

Report

**Institutionalization of the
MPWRR Advisory Service**

June 1999

Report



Institutionalization of the MPWWR Irrigation Advisory Service

Prepared By
Essam Barakat and Robert Cardinali

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Acronyms and Abbreviations

APRP	Agricultural Policy Reform Program
BCWUA	Branch Canal Water User Association
CSU	Colorado State University
EDI	Economic Development Institute
EPIQ	Environmental Policy Indefinite Quantity
EWUP	Egypt Water Use Project
GOE	Government of Egypt
IAS	Irrigation Advisory Service
IIP	Irrigation Improvement Project
IIS	Irrigation Improvement Sector
ISM	Irrigation Systems Management Project
IMT	Irrigation Management Transfer
INPIM	International Network on Participatory Irrigation Management
KfW	Kreditanstalt für Wiederaufbau
MALR	Ministry of Agriculture and Land Reclamation
MOU	Memorandum of Understanding
MPWWR	Ministry of Public Works and Water Resources
O&M	Operations and Maintenance
PIM	Participatory Irrigation Management
PRA	Participatory Rural Appraisal
USAID	United States Agency for International Development
WPAU	Water Policy Advisory Unit
WPRP	Water Policy Reform Program
WUA	Water User Association

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The EPIQ Water Policy Program (WPRP) is a joint activity of the Ministry of Public Works and Water Resources and the United States Agency for International Development. It is carried out under the auspices of the Agricultural Policy Program. Program implementation is the responsibility of Winrock International, International Resources Group, Ltd., and Nile Consultants.

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Executive Summary

This report presents the results of the work carried out in completion of Benchmark C-4 of the agreement between the Government of Egypt (GOE) and USAID/Egypt for Tranche III (FY 98/99). The benchmark states: *GOE (MPWWR) will institutionalize an Irrigation Advisory Service in the MPWWR.*

The report summarizes the successful efforts to transform the Irrigation Advisory Service (IAS) from an extension arm of the Irrigation Improvement Project (IIP) to a permanent unit under the Irrigation Department. The newly configured IAS will have a fully-staffed central directorate located within the Ministry, general directorates in upper and lower Egypt, and directorates at six locations corresponding with existing irrigation command areas.

The benchmark achievement verification is documented at the end of this report as Appendix A (MPWWR ministerial decree establishing the IAS) and Appendix B (documents submitted to the GOE Central Authority for Organization and Management).

An overview and background of the IAS since its inception under the USAID-funded IIP in 1994 is followed by a discussion of the benchmark objectives and the role and functions of the IAS. A summary presentation is made showing achievements to establish mesqa-level water user associations (WUAs) by the IAS. The MPWWR has made an initial IAS resource needs identification, focussing on present and future staffing structure and additional manpower needs, annual recurring operating cost estimates, procurement list for additional equipment and supplies, and additional transport vehicles needed. Essential building space estimates are also included. A training needs assessment was undertaken during this period: training needs have been identified for IAS engineers, IAS field agents, and for Mesqa- and Branch Canal WUA members.

The detailed Terms of Reference for the IAS comprises the documents required for submission to the GOE Central Authority on Organization and Management. (The documents in the original Arabic are appended as Appendix B of this report). The basic roles and responsibilities of the permanent IAS are:

- Implement and supervise the establishment of 1) water user associations on improved mesqas and in tile drainage system of the old lands; 2) water user unions (WUUs) in new lands and development of their mesqas; and 3) supervise the turnover of improved mesqas and the tile drainage network to WUAs.
- Implement and supervise the establishment of WUAs at the branch canal level (in both all categories of land) in the old lands.
- Conduct continuous orientation and on-the-job training for all levels of IAS engineers, and technicians, in line with work programs and objectives. Organize and conduct training for members of WUAs, WUUs, and BCWUAs.
- Assist the MPWWR in effectively executing the programs of the national Irrigation Improvement Project.
- Operate the IAS Communication Unit and monitor its impact.

- Supervise the execution and monitoring of the IIP cost recovery program, the BCWUA branch canal O & M cost-sharing program, and other related activities in coordination with the Revolving Fund Committee.
- Assist in establishing special command area committees for environmental issues, including environmental problem identification and pollution control.
- Coordinate provision of technical assistance to mesqa-level and branch canal WUAs in the old lands and for the WUUs in the new lands, with regard to mesqa irrigation scheduling, in improved as well as unimproved areas, along the branch canals.
- Handle the registering process of all mesqa-level and branch canal user associations operating in IAS directorates.
- Assume a lead role in linking WUAs, WUUs, and BCWUAs with public and private agencies, including NGOs, focussed on rural infrastructure and socio-economic change initiatives.

Scopes of Work for IAS technical and operational units were completed. Job descriptions have been prepared for all key positions in the new IAS. The job descriptions for key positions in the new IAS have been refined and enhanced to match the anticipated workload for the IAS, and in light of the above-mentioned items in the IAS terms of reference.

Summary Recommendations

In successful completion of the benchmark requirements (i.e. verification indicators), the Irrigation Advisory Service has been officially launched by ministerial decree, under the MPWWR Irrigation Department. Formalization of this process has been initiated through submission of documents required by the GOE Central Authority of Organization and Management.

In order to activate the new IAS configuration and allow it to be fully operational, the benchmark working group has offered several recommendations, which are indicated herewith.

- MPWWR must issue necessary orders and instructions to activate the Irrigation Advisory Service, to allow it to become fully operational.
- The IAS needs to be equipped with additional professional and administrative staff, physical facilities, technical and administrative support equipment, and transportation resources. The estimated requirements for these modifications are detailed in chapter 3 of the report.
- IAS staff will need basic introductory training as well as periodic refresher training in a number of key subjects, (which are detailed in section 3.6 of this report).
- The recruitment process for hiring additional IAS staff needs to match personal skills, knowledge and experience with specific job descriptions.
- The IAS should recommend to MPWWR a phased plan for expansion of IAS geographical coverage, eventually to cover all irrigated lands.
- The IAS should establish a special unit to service the national project areas (e.g. Toushka and El Salaam command areas) as well as groundwater command areas.
- The IAS should strengthen central as well as local level coordination with other public and private sector agencies, e.g. Agricultural Extension, Drainage Authority, cooperatives, banks growers' associations, local councils, research institutes, etc., to ensure quality of, and minimize duplication of services.

1. Introduction

1.1 Overview

The Agricultural Policy Reform Program (APRP) is a four-year United States Agency for International Development (USAID) grants program involving several ministries. The Ministry of Public Works and Water Resources (MPWWR) is the primary Egyptian governmental agency charged with the management of water resources. MPWWR and USAID under the umbrella of the APRP jointly designed a water policy package, consisting of integrated water policy and institutional reforms. USAID supports the Ministry's efforts through annual cash transfers based on performance in achieving identified and agreed-upon policy reform benchmarks.

Co-ordination among MPWWR, USAID and the water policy technical assistance program is handled through the Water Policy Advisory Unit (WPAU) and a project steering committee established by the MPWWR.

Technical assistance for the water policy analysis activity is provided through a water resources results package task order (Contract PCE-I-00-96-00002-00, Task Order 807) under the Environmental Policy and Institutional Strengthening Indefinite Quantity Contract (EPIQ) between USAID and a consortium headed by the International Resources Group (IRG) and Winrock International. Local technical assistance and administrative support for EPIQ is provided through a subcontract with Nile Consultants.

The EPIQ Water Policy team assists MPWWR to identify and carry out policy reform which will increase the global efficiency and productivity of Egypt's Nile water system under a water resources results package task order. EPIQ directly assists and takes a lead in identifying and achieving annual policy reform benchmarks, working closely with the MPWWR steering committee, WPAU, key ministry officials, and other APRP units.

1.2 Purpose of the Report

A memorandum of understanding between the Government of Egypt (GOE) and USAID listing agreed-upon policy reform benchmarks for the APRP Tranche III period (1 July 1998 – 30 June 1999) was signed on 28 September 1998. Benchmark 4 of Section C of the APRP medium/long-term policy goals: Agricultural Land and Water Resource Investments, Utilization and Sustainability states:

GOE (MPWWR) will institutionalize an Irrigation Advisory and Support Service in the MPWWR.

The report documents the achievement of this benchmark evidenced by the completion of two verification indicators: 1) a ministerial decree has been issued establishing the Irrigation Advisory Service (IAS) Central Directorate under the MPWWR, and 2) necessary documents have been submitted to the Central Authority for Organization and Management to establish an Irrigation Advisory and Support Services Central Directorate under the MPWWR. In support of this benchmark activity, a task team was set up, led by the EPIQ senior sociologist, and with

members representing with the Water Policy Advisory Unit and the Irrigation Advisory Service. A work program was developed to cover activities between October 1998 and June 1999. This work program was incorporated into the overall EPIQ work plan.

1.3 Organization of this Report

Chapter 2 presents a general overview of the background and present status of the MPWWR Irrigation Advisory Service, as well as a description of the Tranche III benchmark methodology. Chapter 3 provides the outline for the recommended institutional structure for the IAS, including staffing requirements, institutional support, and projected budget requirements. Chapter 4 contains an English translation of the documents required to establish the Irrigation Advisory Unit in the MPWWR. Chapter 5 highlights benchmark conclusions and recommendations. Appendixed are the complete set of original documents and the Ministerial letter of decree in support of the IAS.

2. Background and Problem Description

2.1 Overview of the Irrigation Advisory Service in Egypt

In 1989, the Ministry of Public Works and Water Resources (MPWWR) established, by Ministerial decree, the Irrigation Advisory Service (IAS) as the water management and technical assistance and extension delivery arm of the Irrigation Improvement Project (IIP) component of the USAID-funded Irrigation Management Systems Project. The primary IAS mandate is to advise and assist private water users to establish, maintain, and manage their own sustainable water user associations (WUAs) for improving irrigation management. The IAS is also required to provide continuing water management technical assistance to WUAs and farmers in improved areas. IAS efforts to establish and support WUAs in their formative stages are generally regarded as very effective.

Among the major constraints to IAS performance and sustainability is that IAS was formed as a component of a donor-sponsored project and was not established as a permanent organizational unit in the MPWWR. There is ample justification to support the establishment and institutional strengthening of the IAS. Mesqa improvement completion is seriously behind schedule, and loss of partial program funding has been disruptive to consistent IAS performance. Other issues include incomplete staffing, loss of trained staff, lack of training and career development opportunities, and inconsistent policy and support for developing and retaining highly skilled and motivated field staff. A major consequence of these shortcomings is that the IAS has not been able to adequately develop a comprehensive water management technical assistance program. In order for the IAS to develop such service-orientated capabilities and become sustainable, the institution needed to be independent from IIS identification, and strengthened with better administration and institutional management tools. Also needed are improved engineering technology as well as water user organizing strategy and communications skills.

The MPWWR recently adopted the policy/strategy of developing and promoting WUAs outside of the IIP. It has also started developing WUAs at the branch canal level, and is actively pursuing increased stakeholder participation in irrigation operation, maintenance and management. The IAS needs to play a focal role in all these activities. And will assist these organizations participate more effectively in branch canal management, operation and maintenance, through development of cost-sharing plans.

In Egypt at present, only the IAS possesses the knowledge and skills required for forming and providing services and technology to WUAs.¹ Farmers need training and technology transfer in the areas of modern on-farm irrigation methods, on-farm water management, and soil-water-plant relationships. However, these techniques and services are currently not provided through any extension delivery means. An institutionalized IAS, working in tandem with local agricultural extension units, can develop and provide this necessary technological support to farmers in a regular and effective manner.

¹ Agricultural Extension (housed within the Ministry of Agriculture and Land Reclamation) provides extension education support to farmers regarding their crop production practices.

The following roles and functions of the IAS are envisaged, and reflect the contents of the administrative documentation prepared by MPWWR to establish the IAS as a discrete entity:

- Maintain close operational linkages with the MPWWR Irrigation Improvement Sector in support of the Ministry's strategies for irrigation improvement;
- Develop close operational linkages with the MPWWR Irrigation Department to help strengthen irrigation district capabilities better service to farmers;
- Review Law 12 (and its 1994 amendment Law 213) in light of the IAS role in organizing users in New Lands and Old Lands as it applies to organizing strategy, institutional framework, functions, and linkages with the Irrigation Department;
- Develop new and close operational linkages with the MPWWR Water Communications Unit to help strengthen irrigation district capabilities to disseminate information to farmers;
- Strengthen level expertise and capacity among staff and BCWUAs to form mesqa-level WUAs, and to develop capacity to establish BCWUAs;
- In conjunction with the MALR Agricultural Extension wing develop an on-farm water use and management technical assistance program, including introduction, demonstration and adaptation of modern irrigation methods;
- Along with the National Water Research Center, Agricultural Extension, the National Agricultural Research Center, and Egyptian Universities, strengthen and help coordinate links between research and extension in the areas of irrigation water management and soil-water-plant relations. Cross-coordination and cooperation among the relevant units of the two Ministries is imperative so that scarce public resources are not wasted by duplicated and/or incomplete efforts;
- Develop and provide technical assistance support to private groundwater management and drainage associations, and water user associations in the new lands.

This benchmark activity supports MPWWR objectives to strengthen irrigation districts, improve communication with farmers, encourage farmer participation in water management, modernized irrigation in Egypt and conserve water.

Irrigation advisory and support services are fundamental to the successful implementation of irrigation improvement programs, water user participation in irrigation system operation, management and maintenance, and adoption of modern irrigation techniques and practices at the farm level. The current and envisioned services do not currently exist elsewhere, either within the GOE or through a private sector entity.² Taking all of this into consideration, a MPWWR Irrigation Advisory and Support Service Unit is the logical organization for building such capacities.

2.2 Objectives of The Benchmark

The primary objective of this benchmark is to institutionalize the IAS as a permanent organizational unit in the MPWWR, under the administrative aegis of the Irrigation Department. Accomplishing this objective the preparation of formal IAS terms of reference, institutional

² Private sector irrigation advisory and support services are limited in Egypt. Typically, larger commercial farms producing specialty crops will retain qualified consultants or employ their own technicians in this capacity. The vast majority of Egyptian farmers do not have the resources to retain their own consultants.

structure, and description of personnel responsibilities and functions was required. The identification of institutional strengthening and projected operational resources to meet the IAS mandate was also necessary. Furthermore, the process required recommendations regarding organizational structure of IAS, relationship of the IAS unit to other MPWWR units, a staffing plan, staff background and educational requirements, job descriptions, staff training needs, and appropriate support mechanisms for developing and retaining highly skilled and motivated field staff. The required documentation regarding the IAS unit has been prepared and submitted to the GOE Central Authority for Organization and Management.

Upon completion of the administrative and legal formalities the IAS will move laterally into a new IAS Central Directorate under the MPWWR Irrigation Department. This includes professional and support staff, office equipment, vehicles, etc. The new unit will require the addition of supervisory, technical and administrative support staff, equipment, and infrastructure. Training needs have been restated and updated in light of earlier assessments.

2.3 Benchmark Work Plan Components

A work plan was prepared having the following steps and procedures:

- Develop a detailed work plan.
- Review the current MPWWR organizational structure; determine the appropriate organizational type for the IAS (i.e., central directorate, sector, etc.); review GOE policies and methods for establishing a new unit within the MPWWR.
- Develop an IAS organizational structure (central directorate, directorate and field offices) and staffing plan with relevant job descriptions.
- Conduct an IAS staff training needs assessment, and develop a long-term training plan for IAS institutional strengthening, including introductory developmental on and off-shore training proposals, and proposals for training of irrigation district engineers.
- Develop draft recommendations regarding IAS institutional support and budgetary requirements.
- IAS and MPWWR Water Communications Unit to prepare a public awareness package of materials to be used by IAS field agents in both improved and non-improved areas.
- Prepare necessary draft documents required by the Central Authority for Organization and Management to establish an Irrigation Advisory Service Unit in the MPWWR.
- Revise documentation for the proposed IAS Unit based on the results of the Tranche III benchmark workshop, and present to the Minister for approval and submission of documentation to the Central Authority for Organization and Management).

2.4 Performance Achievements of the IAS

In its relatively short existence, the IAS has achieved a number of significant performance targets, primarily working as a component of the IIS in implementation of irrigation improvement projects under USAID, and World Bank/KfW³-financed projects. A summary of these achievements can be seen in the following table.

³ KfW Kreditanstalt für Wiederaufbau (Federal Republic of Germany)

**Table 1. IAS Achievements for the 3-Year Period Prior to FY 1998- 1999
Organizing WUAs for Mesqa Improvement**

Financial Year	Work	Financing Agency	No. Of WUAs	No. Of Mesqas	Area Served (feddan)	No. Of Farmers
1995-1996	Completed the Establishment of WUAs in Qena, El Minia, Beni Suef, Western Fayoum, Kafr El Sheikh, Behaira, & Sharqaia Governorates, and operating the improved mesqas.	USAID	1,140	1,140	71,188	36,000
1996-1997	Established WUAs, & worked with them before, during, & after execution, in O&M.	Local GOE Investments	351	351	22,448	31,000
1997-1998	Established WUAs, & worked with them before, during, after execution in O&M.	World Bank & KfW	831	831	53,453	27,000

Table 2. Organizational Structure of the Central Directorate of the Irrigation Advisory Service

3. Irrigation Advisory Service Resource Needs Identification

As part of the preparatory activities to establish an independent Irrigation Advisory Service a projected budget and resource need identification was developed.

3.1 IAS Staffing Structure and Requirements

Table 3. IAS Staffing Structure and Requirements

Position	Existing No.	Total Projected Required
Senior and Technical Staff		
• Under Secretary	0	1
• Director General	1	2
• Inspectors (also called Dir. of Works)	4	3
• Asst. Dir. of Works	9	11
• Civil Engineers	12	30
• Mechanical Engineers	0	2
• Field Agents / Technicians	300	300
• Equip. Maintenance Specialists	4	12
Administrative Staff		
• Dir. of Administration	0	1
• Finance (Ctrl. Dir.)	0	2
• Dir. of Admin/Finance (Gen. Dir.)	0	3
• Record Keepers	0	3
• Accountants	1	3
• Contracts Officer	0	1
• Dir. Of Drawing Section	1	2
• Office Secretaries	1	6
• Admin Assistants	0	38
• Drivers	2	25
• Laborers (full-time)	0	25

3.2 IAS Budget for Recurring Annual Operating Costs

Table 4. IAS Budget for Recurring Annual Operating Costs

Vehicles (23 Cars)		
Fuel	23 cars x 40 L x 300 days @ LE 1	LE 276,000
Oil	23 cars x 5 kg x 12 mos. @ LE 5	LE 6,900
Washing	23 cars x 12 mos. x LE 20	LE 5,520
Spare Parts & Repairs		LE 100,000
Motorcycles (300)		
Fuel	300 units x 2L x 300 days @ LE 1	LE 180,000
Spare Parts & Repairs	(Lump sum)	LE 6,065
Office Supplies		LE 300,000

3.3 IAS Equipment Procurement Requirements

The items in Table 5 are required to furnish and equip the offices of the IAS Central Directorate, two General Directorates, six Directorates, and two maintenance centers.

Table 5. IAS Equipment Procurement Requirements

Office Furniture					
Executive Desks	(3)	@ LE	2,500	LE	7,500
Desks	(135)	@ LE	1,000	LE	135,000
Executive Sofa Sets	(3)	@ LE	2,500	LE	7,500
Sofa Sets	(6)	@ LE	2,000	LE	12,000
Meeting Tables	(3)	@ LE	1,000	LE	3,000
Office Chairs	(250)	@ LE	60	LE	15,000
Carpeting	(500 M ²)	@ LE	25	LE	12,500
Cupboards	(30)	@ LE	350	LE	10,500
Ceiling fans	(30)	@ LE	200	LE	6,000
Design tables	(24)	@ LE	300	LE	7,200
White/Green Boards	(30)	@ LE	200	LE	6,000
Office Equipment					
Air Conditioners	(16)	@ LE	3,000	LE	48,000
Photocopiers	(9)	@ LE	6,000	LE	54,000
Fax Machine	(9)	@ LE	5,000	LE	45,000
Telephone Networks	(9)	@ LE	12,000	LE	108,000
Overhead Projector	(3)	@ LE	3,000	LE	9,000
Video Cassette Recorder	(3)	@ LE	3,000	LE	9,000
Televisions	(6)	@ LE	2,000	LE	12,000
Current Meters	(18)	@ LE	1,000	LE	18,000
Auto Level Recorder	(60)	@ LE	1,500	LE	90,000
Boats	(6)	@ LE	500	LE	3,000
Meter Scales	(Misc.)			LE	3,000
Salinity Testing Set	(4)	@ LE	1,500	LE	6,000
Moisture Testing Set	(4)	@ LE	1,500	LE	6,000
Flumes	(Misc.)			LE	5,000
Piezometer	(Misc.)			LE	3,000
Cameras (35mm)	(5)	@ LE	1,200	LE	6,000
Video Camera Recorder	(2)	@ LE	1,500	LE	3,000
Digital Camera	(1)	@ LE	2,000	LE	2,000
Desk Top Computer w/ Monitor	(15)	@ LE	5,000	LE	75,000
Laser Printers	(10)	@ LE	2,000	LE	20,000
Laptop Computer	(3)	@ LE	8,000	LE	24,000
Computer Plotter	(1)	@ LE	6,000	LE	6,000
Data Show Projector	(1)	@ LE	9,000	LE	9,000
Software Programs (Lic.)				LE	11,000
Copier for Design Maps	(3)	@ LE	4,000	LE	12,000
Flip Chart Stands	(10)	@ Le	100	LE	1,000

3.4 IAS Transportation Requirements

Table 6 lists the vehicles required for the IAS Central Directorate, two IAS General Directorates, and six IAS directorates.

Table 6. IAS Transportation Requirements

IAS Central Directorate	Unit Cost	Total Cost
1 4WD Landcruiser	LE 150,000	LE 150,000
1 Minivan	LE 160,000	LE 160,000
1 Pickup	LE 100,000	LE 100,000
IAS General Directorate		
2 4WD Jeeps	LE 80,000	LE 160,000
2 Minivans	LE 160,000	LE 320,000
Office of IAS Directorates		
12 Pickups	LE 100,000	LE 1,200,000
4 Minivans	LE 160,000	LE 640,000
300 Motorcycles	LE 4,000	LE 1,200,000

3.5 IAS Building Space Requirements

Table 7. IAS Building Space Requirements

Central Directorate for IAS	250 M2
IAS General Directorates	250 M2 x 2
Office of the Directorates	300 M2 x 6
Maintenance Centers (Upper & Lower Egypt)	120 M2 x 2

3.6 IAS Five-year Training Needs

3.6.1 Training Program for IAS Engineers

Table 8. IAS Five-Year Training Needs

Type of Training	Events (1999-2004)	Number of Participants	Days per Event	Cost per Participant (LE)	Total Cost (LE)
IAS Orientation Course	6	30	14	100	252,000
Mesqa & WUA Planning & Design	6	30	14	100	252,000
On-Farm Water Management Techniques	4	30	14	100	168,000
Monitoring and Evaluation	6	30	14	100	252,000
Mesqa System, Water Delivery and Drainage O&M	8	30	14	100	336,000
BCWUA Organizational Techniques	8	30	14	100	360,000
Communication Skills & Audio-Visual Design	6	30	14	100	252,000
Training of Trainers	6	30	14	100	252,000
Computer Skills & AUTOCAD	6	30	14	100	252,000
English Skills Proficiency	6	30	14	100	252,000
Participatory Rural Appraisal (PRA)	6	30	14	100	252,000
Principles & Practices of Program Management & Administration	6	30	14	100	252,000
Environmental Protection	6	30	14	100	252,000

3.6.2 Training for IAS Field Agents

Table 9. Training for IAS Field Agents

Type of Training	Events (1999-2004)	Number of Participants	Days per Event	Cost per Participant (LE)	Total Cost (LE)
IAS Orientation Training	8	100	7	80	448,000
WUA Mesqa Planning & Design	8	80	7	80	358,400
On Farm Water Management	4	40	7	80	89,600
Monitoring & Evaluation Methods	4	40	7	80	89,600
Participatory Rural Appraisal (PRA)	4	40	7	80	89,600
Farmer Communications	4	80	7	80	179,200
Development of Higher Level WUAs	4	100	7	80	224,000
Environmental Protection	4	100	7	80	224,000
O & M for Mesqas, Water Delivery & Drainage	10	100	7	80	560,000

3.6.3 Training for WUA and BCWUA Members

Table 10. Training for WUA and BCWUA Members

Type of Training	Events (1999-2004)	Number of Participants	Days per Event	Cost per Participant (LE)	Total Cost (LE)
WUA Organizational Training	100	1,500 WUAs & BCWUAs (@ 6persons)	3	10	270,000
Managing Mesqa O&M	100	1,500 WUAs & BCWUAs	3	10	270,000
WUA Financial, Administration & Record-Keeping	100	1,500 WUAs & BCWUAs	3	10	270,000
Demonstration Field Trips	200	1,500 WUAs & BCWUAs	1	5	45,000
Business Enterprise Skill Development	100	1,000 WUAs & BCWUAs	3	10	270,000

4. Terms of Reference for the Irrigation Advisory Service

This section of the benchmark report contains an English translation of the Terms of Reference (TORs) for the Irrigation Advisory Service. (The original Arabic version is attached as Appendix B). The TORs were approved by MPWWR and submitted to the Central Directorate for Organization and Management to formally institutionalize a permanent IAS under the MPWWR Irrigation Department.

This section is divided into two main sections:

- General description of the functions and responsibilities of the IAS, including Scopes of Work for IAS Technical Units within the Central Directorate, the General Directorates and the Directorates.
- Job descriptions for the senior officials of the IAS in the Central Directorate, and the heads of units at the General Directorate and Directorate levels.

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

4.1 Description of Primary IAS Functions and Responsibilities

The roles and functions of the MPWWR Irrigation Advisory Service are indicated in the following section:

- Implement and supervise the establishment of: 1) Water User Associations on improved mesqas and in the tile drainage system of the old lands, 2) Water User Unions in new lands and development of their mesqas; and supervise the turnover of improved mesqas and the tile drainage network to Water User Associations. The IAS should maintain liaisons with the associations and unions.
- Implement and supervise the establishment of the Water User Associations at the branch canal level (in both improved and unimproved areas) in the old lands, and Water User Unions in the new lands. The IAS is to take the lead in resolving procedural and logistical problems at the branch canal and mesqa-levels, so as to achieve the best levels of farmer participation in mesqa and branch canal management, operation and maintenance.
- Conduct continuous orientation and on-the-job training for all levels of IAS engineers and technicians, in line with work programs and objectives. Organize and conduct training for members of WUAs, WUUs, and BCWUAs, in order for them to effectively carry out their responsibilities related to mesqa and branch canal management, operation and maintenance, as well as initial physical improvements.
- Maintain regular liaisons with the MPWWR Irrigation Sector to effectively execute the programs of the National Irrigation Improvement Project. IAS will act as intermediary between the Irrigation Improvement Sector and the Water User Associations in the improved areas.
- Supervise the Monitoring and Evaluation Unit with regard to Water User Association development activities, improvement program for mesqas and branch canals, users of tile drainage infrastructure, and Branch Canal Water User Associations. Also, evaluate the impact of improved mesqas in each command area, recording data from farmers regarding branch canals, tile drainage and mesqas under improvement. Publish periodic evaluation and monitoring reports for IAS programs and activities.
- Strengthen the IAS Communication Unit to perform the following:
- Prepare awareness campaign brochures for the improved and unimproved areas, and areas with a tile drainage system.
 - Assist in multi-media water management education programs using audio-visuals and other methods.
 - Maintain communication with all important projects and programs concerned with the Egyptian farmer and village economy, particularly those related to rural socio-economic development.
 - Maintain communications with the various technical and policy units of the MPWWR, e.g. Irrigation Department, Irrigation Directorates, Irrigation Improvement Sector projects, Drainage Authority, and extension service entities of the MALR.

- Participate in local and international meetings, particularly those related to INPIM/Egypt objectives.
- Supervise the execution and monitoring of the IIP cost recovery program and other related works, in coordination with the Revolving Fund Committee, etc.
- Assist in establishment of special command area committees for environmental issues, including environmental problem identification and pollution control. Develop and disseminate awareness material regarding solutions to create a cleaner environment for the Egyptian farmer. Communicate with specialized authorities and coordinate with them to apply recommendations with farmer participation through mesqa WUAs and BCWUAs.
- Coordinate provision of technical assistance to mesqa-level and branch canal water user associations in the old lands, and to the water user unions in the new lands, with regard to mesqa irrigation scheduling in improved as well as unimproved areas, along the branch canals. In addition, work with farmers to design a program in operation and maintenance of branch canals as well as modifications to any control structures necessary for improving water delivery from head to tail reaches.
- Coordinate the registration process of all mesqa-level or branch canal user associations operating in the IAS directorates.
- Assume a lead role in linking WUAs, WUUs, and BCWUAs with public and private agencies, including NGOs, focussed on rural infrastructure and socio-economic change initiatives.

4.2 Scope of Work for IAS Technical Units

4.2.1 IAS Training Department

- Design and administer training programs for engineers and technicians in the IAS Directorates.
- Supervise the water user associations' training, including:
- General training for areas to be improved:
 - Special training on organizing procedures for areas to be improved.
 - Special training on operation and maintenance for improved mesqas.
 - Field visits to demonstration and improved areas.
 - Improved irrigation and drainage practices.
 - Special training on water user association formation at the canals and unions in new lands.
 - Special training on tile drainage maintenance.

4.2.2 IAS Technical Department

- Examine all technical subjects related to IAS activities, and prepare evaluative and substantive technical reports as and when required.
- Follow-up on all technical issues.
- Follow-up project implementation and prepare technical reports.

4.2.3 IAS Financial and Administration Department

- Financial accounting and budgeting
- Management of contracts
- Procurement and store inventory
- Control of staff appointments, retirements, terminations, leaves,
- Control of salary payments, increments, per diems, settlements, extra salaries, bonuses, insurance, and compensations
- Management of all official bookkeeping, indexing for files, report production and tracking, of memoranda and ministerial decrees regarding WUAs, BCWUAs and IAS general administration.
- Maintaining copies of WUA and BCWUA records.

4.2.4 General Directorates for Irrigation Advisory Service (Upper & Lower Egypt)

- Supervise execution and planning of directorate work plans.
- Coordinate programs with Irrigation Improvement Sector, Irrigation Department, Drainage Authority, Agriculture Department, and local and executive councils in command areas.
- Monitor all work in the IAS directorate.
- Maintain coordination between IAS technical units: Technical Assistance, WUA Development, Monitoring & Evaluation, Communications, Environment, and Drainage.
- Supervise training courses for IAS staff, field agents, supervisors and farmers.
- Coordinate provision of administrative assistance, resolving problems concerning the execution of activities in IAS directorates.
- Conduct and evaluate educational and awareness-building programs, and prepare advisory materials and audio-visual programs.
- Supervise implementation of the mesqa cost recovery program.

4.2.4.1 IAS General Directorate Operations Section

- Supervise preparation of annual and monthly plans for IAS directorates.
- Supervise all work in IAS directorates.
- Monitor WUA performance in improved and unimproved mesqas. This includes WUUs in new lands, and seeing to it that they carry out their assigned functions responsibilities efficiently.

4.2.4.2 IAS General Directorate IAS Training Section

- Coordinate training for engineers and technicians of the IAS according to set work phases and activities.
- Train WUAs to carry out their responsibilities in improved and unimproved areas.
- The training program for WUAs includes:
 - general training for areas to be improved,
 - organizing procedures for areas to be improved,
 - operation and maintenance for improved mesqas,
 - field visits to demonstration and improved areas,

- improved irrigation and drainage practices,
- water user association formation at the canals and unions in new lands,
- tile drainage maintenance, and
- WUA business management skills, including record keeping, accounting and fiscal management.

4.2.4.3 IAS General Directorate Financial and Administration Section

- Perform accounting
- Maintain inventory of branch stores
- Manage employment affairs (staffing)
- Monitor employee leaves, retirements, resignations and insurance
- Supervise WUA and WUU registration maintaining all financial records.

4.2.5 IAS Directorates (command areas)

- Coordinate the activities of the different sections: technical assistance, monitoring and evaluation, studies, communication, environment and drainage.
- Communicate and coordinate with the general directorate to attend meetings, discuss work proceedings and solve any problems.
- Conduct and monitor IAS training programs for engineers, technicians and water user associations.
- Supervise the implementation of the cost recovery programs.
- Supervise the maintenance centers that deal with the WUAs to cover improved mesqa and tile drainage network needs.
- Coordinate and cooperate with the Irrigation Improvement and Irrigation and Drainage departments to implement and monitor IAS activities in their respective areas.
- Monitor IAS and WUA activities in the implementation areas.

4.2.5.1 IAS Directorate Technical Assistance Section

- Conduct water measurements for better water control and mesqa water scheduling along the branch canals, and in newly improved mesqas.
- Through field agents and supervisors, assist the WUAs in O&M of mesqa intake, field drains, tile drainage operation and maintenance plans.
- Provide field agents and supervisors with technical backup and support.
- Provide technical assistance in mesqa map preparation, detailed drawings and data collection.
- Participate in field agent and supervisor training.
- Work with mesqa improvement construction engineers to ensure that WUAs participate in planning, design, construction and operation of the suggested improvements.
- Work with tile drainage construction engineers to assure that the users participate in the execution of these networks, in order to guarantee their full participation in operation and maintenance.
- Continuously inform WUAs of relevant policies, rules, and decrees.

4.2.5.2 IAS Directorate WUA Section

- Disseminate information on the seven phases for organizing WUAs on improved mesqas and make sure that each group has fulfilled the conditions for establishing a water user association. Also disseminate information for the tile drainage beneficiaries
- Strengthen the bonds between the WUAs and the Irrigation Improvement Project, Tile Drainage, the Irrigation Departments and appropriate sectors of the MALR (e.g. agriculture advisory service, cooperatives, and banks).
- Attend meetings of the WUA general committee.
- Communicate continuously with the IAS Director regarding IAS activities and WUAs.
- Help prepare WUA advisory brochures.
- Collect agricultural, mesqa, environmental, drainage and farmer data. Keep these data in each mesqa file.
- Assist the WUAs in preparing and maintaining financial records and in holding periodic meetings.
- Assist WUAs in IAS areas to formally register their associations.

4.2.5.3 IAS Directorate Monitoring and Evaluation Section

- Execute the monitoring and evaluation programs for IAS activities
- Create and manage the database for the IAS areas, covering all activities.
- Prepare periodic and regular monitoring and evaluation reports for IAS projects.
- Prepare and participate in and conduct the training programs for field agents, supervisors and water users related to M & E techniques.
- Coordinate with the various research institutes of MPWWR and MALR to execute the monitoring and evaluation programs related to water distribution and on-farm technology transfers. Represent the IAS as required in local and international conferences.
- Coordinate with Irrigation and Drainage authorities and the MALR at the IAS program locations to ensure efficient implementation of all activities.

4.2.5.4 IAS Directorate Communication Section

- Publish advisory brochures for the improved and unimproved areas in addition to tile drainage areas.
- Maintain regular contact with other projects and programs concerned with rural economic development.
- Maintain regular contact with Irrigation, Irrigation Improvement, Drainage and Agriculture Departments to disseminate essential information to WUAs.
- Assist in preparation of multi-media programs focussing on performance and impact of IAS activities.
- Organize conferences and seminars serving the needs of the IAS program.

4.2.5.5 IAS Directorate Environment and Drainage Section

- Prepare a preliminary environmental assessment of polluted areas (situational analysis).

- Conduct studies and develop strategies for creating a clean environment for the Egyptian farmer.
- Work with environmental authorities (Ministry of Environment, and specialized Institutes) to execute recommendations and make certain that users participate through their WUAs.

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

4.3 IAS Position Job Descriptions

Job Descriptions for the following senior IAS officials and heads of technical and administrative units are included this section:

- Central Directorate of the Irrigation Advisory Service (MPWWR)
 - Head of the IAS
 - Director of Technical Follow-up Department
 - Director of Training Department
 - Director of Finance and Administration Department

- General Directorate of the IAS (Upper and Lower Egypt)
 - Director General of the IAS Directorates (Upper and Lower Egypt)
 - Chief of Finance and Administration Section
 - Chief of Technical Assistance Section
 - Chief of WUA Section
 - Chief of Monitoring and Evaluation Section
 - Chief of Communications Section
 - Chief of Environment and Drainage Section

- IAS Field Directorates (East Delta, West Delta, Middle Delta, Lower Nile Valley, Middle Nile Valley and Upper Nile Valley)
 - Director of IAS Field Directorates

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: High Rank
Group: High Administration

Position: Head of the Central Directorate of the Irrigation Advisory Service.
General Description: Manager of technical and administrative positions in the Central Directorate for the Irrigation Advisory Service of the Irrigation Department.
Responsible for: Implementation and supervision on the Irrigation Advisory Service policies.

Duties and Responsibilities:

The incumbent will work under the direction of the chairman of the MPWWR Irrigation Department, and will have the following duties:

- Has ultimate authority to manage all aspects of the IAS, including authority to issue and make decisions, according to established rules and regulations.
- Supervise the work of the other departments under his authority.
- Coordinate foreign aid inputs and local government support for the execution of IAS activities.
- Overseeing IAS policy and program planning, and coordinating with MPWWR and other GOE plans.
- Supervise the work of the IAS General Directorates.
- Coordinate with other sectors under the Irrigation Department to implement IAS activities. This includes MALR and local councils.
- Participate in holding of local and international conferences concerning farmers' participation in Irrigation and Drainage management.
- Closely monitor the implementation of the mesqa cost recovery program, and the formation and organization of the Water User Associations.
- Supervise IAS financial affairs according to established regulations and rules.
- Handle all personnel matters including leaves, and prepare performance evaluation reports of staff working under his authority.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum one year in the rank preceding this one.
- Successfully passed the training programs in administration specified by law No. 5 for year 1991.

Minister of the Ministry of Public Works and Water Resources
Doctor Professor Mahmoud Abou Zeid

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: First Rank
Group : Civil Engineering

Position: Director of Technical Department.
General Description: This position is among the civil engineering positions in the Central Directorate for the Irrigation Advisory Service, and responsible for all technical work for the IAS activities.

Duties and Responsibilities:

- This person will work under the supervision of the Head of the Central Directorate of the Irrigation Advisory Service.
- Incumbent will be free to handle subjects within the rules and regulations and has the authority to issue orders and instructions.
- Examine all the technical subjects concerning the IAS activities and give comments.
- Supervise the execution of the instructions of the Head of the Central Directorate of the Irrigation Advisory Service.
- Prepare periodic reports of the IAS progress and implementation problems.
- Approve leaves and performance reports of the employees working under his authority according to the rules and regulations organize that.
- Any other work assigned to him by superior officers.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum six years work in the rank preceding this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: First Rank
Group : Civil Engineering

Position: Director of Training Department.
General Description: This position is among the civil engineering positions in the Central Directorate of the Irrigation Advisory Service in the Irrigation Department
Responsible for: Training.
Duties and Responsibilities:

- The person will work under the supervision of the Head of the Central Directorate of the Irrigation Advisory Service.
- Handle and administer all training within the issued rules and regulations
- Supervise preparation of the general annual plan for training.
- Review the annual plan for training and the training budget.
- Review the training programs.
- Monitor the special training for the Water User Associations and Unions and staff that relate to:
 - Primary general training, WUA organizing procedures, improved mesqa operation and maintenance, and tile drainage.
 - Supervise training for engineers, technicians and employees working in the IAS Central Directorate according to work phases and varieties of technical know-how.
 - Supervise training for field agents and supervisors who deal with WUAs in improved command areas.
 - Suggest additional training needs.
- Approve leave and administrative reports of the employees working under his authority according to established rules and regulations.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum six years working in the rank below this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: First Rank
Group: Finance

Position: Director of Finance and Administration Department.
General Description: Chief of the financing and accounting section of the IAS.
Responsible for: Financial and administrative work.
Duties and Responsibilities:

- The incumbent will work under the supervision of the Head of the Central Directorate for the Irrigation Advisory Service.
- Incumbent will be free to handle subjects within the issued rules and regulations and has the authority to issue orders and instructions to subordinates.
- He/she will review and control all following Finance and Administration functions:
 - All the accounting and budgeting works.
 - All the contracts and procurement.
 - All the stores works.
 - Appointments, staffing, retirements, resignations and leaves.
 - Requests decrees for salary increase
 - Necessary settlements for employees according to laws and regulations.
 - Memoranda regarding salary increases, per diems and extra salaries (bonuses).
 - Bookkeeping works.
 - Indexes for files arrangements and distribution.
 - File numbers, letters, memoranda, and issued decrees.
 - Important memoranda and all reports concerning the financial and administration works.
 - Approve leave and staff performance reports for the employees working under his authority according to the rules and regulations.
 - Any other work requested by a superior officer.

Job Prerequisites:

- Bachelor of Commerce.
- Minimum six years in the rank preceding this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: Second Rank

Group: Finance

Position: Chief of Finance and Administration Section.
General Description: This position is among the financing and accounting positions in the General Directorate for the IAS in the Irrigation Department.
Responsible for: Finance and Administration.
Duties and Responsibilities:

- The incumbent will work under the supervision of the designated director general.
- Free to a certain degree to handle subjects according to established procedures, rules and regulations.
- Assist registering documents and settlements prior to financial release and enter into special accounting records.
- Assist in preparing memoranda regarding financial approvals in order to release expenditures of the previous fiscal budget period.
- Assist in preparing financial release documents and register them
- Follow-up on all financial matters on all contracts, procurement and committees.
- Assist in conducting routine and occasional inventory assessments and prepare special estimates for stores.
- Follow-up with periodic, monthly, quarterly, final accounting reports.
- Assist in preparing salaries and wages list, per diems, and bonuses.
- Assist in appointment, staffing, retirements, resignations and leaves procedures.
- Complete all data needed for special records related to pensions, insurance, bonuses and compensations.
- Assist in preparing ministerial decrees related to appointments, promotions, settlements, end of service actions, etc.)
- Maintain updated book keeping and record works.
- Participate as a member of IAS bidding committees.
- Maintain registration process of WUAs.

Job Prerequisites:

- Suitable baccalaureate degree.
- Minimum eight years in rank directly preceding this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: Second Rank
Group: Civil Engineering

Position: Chief of the Technical Assistance Section.
General Description: This position is among the civil engineering positions in the General Directorate for the IAS in the Irrigation Department. Responsible for the technical assistance of the IAS activities.

Duties and Responsibilities:

- The incumbent will work under the supervision of the appropriate director general.
- Free to a limited degree to make decisions as per the roster of duties and responsibilities of the post, and according to established rules and regulations.
- Conduct water measurements for better water control and mesqa water scheduling along the branch canal and in newly improved mesqas.
- Prepare operation and maintenance plans for mesqas, intake, field drains and tile drainage and assist field agents and supervisors to the same at local level.
- Provide field agents and supervisors with technical knowledge and direction.
- Manage field data collection and coordinate preparation of mesqa maps and detailed drawings.
- Work with mesqa improvement construction engineers to make sure that the users
- participate in the execution of these networks.
- Provide WUAs with all related policies, rules, decrees, etc on continuing basis.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum eight years in the rank preceding this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: Second Rank
Group: Civil Engineering

Position: Chief of the WUAs Section.

General Description: This position is among the civil engineering positions in the General Directorate for the IAS in the Irrigation Department. Responsible for all WUA development activities.

Duties and Responsibilities:

- This person will work under the supervision of the responsible director general.
- Free to a certain degree to make decisions according to his duties and responsibilities of his position and according to established procedures, and rules and regulations.
- Supervise and assist the formation of the all levels of WUAs and Water User Unions.
- Assist the field agents and supervisors in organizing and training WUAs.
- Assist in the execution of the training programs prepared by the training department in the IAS Central Directorate.
- Participate in preparing advisory brochures and publications for WUAs.
- Strengthen the bonds between the WUAs and the Irrigation Improvement Project, Tile Drainage, the Irrigation department as well as the MALR (e.g. agriculture advisory service, cooperatives, village bank, etc).
- Execution of the seven phases of WUAs and Unions organizing and establishment, making sure that each group has fulfilled the conditions for establishing a water user association and unions to receive improved mesqas resources.
- Assist the WUAs to register and formalize their associations.
- Assist WUAs in monitoring WUA financial records.

Job Prerequisites:

- B.Sc. civil engineering.
- Minimum eight years in the rank below this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: Second Rank
Group: Civil Engineering

Position: Chief of Monitoring and Evaluation Section.
General Description: This position is among the civil engineering positions in the General Directorate for the IAS or the Irrigation Department. Responsible for the Monitoring and Evaluation activities.

Duties and Responsibilities:

- The incumbent in this position will work under the supervision of the responsible director general.
- Free to a certain degree to make decisions according to his duties and responsibilities of his position and according to established procedures and rules and regulations.
- Assist in the execution of the monitoring and evaluation programs related to IAS activities.
- Gather and maintain all types of data relate the irrigated command areas.
- Prepare regular and periodic monitoring and evaluation reports (annually, semi- annually, and quarterly).
- Prepare and participate in the execution of the training programs for field agents, supervisors and water users.
- Communicate and coordinate with the institutes of the MPWWR and the MALR to execute the monitoring & evaluation programs related to water distribution and on-farm, and technology transfer.
- Participate in local and international conferences as necessary.
- Coordinate and cooperate with Irrigation and Drainage authorities and the Ministry of Agriculture at IAS work locations to guarantee smooth execution and efficiency of all activities.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum eight years in the rank below this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: Second Rank
Group: Civil Engineering

Position: Chief of Communication Section.
General Description: This position is among the civil engineering positions in the General Directorate for the IAS or the Irrigation Department. Responsible for IAS communications activities.

Duties and Responsibilities:

- The incumbent will work under the supervision of the appropriate director general.
- Free to a certain degree to make decisions according to his duties and responsibilities of his position and according to established procedures and rules and regulations.
- Assist in designing and publishing brochures for the improved and unimproved areas, in addition to tile drainage areas and the new lands.
- Assist in preparation and execution of media programs through audio-visual methods.
- Coordinate and maintain liaison with projects and programs working in all aspects of Egyptian rural development and agricultural development.
- Participate in organizing conferences and seminars that bolster IAS activities and are directly related to users participation in irrigation and drainage works.
- Coordinate and maintain contact with governmental authorities as well as non- governmental agencies (e.g. Irrigation, Irrigation Improvement, Drainage and Agriculture departments, etc) for media to transfer technology and guarantee efficient execution of the IAS activities.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum eight years in the rank directly preceding this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: Second Rank
Group: Civil Engineering

Position: Chief of Environment and Drainage Section.
General Description: This position is among the civil engineering positions in the General Directorate for the IAS or the Irrigation Department. Responsible for environmental and drainage activities.

Duties and Responsibilities:

- The incumbent will work under the supervision of the responsible director general.
- Free to a limited degree to make decisions according to established duties and responsibilities of his position and according to procedures, rules and regulations.
- Collect environmental data and prepare a preliminary environmental assessment before initiating any project.
- Find suitable solutions with related authorities for environmental protection.
- Develop and implement awareness among the WUAs and WUUs regarding environment protection.
- Develop and implement a program to accelerate farmers' participation for environment protection at WUA levels.
- Coordinate regular contact and cooperate with other authorities working in environmental protection, to share and transfer technology, ideas and information.
- Develop and utilize brochures and publications issued by environment protection authorities among WUAs.
- Closely monitor current and future drainage projects specially tile drainage networks.
- Maintain regular contact with tile drainage centers in the irrigated command areas.

Job Prerequisites:

- B.Sc. civil engineering.
- Minimum eight years in the rank below this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: Director General
Group: High Administration

Position: Director General of the IAS Directorates (Upper and Lower Egypt)
General Description: This position is among the senior management level positions responsible for overseeing technical and administration staff of the IAS directorates of the Central IAS Directorate of the Irrigation Department.

Duties and Responsibilities:

- The person will work under the supervision of the Head of the Central Directorate of the Irrigation Advisory Service.
- Incumbent will handle and administer matters within the issued rules and regulations and has the authority to issue orders and instructions accordingly.
- Prepare policies and plans for the general directorates, and issue orders for implementation at the directorate level.
- Supervise planning and execution of the IAS branch directorate's work plan.
- Coordinate with the Irrigation, Improvement, Drainage and Agriculture Department.
- Coordinate with local and executive councils to inform them about the project and gain their confidence, support and participation.
- Supervise WUAs' formation process in directorate.
- Supervise the training programs for IAS employees, field agents and supervisors and water users.
- Supervise financial and administrative works, applying the financial rules.
- Supervise the mesqa cost recovery program and monitor its implementation impact.
- Administer staff leaves and prepare staff performance reports.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum period of two years in the rank preceding this one.
- Successfully completed the training programs in the administration field specified by Law No. 5 for the year 1991.

Approved,
Minister of the Ministry of Public Works and Water Resources
Doctor Professor Mahmoud Abou Zeid

Arab Republic of Egypt
Ministry of Public Works and Water Resources
Irrigation Department
Central Directorate of the Irrigation Advisory Service

Degree: First Rank
Group: Civil Engineering

Position: Director of IAS Directorates
(East Delta, Middle Delta, West Delta, North Valley, Middle Valley, and South Valley).

General Description: This position is among the civil engineering positions in the Central Directorate for the Irrigation Advisory Service of the Irrigation Department.

Duties and Responsibilities:

- The incumbent works directly under the supervision of the IAS director general.
- Free to handle subjects within the issued rules and regulations and has the authority to issue orders and instructions to subordinates.
- Supervise and follow-up the following activities:
 - Coordinate the work among various IAS sections, i.e. technical assistance, monitoring and evaluation, communications, environment and drainage.
 - Prepare the annual and periodic directorate plans.
 - Coordinate with the general directorate to participate in monthly meetings to address and solve problem issues effectively.
 - Execute IAS training programs and cost-recovery and O&M cost-sharing programs where they are implemented.
 - Coordinate the administration and utilization maintenance centers that provide help to the WUAs regarding mesqa and tile drainage needs.
 - Coordinate with the Irrigation Department, the Irrigation Improvement project and Drainage Authority to execute the IAS activities in their commands.
 - Administer staff leave and prepare employee performance reports according to the established rules and regulations.

Job Prerequisites:

- B.Sc. in civil engineering.
- Minimum six years in the rank preceding this one.

Approved,
Chairman of the Irrigation Department
Eng. Yehia Abdel Aziz Abdel Shafi

5. Conclusions and Recommendations

Having successfully achieved the benchmark requirements (i.e. verification indicators), the Irrigation Advisory Service is officially launched by ministerial decree, under the MPWWR Irrigation Department. This process has been formalized through submission of documents required by the GOE Central Authority of Organization and Management.

In order to activate the new IAS configuration and allow it to be fully operational, the benchmark working group has offered several recommendations, which are indicated herewith:

- MPWWR must issue necessary orders and instructions to activate the Irrigation Advisory Service, so that it can become fully operational.
- The IAS needs to be equipped with additional professional and administrative staff, physical facilities, technical and administrative support equipment, and transportation resources. The estimated requirements for these modifications are detailed in chapter 3 of this report.
- IAS staff will need basic introductory training as well as periodic refresher training in a number of key subjects, which are detailed in section 3.6 of this report.
- The recruitment process for hiring additional IAS staff needs to match personal skills, knowledge and experience with specific job descriptions.
- The IAS should recommend to MPWWR a phased plan for expansion of IAS geographical coverage eventually to cover all irrigated lands.
- The IAS should establish a special unit to service the national project areas (e.g. Touthka and El Salaam command areas).
- The IAS should strengthen central as well as local level coordination with other public and private sector agencies, e.g. Agricultural Extension, Drainage Authority, cooperatives, banks growers' associations, local councils, research institutes, etc., to ensure quality and minimize duplication of services.

Appendix A

Ministerial Decree from MPWWR regarding establishment of the Irrigation Advisory Service.

Appendix B

Documents submitted to the GOE Central Authority for Organization and Management to establish an Irrigation Advisory Service in the MPWWR.