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***MWRI POLICY ON IRRIGATION
MANAGEMENT TRANSFER (PHASE I)***

***Report No. 36
Main Document***

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Water Policy Program

International Resources Group

Winrock International

Nile Consultants

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***MWRI POLICY ON IRRIGATION
MANAGEMENT TRANSFER
(PHASE I)***

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NOTE

This is a preliminary benchmark report that documents activities and conclusions pertaining to the achievement of the Tranche IV indicator for the first year. This indicator states:

The MWRI will develop a policy on irrigation management transfer, to include a plan for phased implementation and to identify legal requirements, by 31 December 2000

This document, therefore, does not include detailed reporting on activities undertaken during the first year but that pertain to the Year 2 performance indicator. These include results of study tours, surveys, focus group meetings, processes related to pilot site selection and implementation.

The final benchmark report, to be issued in December 2001, will include all of the material in achievement of this benchmark from both Years 1 and 2.

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List of Abbreviations and Acronyms

APRP	Agricultural Policy Reform Program
BCWUA	branch canal water user association
EPADP Projects	(MWRI) Egyptian Public Authority for Drainage
EPIQ	Environmental Policy Indefinite Quantity
EWUP	Egypt Water Use Project
GOE	Government of Egypt
IAS	Irrigation Advisory Service
IDRC	International Development Research Council
IFAD	International Fund for Agricultural Development
IIP	Irrigation Improvement Project
IIS	(MWRI) Irrigation Improvement Sector
IMT	irrigation management transfer
INPIM	International Network on Participatory Irrigation Management
IRG	International Resources Group, Ltd.
ISM	Irrigation Systems Management Project
JICA	Japan International Cooperation Agency
MALR	Ministry of Agriculture and Land Reclamation
M&E	monitoring and evaluation
MED	(MWRI) Mechanical & Electrical Department
MOTS	Ministry of Trade and Supply
MPE	Ministry of Public Enterprise
MWRI	Ministry of Water Resources and Irrigation
O&M	operations and maintenance
PRA	participatory rural appraisal
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WPAU	Water Policy Advisory Unit
WPRP	Water Resources Results Package
WUA	water user association

Executive Summary

The purpose of this report is to present the results of the work carried out in completion of Benchmark 4 of Section C of the agreement between the Government of the Arab Republic of Egypt (GOE) and USAID/Egypt for Tranche IV (FY 99/00). The benchmark states:

“The GOE (MWRI) will adopt a policy and strategy for transferring management of selected sections of the irrigation system to stakeholders and/or the private sector.”

The two Verification Indicators for the benchmark are:

The MWRI will develop a policy on irrigation management transfer, to include a plan for phased implementation and to identify legal requirements, by 31 December 2000.

Application of the policy will be initiated in two selected pilot areas by 31 December 2001.

In support of this policy benchmark activity, a benchmark task team was established, led by the EPIQ senior sociologist, and with members representing the Water Policy Advisory Unit and key units from the Irrigation Sector, Horizontal Expansion & Projects Sector, Drainage Authority, Mechanical & Electrical Department, and Irrigation Advisory Service. A work program was developed to cover activities between October 1999 and December 2000. This work program was incorporated into the overall EPIQ work plan. Under the APRP program of USAID, policy reforms were achieved during 1997-1999 that further strengthened the process of expanding user participation at secondary levels of the irrigation/drainage system. MWRI promulgated a policy allowing for the formation of secondary-level *Branch Canal Water User Associations*. One of the seminal recommendations from that BCWUA policy was to develop and pilot-test a policy on transferring selected water management and operational functions from GOE to the users.

The GOE transfer of major management responsibilities for sections of the irrigation system above the mesqa-level to stakeholders and/or the private sector is a bold advance toward the goal of participatory management and privatization of the irrigation system. Although irrigation management transfer (IMT) is now a major feature of irrigation delivery in many other countries, IMT is only now being launched in Egypt. Successful implementation of this benchmark will be a major turning point for this process to take hold at the grass-roots level of the GOE.

Unlike earlier irrigation improvement efforts in Egypt (e.g. EWUP, ISM, and IIP), which can be classified as “*farmer participation in irrigation improvement*”, the IMT model allows the private sector to take managerial and financial control over operation and maintenance. This will result in direct and immediate reductions in government expenditures, freeing government funds to focus on those tasks the private sector is unable to effectively undertake.

This benchmark is being implemented over a two-year period and is divided into two phases.

Phase I focused on the following:

- Analyzing IMT experiences in other countries;
- Assessing the impact of the program in Egypt to develop branch canal water user associations and water boards;
- Preparing a clear understanding and consensus view regarding which components of irrigation and drainage are to be included in the Egyptian IMT program;
- Developing the results of these analyses into a set of prioritized directional guidelines and policy for Egypt;
- Identifying an IMT strategy or multiple strategies suitable to the Egyptian context and incorporating this into the IMT policy;
- Considering all approaches and strategies for IMT, involving the private sector, especially water users and their organizations in all land categories (new, old, old-new, groundwater, etc.); and
- Issuing a policy document on irrigation management transfer, with a plan for phased implementation in the selected areas, focusing on following priority issues:
 - administrative aspects of IMT,
 - harmonizing all relevant GOE laws with IMT process,
 - assessment of water user interest in, and expectations of, the IMT process,
 - estimate of potential private sector capability in water delivery and O&M, and
 - evaluation of irrigation and drainage practices in each study area.

The MWRI policy statement, with twenty-four policy clauses, detailing procedures and processes has been approved as follows:

In a phased process of application, the MWRI will transfer selected sub-sections of Egypt's irrigation and drainage network to users and/or the private sector acting on behalf of the users.

The IMT policy statement objectives are to:

- Determine the prerequisites for introducing handing over of management responsibilities to stakeholders and/or the private sector in Egypt;
- Define the strategies and steps required to implement partial, incremental and total management transfer in all categories of land, including old lands; and
- Consider roles and responsibilities of MWRI in the transfer process.

The formulation of this policy entailed consideration of the following variables:

- IMT experiences in other countries,
- Priority focus to water users' role in IMT during the initial phase,
- Strengthening the program to develop branch canal water user associations in Egypt, and
- Harmonizing all relevant GOE laws with the IMT process and objectives.

An IMT phased implementation plan details activities for the first year of pilot efforts. The pilot phase will be monitored and evaluated on a regular basis to determine modifications necessary to further refine the process. MWRI has prepared a master IMT plan to the year 2025, culminating in a transfer program of selected main canals and drains. The IMT plan for the first phase includes the following elements:

- Legal changes required to support the IMT process, including contracting and assessment capabilities;
- Definition of roles and relationships between public and private sector entities as they relate to IMT;
- Definition of administrative and financial management systems for O&M;
- Training of staff, and development of plans for organizational restructuring;
- Arrangement for provision of support services;
- Development of Branch Canal Water User Associations;

- Upgrading of the physical irrigation/drainage infrastructure as part of the transfer process.

The second phase (ending 2001) of the IMT process features policy application in four pilot areas, representing a variety of operating management environments, and training of stakeholders particularly regarding O&M and organizational management.

The third phase (ending 2002) is to result in consensus agreement on methods of revenue generation, including direct assessment and contracting for works and services, and pilot area replication and extension.

The fourth phase (5 years ending 2007) will achieve issuance of ministerial degree sanctioning the method of revenue generation for the pilot areas and negotiations of transfer timetable, capacity building and training in technical matters relating to management and on-site supervision, an IMT pilot developed for federation of BCWUAs, and the IIP and EPADP sub-surface drainage amalgamated into one program at water district or public canal level.

For the fifth phase (5 Years ending 2012) it is envisaged that IMT will have been implemented at the public canal level (moderate size). Each branch canal or secondary drain on the public canal system will be turned over to users in preparation for the public canal level.

The sixth phase ten years to 2022) will concentration on consolidation of federation into district command areas

In the years following the sixth phase, i.e. post-2022, it is planned that main canals and drains transferred to private management, and IMT will be implemented at the regional level (e.g. East Delta, West Delta, etc.)

Process Documentation and continuous *Monitoring and Evaluation* are critical to the first years of IMT implementation, and will provide the basis for any future changes in direction.

1 Introduction

1.1 Overview

The Ministry of Water Resources and Irrigation (MWRI) is the primary government agency charged with the management of water resources in Egypt. Escalating population growth, a desire for agricultural expansion, and increasing demands on surface water supply, play significant roles in water delivery capability. Both MWRI and USAID are aware of the need to develop policy reform that will effectively address these and other issues that determine utilization efficiency, productivity, and protection of water resources.

During FY 96/97 the MWRI and USAID developed a “water resources results policy package” that focused on producing four major results:

- 1) improved irrigation policy assessment and planning process,
- 2) improved irrigation system management,
- 3) improved private sector participation in policy change, and
- 4) improved capacity to manage the policy process.

The MWRI and the USAID designed the water resources results package aimed at policy analysis and reforms leading to improved water use efficiency and productivity. Specific objectives were:

1. To increase MWRI knowledge and capabilities to analyze and formulate strategies, policies and plans related to integrated water supply augmentation, conservation and utilization, and to the protection of the Nile water quality.
2. To improve water allocation and distribution management policies for conservation of water while maintaining farm income.
3. To recover the capital cost of mesqa improvement, and to establish a policy for the recovery of operation and maintenance costs of the main system.
4. To increase users' involvement in system operation and management.
5. To introduce a decentralized planning and decision making process at the irrigation district level.

In early 1997 the water resources results package was amalgamated into the USAID Mission's Agricultural Policy Reform Program (APRP). APRP is a broad-based policy reform program involving five GOE ministries (Ministry of Agriculture and Land Reclamation (MALR), MWRI, Ministry of Trade and Supply (MOTS), Ministry of Public Enterprise (MPE) and Ministry of International Cooperation). APRP has the goal of developing and implementing policy reform recommendations in support of private enterprise in agriculture and agribusiness.

USAID supports the MWRI in five program activities under APRP. These five activities are: 1) water policy analyses, 2) water policy advisory unit, 3) water education and communication, 4) main systems management, and 5) Nile River monitoring, forecasting and simulation. USAID supports the Ministry's efforts through technical assistance and cash transfers (annual *tranches*) based on performance in achieving identified and agreed upon policy reform benchmarks.

Technical assistance for the water policy analyses is provided through a task order (Contract PCE-I-00-96-00002-00, Task Order 807) under the umbrella of 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 is provided through a subcontract with Nile Consultants.

1.2 Purpose of the Report and Background

A memorandum of understanding between the Arab Republic of Egypt (GOE) and USAID listing mutually agreed policy reform benchmarks for the APRP Tranche IV period (1 September 1999 to December 31, 2001) was signed on September 28, 1999. Benchmark 4 of Section C of the APRP medium/long term policy goals, "Agricultural Land and Water Resource Investments, Utilization and Sustainability" states:

"The GOE (MWRI) will adopt a policy and strategy for transferring management of selected sections of the irrigation system to stakeholders and/or the private sector."

The two Verification Indicators for the benchmark are:

1. The MWRI will develop a policy on irrigation management transfer, to include a plan for phased implementation and to identify legal requirements, by 31 December 2000.
2. Application of the policy will be initiated in two selected pilot areas by 31 December 2001.

In support of this policy benchmark activity, a benchmark task team was set up, led by the EPIQ senior sociologist, and with members representing the Water Policy Advisory Unit and key units from the Irrigation Sector, Horizontal Expansion & Projects Sector, Drainage Authority, Mechanical & Electrical Department, and Irrigation Advisory Service. A work program was developed to cover activities between October 1999 and December 2000. This work program was incorporated into the overall EPIQ work plan.

The IMT benchmark has a two-year implementation program prospectus, with the verification indicators clearly designated for Year 1 and Year 2. The IMT Working Group developed a methodology that allows for acceleration of the pilot identification process (primarily Year 2 activities), while focussing on formulation of a policy on irrigation management transfer. It was decided by the Steering Committee to work on Year 2 designated program activities during the first year in order to foster an IMT policy that benefits from initial pilot implementation efforts. Work on this benchmark policy reform started September 1999 and will be completed by December 31, 2001. Activities relating to the second year program and to the second verification indicator, i.e. pilot implementation, will be reported in detail in the final benchmark report.

1.3 Organization of this Report

Following the Introduction (Chapter 1) of this report, there is a general overview of participatory irrigation management (Chapter 2) experiences in Egypt resulting in the present management transfer program. A description of the IMT benchmark methodology is presented in Chapter 3. Chapter 4 summarizes the MWRI policy on irrigation management transfer. Chapter 5 highlights an MWRI phased implementation plan for IMT. The proposed provisions in the national water law that are being made to give IMT a legal foundation comprise Chapter 6. Detailed reporting and analysis of these activities will be included in the final benchmark report in December 2001. The complete Arabic version of

the IMT policy statement and its supporting clauses, along with a MWRI phased implementation plan are attached as Appendix A and Annex B, respectively.

2 Background and Problem Description

2.1 Overview of Water User Participation in Water Management in Egypt Leading Toward Irrigation Management Transfer

The primary Government of Egypt agency responsible for water resources management is the Ministry of Water Resources and Irrigation. As such, it is mandated to plan, construct, operate, manage, and maintain the irrigation and drainage network in Egypt. The MWRI distributes irrigation water to Egypt's "old lands" by diverting water at various points from the Nile River to principal canals, which, in turn, feed a complex network of main canals. Water is generally supplied throughout the network below the surrounding farm ground level, which requires farmers to lift water (using pumping devices) from the watercourse supplying their farms.

In 1981, the MWRI initiated the Irrigation Management Systems Project (IMS) with USAID funding. The IMS Project was amended in 1984 to take advantage of the seven-year Egypt Water Use and Management Project (EWUP, 1977-84), an interdisciplinary project implemented by the MWRI. The recommendations of that project related to farmer participation in irrigation management were:

- Farmers should be involved in improvements to the water delivery system,
- Farmers must play a role in ensuring more efficient operations, improved maintenance and protection of physical works,
- Farmers should become involved in management of water,
- The need for a special well-trained cadre of professionals (IAS) for generating new farmer responsibilities related to water delivery, water use and organization of farmers and to train farmers in these skills,
- Continued farmer involvement is essential for improved operations, water scheduling, mesqa improvements and renovations of branch canals.

As a successor to EWUP, the Irrigation Improvement Project was added as a component of IMS in 1987, and has since evolved organizationally to sector status within MWRI with a number of projects for irrigation improvement assisted by several donors and international

lenders. Participatory irrigation management began in a formal way under the IIP, and while many lessons have been learned, insufficient monitoring and evaluation were carried out documenting the impact. A successor phase of the IIP, funded with assistance from KfW and the World Bank, is being carried out as part of a seven-year program. Proposals are underway, with cooperation from other funding resource agencies, for expanding the IIP development package to other command areas.

Under the APRP program of USAID, policy reforms were achieved during 1997-1999 that further strengthened the process of expanding user participation at secondary levels of the irrigation/drainage system. MWRI promulgated a policy allowing for the formation of secondary-level *Branch Canal Water User Associations*. One of the seminal recommendations from that BCWUA policy was to develop and pilot-test a policy on transferring selected water management and operational functions. The GOE transfer of major management responsibilities for sections of the irrigation system above the mesqa-level to stakeholders and/or the private sector is a bold advance toward the goal of participatory management and privatization of the irrigation system. Although irrigation management transfer (IMT) is now a major feature of irrigation delivery in many other countries, this present program under discussion is the first attempt to introduce IMT in Egypt. Successful implementation of this benchmark will be a major turning point for this process to take hold at the grass-roots level of the GOE.

Unlike earlier irrigation improvement efforts in Egypt (e.g. EWUP, ISM, and IIP), which can be classified as “*farmer participation in irrigation improvement*”, the IMT model allows the private sector to take managerial and financial control over operation and maintenance. This will result in direct and immediate reductions in government expenditures, freeing government funds to focus on those tasks the private sector is unable to effectively undertake. In the approximately 30 countries where IMT has been introduced so far, the types of reported impacts include:

- An overall reduction in the cost of irrigation,
- Enhanced financial self-reliance of irrigation schemes,
- Expansion of service areas,
- Greater irrigation water efficiency,

- Higher quality technical services to end-users, and
- Increase in cropping intensity and yields.

The incentives for the GOE and farmers to undertake this initiative, therefore, are clear and compelling. As a condition of handing over responsibilities, management transfers are often accompanied by physical rehabilitation of the systems. In most countries, service quality improvement and sustainability of such efforts have remained constant or have improved.

Under IMT models in other countries, private sector entities assume managerial control, but not ownership, over the physical infrastructure and its operations. These management entities normally operate over relatively large areas, and can be in the form of water user associations, irrigation districts, water management districts, private irrigation authorities, cooperatives, or shareholder enterprises. They are usually financially autonomous, within parameters established by enabling statutes or decrees, and are able to hire or contract for technical operational and management services. Management transfer can be partial, incremental or total. During Tranche III, a plan for partial transfer through branch canal O&M cost sharing was negotiated with two branch canal WUAs and the GOE.

MWRI, through this IMT policy initiative, has set in motion a long-term evolutionary process, which will allow the GOE to significantly reduce its costs while continuing to expand its coverage and services in other areas. Management transfers that occur in a supportive socio-technical context result in improved quality and efficiency of irrigation water delivery, which in turn will enhance profitability of irrigated agriculture and decrease the cost of irrigation.

2.2 Objectives and Expected Impact of the IMT Policy Reform

The objectives of this benchmark are that:

- GOE formally determines the prerequisites for introducing the hand over of management responsibilities to stakeholders and/or the private sector, in light of international experience;
- GOE defines the strategies and steps required to implement partial, incremental and total management transfer in all categories of land, including old lands; and

- MWRI issues a policy document on transfer of irrigation management responsibilities to the private sector.

There are many examples of management transfer programs in countries as diverse as Mexico, Colombia, India, Nepal, Turkey, Senegal, the United States and Indonesia which have demonstrated positive results involving farmers and reducing government expenditures. A literature review suggests that there are certain principles, which tend to exist in successful secondary level user associations in many countries. These include:

- Clearly stated aim and purpose in a charter backed by appropriate legislation and policies,
- Clear incentives for water users who devise their own rules and clear sanctions for those who violate these rules,
- Improved services to water users if they are expected to mobilize financial and other resources for O & M and irrigation improvements,
- Clear roles and responsibilities for water suppliers as well as water users, accountability and transparency of irrigation agencies and WUA members,
- Time and flexibility so that water users and suppliers can learn to be successful, and,
- Monitoring (process documentation) to chronicle the records for future reference.

2.3 IMT Working Group and Steering Committee

The work of this benchmark is being carried out by the members of the working group under the supervision of the Steering Committee and IMT Task Force. The IMT Steering Committee is comprised of MWRI Steering Committee members with additional support provided by the Chairmen of the Mechanical and Electrical Department and Drainage Authority of MWRI. The working group has been assisted by several local consultants. Technical input also has been provided by consultants from MWRI experienced in: water user participation, ministerial institutional management, and physical/mechanical operations.

This benchmark is being implemented over a two-year period and is divided into two phases.

Phase I focused on the following:

- Analyzing IMT experiences in other countries;
- Assessing the impact of the program to develop branch canal water user associations and water boards in Egypt;
- Preparing a clear understanding and consensus view regarding which components of irrigation and drainage are to be included in the Egyptian IMT program;
- Developing the results of these analyses into a set of prioritized directional guidelines and policy for Egypt;
- Identifying an IMT strategy or multiple strategies suitable to the Egyptian context and incorporating this into the IMT policy;
- Considering all approaches and strategies for IMT, involving the private sector, especially water users and their organizations in all categories of land (new, old, old-new, groundwater, etc.); and
- Issuing a policy document on irrigation management transfer, with a plan for phased implementation in the selected areas, focusing on the following priority issues:
 - administrative aspects of IMT,
 - harmonizing all relevant GOE laws with IMT process,
 - assessment of water user interest in, and expectations of, the IMT process,
 - estimate of potential private sector capability in water delivery and O&M,
 - evaluation of irrigation and drainage practices in each study area,
 - feasibility of alternative IMT strategies, including partial vs. complete transfer.
- Conducting a study tour to selected countries with major international experiences in Irrigation Management Transfer providing useful lessons for Egypt to review conceptual framework, approaches to IMT, and initial results and impact, with a view toward determining keys to effective implementation and long-term sustainability.
- Assessing the legal requirements for formal implementation of management transfer.

Early in the process a high-level ministerial Steering Committee on Irrigation Management Transfer under the aegis of the EPIQ project Steering Committee was established. The IMT Steering Committee has been given decision-making authority and direct liaison with the Minister's office relative to the importance of future MWRI program and policy decisions. Steering Committee members have participated in a series of activities providing exposure to various international experiences in irrigation management transfer to the private sector, as well as in techniques and methods of institutionalization.

2.4 Irrigation Management Transfer: Experiences from Other Countries

By the term, "irrigation management transfer", we mean the reduction of the government's role in irrigation management and the corresponding expansion of the role of water users and other private-sector institutions in irrigation management. Inclusive of this are numerous institutional changes involving enhanced private sector control, authority, responsibility, resource mobilization and profit as well as cost sharing in the management of irrigation.

The IMT Working Group completed a review of reports and legislation from a number of developing countries in Latin America, Africa and Asia, in order to ascertain a reasoned perspective. A chart was prepared that highlights the experiences of the transfer process in many of these countries, and has been drawn from information contained in many of the documents. The information in this chart (Appendix III), summarizes the basic information regarding type and modality of transfer and reported impacts on operations, maintenance, agricultural productivity, economic productivity, and irrigation finance.

The IMT experiences in many of the Latin American countries antedates transfer to the private sector in Asia and Africa. Much of the work has been carried out on a pilot basis although in 1988 Mexico instituted a major institutional reform program to transfer 77 irrigation districts (3.2 million ha.) from the Government to WUAs for lateral canals. Included as part of this process is establishment of WUAs at the main system level.¹ In the 1970's, a few public irrigation systems in Colombia were converted to management by WUAs, a process that became a nation-wide program the early 1990's. In addition to

¹ A structured study tour to Mexico and California was undertaken in November 2000 by MWRI under the sponsorship of USAID and organization of the Institute of International Education. The results of this study tour have been issued as a separate document.

positive impacts in terms of irrigated agriculture, an interesting ancillary example of the effects of IMT in the Dominican Republic indicate that transfer of management from government to local WUAs has reversed negative environmental degradation due to salinization, waterlogging and declining land productivity.

A number of examples of transfer in Africa were studied. In some cases, national budgets that had been used to operate and maintain systems were seriously reduced or eliminated, leading to an irrigation system “commercialization” process. In Nigeria, a case in point, systems have had to become largely self-financing. The government found that in order to motivate farmers to pay their share of costs, import restrictions had to be instituted, and production tax breaks applied. In Madagascar, as an incentive for farmers to take over management and operations of the system of distributary canals, the government offers to rehabilitate the systems.

In Asian examples, WUAs in Japan, South Korea, Taiwan are shown to have considerable political strength and elaborate formal operational terms of reference. Several major systems in India reportedly effectively manage large distributary canals. In the Philippines the process of transfer has moved in a staged manner since 1982; in spite of reports of successful cases of transfer, few systems in the Philippines have been fully transferred as yet, after nearly 18 years. There is little empirical or anecdotal evidence regarding the effects of transfer or why transfer has not been more widespread in the Philippines. In Sri Lanka the government has expanded IMT from pilot areas to distributaries of large-scale systems, as a result of financial pressures and the recognition of the potential for effective farmer management. This has resulted in a new formalized division of responsibilities between the government and farmers in irrigation systems. In Nepal, the government is employing a “joint management” strategy, which calls for partial transfer to users and continued technical oversight by the government. In Indonesia the government is now in the twelfth year of a 30-year program to transfer small irrigation systems (below 500 ha.) to water users. As yet, main system transfer is not a feature of the program.

2.5 Cooperating Agencies for the IMT Policy Reform

Transfer of water management functions requires a multi-disciplinary approach, involving a number of agencies and authorities. The IMT benchmark Steering Committee and Working

Group therefore have representation from the following units of MWRI:

- Project Steering Committee and IMT Task Force
- Irrigation Department
 - Irrigation Advisory Service
 - Irrigation Improvement Sector
 - Groundwater Sector
 - Horizontal Expansion & Projects Sector
 - Mechanical & Electrical Department
 - National Water Research Center
 - Water Communications Unit
 - Drainage Authority (EPADP)
 - Water Policy Advisory Unit

In addition, the IMT Working Group maintains regular contact with other agencies and donors also involved in privatization and user management. Among these are:

- American University in Cairo (Desert Development Center),
- Multilateral Donors: UNDP, IFAD, World Bank, IDRC, and
- Bilateral Donors: USAID, JICA, GofNetherlands, KfW, GofItaly

3 IMT Policy Development Program

Approved by IMT Steering Committee

The chief benchmark output for the first year is the IMT policy statement and its supporting clauses. In preparing this policy statement MWRI took into consideration performance shortcomings, assessment of stakeholder participation options and capacity, identification of water management units and functions to be transferred, identification of changes to be made in MWRI units, and changes in legislation to support the IMT process.

The IMT policy comprises the following features:

- Objectives and justification of the IMT policy;
- Legal basis for the IMT policy;
- Aspects of the system to be transferred;
- Management functions to be transferred;
- Operational functions to be transferred;
- Types of entities to take over from MWRI;
- Process and method of organizing and formally registering new entities;
- Phased implementation timeframe for pilot testing new policy, and thenceforth, wider application of policy;
- Responsibilities to be transferred based on an integrated hydraulic command area that combining irrigation and drainage functions;
- IMT initiatives should be carried out according to the following land classification priority:
 - Old New Lands
 - New Lands
 - Old Lands (esp. improved and partially improved command areas)

Phases 1 and 2 above assume that rehabilitation of the physical infrastructure would be carried out as part of the transfer process, on a negotiated cost sharing basis, and be monitored by a joint committee comprised of technical units from the MWRI Irrigation Department, the Drainage Authority, and the Mechanical and Electrical Department.

The private sector and/or user-groups' capability to take on O&M responsibilities has four dimensions: technical and/or physical, organizational, financial, and willingness. An assessment was carried out through multiple focus-group meetings at the four designated pilot areas to determine the viability of secondary-level organizations to take on water management O&M responsibilities. This appraisal level assessment deals with water users' financial capability and willingness dimensions. It is presumed that the technical dimension will be satisfied by technical support and advice from MWRI specialists. The farmers' organizational capability is already evident based on the establishment of a broad network of WUAs through the IIP program, the successful formation of BCWUAs under the APRP project, and the recent launching of the MWRI Water Boards Project.

Focus group sessions were held in all pilot command areas with the following results:

- All respondents identified manual cleaning and weed removal from the branch canal as an activity farmers could take on immediately through its BCWUA. Many said the BCWUA could take on dredging activities, pitching and trimming into the canal bank using their own technical and financial resources. Most felt that canal maintenance could be conducted by the BCWUA at a lower cost than a private company would do it, and that the removal of encroachments into the canal could be better handled by the BCWUA.
- All respondents indicated that the BCWUA could perform these activities at a lower cost than a private company or contractor. Most respondents indicated that the BCWUA could handle mechanical dredging tasks after receiving training and technical supervision. In addition to the cost savings from taking over O&M responsibilities, the BCWUA would also benefit in the following ways:

- Improved speed and scheduling of maintenance operations.
 - Higher quality work
 - It was stressed that under the current system, canal maintenance is often scheduled and conducted at times inconvenient for crop water requirements. (For example, yields will be significantly reduced if only one irrigation of wheat is missed). Anticipating irregular availability of water at such times, farmers tend to over-irrigate prior to the rotation they expect to miss, also resulting in lower yields.
- Most farmers and engineers believed that gains in farm income due to increased crop productivity are likely to be higher than the savings in O&M costs. The farmers expressed a willingness to take on the O&M activities on the branch canals. Their attitude clearly indicates a desire to minimize discussions and accelerate the pilot transfer process.
 - The stakeholder focus group sessions revealed that farmers expect yields will increase, if branch canal O&M activities are coordinated, so as not to conflict with satisfying crop water requirements.
 - Specific questionnaire responses and open-discussions revealed that more equity in water distribution could be attained as a result of the improved coordination of deliveries with needs. Improved delivery to the tail-end users was the primary justification of expected increases in productivity.
 - All focus groups indicated that trash removal and preventing dumping trash and sewage in the canals, would be improved if BCWUAs had the authority to maintain the canals and punish polluters. The Irrigation Department now has that mandate, but do not have the manpower or other resources to enforce it. The farmer members of a BCWUA would be on site continuously and be aware of pollution violations. Clearly, there is an inherent opportunity for improved environmental conditions and the environmental stability in the continuous on-site management that a BCWUA could provide.
 - Focus group session results indicate that farmers strongly believe they can do many of the branch canal O&M operations at lower cost than the current system of contracting these operations out to private companies. Overall, farmers expect a cost reduction of slightly more than one third. Furthermore,

they believe the BCWUA would perform higher quality work because of the vested interest in the outcome. This seems to satisfy the reduced cost indicator, at least at the appraisal level.

- Both the secondary and primary data indicate that a BCWUA taking on the O&M responsibilities of the branch canal is a financially viable irrigation management transfer, given that there is a transition period during which the BCWUA stabilizes its operations and financial position. The BCWUA will need support, both technical and financial, from MWRI (Irrigation Department and IAS) during the transition period.

3.1 Pilot Site Selection: Summary of Process and Outcome

The IMT Steering Committee, upon recommendation from the IMT Benchmark Working Group, determined that the following steps be taken as part of the program preparation of the implementation phase (these activities will be reported in complete detail in the final benchmark report at the end of Phase 2):

- It was decided that four pilot IMT areas representing three land categories be selected, instead of two as specified in the MOU. Site selection criteria should focus on the highly problematic areas where improvement of the management system is needed; though problems should not be so complicated that they hinder the transfer process.
- The selected sites should be used as viable demonstration areas for testing the IMT policy, and should be representative of their land category in terms of position, accessibility, infrastructure, services and facilities; and
- There should be demonstrated willingness and commitment on the part of stakeholders (including farmers, officials, political entities, and People's Assembly representatives) to support and fully participate in the IMT process.

Pilot areas selected according to the above criteria include:

- New Lands: New Shebab in Sharkaiya (high water delivery cost)

- Old Lands: El Nazl area of El Bahr El Sagheer in Mansoura (partially improved tertiary command area); Beni Abeid of Serry Canal, El Minya (improved system under USAID-funded IIP)
- Old New Lands: South Tahrir in Beheira (opportunity for integrated water resources, surface and ground water)

A Ministerial Decree designating the pilot areas was issued by the MWRI Minister, to be later followed by under secretarial-level decrees for detailed implementation, as in the case of the Tranche III BCWUA benchmark.

3.2 IMT Phase 2 Activities Initiated During Year 1

The Phase 2 activities carried out during the first year, which led to the formulation of the formal policy did not fall under the first year work program. These activities will be reported in the final benchmark report (December 2001) and include:

- Final selection of IMT pilot areas for Phase II;
- Focus group meetings with stakeholders at the selected branch canals;
- Study tour to Mexico and California, USA to investigate the strategy and impact in selected countries having an IMT program,
- Comprehensive socio-economic survey of the four IMT pilot command areas,
- Physical rehabilitation assessment of the four IMT pilot areas,
- Preparation of a Phase II IMT Work Plan, detailing the steps in implementing the transfer process.

4 Policy on Irrigation Management Transfer

The policy statement on *irrigation management transfer* (IMT), which mandates handing over water management responsibilities from the GOE to stakeholders and/or the private sector, focuses on the major management and operational responsibilities irrigation and drainage network sections above the mesqa-level.

This policy is consistent with, and supportive of, overall GOE objectives toward increasing private sector involvement in all levels of the irrigation and drainage network. Although irrigation management transfer (IMT) is a major feature of irrigation delivery in many countries, IMT is only now being launched in Egypt.

The IMT policy adopted by MWRI allows the private sector to take managerial and financial control over operation and management. This will result in direct and immediate reductions in government expenditures, freeing government funds to focus on those tasks the private sector is unable to effectively undertake.

It is expected that impact of IMT will result in:

- An overall reduction in the cost of irrigation,
- Enhanced financial self-reliance of irrigation schemes,
- Expansion of service areas,
- Greater irrigation water efficiency,
- Higher quality technical services to end-users, and
- Increase in cropping intensity and yields.

4.1 Objectives of the Policy Statement

The IMT policy statement objectives are to:

- Determine the prerequisites for introducing the handover of management responsibilities to stakeholders and/or the private sector in Egypt;
- Define the strategies and steps required to implement partial, incremental and total management transfer in all land categories, including old lands; and
- Consider the role and responsibilities of MWRI in the transfer process.

The formulation of this policy entailed consideration of the following variables:

- IMT experiences in other countries,
- Priority focus on the water users' role in IMT during the initial phase,
- Strengthening the program in Egypt to develop branch canal water user associations, and
- Harmonizing all relevant GOE laws with the IMT process and objectives.

4.2 Policy on Irrigation Management Transfer

The official IMT policy is attached as Appendix A, in Arabic. The official English translation is provided below.

In a phased process of application, the MWRI will transfer selected sub-sections of Egypt's irrigation and drainage network to users and/or the private sector acting on behalf of the users.

IMT Policy Clause 1. Under this policy IMT is in an evolving state, in that dynamics and features of the policy will not change, although implementation strategies and impacts may be reviewed and considered at regular intervals.

IMT Policy Clause 2. The IMT policy is applicable in all categories of land in Egypt.

IMT Policy Clause 3. MWRI may maintain a permanent IMT Task Force, to advise and assist in the implementation and monitoring of the IMT policy.

IMT Policy Clause 4. To effect a transfer, MWRI and the transfer entity will enter into an agreement. The agreement will detail the conditions of transfer, functions and responsibilities are to be transferred, and timetable for implementation.

IMT Policy Clause 5. Under the IMT policy model, private sector entities will take over managerial control over the physical infrastructure and its operations. Ownership of the physical infrastructure of the system will remain with the Government.

IMT Policy Clause 6. Transfer of operations and maintenance will be made to user-based institutions operating at the secondary level, e.g. branch canal water user associations or their representative bodies, private irrigation companies, registered cooperatives, or registered shareholder enterprises. It is expected that such institutions would be financially autonomous, within parameters established by enabling statutes or decrees, and able to hire or contract for technical operational and management services.

IMT Policy Clause 7. Management transfer can be partial, incremental or total, and will be determined on a case-by-case basis in the process of negotiation. Relevant factors to be weighed include, 1) size of command area and discharge, 2) technical complexity of the sub-system, 3) technical and managerial capabilities of the users, and 4) current and projected resource base of the local institutions. Management transfer in future phases of the process may focus on larger areas or higher levels in the water resources network.

IMT Policy Clause 8. An IMT strategy for special development areas, e.g. El Salaam Canal, Bostan, Toshka, etc., may be identified as these areas become populated and irrigated agriculture is initiated.

IMT Policy Clause 9. As a prerequisite to entering into the agreement, MWRI and the transfer entity will assess the condition and performance criteria of the physical system to determine what modifications/improvements are required to upgrade the system to an acceptable technical level. The agreement will specify the nature of the work to be carried out, the timeframe, and the method for financing the work.

IMT Policy Clause 10. MWRI, in consultation with stakeholders, including local authorities, will assess socio-economic criteria to determine if a user association is ready to assume O&M responsibilities.

IMT Policy Clause 11. Reclaimed lands and areas improved under the IIP may be given priority for IMT implementation during the early stages, as strategies are perfected for application in old lands.

IMT Policy Clause 12. As part of the evolutionary policy on IMT, the IIP and EPADP tertiary programs should be harmonized into a single developmental package for simultaneous implementation.

IMT Policy Clause 13. The agreement between MWRI and the transfer entity will identify the roles that the MWRI technical units and their staff will assume in relation to the transfer entity. These include technical, supervisory, monitoring, and legal enforcement functions.

IMT Policy Clause 14. The revised Law on Water Resources and its by-laws, when finally approved, will support the IMT process. Until such time as the new law is officially enacted, the undersecretary of state in each governorate will officially sanction a ministerial decree for the formation of the pilot branch canal water user associations.

IMT Policy Clause 15. The Irrigation Advisory Service (IAS), under the MWRI Irrigation Department, will have primary responsibility for the organization and preparation of the transfer entities involved in the transfer process. The organizing process follows the MWRI policy on BCWUAs, established June 1999.

IMT Policy Clause 16. The IAS will apply an eight-step BCWUA strategy for IMT, to include the following:

- Collection of basic information needed to organize and register BCWUAs for IMT:
 - a. Profile of each branch canal
 - b. Data collection (e.g. maps, area served, agronomic and water delivery data)

- The branch canal will be divided into natural hydrological reaches (i.e. head, middle and tail). Influential persons will be identified on each reach for initial entry-point contact.
- Irrigation district and IAS field teams will hold several individual and joint meetings with influential farmers on each reach. Field teams will hold additional meetings with branch canal stakeholders on each.
- Election of reach committee: farmers on each reach will nominate representatives to sit on the BCWUA Executive Council.
- Establishment and convening of Executive Council of Branch Canal Water User Association. Officers (Chairman, Vice-Chairman, Treasurer and Secretary) will be selected from among the Executive Council members.
- Governorate MWRI Undersecretary of State issues a decree formalizing the formation and registration of Branch Canal Water User Association for IMT.
- BCWUA will establish and equip an on-site office.

IMT Policy Clause 17. As part of the organizing process the IAS will train the stakeholders in managerial, administrative, fiscal, and technical aspects of the transfer process and operation of the system.

IMT Policy Clause 18. Overall BCWUA role and responsibilities in the IMT process:

- As part of the irrigation management transfer process the Executive Council will assume operational and managerial control over the BCWUA, inclusive of planning, monitoring, fiscal management and implementation. Additionally, the EC liaises with other major stakeholders in the process, including the District Engineer, the IAS and other critical units of MWRI, (including EPADP and MED).
- Monitoring irrigation and drainage performance and requirements and the water level in the area served by the branch canal.
- Regularly preparing observations and recommendations on branch canal issues for joint review with MWRI officials.
- Scheduling and water deliveries between branch canals and mesqas.
- Regularly conducting and overseeing branch canal maintenance work for pitching, weeding and embankments and gates, as well as leveling and compacting of embankment pads.
- Assuming major responsibility for the establishment and strengthening of mesqa-level Water Users Associations

- Managing BCWUA internal finances, including determining fee assessment, and internal administration.
- Interfacing with public sector authorities, e.g. Irrigation Department, MALR, EPADP, District Council, etc., regarding problems that arise on the branch canal.
- Assisting farmers on the branch canal with seasonal crop plans, collecting cropping plans for each mesqa, and reviewing with Irrigation Department and MALR.
- Following up on the cropping plan implementation and reporting back to the irrigation or drainage authority directorate.

IMT Policy Clause 19. To formally attest to the legitimacy of the new Branch Canal Water User Association, the governorate MWRI Under-Secretary will issue a registration certificate on behalf of the Minister by ministerial decree. The BCWUA upon submission of its membership charter, list, by-laws, and plan of action. Copies of the MWRI undersecretarial decrees for the pilot IMT canals will be annexed to the IMT agreement.

IMT Policy Clause 20. The MWRI will provide adequate resources to the Water Communication Unit and the IAS to spearhead stakeholder training in principles and aspects of implementation of IMT. This training may include short courses, development of awareness materials for literate and semi-literate audiences, and wider mass media applications.

5 Irrigation Management Transfer

Phased Implementation Plan

A major feature of the IMT policy preparation process is a phased implementation plan that addresses the major issues likely to be encountered. The IMT Working Group implementation plan includes the following elements:

- Legal changes required to support the IMT process, including contracting and assessment capabilities;
- Clear definition of roles and relationships between public and private sector entities as they relate to IMT;
- Clear definition of administrative and financial management systems for O&M;
- Training of staff, and development of plans for organizational restructuring;
- Arrangement for provision of support services;
- Development of Branch Canal Water User Associations;
- Upgrading of the physical irrigation/drainage infrastructure as part of the transfer process.

5.1 IMT Implementation Plan Activities - Year 2001

During the first year following promulgation of the MWRI IMT policy, a number of major issues are to be addressed, including:

- All legal reforms, which will support the IMT process should be finalized. The MWRI will review the laws and regulations to determine which might mitigate progress in the transfer process, and can be amended or changed. The IMT Steering Committee will approve recommendations to the Minister of MWRI.
- The mobilization of political support at all GOE legislative and executive branch levels.
- Support among all stakeholders is to be generated through multiple focus group meetings, workshops and conferences.
- IMT pilot program staging activities:

- Four pilot areas are to be the focus of the IMT policy testing process. These areas represent a variety of locations, operating and water management environments, socio-economic characteristics, land-holding patterns, and technical issues.
- Branch Canal Water User Associations to be organized by the IAS
- Stages and categories of transfer to be negotiated for each pilot system, with provision made at all levels, including mesqas, branch canals, secondary and primary drains, and main canals,
- Training of stakeholders to be incorporated into all planned activity areas, particularly those O&M functions which are to be transferred,
- Consensus agreement on methods of revenue generation, including direct assessment, and contracting for works and services,
- Consensus agreement on physical rehabilitation works required as part of transfer process, and method of cost-sharing for same,
- Issuance of ministerial decree sanctioning the method of revenue generation for the pilot areas,
- Transfer timetable to negotiated among BCWUAs and MWRI
- Major responsibilities to be transferred to the users at the branch canal level include:

Maintenance:	Weed removal	100% user liability
	Bridge & minor structure repair	100% user liability
	Routine canal cleaning	100% user liability
	Maintenance of tile drains	100% user liability
Operations:	Water distribution	100% user liability
	Operation of control structures, flow measuring devices, & network & equipment maintenance	100% user liability

It is expected that the BCWUAs will assume responsibility for carrying out major works and bearing their costs, after having received adequate training and on-site supervision. The Irrigation Department and Drainage Authority would continue to supervise and provide on-going technical assistance, in accordance with the revised law:

- Monitoring and Evaluation of IMT process using combined economic, engineering and PRA methods.
- Process Documentation by IAS on the 4 pilot areas.
- Training and capacity building.
- Incorporate accountability and transparency into BCWUAs activities.
- Review and refine MWRI IMT policy, based on results of the pilot phase first year.

5.2 IMT Implementation Beyond Initial Pilot Phase

The revision to Law 12 will provide the legal basis for long-range planning to transfer sections of the irrigation system to users or their representatives. An evaluation of the pilot phase, to be carried out by the end of 2002, will provide direction for IMT process replication and expansion. By 2012, it is expected that several main canals and main drains will be identified for phased transfer. Each branch canal or secondary drain on the main system will be turned over to users in preparation for the transfer at the main level. The IMT Working Group recommends that MWRI prepare a master plan for the transfer of the irrigation and drainage network sections to the year 2025.

6 IMT Implementation Plan Phases

Phase I (end of 2000)

- Legal reforms Supporting the IMT process.
- Formulation of IMT policy.
- Mobilize political support as legislative and executive levels
- Consensus among stakeholders through multiple focus group meetings workshops and conferences.

Phase II (ending 2001)

- Four pilot areas to be focus of IMT policy testing process, representing a variety of operating management environments.
- Contracting procedures between MWRI and private sector to be formulated .To include detailed description of stakeholders' role.
- Training of stakeholders, particularly regarding O&M and organizational management.
- Process documentation by IAS in pilot areas.
- Review and refine IMT policy, based on results of the pilot phase.

Phase III (ending 2002)

- Consensus agreement on methods of revenue generation, including direct assessment and contracting for works and services
- Pilot area replication and extension
- Major responsibilities to be transferred to the users at the branch canal level focus on O&M.

Phase IV (5 Years ending of 2007)

- Issuance of ministerial degree sanctioning the method of revenue generation for the pilot areas and negotiations of transfer time table
- Capacity building: BCWUAs take charge after having received adequate training and on-site supervision MWRI to supervise and provide on-going TA.
- Monitoring and Evaluation of IMT process using combined economic, engineering and PRA methods.
- Pilot developed for federation of BCWUAs.
- IIP and EPADP sub-surface drainage amalgamated into one program at water district or public canal level.
- Policy/program evaluation and refinement

Phase V (5 Years ending (2012)

- By 2012 IMT to have been implemented at the public canal level (moderate size). Each branch canal or secondary drain on the public canal system will be turned over to users in preparation for the public canal level.

- Continuous M&E. Impact assessment.

Phase VI (10 years ending 2022)

- Consolidation of federation into district command areas

Phase VII (Post-2022)

- Main canals and drains transferred to private management
- Implementation of IMT at regional level (e.g. East Delta, West Delta, etc.)

6.1 IMT Process Documentation

The documentation and recording of the irrigation management restructuring process is a critical step for allowing participants to maintain a history of their local institution, and for service entities such as the Irrigation Department, to understand the nature of the organization. *Process Documentation*, therefore, will be a major aspect of the implementation of IMT pilot work plan. The Irrigation Advisory Service will coordinate the process documentation, following the methodology and pattern established during the Tranche III benchmark work plan on BCWUA development.

6.2 IMT Under Secretarial Decrees for BCWUAs

In order to formally certify the legitimacy of the new pilot IMT Branch Canal Water User Association, the governorate Under-Secretary for MWRI will issue a formal decree on behalf of the Minister. This document, authorized by the ministerial decree, is to be issued to the BCWUA upon submission of its membership charter, list of members, by-laws and plan of action.

7 Proposed Revisions in Water Law in Support of Irrigation Management Transfer

MWRI has drafted a revised national water law, amending Law 12 on irrigation and drainage. The draft is currently under formal review. The IMT Working Group assisted the task group responsible for drafting the revised law in areas directly affecting user participation and management transfer. The relevant sections of the draft law are indicated in Articles 32, 56 and 57, respectively. MWRI will undertake the process of formalizing the legislation before it is officially enacted. The primary distinguishing feature of the revised law lies in its inclusiveness with respect to levels of the irrigation system and types of entities that may be assigned managerial and operational aspects of the irrigation and drainage network. The Articles of the draft revised law are as follows:

Article 32 - The Ministry of Water Resources and Irrigation is authorized to manage and regulate the distribution of water from all sources for all the uses indicated under Article (2), paragraph (b) of any kind whatsoever on private intakes and openings. The Ministry may determine or modify the purposes of water uses. The Ministry determines, during the period of the least needs, the dates of rotations of any kind. The details of these dates are announced by administrative ways by each local competent general management.

The Ministry of Water Resources may assign a specialized company or a union or an association or a board of water users to manage, operate, and maintain parts of irrigation and drainage branches; private mesqas, drains, or title drains; groundwater wells; joint reservoirs; methods and means of improved irrigation; or reservoirs at the cost of the users. The water union, associations, and boards act independently and are created and formed by a decision issued by an authority to be determined by the Minister of Water Resources and Irrigation in each governorate and in accordance with the executive regulations of the law.

Article 56 - The Ministry of Water Resources and Irrigation shall regulate by decision the method of managing and using improved irrigation systems in the old lands. The systems are applied by establishing unions and associations of the water users at the level of improved canals and mesqas.

Article 57 - The costs of improving the private Mesqas and contents in the old lands are collected after the Ministry of Water Resources and Irrigation determines the costs of their construction in accordance with the rules described under Article 62 of this draft law.

Article 71 - The Minister of Water Resources and Irrigation or whomever he may delegate is authorized to issue licenses to irrigate the new lands. The licensee shall follow such irrigation method as may be described in the license. If the licensed irrigation method is not complied with, the department issuing the license may execute the licensed irrigation network at the landlord's or landholder's cost, as the case may be, and collect the cost thereof by administrative way or by the procedures provided under Article (62) of this law.