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***REVISED LAW 12 OF 1984 ON WATER RESOURCES  
AND ITS EXECUTIVE REGULATION***

***Report No. 48***  
**Main Document**

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**Water Policy Program**

**International Resources Group**

**Winrock International**

**Nile Consultants**

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AND ITS EXECUTIVE REGULATION***

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# **Executive Summary**

## **Introduction**

Law 12/1984 and its supplementary Law 213/1994 define the use and management of public and private sector irrigation and drainage system structures; including main canals, feeders, and drains. They also provide legal direction for the use and maintenance of public and private canals, and specify arrangements for cost recovery in irrigation and drainage works. Law 12 regulates the use of groundwater and agricultural drainage water and legislates other factors such as protection against flooding, navigation and coastal protection. Penalties for violation of the laws and by- laws are also specified.

The supplementary Law 213 provides the Ministry of Water Resources and Irrigation (MWRI) with the legal foundation for involving landowners, at the mesqa and farm levels in irrigation system improvements. It also established a fund to finance projects related to the development and maintenance of improved mesqas and to promote water use awareness.

In light of prevailing and projected water supplies, demographic, and ecological conditions in Egypt, the laws are in serious need of reconsideration. Law 12 and its executive regulation have been revised to take into account current Government of Egypt (GOE) policies on liberalized crop choice and horizontal expansion of new lands. Implementation of this policy benchmark will significantly improve the ability of MWRI to maximize diminishing resources and to guide Egypt's water suppliers and water consumers into this millennium.

## **Scope of Work**

Benchmark C.5 Phase II of APRP Tranche IV (1/1/2001 – 31/12/2001) states that “The GOE (MWRI) will prepare revisions to Law 12/1984 on irrigation and drainage and its supplementary laws, to improve effective water resources management.” This report has been prepared in support of this benchmark. Given the major changes in the visions, policies and water resources situation in Egypt, most notably the increasing scarcity of water, the anticipated diversion of Nile water to new lands, and the importance of stakeholder participation, Law 12 was carefully reviewed and revised in Phase I of this benchmark.

The objective of this benchmark Phase II focused on the development of executive regulation to go with the modified Law 12 involving all levels of stakeholders.

### **Need for Reviewing Law 12 and its Executive Regulation**

Law 12/1984 was issued to provide a legal basis for irrigation and drainage issues based on the visions of the 1980's. Given the major changes in vision and policies, the increasing scarcity of water in Egypt, the anticipated diversion of the Nile water to new lands, and the increased importance of stakeholder participation, the law and its executive regulation need to be carefully reviewed and revised.

### **Legislation Governing Water Resources**

Table (1) provides an overview of water laws and water-related laws dealing with water resources and their management. Some of these laws need to be reviewed as some of their articles overlap or conflict with the modified Law 12 on water resources.

**Table 1 Water Laws and Water-Related Laws**

<b>Laws dealing specifically with water</b>			
<b>Law/Year</b>	<b>Subject</b>	<b>Synopsis</b>	<b>Implementing Agency</b>
<b>Law 12/1984</b>	Irrigation and drainage	Regulates the use of water, includes full recovery of sub-surface drainage cost by farmers	Ministry of Water Resources and Irrigation (MWRI)
<b>Law 93/1962</b>	Drainage of liquid waste	Regulates the discharge of wastewater into sewer systems and specifies standards for waste disposal to sewers and for use in irrigation.	Ministry of Housing, Utilities and New Communities.
<b>Law 48/1982</b>	Protection of the River Nile and Water ways	Classifies types of waterways and regulates the discharge of wastewater into these waterways.	MWRI and Ministry of Health and Population (MOHP)
<b>Law 4/1992</b>	Law for the Environment	Provides rules for protection of the environment. Regulates air pollution. Sets standards for industry.	Ministry of Environmental Affairs/Egyptian Environmental Affairs Agency
<b>Law 213/1994</b>	Legalizes WUAs on old lands	Legalizes WUAs at mesqa level and provides for recovery for capital cost for IIP.	MWRI
<b>Law 27</b>	Drinking water quality	Sets drinking water quality standards and regulates monitoring.	MOHP
<b>Laws dealing with Privatization</b>			
<b>Law 203/1991</b>	Public sector business law	Regulates restructuring of Public Enterprises and transfer of government agencies to Holding Companies	Ministry of Public enterprise (MPE)
<b>Law 95/1992</b>	Money market law	Legalizes the sale of shares to employees (Employee Share Holder Association)	MPE
<b>Law 159/1981</b>	Companies law	Regulates the transfer of public sector companies (under law 203) to private sector companies	MPE
<b>Law 100/1996</b>	Law to establish the Egyptian Electricity authority	Allows private sectors developers to invest in electrical power generation projects	MPE
<b>Law 8/1997</b>	Investment law	Regulates while tax exemptions, currency conversions, profits repatriation and protection against nationalization for foreign investor.	MPE
<b>Laws dealing with Agriculture</b>			
<b>Law 113/1939</b>	Land tax	Sets land tax to 14% of the (estimated annual rent of the land cultivated or not)	Ministry of Agriculture and Land Reclamation(MALR)
<b>1939/1992</b>	Land tax	20 laws and decrees were issued in this period with refinements, additions and exemptions	MALR
<b>Law 96/1992</b>	Final land tax	Sets the rental value to 22 times the prevailing land tax. It maintains the land tax at its previous level (14%) but allows for increase in land rents	MALR

## **Analysis and Review of Proposed Modifications in Law 12/1984 and its Executive Regulation**

The current applicable laws governing the State's control of water resources and related installations are incapable of meeting the State's needs in a manner consistent with its economic plan. Therefore, it has become necessary to formulate new rules and amend current laws, including Law 12/1984 and Law 213/1994.

For this purpose, a modified law was enacted to reflect the latest developments, concepts, visions, and inputs related to water use management. The modified law was intended to achieve the following objectives:

- Highlight the concept of integrated water management for different sources, types, and uses considering the social and economic aspects.
- Develop new water resources.
- Define the responsibilities and authorities of governmental and non-governmental bodies at all central, regional, and local levels.
- Encourage water users to participate in water resource management under the supervision of MWRI officials. Private companies should be encouraged to assume this function, passing associated costs and expenses on to the end users.
- Complete the tile drainage networks so they can reach all the existing farmlands and replace the old ones.
- Expand the use of drainage water for irrigation purposes after conducting field studies to determine suitability for use in their existing condition or after mixing them with freshwater.
- Expand the use of groundwater stock for drinking and irrigation purposes.
- Improve and integrate surface irrigation systems modernizing them on the old lands.
- Continue to implement replacement and renovation projects; improve the performance of hydraulic installations erected on canals and drains and the water distribution systems; adjust water balances; and replace or renovate irrigation and drainage pumps at the end of their life span.

- Continue to conserve the use of irrigation water and apply modern irrigation systems such as sprinkling, dripping and other improved methods adopted pursuant to Law No. 12/1984 as amended.
- Benefit from rain and floodwater.
- Amend the organizational structure, job descriptions, and the ministry previous title, now called the Ministry of Water Resources and Irrigation, to reflect the new water policy philosophy.
- Toughen the penalties for the violations of the law concerning water resources and irrigation regardless of the courts' right to impose other penalties legislated by the penal code or other criminal laws.

In order to achieve the above mentioned targets, the Ministry of Water Resources and Irrigation has formulated the proposed draft law in coordination with the governmental authorities concerned with water resources and irrigation affairs, especially, the Ministry of Agriculture and Land Reclamation, the Ministry of Reconstruction, and the local councils.

Two workshops were held. The first one was conducted during Phase I with 50 stakeholders from the ministries with water – resources related management responsibilities, NGOs, water users, public personalities and universities' researchers. The second workshop was held in Alexandria from 4-6 October 2001 and was attended by 22 MWRI key position personnel (Annex D). the purpose of these workshops was to solicit comments on the proposed modifications in Law 12 and the executive regulation.

The remarks and comments made by the above mentioned bodies were taken in consideration while preparing the proposed law and the executive regulation.

The modified law containing 119 articles distributed over 10 parts can be found in the appendices A and B both in English and in Arabic. It is now re-titled to address water resources in general.

The proposed executive regulation includes 125 articles distributed over 8 parts, can be found in the appendices C and D in English and in Arabic.

The modified law was submitted to H.E. the Minister of Water Resources and Irrigation via memo from the head of the Water Policy Advisory Unit. The Minister noted his approval by handwritten note on the memo and instructed that appropriate steps should be taken. A copy of that approval, along with an English-language translation, is included in the following two pages.

The results, findings and recommendations of this benchmark were presented to the MWRI Water Policy Steering Committee at the final Tranche IV Benchmark Workshop held on Nov. 9-10, 2001. The draft version of this report and its appendices were made available to the Steering Committee members and other key officials of MWRI, USAID and other involved GOE entities. Following comprehensive discussion and deliberation, the draft report was adopted by the Steering Committee. The Steering Committee subsequently forwarded its recommendations for this benchmark to H.E., the Minister of MWRI, for approval.



## Memorandum

To: H.E. Minister of Water Resources and Irrigation  
From: Eng. Gamil El-Saved Mahmoud. Director WPAU  
Date: September 24, 2001  
Subject: Revised Law 12 of 1984

I am honored to inform you that the working group of Tranche IV Benchmark on "Revision of Law 12 of 1984 on Irrigations and Drainage" has already prepared the draft of the final revision of the law with its explanatory note (please you will find it enclosed) the revision was undertaken by the working group with support from the MWRI task committee headed by the chairman of the Irrigation Department. The revised law was discussed in a workshop attended by stakeholders representing relevant ministries, NGO and farmers. Stakeholders' comments and feedback were taken in consideration in revising the law.

Also, the working group of this benchmark has prepared the executive regulation that goes with the revised law. Several meetings were held with the MWRI key personnel to put the regulation into its final form. The executive regulation will soon be ready to be presented to the Steering Committee of the Water Policy Project.

Your kind approval of the revised law is requested in order to satisfy the benchmark verification indicator which states "A draft revision of Law 12 of 1984 will be approved by MWRI by December 2001".

To Eng. Gamil Mahmoud

Final Draft of Revised Law 12/1984 is approved  
MWRI Signature

(Mahmoud Abou-Zeid) September 30, 2001

# 1 Introduction

## 1.1 Overview

Water management is a critical element in Egypt's economic viability. In order to be effective and support GOE water policy reforms, water management requires a basic legal structure that provides all relevant agencies and stakeholders with guidelines and instruments for planning for new development interventions, water allocation and deliveries, and operational management and maintenance of the irrigation system. Law 12/1984 on irrigation and drainage was enacted to address these issues. This law was supplemented by law 213/1994, which formalized roles of farmer participation in water management in most categories of land.

Law 12/1984 defines the use and management of public and private sector irrigation and drainage network structures, including main canals, feeders, drains and tile drains. It also provides legal direction for the use and maintenance of public and private canals and specifies arrangements for cost-recovery in irrigation and drainage works. In addition, rules are provided for water allocation, rotations, and seasonal activities such as rice plantation, as well as rules for the construction of water intakes. The law also regulates the use of groundwater and drainage water, and regulates other factors such as protection against flooding, navigation and coastal protection, and general irrigation system protection measures and expansion in new irrigated lands. Penalties for violation of the law and its bylaws are specified. Law 12 focuses almost entirely on issues pertaining to the mandate of MWRI. It does not provide for the involvement of all stakeholders in the planning and allocation of increasingly scarce water resources.

The supplementary Law 213/1994 provides MWRI with the legal foundation for involvement of landowners at the mesqa and farm level for improving irrigation systems. It also establishes a fund to finance projects related to development and maintenance of improved mesqas in IIP areas and to promote awareness with respect to the use of water. Law 213 only provides for water user organizations above the mesqa level on new lands. Establishment of organizations on old lands above the mesqa level requires modification of the law.

This benchmark was implemented over a two-year period and was divided into two phases. Phase I focused on the analysis and review of the law modification in light of prevailing and projected water supply and demographic and ecological conditions in Egypt. Law 12 and its supplementary law 213 were reviewed taking into account the current GOE policies on liberalized crop choice and horizontal expansion to new lands and other new policy reforms. Phase II focused on preparing the final draft of the modified law in its new form to be approved by MWRI as well as working out the details of the law executive regulation.

## **1.2 The Need for Reviewing Law 12/1984 and its Executive Regulation**

Laws 12 and its executive regulation were issued to provide a legal basis for irrigation and drainage issues based on the visions of the 1980's. Given the major changes in vision and policies, the increasing scarcity of water, the anticipated diversion of Nile water to new lands, and the increased importance of stakeholder participation, the laws need to be carefully reviewed and revised. The objectives of this benchmark focused on strengthening capability to manage water resources in an era of increasing water scarcity, including the involvement of stakeholders at all levels in the planning, management, and allocation of water resources.

Revision of the law and its executive regulation should ensure the establishment of the following:

- More efficient integrated water management at all levels of the Egyptian irrigation and drainage system.
- An updated legal code for irrigation and drainage issues to reflect current and projected practices and situations, including the role of the private sector in water management.
- Establishment of a legal basis for all levels of user organizations and water boards in all categories of land in Egypt.
- Better coordination between MWRI, other ministries, and authorities at the local level.
- Increased and more efficient communication and coordination between different sectors of MWRI for planning, implementation, and monitoring.

- Tighter controls over water quality and quantity usage.
- Increased stakeholder involvement in water allocation planning and implementation.
- Improved water delivery and usage efficiency, and more efficient drainage performance.
- Capability to better enforce laws related to water allocation, irrigation and drainage

### **1.3 Purpose of the Report**

Benchmark C.5 Phase II of APRP Tranche IV (1/7/99-12/31/2001) states that “The GOE (MWRI) will prepare revisions to Law 12/1984 on irrigation and drainage and its supplementary laws, to improve effective water resources management.” In support of this benchmark, WPAU/EPIQ carried out the following tasks:

- Worked closely with the MWRI Working Group in the review of Law 12 and its executive regulation.
- Identified new areas and concepts related to improved water use and management, taking into account results of the irrigation management transfer, water quality and water reuse benchmarks, and current relevant issues and policies.
- Held a stakeholder workshop to review and discuss draft being developed for Law 12 executive regulation.
- Prepared the proposed provisions to executive regulation of modified Law 12/1984.

The objective of this report is to outline and discuss changes and amendments that have been considered in developing the modified law and its executive regulation. Modified Law 12 on water resources and its proposed executive regulation both in Arabic and in English are attached to the report (Appendices A, B, C and D)

## 1.4 Benchmark Activities

APRP Tranche IV, Benchmark C5 had two stage implementation plan: Phase I (November 1999 – December 2000) resulted in analysis and review of modifications in Law 12 of 1984 on irrigation and drainage, phase II (January – December 2001) was dedicated to the development of the revised Law 12 and its executive regulation.

Under the benchmark C5 Phase I, the following activities were conducted:

- Established MWRI revision of water resource law task committee.
- Designated of WPAU – EPIQ informal work group.
- Revised Law 12 of 1984 on Irrigation and Drainage and its supplementary Law 213.
- Held several meetings with MWRI working group to analyze and review modifications in Law 12.
- Consolidated sector input into a proposed water law revision report to be submitted to the MWRI Task Committee.
- Completed analysis and review with stakeholders' participation in review of the proposed water resources law revision report.

Phase II was a continuation of Phase I activities. Activities accomplished under Phase II included:

- Prepared the final draft of the modified law in order to be submitted to MWRI.
- Reviewed articles of the executive regulation of Law 12 and Law 213 in order to identify articles requiring amendment or revision.
- Investigated the different articles in the proposed law to find out:
  - Issues that needed to be defined.
  - Articles that needed more details.
  - Issues that required explanation or clarification.
  - Works that required licenses.
- Studied each of the ten parts of the modified law separately and prepared its corresponding executive regulation.

- Reviewed all parts of the modified law along with their executive regulation to ensure there were no conflict or repetition.
- Held several meetings with the MWRI working group to discuss draft being developed for modified Law 12 executive regulation.
- A stakeholders' workshop was conducted to solicit stakeholders feedback on the proposed new executive regulation.
- Prepared the final draft of the executive regulation both in Arabic and in English to be delivered to MWRI for approval.

## **1.5 Organization of the Report**

Chapter 1 provides the background, reviews past benchmark activities completed during Tranche IV Phase I and summarizes the major activities that have been conducted under Phase II. Legislation governing irrigation and drainage is presented in chapter 2. Analysis and review of proposed amendments to Law 12 and its executive regulation are presented in Chapter 3 & 4. chapter 5 discusses conclusions drawn from analysis and review of modifications in Law 12 and its executive regulation.

Finally, this Benchmark Report includes five appendices:

- |                     |   |
|---------------------|---|
| Appendices A and B: | Modified Law 12 in English and in Arabic.               |
| Appendices C and D: | Proposed Executive Regulation in English and in Arabic. |
| Appendix E:         | Stakeholders' Workshop Report.                          |

## **1.6 Steering Committee Approval**

The results, findings and recommendations of this benchmark were presented to the MWRI Water Policy Steering Committee at the final Tranche IV Benchmark Workshop held on Nov. 9-10, 2001. The draft version of this report and its appendices were made available to the Steering Committee members and other key officials of MWRI, USAID and other involved GOE entities. Following comprehensive discussion and deliberation, the draft report was adopted by the Steering Committee. The Steering Committee subsequently forwarded its recommendations for this benchmark to H.E., the Minister of MWRI, for approval.

## **2 Legislation Governing Water Resources in Egypt**

### **2.1 Preamble**

Laws are regulatory formulae governing the relations among individuals or between the state and the citizenry. They define rights and obligations under the specific circumstances in which they were enacted and enforced. Therefore, man-made laws always require evaluation and rectification over time to keep abreast with change, to fill-in a loophole, or to cope with the changing nature of human beings.

Like other legislation, irrigation and drainage laws have been exposed to amendment, abrogation or rectification. This is more so in modern times, which are rampant with continual change and breath-taking developments. The legislators, therefore, intervene from time to time to restore proper regulation or to introduce new governing rules.

This chapter sheds light on features of each law governing water resources, without venturing into the details of the provisions of each law. It also reviews the problems that impede implementation and proposes solutions.

### **2.2 Review of Previous Laws**

#### **Rules and regulations for canals and embankments of 1887**

This was the first quasi-comprehensive legislation for irrigation and drainage. It had been promulgated in February 1894 and is seen as the primordial substance of the laws on irrigation and drainage in Egypt.

The regulations started by defining the canals, the drains and the mesqas. They obliged the beneficiaries on private mesqas to cleanse them and entitled the Ministry of Water Resources and Irrigation to perform this function at the expense of those beneficiaries who failed to do so. It stated that the maintenance of public drain is the sole responsibility of the state, whereas private drain maintenance is the responsibility of the beneficiaries.

The regulations reiterated the provisions of the decree issued in September 1887 concerning protection against floods and the responsibility of the state and landlords in maintaining the embankments heads, crossings, levees, and private structures that are integral parts of the basins.

This was indeed natural, as the end of the 19<sup>th</sup> Century and the beginning of the 20<sup>th</sup> Century had witnessed the co-existence of both basin and perennial irrigation systems. The Nile Delta was transformed to the latter system while the larger part of Upper Egypt remained under a basin irrigation system.

The regulations underscored the importance of protection of rights on the mesqas and drains. They particularly elaborated on procedures of industrial works such as heads and water pipes, and the regulation of boat passage in the Nile mainstream and main canals.

The regulations delineated actions that could damage the irrigation system, such as the erection of a barrage or the placement of water pipe or siphon, without prior permission. Delineated actions included damages to the river embankments, canals, and the drainage system.

Violators were subjected to a fine that ranged from pt. 25 to the real cost of repair, in addition to imprisonment for a period ranging from one day to 60 days. An administrative committee was empowered to pass such decisions. Its members were the irrigation inspector, the district engineer, and three village mayors appointed by the Ministry of the Interior.

In July 1909, the regulations were amended for such cases where the contravention did not require rehabilitation, in which case the fine was set at a maximum of LE 20.

### **Law 68 of 1953**

With the exception of the decree of June 1899 concerning the maintenance works during the flood season and the decree of May 1903 concerning irrigation of the under-irrigated soils,

the above-mentioned regulations for canals and drains remained operative until Law 68/1953 concerning irrigation and drainage was enacted and implemented.

It ensured the irrigation authority full hegemony over water distribution, so as to guarantee equitable access to irrigation water. It also empowered the irrigation authority to prevent irrigation of the agricultural lands outside the set turns or to irrigate the under-irrigated lands at times other than those set by the Minister of Water Resources and Irrigation.

The law specifically dealt with the problem of slow bureaucratic action. It provided for direct communication between the applicant farmer and the irrigation inspector so as to save time and effort. It also made it incumbent upon the irrigation authority to decide on complaints within a specific period from the date of receiving the complaint. As a result, rules of equity have been established. The law had abrogated the irrigation committees and assigned their jurisdictions to the ordinary courts of law.

Law 68/1953 put special emphasis on “Private Properties Relating to Irrigation and Drainage”, by which it meant privately-owned lands situated between the river embankments, the canals banks, the public drains, and lands located 50 meters outside the river embankments and 20 meters outside the end section of public canals and drains. The law considered those lands liable to specific limitations to serve the purpose of irrigation and drainage in their surrounding areas. It provided certain compensations if and when surface soil was taken from such lands or when the outcome of dredging was discarded on them.

The law has regulated the obligatory work for maintaining the riverbanks during the flood. It entitled the Minister of Water Resources, in case the flood was extraordinarily high, to declare a state of emergency. It conferred greater powers on the engineers entrusted with oversight (supervisory) functions so as to counteract over-flooding.

This was the first law that granted irrigation engineers the power of law enforcement agents in providing the facts on irrigation and drainage contraventions.

Some provisions of Law 68/1953 were amended by Law 29/1959, which re-instituted the irrigation and drainage (administrative) committees in lieu of the ordinary courts. Law 164

was promulgated in 1957 to define the procedures to be observed before the administrative committees. It explained, among other things, the format of proving the contravention, the method of notifying the violator and the procedures of summoning him before the administrative committee for passing a judgment on the violation committee.

### **Pumping fees and machinery**

Since the issuance of the decree of March 1881, it has been common practice for the MWRI to issue decrees specifying fees of irrigation by the privately-owned pumps used on the river stream, the canals and the mesqas. But since pump owners tended to overvalue their services, Law 20 was issued in 1953 to set the fees according to the categories defined by the Minister of Water Resources. It conferred on irrigation engineers the powers of law enforcement agents regarding violations of the provisions of that particular law; among other things, with the use of water-lifting machines, conditions and regulations for their use and the validity of licenses. It also granted the irrigation department the authority of withholding the water-lifting machines, managed in violation of the provisions of the law, without waiting for the issuance of the judgment on the contravention in question, as judicial procedures might be prolonged.

### **Fees of irrigation, from public pumps and artesian wells**

Law 87, issued in 1942, stipulated that those fees shall be specified in a decree of the Minister of Water Resources. The philosophy behind this trend was that the lands irrigated easily should have free access to irrigation water and that a fee would be due on lands irrigated by pumped water so as to make up for operational costs. To this effect, a Ministerial Decree was issued whereby an annual fee for irrigating a unit area was set. Again, some artesian well owners overvalued the fees, and the government had to intervene by issuing Law 128/1949, which specified certain procedures for the beneficiary farmers using the privately owned artesian wells for irrigating their lands. It obliged well owners not to decline farmers access to water against the fee categories defined in the decree of the Minister of Water Resources. Irrigation engineers retained their power as law enforcement agents until Law 68/1953 was issued, including provisions for water-lifting machines, their use, licenses, and regulations.

Planting of trees on banks of public canals and drains

Law 28/1941 stipulated that owners of lands situated on the banks of public canals or drains are bound to plant trees, as defined by the Ministry of Agriculture (MOA), on the side of the bank bordering their lands. It also obliged them to maintain those trees and prohibited cutting them without prior permission from MOA, in which case the trees would be sold through public auction by MOA staff. The landlord would receive three quarters of the net price. The purpose of this Law was to promote forestation of the banks of public canals and drains and to expand the country's wood wealth.

### **Law 71 of 1953**

Law 71 was the first Law that regulated rice planting in Egypt. It stipulated that rice planting was not permissible outside regions specified annually by the MWRI. As an exception, rice growing was permitted in Fayoum. The law stipulated that lands with access to artesian irrigation and with infrastructure for drainage might be planted with rice, provided that permission is obtained from the MWRI. Violators were subject to the a fine of LE 25-35 per feddan or fraction of a feddan, which was then equivalent to value of yield per unit area.

The MWRI noticed that court judgments withheld the penalty in many cases, thus encouraging farmers to commit violations of the law. Therefore, Law 250/1956 stipulated that it is impermissible to withhold the enforcement of the penalty.

Law 31/1961 included two major amendments:

- The Minister of Water Resources, in addition to his annual decree specifying areas where rice may be grown, may define a percentage for each region where rice may be additionally grown, provided that the percentage shall be strictly observed so as to ensure availability of water for other plantations.
- The fine for planting rice outside the region specified annually increased proportionately with the increase the rice farm gate price. It was then increased to LE 35-50 per feddan or fraction of feddan.

### **Law 82 of 1956**

On-farm open drains were established at the expense of landlords, based on Law 35/1949. It was later deemed more appropriate by the Ministry of Water Resources to replace the network with tile drainage, so as to maintain the small landholdings. However, implementation was faced with two major impediments:

- Farmers objected to the temporary vacation of their lands for the deployment of drainage pipes.
- The Ministry was unable to access the cost of establishing the tile drainage network.

For these reasons, Law 82/1956 was promulgated. It defined the on-farm drain as “an open or tile drain”, so as to overcome the problem of cost recovery. The problem of temporary vacation of the land was overcome by an earlier law promulgated in 1954, which provided for expropriation of lands for public interest or for the introduction of certain improvements. Likewise, the on-farm drainage Law of 1956 made it obligatory for landlords to repay the cost of establishing open or tile drains.

### **Law 130/1967**

With the expansion of irrigation and drainage networks, navigation was redefined to mean the use of water streams and in-land lakes. Internal navigation was first regulated by Law 13/1917 concerning registration of boats. Later, Law 17/1941 prohibited operation of boats on in-land waters without prior permission (license) from the Ministry of Transport, after the payment of fees and confirmation of technical standards.

The law has conferred upon the employers of the Internal Navigation Division the power of law enforcement agents. Law 75/1946 incorporated one amendment on collection of annual fees by way of administrative sequestration when need arises. Law 10/1956 abrogated Law 17/1941 and regulated internal navigation through such provisions as:

- Adding the Suez Canal to the list of inland water streams;
- using the license for entry into Egyptian sea-ports for loading and unloading;
- making licenses valid only for three years instead of five years;
- issuing a decree specifying safety conditions and determining shipment routes;

- setting a maximum inspection fee before licensing;
- abrogating administrative sequestration as a means of fee collection;
- exempting immobile floats on internal waters from the annual fees;
- multiplying the penalty of fine imprisonment for violations of Law 10/1956;
- imposing a new fine for failure to show the license upon request.

In 1958, a public establishment for internal water transport was created and was converted in 1961 into a public authority. Law 57/1962 was issued to amend some of the provisions of Law 10/1956, including transfer of jurisdiction to the General Authority for Water Transport, reduction in the validity of licenses to two years, and an exemption from loading fees for boats whose loading capacity did not exceed 10 tons. It also made it compulsory for state-owned boats to obtain navigation licenses, having been exempted in the past.

In 1957, Law 130 was issued to regulate anchorage on internal waters. It particularly stated that anchorage shall only be possible on platforms to be specified by the MWRI, in consultation with the concerned ministries. Licenses were issued by the MWRI, thus ensuring safety of water streams and protection of their bank meanders. The law had set an anchorage fee, paid to the MWRI, from which the state-owned boats were exempt. The law provided for the administrative removal of contraventions and recovery of costs by way of administrative sequestration.

### **Law 74/1971**

This law on irrigation and drainage was issued to add novel provisions to existing laws. For example:

- The cost of establishing on-farm drains was considered as preferential as land tax.
- The MWRI informed the land tax authority about the lands covered with tile drainage network so as to reassess the tax such that the rental value becomes proportional to the increase in yield per unit area.
- The MWRI must license the drilling of artesian wells in the Nile Valley, Delta, Natroun Valley and Tahrir province (Directorate).

- Agencies licensing floats on the Nile banks or major canals must obtain an approval from the MWRI to ensure bank maintenance.
- Drainage engineers were given the powers of law enforcement agents.
- Accentuating the penalties for serious contraventions, which were disproportionately penalized in previous laws.
- A special fund was created within the Irrigation Authority with an issued capital of LE 700,000 for the damage repairs, if and when violators failed to make repairs.
- Administrative committees were created to decide on the contraventions stipulated in the law. Each committee was composed of a court judge, the district irrigation engineers and a member of the socialist union (then ruling party). The purpose was to expand the administrative committees instead of having only one committee at the governorate level.

Law 68/1953 (law on Irrigation and Drainage) stipulated that the Irrigation Authority may instruct violators to rectify the contravention within the specified dates. Otherwise, repairs must be executed at the violator's own expense. It also provided for the possibility of completing the repairs first and charging the cost to the violator later, if and when the contravention necessitated immediate repair. Law 74/1971 incorporated a condition that the violator must be officially indicated before being requested to repay the cost of repair.

However, the enforcement of this article has proven difficult, due to the fact that violators are rarely detected, let alone the fact that the committees stipulated in Law 74/1971 were not operative. Therefore, the MWRI reconsidered appropriate ways to catch transgressors of public irrigation and drainage utilities. In 1976, an amendment was introduced to Article 80 of Law 74/1971, to read as follows: "When a transgression on irrigation and drainage utilities is proven, the concerned irrigation engineer has the power to instruct the transgressor to rectify the damage within a set date; or otherwise the repair works will be executed at his own expense. Violators shall be notified in person or by registered recommended mail, or upon receipt of a copy of the technical report prepared by the irrigation engineer. In this case, the violator is bound to pay LE 20 as a deposit to the repair works account. In all cases, the violator shall pay an amount equivalent to the benefits attained as a result of his contravention, according to the categories specified in a decree by the Minister of Irrigation".

## **Law 134/1983 (Concerning rules and regulations for fisheries and aquaculture)**

The law stipulated that the fish farms must be located in fallow lands, as defined by the Ministry of Agriculture. It also prohibited the use of fresh water for this purpose. According to the law, only agricultural drain and lake waters, as defined by the MWRI, can be used. The MWRI sets the rules of water use and the MALR issues the licenses. The law stipulated a clause for imprisonment for no less than three months and a fine of no more than LE 10,000 as penalties for violation of its provisions.

In view of recent years of shortage in rainfall and droughts in North and East Africa, every drop of water is valuable for development. The MWRI has always been keen to maximize the benefits from the available water resources and safeguard them against possible damage and transgression. It has always sought to secure water to meet the increasing demand by the various sectors including agriculture, the largest user of water resources. Short and long term plans were designed and implemented to improve irrigation, rationalize water use and increase the efficiency of on-farm irrigation. These efforts were crowned with the promulgation of Law 12/1984.

### **2.3 Review of Present laws**

#### **Law 12/1984**

In 1984, Law 12 was enacted as a comprehensive legislation on irrigation and drainage affairs. It amended most of the provisions of the previous laws covering, in particular, the following chapters:

Chapter One: Public Properties Relating to Irrigation and Drainage

Chapter Two: Private Mesqas and Drains

Chapter Three: On-farm Drains

Chapter Four: Water Distribution

Chapter Five: Irrigation and Drainage Fees

Chapter Six: Protection of Irrigation, River Navigation and Coasts

Chapter Seven: Penalties

## Chapter Eight: General Provisions

In September 1987, the executive regulations (bylaws) were issued by Ministerial Decree No. 14717. Following are the salient features of Law 12/1984:

- Landlords, whose lands are opposite banks of public canals and drains have the right to cut down trees, with the written consent of the Director General of Irrigation, provided that the landlords plant three trees for each tree cut down. The purpose of this article was to preserve the country's wood wealth and to promote forestation on the riverbanks.
- The term "landholders" was used instead of "landlords" in illustrating the demarcation line between holdings, with regard to the dredging and maintenance of the private mesqas and drains. When it relates to the drilling and use of private mesqas or drains across lands owned by others, then the decision becomes the sole responsibility of the landlord.
- The law obliged farmers not to damage the industrial works of the on-farm drains. It also stipulated that the terms of a water-well drilling license have to be strictly observed, including the set water-lifting rates.
- The law includes a special section on "Irrigation of New Lands." It introduced new provisions prohibiting any construction on the northern coast within 200 meters of the Mediterranean Sea water line.
- The law stipulated more severe penalties for those crimes which, in earlier legislation were not given penalties proportional to their consequences on irrigation and drainage utilities. Deterrent penalties were introduced for contraventions to the new provisions of the law.
- The law dissolved the administrative committees constituted within the circuit of each court to decide on irrigation and drainage utilities transgressions. This jurisdiction was assigned to the normal courts of law. The law amended the article pertaining to elimination of damage. It assigned the Director-General of Irrigation the authority to issue an order for the administrative elimination of the consequences of the contravention.
- The law provided for a special fund for repair works in case the violator failed to restore the utility to its original condition. The accrued receipts (fees,

finances, charges, damages and cost of removal of the contraventions) must be transferred to that fund.

- The law established a dispute resolution mechanism at the governorate level, with a judge, to be nominated by the chairman of the primary court, as committee-chairman. The committee members are the Deputy Director of the Survey Authority, the Deputy Director of Agriculture and a member of the Governorate's Municipal Council.

### **Law 213/1994**

This law was promulgated to amend some provisions of Law 12/1984. Two new articles have been incorporated. The name of the MPWWR was replaced with the MWRI. Article 64 stipulates that license-holders in the new lands must apply modern irrigation technologies, in accordance with the provisions of the license. The licensing terms, conditions, and of water distribution costs shall be clearly stated.

Article 71 stipulates that the Minister of MWRI shall issue a decree specifying the methodology of managing the improved irrigation systems, including the creation of Water Users Associations (WUAs).

Law 213/1994 complemented Law 12 with two new articles concerning improved on-farm irrigation in the old lands, where IIP is implemented, and the creation of a special fund to secure financing for developing and maintaining the improved mesqas and increasing public awareness in the field of water use.

In February 1995, the Minister of MWRI issued Decree 149 concerning implementation of some provisions of the law of irrigation and drainage. The decree covered the following major areas:

Section One: Maintenance of Private Mesqas and Drains

Section Two: Irrigation of the New Lands

Section Three: WUAs in the New Lands

Section Four: Utilization of Improved On-farm Irrigation in the Old Lands

## Section Five: The Special Fund for Developing and Maintaining Mesqas

### **Law 48/1982**

In 1953, Law 196 was issued to regulate the drainage of wastewater from public, commercial and industrial entities into water bodies. It is considered the first legislation that regulates the drainage of liquid waste, including effluents. Law 33/1954 amended some of the provisions of the previous laws in regard to the authority which issues licenses (Ministry of Housing and Utilities) after consulting with the Ministry of Health.

In 1962, Law 93 was issued to regulate drainage of waste into public streams and of liquid water from residential, commercial and industrial operations into water streams. The law continued to permit the drainage of effluents into streams after securing the approvals of MOH, MOI and MWRI. The Ministry of Housing and utilities issues the license, under the conditions:

- The water stream's capacity is enough to receive the liquid waste.
- The liquid waste quality complies with the standards set by the MOH.

The law continued to permit the drainage of effluents into rayahs, canals, drains and lakes, provided that the approval of the MWRI has been obtained by the applicant. The law only made an exception for the Nile's proper stream and main branches. It allowed the extension of the six-month period for the treatment of waste for other equal periods. Even under the circumstances of a real threat, the law did not require prevention of the drainage of waste unless by a reasoned decree.

The executive regulations (by-laws) of this law were issued in Decree 649/1962 by the Minister of Housing, specifying the standards of the waste to be drained and methods of sampling and analysis.

With time, the problem of water pollution became aggravated, and the river system was drastically abused. The problem became more conspicuous in rural Egypt where effluent is drained into the agricultural drains. The MWRI has always viewed these practices as transgressions against irrigation and drainage streams. But it has always lacked the means to

remove the contraventions, or the resources to finance this process under Law 169/1953 and Law 93/1962.

In 1982, Law 48 was issued for the protection of the Nile and water streams against pollution. Its by-Law was promulgated in February 1983, including eight chapters:

Chapter One: Definitions of Water Streams

Chapter Two: Licensing the Drainage of Treated Liquid Wastewater into Water Streams.

Chapter Three: Monitoring of Compliance with Licensing Conditions

Chapter Four: Floats and Mobile Units

Chapter Five: Sampling and Analysis

Chapter Six: Standards for Treated Liquid Waste to be Drained into Water Streams

Chapter Seven: The Special Fund (fees, charges, fines to be transferred to the fund)

Chapter Eight: General Provisions

## **2.4 Problems Facing Law Enforcement**

Recently, numerous laws have been enacted to regulate the performance of government agencies. Under these circumstances, certain jurisdictions are duplicated, thus leading to overlaps in certain functions. For example, there is a lack of clear vision as to the roles of MWRI and the municipal units in Law 43/1979 concerning irrigation. Article 12 of Chapter 9 of Law 43 confers the right to assume the following functions on the governorate, within the framework of the MWRI general policies and rules dealing with the following:

- Maintenance of water streams that serve the governorate.
- Maintenance of drains existing in toto within the boundaries of the governorate.
- Operation and maintenance (O&M) of the irrigation and drainage stations serving the governorate.
- Utilization of the groundwater by drilling wells, installing pumps and the related maintenance works.
- Maintenance of private irrigation and drainage facilities.
- Supervision of the irrigation turn system implementation in view of emergency circumstances that require readjustment of the turn interval system.

- Conversion of private mesqas and drains into public properties.
- Elimination of contraventions and transgressions on public irrigation and drainage utilities.
- Approval of new irrigation and drainage projects and management of surveying activities (by offices of the Egyptian Survey Authority at the governorate level).
- Survey services including those relating to notarization.
- Implementation procedures of the Land Title Registry law, as approved by the Board of Directors of the Land Title Registry Fund.
- Implementation of the Agrarian Reform laws.
- Removal of transgressions on state properties.
- Procedures for establishing demarcation lines between state-owned and privately owned land parcels.
- Surveys of crop plantations to furnish the Ministry of Agriculture with the actual acreage of each crop.

The reality is that Law 12/1984 regulates all the above-mentioned functions through clearly stated provisions.

With regard to Law 48/1982, MWRI's responsibility for the protection of water streams against pollution overlaps with other state agencies, resulting in exacerbation of the water pollution problem. Law 48 includes an article relating to licensing wastewater drainage near residential quarters or the commercial/industrial installations. In the meantime, the local administration Law 43/1979 assigns this responsibility to the municipalities, each within its area of jurisdiction. Municipalities also assume all jurisdictions of ministries, with the exception of national utilities or utilities of a special nature, as specified in a Presidential Decree. Therefore, the governor represents the Executive Authority at the governorate level and oversees the implementation of the state's public policies, service utilities and production, within the governorate boundaries.

Ineffective enforcement of some laws resulted from assigning certain responsibilities to only one state agency. For example, sampling and periodical analysis is the sole responsibility of the MOH. Other government laboratories should be involved. Likewise, a plan should be

devised for emergencies resulting from non-compliance with the licensing terms and conditions. The three-month repair period has proven insufficient, and the General Authority for Sanitary Drainage is not in a position to technically keep abreast of state-of-the-art technologies for wastewater treatment plants. Consequently, the applicants for licensing will have to select, on their own, the latest technology in the field of wastewater treatment.

Drainage of treated human or animal waste into fresh waters or groundwater reservoirs needs to be reconsidered. Groundwater reservoirs must be protected so as to ensure non-contamination. In addition, fees and advance payments, as stipulated in the by-laws, are too low since the inflation rate has not been taken into account.

Law 4/1994 (law of the Environment) is more comprehensive. It stipulates more severe penalties for water, air, and soil pollution. For water, pollutants include solar oil, wastewater, and garbage from vessels or from other sources. It clearly defines certain criteria to be met before project construction and during operations. According to the law, compliance with the standards is checked regularly. Action is taken against violators. Fines have been increased and grace periods reduced for redress. If a violator fails to comply with the required measures, EEAA will remove the contravention administratively (using the law-enforcement agency) and withdraw the license immediately. The by-laws specify the prohibited non-degradable pollutants.

## **2.5 Proposals for Better Law-Enforcement**

To render Law 12/1984 and Law 213/1994 more effective, they must be reviewed in light of the on-going changes in water management in Egypt. All the laws that relate to irrigation and drainage should include a special clause stating that provisions of the other laws shall not contradict the provisions and rules of the irrigation, drainage and pollution laws. The Irrigation and Drainage law should incorporate a provision that prohibits summoning, arresting, or interrogating MWRI engineers who have law enforcement agent status for performance of duties entrusted to them, without prior written approval from the Minister of MWRI. Likewise, Articles 67, 68, and 74 pertaining to irrigation of the new lands, and Article 72 regarding fees for irrigation and drainage using state-owned pumps, need to be reconsidered. Chapter 8 of Law 12, pertaining to penalties, has to be reviewed accordingly.

To remove duplication, define responsibilities and accentuate penalties, the following laws need to be reviewed:

- Law of the Environment (Law 4/1994);
- Law of Irrigation and Drainage (Law 12/1984);
- Law of the Protection of the Nile River and its Waterways  
from Pollution (Law 48/1982);
- Law of Desert Lands (Law 143/1981);
- Law of Local Municipalities (Law 43/1979);
- Law of Agriculture (Law 53/1966); and
- Law of Agrarian Reform (Law 178/1952).

## **3 Proposed Modifications to Law 12/1984: Analysis and Revision**

### **3.1 Introduction**

The present law regulating the irrigation and drainage works is Law No. 12/1984, amended by Law 213/1994. Since the last amendment of the present law, numerous changes have occurred and new visions have called for making the law more flexible. According to the instructions of MWRI, a committee was established to review Laws 12 and 213 and to propose a comprehensive law, including flexible programs, that can accommodate changes and facilitate difficulties in enforcing the present law.

New visions have also appeared in water policy, the most important of which is the necessity for beneficiaries and water users to participate in water management while bearing some of the costs of operation and maintenance.

### **3.2 Analysis of Proposed Modifications**

In this section, proposed modifications are analyzed and justifications for each of the proposals are provided.

## **PART I**

### **DEFINING WATER RESOURCES AND WATER USES; PUBLIC PROPERTIES PERTAINING TO WATER RESOURCES**

This Part contains 18 articles distributed over 3 chapters as follows:

#### **Chapter 1: Defining Water Resources and Water Uses (Articles 1 – 2):**

According to Article (1), “Water Resources” means limited natural resources with social, economic, and environmental dimensions having the status of public property. The Ministry of Water Resources and Irrigation is authorized to manage and develop the water resources in all possible means; and to control and regulate their uses.

This definition is new. The previous laws concerning irrigation and drainage did not contain any definition of the water resource but most of these laws only cited or enumerated some of these resources as part of the list of public properties pertaining to irrigation and drainage.

According to Article (2-a), water resources in use are: the River Nile water; rainwater and floodwater; deep groundwater; desalinated water; and any freshwater from unconventional sources. For the purposes of the present law, the water resources include the agricultural drainage water; the treated industrial and sanitary drainage water; and the shallow groundwater.

It is obvious from the previous enumeration of water resources contained under Article (2) that the criterion adopted by the draft law concerning water resources is that the water must be fresh and fit for water use.

According to Article (2-b), the water uses include: irrigation; drinking and human uses; industry; in-stream transportation and river navigation; generation of hydroelectric power; and tourism activities and environment support.

## **Chapter 2: Public and Private Properties Pertaining to Water Resources (3-9):**

In this Chapter, some lands and basins are added to the public properties pertaining to the water resources described in the previous law. These include:

- The Aswan Dam Lake basin;
- Toshka depression basin;
- Any other basins formed as a result of building dams or reservoirs;
- The lands, 200 m. wide, located alongside the northern coastal line of the state, the Red Sea, the Suez Gulf, and the western side of the Gulf of Aqaba;

- The lands acquired as a result of establishing protection projects or for any other natural reasons;
- The lands surrounding the groundwater wells as may be designated by the Ministry of Water Resources and Irrigation; and
- The lands where the Ministry conducts artificial water recharge (Article 3).

According to Article (4), no person may without license from the Ministry of Water Resources and Irrigation execute in the said lands any work or dig any holes therein that would endanger the safety of the water streams. The competent engineer of the Ministry of Water Resources and Irrigation is authorized to enter the said lands to inspect the works that are being executed.

The draft law fully authorizes the Minister of Water Resources and Irrigation to take the necessary measures to complete the constructions of canals and public drains. The Minister is also authorized to deem private feeders (*Mesqas*) or private drains as public properties if they are directly connected to the River Nile, public irrigation canals, drains, or lakes (Article 5).

According to the draft law, the Ministry of Water Resources and Irrigation may coordinate with the other concerned public or private bodies in respect of supervising the public properties pertaining to the water resources. However, these bodies, must act under the full control and supervision of the Ministry of Water Resources and Irrigation and may permit the use of the part under their control only with permission from the Ministry of Water Resources and Irrigation (Article 6).

To cultivate a land owned by the State, which is located within the public properties pertaining to water resources, or to establish a jetty on the Nile banks, public canals or public drains, a license must be obtained from the Ministry of Water Resources and Irrigation (Article 8).

### **Chapter (3): Private Works in the Public Properties Pertaining to Water Resources (10 – 18)**

In this Chapter, the proposed law seeks to enable the public properties to carry out their functions in accordance with the general plan of the Ministry of Water Resources and Irrigation. It also tries to limit the effects of private works erected inside these properties and to put such works under the full control of the Ministry.

Therefore, the proposed law permits performing or modifying such works only by license from the Ministry of Water Resources and Irrigation in accordance with such conditions as the Ministry may determine. It also requires for such works to be performed or modified that certain fee, to be determined by the Minister of Water Resources and Irrigation, be paid upon licensing (Article 10).

The draft law authorizes the Ministry of Water Resources and Irrigation to cancel a license for such work or deem the licensed work, upon the end of the license period, a public property of the State. If the license is cancelled after the end of its period, no compensation is paid. If the license is cancelled before the end of its period, the licensee is compensated for the work cost in proportion to the remaining period of the license.

Under the draft law, the Ministry of Water Resources and Irrigation is bound to require that the licensee permit the owners or holders of the other lands to benefit from the licensed work if the license is intended to irrigate a land or drain water there from. The other landlords and landholders, however, must pay an appropriate part of the construction costs to be determined by the competent General Manager. The license must designate the area of the land benefiting from the licensed work. The other landlords and landholders continue to benefit from the licensed work even if new owners or holders of these lands replace the old ones (Article 12).

According to Article (13) of the proposed law, a licensee must maintain and keep in good order and repair the licensed work in accordance with the license conditions. The licensee is also bound to make such renovation or alteration as may be deemed necessary for the public interest by the Ministry at such time and in accordance with such specifications as the Ministry may determine, otherwise, the Ministry implements the same at the licensee's expense. Where a license is issued to a group of persons, they are held jointly bound in performance and liability (Article 13).

The proposed law, however, permits the licensee to renovate or alter the licensed work only with a written permission from the Ministry of Water Resources and Irrigation (Article 14).

According to Article (15), where the license conditions are violated and the licensee does not remove the reasons of violation, the department that has issued the license may cancel the license and remove the licensed work.

The license may also be withdrawn if the State performs a work that would render the licensed work redundant. In this case, the Ministry of Water Resources and Irrigation is authorized to issue a decision canceling or removing the licensed work without having to pay damages (Article 16).

The proposed law also binds the licensee to remove the licensed work and restitute the public property within such period as may be determined by the Ministry of Water Resources and Irrigation. Otherwise, the Ministry will do the same at the licensee's expense if the license is not renewed and the Ministry has not decided to annex the licensed works to the State's property (Article 17).

The private bridges and other water installations erected under a license by the Ministry of Water Resources and Irrigation across a public irrigation canal, drain, or flood plain are deemed public properties subject to the supervision of the Ministry upon the moment they are constructed (Article 18).

## **PART II**

### **ENSURING THE RIGHTS OF USE OF PRIVATE SOURCES AND IRRIGATION AND DRAINAGE STREAMS**

This Part contains 13 articles (19 – 31) and corresponds to Part II of Law No. 12/1984 concerning private *mesqas* and drains and Part III concerning field drains.

The drafters of the proposed law combined Part II with Part III of Law No. 12/1984 in one part including all their provisions together with the amendments introduced thereto.

The proposed law gives the landlords using a joint private *mesqa*, a joint irrigation stream, or a joint groundwater well, the right to withdraw water from, or drain water into, them in proportion to the area of land owned by each landlord.

The draft law authorizes the local irrigation inspector to lay down the rotation schedules for this purpose. It also gives the landlords the right to complain of the inspector's decisions to the competent general manager who is authorized to decide finally on such complaint and his decision is deemed final. The competent general manager is authorized to hear any conflict that may arise from the way the said right of use is exercised (Article 19).

According to the proposed law, the responsibility to dredge and maintain the private *mesqas* and drains and preserve their embankments in good condition lie with the landlords. If the landlords fail to carry out this function, the competent manager may instruct them to do so. Failing this, the competent administrative department may implement such works and collect the actual costs thereof by administrative ways from the landlords in proportion to the land area each of them owns including the damages for each land occupied because of such works (Articles 20 and 21).

Being an important source of water, the groundwater wells were added, in Article (29), to the private *mesqas* and drains, which a competent general manager may decide to block, stop their use, remove, or deem useless where there is another source for irrigation or drainage. There is no doubt that adding the groundwater wells to the water resources is in conformity with the approach of the Ministry's general plan and its efforts to conserve the water use.

The proposed law binds the users of private *mesqas*, drains, or groundwater wells to take, at such date as may be determined by the competent general manager, the necessary action to prevent the damage resulting from their *mesqas*, drains, or groundwater wells. Failing this, the competent general department may take such action at their expense (Article 29).

To cope up with the technological development of irrigation and drainage systems, the draft law made the provisions of this Part applicable to the joint improved systems of irrigation and drainage including the groundwater wells (Article 30).

### **PART III**

#### **WATER DISTRIBUTION**

This Part contains 24 articles distributed on 3 chapters as follows:

##### Chapter (1): Water Management and Water Distribution Regulation (32 – 36)

According to Article (32), the Ministry of Water Resources and Irrigation is responsible for water management, regulation, and distribution for all uses from all sources on private intakes and openings. The Ministry may determine or modify the systems of water resource use to fit the purpose of such use. The Ministry also determines all the methods to be adopted for water management and distribution.

The Ministry of Water Resources and Irrigation regulates the method of participation by the farmers and water users and makes available the private and government funding necessary for construction, replacement, rehabilitation, operation, and maintenance works of irrigation and drainage-related networks. The Ministry regulates, in particular, the formation of corporate water users associations in both the old and new lands for private or public irrigation networks. It also regulates the formation of corporate water boards in certain lands of specific geographical borders and public water sources. The Minister of Water Resources and Irrigation or whomever the Minister may delegate establishes by decision such water users associations and water boards as provided in the Executive Regulation of this Law (33).

To catch up with the economic development in Egypt, Article (34) of the proposed law authorizes the Ministry of Water Resources and Irrigation to entrust a specialized company, or an association, or a water board to construct, manage, operate, and maintain, at their expense, parts of:

- Irrigation and drainage networks;

- Groundwater wells;
- Joint reservoirs and dams;
- Improved irrigation systems; or
- Tile drains.

To ensure that water is fairly distributed, the draft law authorizes the competent general manager, where the public interest so requires, to prevent at any time even during on-periods taking water for irrigation from a public canal or groundwater well or to prevent the excessive use or wasting of water by farmed lands (Article 35).

In addition to the rice crop, which consumes great quantity of water, the draft law also cites other water-consuming crops. Therefore, the proposed law prohibits cultivating such crops except with license from the Ministry of Water Resources and Irrigation provided that such crops and the cultivated areas are designated by decision by the Minister of Water Resources and Irrigation after consulting the Minister of Agriculture and Land Reclamation (Article 36).

## **Chapter 2: Water Intakes and Drain Outflows (37 – 43)**

To preserve the State's water resources, the draft law prohibits the erection of any water intakes, regardless of their purposes, particularly on the Aswan Dam Lake or the River Nile except by license from the Ministry of Water Resources and Irrigation. The reason behind inserting the Aswan Dam Lake is due to the importance attached to this lake as a strategic reservoir for freshwater and for providing the desert reclamation projects with the necessary water (Article 37).

## **Chapter 3: Water-Lifting Machines (44 – 55)**

No pump or equipment driven by a fixed or mobile mechanical automated device or by any other method may be erected or operated to lift water from a water resource for any of the designated water uses without license from the competent general department. The license applicant must pay such fee as may be determined by a decision of the Minister of water Resources and Irrigation (Article 44).

The proposed law has cancelled the 10-year ceiling determined by Article 49 of the previous law No. 12/1984.

**PART IV**  
**DEVELOPING AND IMPROVING**  
**IRRIGATION AND DRAINAGE SYSTEMS**

The provisions of this Part were introduced into the draft law to reflect the trend to develop and improve the existing irrigation and drainage systems. This Part contains 14 articles distributed on 2 chapters as follows:

**Chapter 1: Developing Surface Irrigation Systems (56 – 61)**

The draft law links the provisions of this chapter with the provisions of Part II protecting the rights of use of the private sources and private irrigation and drainage streams. The draft law requires for the application of the provisions of this Chapter that they should not affect the provisions of Part II of this draft law (Article 56).

According to Article (57), the Minister of Water Resources and Irrigation or whomever he may delegate defines by decision the command areas where private *mesqas* must be developed by applying improved irrigation systems in accordance with the field technical and social studies conducted by the Ministry's Division for Irrigation Improvement. The Ministry's decision is binding by operation of law to all the parties involved in the improvement process including the farmers, the landlords, and the landholders. The Minister of Water Resources and Irrigation may, by decision, take possession temporarily of the lands necessary for constructing the improved irrigation network and may, in accordance with Law No. 10/1990 concerning Expropriation for Public Interest, take actions for the expropriation of such lands.

The Minister of Water Resources and Irrigation regulates by decision the methods of managing and using the improved irrigation systems in the old lands in which these systems are to be adopted by establishing corporate water user associations and water boards (Article 58).

The owners of these old lands shall bear the costs of improving the private *mesqas* and their contents on pro rata basis as per the number of feddans each owns and in accordance with the rules described under Article (64) of this draft law (Article 59).

Under the proposed law, the Special Fund for financing the projects for the development and maintenance of the improved *mesqas* in the old lands will continue to perform its functions. The Fund is created by virtue of Article (36), bis (1), of the law No. 12/1984 as amended by law No. 213/1994. The Minister of Water Resources and Irrigation determines by decision the rules regulating the Fund's financial policy, and the formation of its board of directors made up of representatives of the water users associations and water boards (Article 60).

The draft law provides the water user associations and water boards with the necessary protection in respect of the private pumps they use. More important, The draft law prohibits the use of any pumps on the improved *mesqas* other than the private pumps used by the water users associations (Article 61).

## **Chapter 2: Improving and Developing Drainage Systems (Articles 62 – 69)**

According to the draft law, the Minister of Water Resources and Irrigation may by decision temporarily take possession of the lands necessary for the construction of the open and tile drainage network. The Minister also may take the necessary procedures to expropriate the ownership of these lands in accordance with the provisions of Law No. 10/1990. The cost of the erection and renovation of the network of the tile field drains and the open or tile drain collectors are divided on all the lands located in the drainage unit (Articles 62 and 63), in accordance with the terms and conditions described under Article (64).

According to the draft law, the Administration's estimation of the costs and the parts to be paid by each landlord of these costs are final only after the lapse of challenge deadlines. Complaints must be filed first with the competent inspector at the local land registry office and, then, are decided on by a committee formed for this purpose. The Committee is chaired by the competent inspector or acting inspector of the local land registry office and comprises representatives of the Ministry of Agriculture and the local cooperative; a specialist from the

local land registry office, and an engineer from the Ministry of Water Resources and Irrigation. The Committee's decision may be challenged before the competent court of first instance but the challenge does not give rise to the suspension of the enforcement of the decision (Article 64).

The proposed law assigns to the drain user associations the function of performing the periodic and general maintenance of the tile drainage networks within the boundaries of the drain collector, otherwise, the competent general department carries out such maintenance. In this case, the competent general department collects, by administrative means, the actual costs from the landlords in proportion to the area each owns of the land benefiting from the drain collector plus appropriate damages for the land occupied because of such maintenance (Article 67).

The draft law prohibits tampering with, or causing damage, to the industrial works of both tile field drain network types. Regardless of the penal code provisions, the competent engineer must prove any violation of any provision of Article (68). If the violator's act causes damage to a third person, the competent engineer may instruct the violator to restitute the thing subject of the violation within such short period as the engineer may determine, otherwise, the competent general department makes restitution at the violator's expense.

The draft law creates a Special Fund to implement and supervise the tile drain projects. The Fund's resources are obtained from the appropriations allocated in the State's general budget; the proceeds of loans, grants, and installments paid by the landlords; and the Fund's investment returns. The Minister of Water Resources and Irrigation determines by decision the rules regulating the Fund's financial policy and the formation of its board of directors made up of representatives of the associations of the users of tile drain collectors (Article 69).

## **PART V**

### **IRRIGATION OF NEW LANDS**

This Part contains 6 articles beginning with Article (70) and ending with Article (75).

The draft law defines “New Lands” as every land not previously licensed to be irrigated (Article 70).

In order to preserve the state’s water resources and to prevent waste, the draft law provides that no land may be sold or allotted for horizontal agricultural expansion or agricultural development purposes, by any ministry or body to any individual or group. There may be exceptions to this rule after the purpose of the allotment has been indicated and the Ministry of Water Resources and Irrigation determines that there are enough sources of water to irrigate and cultivate such land. The Ministry may determine the quantities of water necessary for the other activities; such as industrial, commercial, tourist, or other purposes (Articles 71 and 72).

The license to irrigate the new lands is issued by the Minister of Water Resources and Irrigation or whomever he may delegate (Article 73). Unless otherwise specifically provided in the draft law concerning the irrigation of the new lands, all the other provisions of the draft law apply to the irrigation of new lands. For the purposes of enforcing the provisions of this Part, the Minister of Water Resources and Irrigation defines by decision:

- The terms and conditions for licensing the irrigation of new lands;
- The costs and charges for water supply and distribution; and
- Establishing corporate water users associations and water boards (Article 74 - 75).

## **PART VI**

### **GROUNDWATER**

This Part contains 8 articles from Article 76 to Article 83.

Groundwater is an important water source, especially in deserts and areas with no surface water network. For this reason, Part VI is devoted entirely to groundwater.

According to Article (76), no deep or shallow groundwater well may be dug in the Arab Republic of Egypt except with license from the Ministry of Water Resources and Irrigation,

in accordance with such conditions as may be determined by the Ministry. This applies even if the well has to be dug in land governed by the provisions of law No. 143 of 1981 concerning the desert lands. It makes no difference if those engaged in digging the groundwater well are ordinary citizens, contractors, or companies (Article 76).

A person licensed to dig a well must comply with the license conditions concerning well use and the determined rates and quantities of water. The license to use the well is issued and renewed by the local competent general department (Articles 77 and 78).

The license to use the well is withdrawn or cancelled if the well is not used within three years from the date the license is issued or if the well is used for purposes other than those for which the license is issued. The Minister of Water Resources and Irrigation regulates by decision the procedures, methods, and conditions for digging wells (Articles 79 and 80).

The Minister of Water Resources and Irrigation regulates by decision the methods to be adopted by the Ministry in managing and using the wells by way of establishing corporate water boards and water user associations. The Minister of Water Resources and Irrigation also defines by decision the wells and *mesqas* for which charges are collected for their erection, management, and maintenance (Articles 81 and 82).

The draft law creates a Special Fund to finance the erection of groundwater wells, control the distribution of its water, and increase awareness about groundwater conservation (Article 83). This is a new article in its vision and approach. The Minister of Water Resources and Irrigation determines by decision the Fund's regulations, line-up of its board of directors, by-laws, and resources.

## **PART VII**

### **CHARGES OF PUMPS AND WATER-LIFTING MACHINES**

This Part contains 5 articles from Article 84 to Article 88.

According to the draft law, the Minister of Water Resources and Irrigation determines the rates for using the State's pumps and water-lifting machines (Article 84).

The draft law, however, requires that no charges be collected in excess of the fixed charges. If excess charges are collected, the extra excess must be refunded. Excess charges can be proved with adequate evidence regardless of the disputed amount (Article 85).

According to the draft law, a person licensed to drain - into the Nile, groundwater, or public drains - water resulting from an activity other than the agricultural activity is bound to pay such charges as may be determined in accordance with the rules and rates laid down by decision of the Minister of Water Resources and Irrigation (Article 86).

The draft law also binds the user of a groundwater well or a lifting machine to irrigate, and drain water from, the lands for which a license is issued. The user may not, unless there are serious reasons, cease to use such wells or the machines licensed for irrigation or drainage purposes (Article 87).

## **PART VIII**

### **PROTECTION OF WATER RESOURCES, STRUCTURES, NAVIGATION, AND SHORES**

This Part, corresponding to Part V of the previous law No. 12/1984, contains 12 articles distributed in 3 chapters, as follows:

#### **Chapter 1: Protection from High Water Level Threats (Articles 89 – 92)**

According to the draft law, the Minister of Water Resources and Irrigation may, by decision, announce the State of Emergency if there are risks threatening the safety of dams, reservoirs, or embankments; thus, requiring implementing urgent protection works in accordance with an emergency plan laid down by the Ministry of Water Resources and Irrigation.

## **Chapter 2: Protection of Water; Removing Obstacles of Irrigation, Drainage, and Navigation (articles 93 – 97)**

Article (93) prohibits works that may affect the water resources. No person may waste or squander water. In view of the great importance attached to the Aswan Dam Lake as it provides all the parts of the country with water, the draft law prohibits draining into the Aswan Dam Lake whether from the lands, installations, or cruising river units.

Article (93) also prohibits transporting toxic or hazardous materials by river transportation units through the navigation waterways. In addition, it prohibits injecting liquid wastes or dumping solid scrap polluting the groundwater.

As regards establishing fish farms, the draft law prohibits establishing fish farms or breeding boxes in the Nile stream and its branches extending to Edfina and Faraskour barrages. The draft law also prohibits establishing installations on the flood plains, and setting up any works that would affect the water environment (Article 93).

According to Article (94), the Ministry of Water Resources and Irrigation is authorized to license certain works. Some of these works are already provided in Law No. 12/1984. The draft law, however, introduces additional works, which must be licensed. These include: irrigating lands with drainage water; draining into a public drain, a groundwater well, or a flood plain; digging groundwater wells to use their water in irrigation, drinking, or industry; and driving river transportation units, passenger transports, floating hotels, or ferry boats. In all cases, the permitted tonnage, the navigation route, and the captains' efficiency must be observed.

## **Chapter 3: Sea Coast Management and Protection (Articles 98-100)**

The draft law prohibits, without affecting law No. 4 of 1994 concerning environment protection, the erection of installations on the coasts along the Mediterranean Sea, Red Sea, Gulf of Suez, and the western coast of Aqaba Gulf for a distance of two hundred meters wide in land from the coastal water line except with license from the General Egyptian Authority for Coast Protection (Article 98).

The draft law did not neglect the cases of high emergency, which require establishing installations of a special nature inside the prohibition area described in Article (98). But, in such cases, the General Egyptian Authority for Shore Protection must approve such works in advance, defining the protection works necessary for that installation. Protection works, however, are made against fees to be determined by the executive regulations of the draft law.

## **PART IX**

### **PENALTIES**

This Part contains 12 articles (101 – 112) and addresses the penalties applicable in case of violation of the provisions of the draft law. But the application of the provisions of this Part must not affect any tougher penalty provided in the Penal Code or any other law.

The draft law seeks to achieve the highest possible deterrence to the individuals and persons governed by, or violating, its provisions. It was for this purpose that the draft law:

- Raises the fines imposed under the penal clauses contained in the draft law (Articles 102 – 108);
- Toughens the penalties in case of recidivism (Article 102);
- Link the fine amount to the number of feddans subject of some violations (Article 106);
- Authorizes the Ministry of Water Resources and Irrigation to make restitution at the violator's expense in some cases in addition to imposing the determined penalty (Article 110);
- Punishes the violator no matter if he is a landlord, a landholder, or a squatter in case of violation of the provisions of certain articles (Article 108); and
- Determines a maximum fine of LE 50,000 in case of violation of the provisions of Articles 76 and 93.

## **PART X**

## GENERAL AND FINAL PROVISION

This Part contains 7 articles (113- 119).

According to Article (113), town and village mayors are bound to keep and maintain the industrial works related to the water resources entrusted to them in accordance with the conditions agreed upon between the Ministry of Water Resources and Irrigation and the Ministry of Interior. They are also bound to notify the competent authorities of any loss of these works immediately when such loss is discovered.

The draft law raises the capital of the Special Fund for Restitution concerning irrigation and drainage, before the law is repealed, from seven hundred thousand Egyptian Pounds (LE 700,000) to ten million Egyptian Pounds (L.E. 10,000,000). This Fund, created under Article 103, Law 12/1984, concerns irrigation and drainage. The Fund is allocated to cover restitution costs if the beneficiary fails to make restitution. The entire fees, fines, and indemnities decided pursuant to the draft law accrue to the Fund (Article 115).

Article (117) allows the Minister of Water Resources and Irrigation to determine by decision the rules regulating cost sharing by water users for installing water projects and structures.

The draft law creates a committee in each summary court to decide on the crimes provided in the draft law. The Committee, chaired by the court judge, comprises governmental officials including a works manager selected by the Undersecretary for Water Resources and Irrigation; a municipal council member selected by the municipal unit head; a police officer selected by the governorate police department head; and a representative water user from a board or association selected by the Ministry's undersecretary for the governorate. The Committee must issue its decision within one month from the initial hearing (Article 118).

Establishing a Committee composed as described above would ensure equity because of the members' intimate knowledge of the issues. More importantly, bringing together people's organizations, executive departments, and judicial bodies in dispute settlement would ensure quick resolution based on a clear vision.

In light of the similarity between the present draft law and Law No. 48/1982 concerning Protecting Nile and Water Streams against Pollution, the latter is deemed an integral part of the present draft law on the grounds that both concern water resource preservation in quantity and quality (Article 119).

# **4 Proposed Revisions to Executive Regulation of Water Resources Law**

## **4.1 Introduction**

The Water Resources Law has been amended to catch up with the new water policies and the latest developments in this respect. Therefore, it was necessary to lay down an executive regulation for the amended law. The purpose of this Regulation is to:

- Explain the vague provisions of the above-said law;
- Limit the broad meanings of certain general terms in that law;
- Lay down the procedures necessary for obtaining the services provided in that law; and
- Determine the levels of management authorized to issue the necessary decisions to implement the law.

The Executive Regulation of the Water Resources Law consists of eight parts (125 articles). These parts are as follows:

PART I.	Defining water resources, water uses, and public properties pertaining to water resources
PART II.	Protecting the rights of use of the sources and methods of private irrigation and drainage
PART III.	Water distribution
PART IV.	Developing and improving irrigation and drainage systems
PART V.	Irrigation of the new lands
PART VI.	Groundwater
PART VII.	Protection of water resources, water structures, navigation, and shores
PART VIII.	General and closing provisions

## **4.2 Amendments Introduced to the Executive Regulation of Water Resources**

## **Law:**

The main features of revised Law 12 Executive regulation are given as follows:

- The draft Executive Regulation defines the water resources in use and lists them in particular under Article (2).
- The draft Executive Regulation broadens the scope of the public properties pertaining to the water resources provided under Article (3) and adds to these resources the following:
  - The flood plains;
  - Nasser lake basin;
  - Toshka depression basin; and
  - Such lands surrounding the State-owned underground wells as the Ministry of Water Resources and Irrigation may determine.
- Article (4) of the Draft Executive Regulation adds, for the general purposes of the water resources, more restrictions on the lands privately owned to the State or any other person which are located:
  - within the limits of the embankments of the Nile and its branches or of the public canals; and
  - outside these embankments and canals as far as specified under the above-said article.
- Pursuant to Article (15) of the Draft Water Resources Law, Article (12) of the Draft Executive Regulation gives the licensing department the right to cancel the license where the license conditions are not complied with or if the license produces negative effects, which the licensee has not avoided them.
- Pursuant to Article (17) of the Draft Water Resources Law, Article (13) of the Draft Executive Regulation binds the licensee, in case that the license is not renewed, to remove the erected licensed works and reconstitute the public property.
- Pursuant to Article (18) of the Draft Water Resources Law, Article (14) of the Draft Executive Regulation deems as public properties the private bridges erected on a canal or a drain.

- Article (19) through Article (40) of the Draft Executive Regulation expands the system of electing a Water User Association for each private mesqa, private drain, or joint method of irrigation or drainage where the number of users exceed ten persons. The Draft Executive Regulation, under these articles, grants these Associations a corporate capacity so that they can fulfill their desired goals; namely, managing and maintaining the private mesqas and drains in such way that would ultimately achieve fair and efficient distribution of the water among the members of the Association. In addition, the above-said articles describe the responsibilities of the Association's Chairman of the Board of Directors, Treasurer, and Secretary and specify the sources of its funding.
- To ensure the best management of the public irrigation networks, Article (41) of the Draft Executive Regulation required that a ministerial decision be issued in case of transferring the administration of parts of the irrigation and drainage networks to the users. The decision must contain the procedures, responsibilities, and other relevant organizational matters. Article (41) also authorizes the Minister to create Water User Associations in respect of the branch canals.
- Article (42) and Article (43) of the Draft Executive Regulation create the system of Water Boards at the level of the command areas having specified geographical borders and the public water resources. A Water Board comprises all the local water users including the farmers, residents, and those engaged in other related activities such as the factories and electricity generation. The function of the Water Board is to regulate public participation in the management, maintenance, replacement, and rehabilitation of the irrigation and drainage networks.
- Pursuant to Article (86) of the Water Resources Law, Article (44) of the Draft Executive Regulation increases the charge for water use and exploitation to match the increase in the prices of the other commodities in light of the present economic circumstances.
- Article (51) of the Draft Executive Regulation, in line with the amendments introduced by Article (19) through (40), requires the farmers at the level of each improved mesqa to establish a Water User Association. The

function of this Association is to operate, maintain, replace, and rehabilitate the mesqa; regulate the operation time and the rotation schedules among the farmers; and determine the responsibilities of the pump's operator and guard.

- Pursuant to Article (69) of the Water Resources Law, Article (67) through Article (74) of the Draft Executive Regulation create a special fund called “The Fund for *Drainage System* Improvement, Replacement, Rehabilitation, and Maintenance”. The purpose of this Fund is to:
  - Provide the funding necessary to implement, improve, replace, rehabilitate, and maintain the tile drainage projects;
  - Supervise the implementation of these projects; and
  - Increase the awareness about the preservation of drainage networks to increase crop productivity.
- Pursuant to Article (70) through Article (74) of the Water Resources Law, Article (75) through Article (82) of the Draft Executive Regulation amends the provisions governing the irrigation of the new lands. The purpose of this amendment is to reflect the State's policy of expanding the cultivated lands, conserving the water use, and applying the modern irrigation systems. The Draft Executive Regulation lays down the conditions that would ensure the efficient performance of these systems and the implementation of the necessary maintenance, repair, and replacement works.
- Pursuant to Article (83) of the Water Resources Law, Article (95) through Article (102) create a special fund called “The Fund for Desert Groundwater Well Construction, Maintenance, Replacement, and Rehabilitation”. The purpose of the fund is to:
  - provide the necessary funding to construct, maintain, replace, and rehabilitate the groundwater wells;
  - Supervise the construction of these wells; and
  - Increase awareness about the need to preserve and protect them from pollution.
- To make it easy for the beneficiaries to apply for the services offered by the Ministry of Water Resources and irrigation, Article (123) of the Draft Executive Regulation requires that the competent general department issues sample

application forms indicating the required documents, the due fees, and the time limits for benefiting from such services.

## 5 Conclusions

The proposed modifications in Law 12/1984 and its executive regulation are classified as follows:

### **First: Legal Structural Issues**

- Changing the Ministry's name to "Ministry of Water Resources and Irrigation" in place of "Ministry of Public Works and Water Resources" which was cited in Law 12.
- Changing the law title from Law 12 on Irrigation and Drainage to modified Law 12 on Water Resources.
- Modification of the term "Irrigation Director – General" stated in Law to define the specific Director – General responsibility, each in his own specialty: "Irrigation Director – General; Drainage director – General; Nile Protection Director – General"
- Replacement the term "pertaining to irrigation and drainage" by the term "pertaining to water resources"

### **Second: Simplifying Law Application**

Some of the law articles stated conditioned applications such as: "The condition of threatening the safety of the banks and affecting the water current; thus damaging those banks, other lands, and constructions".

In practice, it was noted that the violators build or dig in their lands without having permits, considering from their viewpoints that such works do not threaten the safety of the banks. It is deemed necessary to re-consider this condition, whereby any building or digging works should be licensed prior to implementation.

### **Third: Inadequacy of Some Items of Law 12 to Cover all Ministry Responsibilities**

- The public properties pertaining to irrigation and drainage do not include the spillways, or the basins of the High Dam Lake and Toshka Depression. For the safety of inhabitants, it seems imperative to add the natural / artificial spillways and basins of the High Dam Lake and Toshka Depression to the water resources public properties.
- Law 12/1984 states that reimbursement of the covered drainage costs should be either from the landowner or the occupant, or from both. But after issuance of the law determining the relationship between landowner and tenant, it seems appropriate to modify this paragraph that reimbursement of the covered drainage costs should be borne by the landowner only.
- Law No. 213/1994, Article 36 (bis1) states that the Water Resources and Irrigation is authorized to decide on the manner the farmer manages and benefits from the improved on-farm irrigation systems in the old lands. In view of the importance of the matter, it seems necessary to add a special chapter on the subject of improving irrigation in the old lands (Chapter 5, Unit 4) which gives the Ministry full authority by force and by Ministerial Decree from the Minister of Water Resources and Irrigation to implement such improvements.
- The Water User Associations or have become principal units of nominal character in water resources management at the farm level in the new lands, besides their fundamental role in the improved irrigation systems in old lands, as well as the on-farm covered drainage systems.
- The estimated values of the penalty fines are too small to compensate the negative impacts affecting the agricultural production. It is imperative to consider raising the value of such fines in order to limit the great numbers of violations.
- For simplifying the legal procedures, it is proposed to form a committee in each court of summary jurisdiction headed by a judge and staffed by specialized personnel to judge the crimes mentioned in the law. The sentence of this court is considered final and is out into force by the public prosecution.

#### **Fourth: New Issues to be Included in the Proposed Law According to the Present Water Policy Vision**

- Constitution of Water User Associations - on the distributary or branch canal level - responsible for the management, operation, and maintenance of the irrigation and drainage networks, with the participation of the beneficiaries themselves and under supervision of the irrigation and drainage officials.
- It is beneficial to encourage the establishment of private companies for the management, operation, and maintenance of irrigation and drainage networks. This could be financially supported by the Administrative boards on the level of the canal or drain general networks, and by the Water Users' Associations on the on-farm irrigation and drainage level.

The proposed executive regulation covers:

- Legal basis for all water users organizations both in new and old lands.
- Stakeholders involvement in water allocation, planning and management.
- Role of private sector.
- Water charges, cost recovery and cost sharing.
- Use of groundwater both in the Nile Valley and the deserts.
- New lands development.

The stakeholders' workshop, held to review the draft of the revised Law 12 and its executive regulation, met its objective in soliciting stakeholders' feedback.

It is necessary to amend the following laws to avoid conflicting overlaps:

- Law of the Environment (Law 4/1994);
- Law of Irrigation and Drainage (Law 12/1984);
- Law of the Protection of the Nile River and its Waterways from Pollution (Law 48/1982);
- Law of Desert Lands (Law 143/1981);
- Law of Local Municipalities (Law 43/1979);
- Law of Agriculture (Law 53/1966); and
- Law of Agrarian Reform (Law 178/1952).

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