Adopt COMMOD Computer Programs
- 6) Study priorities by MPWWR

ACTION PLAN:

Steps to be taken	By When	By Whom
A) Communication and campaign to outside to describe capabilities	July 1, 94	PPD Project Director
* develop information leaflet	July 1, 94	" " "
* send leaflet to potential customers	July 15, 94	" " "
* follow-up with personal visit	Start August 94	" " "

In order to ensure the Action Plan you have developed is carried out, someone needs to be responsible for monitoring progress and ensuring follow through. Who will be that person?

Sustainability of Feasibility Studies: Project Director

Appendix D

SENIOR MANAGEMENT GROUP REPORT

While Component Groups were working on their Action Plans, the Senior Management Group was tasked with preparing a report on actions they would take to address the issues raised during the presentations that warrant their attention. Engineer Gamil gave the following report on behalf of the group:

I. Summary of Issues Requiring Senior Management Attention:

MSM Issues:

Ensure Maintenance and Operations organization approval.

Review organizational responsibilities and clarify roles regarding flow measurement. Who is/will be responsible? A separate, centralized service responsible for data collection and flow management is critical to the sustainability of the MSM outputs.

Decide how to upgrade staff capabilities and provide for appropriate staff incentives.

PSM/MFS/MIC Issues:

Allocation of funding to sustain outputs

Action: Project Director to prepare a proposal for the investment and loan committee.

Ministry needs to issue a decree to allow the sale of services (marketing of outputs) to outside buyers

Consider steps senior management can take to help increase the flow of necessary information.

Support communication links with other Nile countries to sustain the MFS. Give your full support!

Action: Project Director presents a note to Nile Sector.

IIP/PPD Issues:

Measure and moderate outputs compared with project objectives.

Action: IIP Steering Committee to discuss and submit proposals with presence of AID.

Need to develop new criterion for entitlement to water (related to changing cropping patterns issue).

Action: Policies Committee to discuss.

What will be the home for IAS?

Can funds generated by cost recovery be used for new projects?

Action: Policies Committee to discuss.

PD Issues:

Ensure the funds are allocated for the future

PM Issues:

How can we expand PM activities to other Governorates?

Action: Project Directors need to submit proposals to chairman of Irrigation Department.

How can we allocate funds to support spare parts purchase and training?

Action: Project Director needs to prepare a proposal for the investment and loans committee.

S&M/ESA Issues that need Senior Management attention:

What will be done to ensure staff are retained/trained?

Action: Policies Committee will consider.

Overall IMS Project Issue

Examine how effective this project has been...are the new tools being used?

Action: All Project Directors prepare a note to be presented to an evaluation team appointed by the HCC.

II. Issues that will receive priority attention in the next 3 months:

- Identify a home for IAS
- Facilitate the flow of information
- Get Maintenance and Operations organizational approval for MSM
- Review Organizational responsibilities and clarify roles for flow measurements
- Cropping Inventory
- Funds for PD

III. Steps to address remaining issues:

- (1) Moderate output compared to project objectives

IIP steering committee to discuss and submit proposals with presence of AID

- 2) New criteria for entitlement to water

Policies committee to discuss

- 3) Cost recovery resources to be used to fund new projects

Policies committee to discuss

- 4) Funding to sustain activities (PSM/MFS)

Project Director to prepare a proposal for the investment and loans committee

- 5) Support communication links with other Nile countries to sustain MFS

Project Director presents a note to Nile Sector

- 6) Retaining Staff (S&M)

Policies committee will consider

- 7) How to expand PM activities to other Governorates

Project Director to submit proposals to chairman of Irrigation Department

- 8) Funds to support spare parts purchase - PM

Project Director needs to prepare a proposal for the investment and loans committee

- 9) Assessment of the effectiveness of the IMS Project

All Project Directors prepare a note to be presented to an evaluation team appointed by the HCC.

IV. When and how IMS personnel will be informed of Senior Management progress on the above issues:

For the priority issues, each component will be informed through the monitoring office.

For remaining issues, a follow-up committee from HCC will be formed to immediately follow actions and report on progress to components.

=====

Sustainability Study Proposal

Discussion following Eng. Gamil's report involved Dr. Abou Zeid's recommending that a sustainability study be commissioned. It was suggested that a team consisting of a representative from AID, an MPWWR official and a consultant do the study. It was further suggested that the components should submit their ideas and input on the development of the scope of work for the study.

Dr. Abou Zeid suggested that the focus of the study should be on organizational issues, policies and procedures and resource implications for the implementation of sustainability plans proposed to date. There was general agreement that commissioning such a study would be useful, and Eng. Gamil tasked the monitoring office with developing a proposal for the consideration of the HCC during their next meeting.

Appendix E

WORKSHOP EVALUATION

Participants were asked to rate the achievement of objectives on a 1 to 5 scale, with 5 being high and 1 being low; the average scores appear below.

A. WORKSHOP OBJECTIVES

1) *Develop a picture of the outputs and benefits that have been provided by IMS.*

1	2	3	4	5
Low				High

AVERAGE SCORE: 4.48

2) *Review and discuss sustainability plans of the IMS components.*

1	2	3	4	5
Low				High

AVERAGE SCORE: 4.1

3) *Identify specific steps necessary to support and ensure the implementation of the sustainability plans.*

1	2	3	4	5
Low				High

AVERAGE SCORE: 4.03

B. OPINIONS AND FEEDBACK

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

- Having an overall look at all components of IMS
- Giving us the truth about what is happening/needs to happen

- Sharing the benefits of each component for the others to have a good picture about it
- A chance to discuss sustainability issues on a broader lever for all components
- Checking on project shows how the project will continue
- Putting a plan for sustainability in place
- I know where every component stands now.
- A nice feeling that other IMS components have much worse sustainability problems than mine!
- Focus on issues
- Developing a common awareness of constraints affecting IMS component sustainability of gaining some commitment from management to address the problems
- Bring all project people together in one view to discuss issues
- Explain the component of IMS clearly
- Clear picture for future
- To put the basis of sustainability plans for one of the most important and effective projects
- Face sustainability issues
- Better understanding of what should be sustained and how to preserve the valuable achievements of the IMS
- I have a good awareness of all the IMS components.
- To know all purposes of IMS components
- Better understanding of other components problems/accomplishments , Increased awareness of what we all need to do
- Identify, and change the constraints of IMS sustainability
- Key project staff focussing on sustainability i.e. thinking about it
- Brainstorming of sustainability issues
- Caused all of us to focus on the future
- Focusing on sustainability plans
- Producing practical steps to ensure sustainability

- Good organization
- Better understanding of all IMS components
- Good understanding of sustainability
- Focusing of attention and interchange of ideas
- The primary beneficiary this workshop is the useful discussion between MPWWR and USAID.

2. *What workshop activity could have been done better?*

- The precise output of the whole components
- Presentation of outputs to be sustained by each Project Director (3)
- All activities have been done very well.
- More time would have allowed more interaction between components. (6)
- Clearer sorting out of what the real and critical sustainability problems are.
- The sustainability of the components
- Planning for future activities
- All were done equally perfect.
- Action Plans could have been done better. (4)
- Should have had presentation of final exercise (component Action Plans) one more hour could have done it.
- Sustainability activity
- Stop cigarettes during workshop

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?*

- Continue support from USAID after 1995
- Dr. Abu Zeid's suggestions in good.
- Action Plans should be dealt with in follow-up activities
- Finding issues between USAID and MPWWR
- Long-term sustainability should be issued by more funds, growth, and more technical assistance
- Retaining staff, IIP contractors funding problems

- Retention of personnel, always identified but brushed off as unsolvable
- Staff motivation and retention are major problems lacking out there and I'm not sure they were really addressed or that any proposed actions will produce any results.
- Yes there are unresolved issues such as what the fund required to cover the sustainability, the MPWWR should take care of it.
- No, all issues had been solved.
- To be determined with the proposed study
- Monitor implementation of strategies developed and recommendations of the workshop
- There are many of them
- Staffing - retention and motivated
- Most of the projects will not be completed and reached the target within September 95, how can it be sustained.
- USAID role in sustainability actions
- Lots of them , Adopt Dr. Abu Zeid's recommendation. Spend time with HCC meeting reviewing progress on follow up activities
- Most, if not all sustainability issues needs follow up
- No
- None

4. *What comments do you have about the design and facilitation of the workshop?*

- TRG people are always the best
- Excellent
- Need another 1/2 day
- Lot of assignments had to be carried out with very little time.
- Needed to have more time
- Very good
- Good
- Mostly good, control of discussion was not up to snuff, too much rambling by presenters.

- Perfect
- Satisfactory
- Great
- They have done excellent job
- Very good effort

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

- Look for a better hotel
- Meeting room OK
- Food OK
- Room OK
- OK
- Very good
- Good
- Excellent
- Good arrangement
- Poor choice of Hotel
- Good arrangement of Workshop
- Great
- Adequate
- They were perfect
- All good