

Task Order No. 832

USAID Contract No. PCE-I-00-96-00002-00

**Egyptian Environmental Policy Program
Program Support Unit**

WORK ASSIGNMENT REPORT

Tranche 1, Objective 1

***Operationalizing the Environmental Disasters
Management Unit***

Dr. Aref A. Rashad

September 2000

PSU-28

for
**U.S. Agency For International Development
Cairo**

by
**Environmental Policy & Institutional Strengthening
Indefinite Quantity Contract (EPIQ)**

A USAID-funded project consortium led by International Resources Group, Ltd.

Task Order No. 832
Contract No. PCE-I-00-96-00002-00

**Egyptian Environmental Policy Program
Program Support Unit**

**WORK ASSIGNMENT REPORT
Tranche 1, Objective 1**

***Operationalizing the Environmental Disasters
Management Unit***

Dr. Aref A. Rashad

September 2000

PSU-28

for
**U.S. Agency for International Development
Cairo**

by
**Environmental Policy and Institutional Strengthening Indefinite Quantity Contract
(EPIQ)**

A USAID-funded project consortium led by International Resources Group, Ltd.

FACT SHEET

USAID Contract No.: PCE-I-00-96-00002-00
Task Order No. 832

Contract Purpose: Provide core management and analytical technical services to the Egyptian Environmental Policy Program (EEPP) through a Program Support Unit (PSU)

USAID/Egypt's Cognizant Technical Officer: Holly Ferrette

Contractor Name: International Resources Group, Ltd.

Primary Beneficiary: Egyptian Environmental Affairs Agency (EEAA)

EEAA Counterpart: Eng. Dahlia Lotayef

Work Assignment Supervisor: Harold van Kempen

Work Assignment Period: September 2000

Preface

Through competitive bidding, the U.S. Agency for International Development (USAID) awarded a multi-year contract to a team managed by International Resources Group, Ltd. (IRG) to support the development and implementation of environmentally sound strategic planning, and strengthening of environmental policies and institutions, in countries where USAID is active. Under this contract, termed the Environmental Policy and Institutional Strengthening Indefinite Quantity Contract (EPIQ), IRG is assisting USAID/Egypt with implementing a large part of the Egyptian Environmental Policy Program (EEPP).

This program was agreed-to following negotiations between the Government of the United States, acting through USAID, and the Arab Republic of Egypt, acting through the Egyptian Environmental Affairs Agency (EEAA) of the Ministry of State for Environmental Affairs, the Ministry of Petroleum's Organization for Energy Planning, and the Ministry of Tourism's Tourism Development Authority. These negotiations culminated with the signing of a Memorandum of Understanding in 1999, whereby the Government of Egypt would seek to implement a set of environmental policy measures, using technical support and other assistance provided by USAID. The Egyptian Environmental Policy Program is a multi-year activity to support policy, institutional, and regulatory reforms in the environmental sector, focusing on economic and institutional constraints, cleaner and more efficient energy use, reduced air pollution, improved solid waste management, and natural resources managed for environmental sustainability.

USAID has engaged the EPIQ contractor to provide Program Support Unit (PSU) services to EEPP. The PSU has key responsibilities of providing overall coordination of EEPP technical assistance, limited crosscutting expertise and technical assistance to the three Egyptian agencies, and most of the technical assistance that EEAA may seek when achieving its policy measures.

The EPIQ team includes the following organizations:

- Prime Contractor: International Resources Group
- Partner Organization:
 - Winrock International
- Core Group:
 - Management Systems International, Inc.
 - PADCO
 - Development Alternatives, Inc.
- Collaborating Organizations:
 - The Tellus Institute
 - KBN Engineering & Applied Sciences, Inc.
 - Keller-Bliesner Engineering
 - Conservation International
 - Resource Management International, Inc.
 - World Resources Institute's Center For International Development Management
 - The Urban Institute
 - The CNA Corporation.

For additional information regarding EPIQ and the EEPP-PSU, contact the following:

United States of America:

EPIQ Prime Contractor
International Resources Group, Ltd
1211 Connecticut Ave, NW
Suite #700
Washington, DC 20036
Telephone: (1-202) 289-0100
Facsimile: (1-202) 289-7601
Contact: Douglas Clark
Vice President

Egypt:

EEPP-PSU
International Resources Group, Ltd
21 Misr Helwan Agricultural Road
Office 62, 6th Floor
Maadi, Cairo 11431
Telephone: (20-2) 380-5150
Facsimile: (20-2) 380-5180
Contact: Harold van Kempen
Chief of Party

Contents

About the Author	vi
Executive Summary	1
1. Introduction	2
2. EMDU Responsibilities and Work Policies	3
2.1 Objective	3
Main Responsibilities	3
Work Policies	3
The main work policies are: -	3
Disaster Management phases	3
3. EMDU Organization and Staffing Plan	4
3.1 Organization Structure	4
EDMU organizational units are:	4
3.2 Organization Units Responsibilities	4
3.2.1 Study and Research Section:	4
3.2.2 Coordination and Communication Section	5
3.2.3 Information Systems Section	5
3.2.4 Control and Monitoring Section	5
Job Responsibilities	5
3.3.1 EDMU Manager	5
Research and Studies Section Head	5
Environmental Systems Analyst (2 persons)	6
Coordination and Communication Section Head	6
Communication Specialist (3 persons)	6
Information System Section Head	7
Database Administrator	7
Programmer (2 persons)	7
Control and Monitoring Section Head	8
Control and Monitoring Specialist	8
Administration Section Head	8
Administrator	8
Secretary	9
3.4 Hiring Schedule	9
Administrative and Technical Preparations	9
Administrative Facilities	9
Communication Facilities	10
Presentation Equipment	10
EDMU Operation Procedures	11
Procedures Classification	11
Pre-disaster Operation Procedures	11
Receiving incident notifications	11
Evaluating incident status and taking necessary procedures	12
Analyzing and studying situation status	13
Predicting environmental disasters and preparing confrontation plans	13
Gathering and updating all related environmental disaster data	13
Operation procedures during disaster	13
Receiving crisis notifications	13

Evaluating notifications and taking necessary procedures	13
Coordination with relevant entities.....	13
Provision of all information and data related to the disaster	14
The taskforce formation procedures	14
Evaluating incident status	14
Declare a state of environmental disaster.....	14
Managing the crisis from the Central Operations Room.....	15
Operational Level.....	15
After disaster operation procedures	15
Receiving situation notifications after disaster occurrence	15
Evaluating different notifications and taking necessary procedures	16
Coordination with concerned agencies	16
Studying and analyzing the disaster status after its occurrence	16
Identifying procedures to minimize the negative impacts of the disaster.....	16
Evaluating, analyzing and identifying gained lessons from the disaster	16
Implementation Plan	17
Implementation Requirements.....	17
Organization Structure and Job description	17
Preparing Scenarios and Standard Operation procedure	17
Building Information system.....	17
Training	17
The implementation phases	17
Resources	19

About the Author

Dr. Rashad is an Operations Research and Information Systems Certified Consultant He got his B.Sc. in Mechanical Engineering from MTC, Egypt, in 1971, M. Sc. in Operations Research from Naval Postgraduate school, Monterey ,CA ,and Ph.D. from Faculty of Engineering, Cairo University. Dr. Rashad spent one year as a Visiting Professor in the School of Business, University of Southern California (USC).

Dr. Rashad main field of interests are crisis management, operation Analysis, projects management, Information and Decision Support Systems and Feasibility Analysis & Marketing Studies.

Executive Summary

Based on the proposed Framework of the National Environmental Disaster Management Plan, this study is carried out to start operationalizing the unit. The objective of the study is to define the unit responsibilities and work policies and to define its organization structure and the proposed operation procedure.

EDMU responsibilities include environmental disaster's prediction, monitoring, managing and evaluation. The organization structure is based on establishing different organizational units for research and studies, coordination and communication, information system and control & monitoring.

The Operation procedures have been categorized based upon the phases of the disaster management process. The first phase is the pre-disaster phase, where the operations are focused on receiving and analyzing information, studying probable incidents and preparing confrontation plans. The second phase is the during-disaster phase where the operations are focused on evaluating the disaster situation, coordinating with different entities, formation the task force and managing the disaster confrontation process. The third phase is the pre-disaster phase, where the operations are focused on evaluating the situation after disaster and defining procedures to minimize the disaster impacts.

The study proposed an implementation plan to start the unit operation, where the time schedule, resources and cost are defined. The plan is based on developing a prototype project for specifying a certain type of disaster, defining its detailed standard operation procedure, preparing the management documents and formats and training the people on managing such disaster. Based on this prototype a general scheme for disaster management can be developed.

Establishment of EDMU shall facilitate the management process of the environmental disasters and shall effectively help in minimizing disaster hazards and ensure efficient management procedure.

Introduction

The National Environmental Disaster Management Plan defined the framework for managing environmental disasters in Egypt. The plan specified the types of probable disasters that have environmental effects and it defined the basic requirements for different disaster management phases concerning preparedness, response and recovery. The plan also defines the State administrative levels to be involved in the disaster management process as the strategic level (Central Government), tactical level (Governorates) and operational level (Centers within Governorates). The plan defined also the Command Agency and supporting agencies at different administrative levels for each type of the environmental disaster.

To operationalize the EDMU the following study has been carried out based on the guidelines described on the NEDMP. The study is organized as follows: Chapter 2 defines EDMU responsibilities and work policy. Chapter 3 defines the organization structure. Chapter 4 specified the operation procedures in each disaster management phase. Chapter 5 presented the implementation plan. Appendices show the proposed formats to be used during the management process.

EMDU Responsibilities and Work Policies

Objective

The EDMU objectives are to keep track, analyze and evaluate incidents, crises and disasters which may have a harmful impact on the environment, and to manage all operations and activities related to alarming, preventing and minimizing the expected hazardous impacts by co-operating with all relative entities in the state.

Main Responsibilities

The main responsibilities of EDMU are:

- ? Crises and disaster prediction, and preparing the appropriate confrontation plans on different levels.
- ? Monitoring potential crises in order to take precautions before its occurrence.
- ? Evaluate the crises / disaster situation and identify the required means to deal with.
- ? Managing the environmental crises or disaster on the time it occurs according to the National Contingency Plan in cooperation with all relevant entities.
- ? Regular monitoring of the crises/ disaster impacts and analyzing gained lessons after occurrence.
- ? Collect and update all necessary data and information to monitor and manage environmental crises/ disasters to support decision-making process.

Work Policies

The main work policies are: -

- ? Focus on limiting the crises negative impacts or preventing its occurrence.
- ? Dealing with the environmental crises/disaster in a scientific way with organized methods to limit its impacts.
- ? Co-operation with all entities in an effective way to prevent or minimize or demolish the disaster/ crises negative impacts.

Disaster Management Phases

The operation of the unit shall be analyzed according to the functions performed. We can distinguish three main phases of the disaster management process:

- ? Before disaster phase
It includes the operations to be carried out before the disaster occurrence.
- ? During disaster phase
It includes the operations to be carried during the disaster occurrence.
- ? After disaster phase
It includes the operations to be carried after the disaster occurrence.

EDMU Organization and Staffing Plan

Organization Structure

The organization of disaster management consists of:

- ? EDMU organizational units
- ? EEAA disaster higher committee, which includes:-
 - ? EEAA Executive Chairman.
 - ? Head of Air Quality Sector.
 - ? Head of Environment Administration Sector.
 - ? Head of Information System Sector.
 - ? Environment Protection Fund Manager.
 - ? Head of Native Protection Central Department.
 - ? Head of Branches Affairs Central Department.
 - ? Head of Environmental Disaster Management Unit.
- ? Consultants from outside EEAA.
- ? Representatives of relevant entities.

EDMU organizational units are:

The EDMU organization structure includes 5 sub-units and a total of 16 professional staff plus one secretary and headed by EDMU manager. The organization units and their staff are:

Research and Studies section

- ? Research and Studies section head (1 person)
- ? Environmental systems analyst (2 Persons)

Coordination and Communication section:

- ? Coordination and Communication section head (1 person)
- ? Communication Specialist (3 Persons)

Information System section:

- ? Information system section head (1 person)
- ? Data base administrator (1 person)
- ? Programmer (2 Persons)

Control and Monitoring section:

- ? Control and Monitoring section head (1 person)
- ? Control and follow-up specialist (1 Person)

Administration section:

- ? Administrative section head (1 Person)
- ? Administrator (1 person)

Organization Units Responsibilities

Study and Research Section:

- ? Preparing methods and studies concerning means and ways of environmental crisis/disaster prediction.
- ? Applying measurements related to potential environmental crisis sources.
- ? Applying measurements related to what extend are habitat subject to hazard impacts of the crisis.
- ? Analyzing and studying previous and current crisis/disasters.

- ? Develop environmental crisis/disaster scenarios, and describe its measurement procedures.

Coordination and Communication Section

- ? Coordination and communication with all relevant entities.
- ? Identifying, gathering, and documenting all data / information needed for the environmental crisis/disaster management.

Information Systems Section

- ? Develop and operate database system, and update on regular bases
- ? Develop and operate computer applications to deal with environmental crisis/disaster management.
- ? Enter and update the system data regularly.

Control and Monitoring Section

- ? Develop and monitor all environmental crises/disaster management procedures.
- ? Coordinate between all relevant entities before / during and after crises /disaster.
- ? Coordinate and follow-up with all experts and consultants.

Job Responsibilities

EDMU Manager

The main job responsibilities for EDMU manager are as follows:

- ? Planning and following up the implementation of the EDMU sections responsibilities.
- ? Supervises and analysis all on going studies and researches in the EDMU.
- ? Supervises the preparation and evaluation of the EDMU information system.
- ? Developing basis and protocols of cooperation with different entities.
- ? Supervises the equipping and developing of the Environmental Crisis Management Operation Room.
- ? Regular review to the Environmental Crisis National Plan, and supervises the preparation of all executive appendixes.
- ? Supervises the implementations of all tasks assigned to the EDMU from the EEAA.

The qualifications needed for the EDMU manager job are as follows:

- A university degree in a relevant domain
- At least 5 years experience in disasters/crisis management field
- At least 3 years experience as a manager or director
- Good management and coordination capability
- Previous experience in environmental affairs

Research and Studies Section Head

The main job responsibilities for Research and Studies Section Head are as follows:

- ? Planning and following up the activities of the Research and Studies section
- ? Supervise and review studies and researches carried out in the section
- ? Assign research teams from inside and outside EEAA.
- ? Coordinate and follow up study progress
- ? Ensure continuous update of measurements for disaster prediction, analysis and evaluation
- ? Ensure completion and update of disasters scenarios.
- ? Coordinate with other sections to achieve EDMU objectives

The qualifications needed for the Research and Studies Section Head job are as follows:

- A university degree in a relevant domain
- At least 5 years experience in environmental research and studies field
- Good management capability
- Preferable to have higher academic degree in environment domain

Environmental Systems Analyst (2 persons)

The main job responsibilities for Environmental Systems Analyst are as follows:

- ? Participate in analyzing and studying previous and current crisis/disasters.
- ? Participate in developing environmental crisis/disaster scenarios, and describe its measurement procedures.
- ? Participate in developing standard operation procedures for environmental disasters.
- ? Maintain technical documentation about environmental disasters
- ? Advise on specifying the environmental database requirements

The qualifications needed for the Environmental Systems Analyst job are as follows:

- A university degree in a relevant domain, preferable in environmental studies.
- At least 2 years experience in environmental research and studies field
- Good analytical capability
- Preferable to have higher academic degree in environment domain

Coordination and Communication Section Head

The main job responsibilities for Coordination and Communication Section Head t are as follows:

- ? Planning and following up the activities of the Coordination and Communication section.
- ? Establish the contacts with the entities outside EEAA.
- ? Assign work and responsibilities for subordinated communication specialists
- ? Coordinate and follow up communication process during different phases of the disaster
- ? Ensure continuous update of data and information concerning communication means with persons and entities.
- ? Define the required formats used for communication and coordination.
- ? Coordinate with other sections to achieve EDMU objectives

The qualifications needed for Coordination and Communication section head job are as follows:

- A university degree in Business Administration or Public Relation.
- At least 5 years experience in communication and coordination field
- Good communication capability
- Good management capability

Communication Specialist (3 persons)

The main job responsibilities for Communication Specialist are as follows:

- Carry out communication with specified entities.
- Facilitate the flow of information between EDMU and specified entities.
- Understand the roles of the relevant entities during different disaster phases.
- Understand EDMU requirements from specified entities during different disaster phases.
- Collect relevant data and information from the specified entities.
- Provide Information system section with updated data and information

The qualifications needed for Communication specialist job are as follows:

- A university degree in Business Administration or Public Relation.
- At least 2 years experience in communication and coordination field
- Good communication capability

Information System Section Head

The main job responsibilities for Information System Section Head are as follows:

- ? Planning and following up the activities of the Information System section.
- ? Define the scope and limitation of the required information system to achieve EDMU requirements.
- ? Assign work and responsibilities for subordinated personnel
- ? Supervise and review development of the database and computer applications.
- ? Ensure data and information update during different phases of the disaster
- ? Coordinate with other sections to achieve EDMU objectives

The qualifications needed for Information system section head job are as follows:

- A university degree in Computers or Information Systems.
- At least 5 years experience in information field
- Previous position as an Information system manager
- Good management capability

Database Administrator

The main job responsibilities for Database Administrator are as follows:

- Establish the required database to provide needed information during different phases of disaster
- Maintain and update the database.
- Reorganize and restructure the database when needed.
- Participate in developing the required application.
- Coordinate with communication specialists to ensure continuous data update.
- Ensure database recovery, safety and security

The qualifications needed for Database Administrator job are as follows:

- A university degree in Computers or Information Systems.
- At least 3 years experience in information field
- Previous position as a database administrator

Programmer (2 persons)

The main job responsibilities for Programmer are as follows:

- Specify detailed computer application requirements
- Interact with different sections to ensure fulfillment of the application requirements.
- Design computer applications
- Develop programming codes
- Test and verify application
- Ensure proper application interfaces
- Ensure continuous application modification according to requirements

The qualifications needed for Programmer job are as follows:

- A university degree in Computers or Information Systems.
- At least 3 years experience in information field
- Previous position as a programmer
- Good knowledge of programming techniques

Control and Monitoring Section Head

The main job responsibilities for Control and Monitoring Section Head are as follows:

- ? Planning and following up the activities of the Control and Monitoring Section.
- ? Define control and monitoring procedure during disaster management process.
- ? Define formats to ensure control and follow up of different activities.
- ? Assign work and responsibilities for subordinated personnel.
- ? Supervise operation procedures during different disaster phases.
- ? Facilitate completion of the EDMU operations
- ? Ensure effective and efficient implementation of the specified operation procedures.
- ? Coordinate with other sections to achieve EDMU objectives

The qualifications needed for Control and Monitoring section head job are as follows:

- A university degree in Business Administration or a relevant field.
- At least 5 years experience in control and monitoring field
- Previous position as a control manager
- Good management capability

Control and Monitoring Specialist

The main job responsibilities for Control and Monitoring Specialist are as follows:

- Monitor operations in the specified domain
- Ensure implementation of proper and complete operations
- Define obstacles in executing the operations and report for the section Head.
- Coordinate with different sections and outside entities

The qualifications needed for Control and Monitoring Specialist job are as follows:

- A university degree in Business Administration or a relevant field.
- At least 2 years experience in control and monitoring field.

Administration Section Head

The main job responsibilities for Administration Section Head are as follows:

- ? Planning and following up the activities of the Administration Section.
- ? Assign work and responsibilities for subordinated personnel.
- ? Define and facilitate administrative requirements.
- ? Supervise preparation of the control room.
- ? Ensure completion of all communication and presentation equipment.
- ? Ensure availability of required transportation means.

The qualifications needed for Administration Section Head job are as follows:

- A university degree in Business Administration or a relevant field.
- At least 5 years experience in administration activities.
- Good management capability

Administrator

The main job responsibilities for Administrator are as follows:

- ? Execute administration activities

- ? Organize administration needs
- ? Communicate with other administration entities

The qualifications needed for Administrator job are as follows:

- A university degree in Business Administration or a relevant field.
- At least 2 years experience in administration activities.

Secretary

The main job responsibilities for Secretary are as follows:

- ? Organize office work
- ? Maintain filing system
- ? Supervise documentation system

The qualifications needed for Secretary job are as follows:

- A university degree in Business Administration or a relevant field.
- At least 2 years experience in secretarial activities.

Hiring Schedule

EDMU staffing recruitment is proposed in three phases as follows:

Phase 1	EDMU manager Administration Section Head Information Section Head Communication Section Head Communication Specialist Environmental Analysis Specialist
Phase 2	Communication Specialist Environmental Analysis Specialist Programmer (2) Database Administrator
Phase 3	Administrator Communication Specialist Control and Monitoring Section Head Control and monitoring Specialist (2)

The duration of the different phases depends on the allocated resources and cost.

Administrative and Technical Preparations

Administrative Facilities

Consists of all office appliances:

- Photocopying center.
- Stationary and printed materials.
- Office equipment

Communication Facilities

Consists of all means of communication:

- Telephones
- Faxes
- Communication through internet

Presentation Equipment

It consists of:

- One main computer
- Three personal computers
- Three printers
- One Plotter
- Projector

EDMU Operation Procedures

Procedures Classification

EMDU operations are classified as follows:

Pre-disaster operation procedures, where the following activities are carried out:

- ? Receiving incident notifications.
- ? Evaluating notification status and taking appropriate procedures.
- ? Studying and analyzing incident status.
- ? Expecting environmental crisis/disaster and preparing confrontation plans.
- ? Collecting and updating all data related to potential environmental disasters.

During disaster procedures, where the following activities are carried out:

- ? Receiving disaster notifications.
- ? Evaluating different notifications and taking appropriate procedures.
- ? Coordinating with relevant entities.
- ? Collecting all data related to disaster.
- ? Initiate procedures for taskforce formation.
- ? Evaluating the disaster status.
- ? Declare a state of environmental disaster.
- ? Managing the disaster through the operation room.

After crisis procedures, where the following activities are carried out:

- ? Receiving notifications related to crisis after its occurrence
- ? Evaluating various notifications and taking necessary procedures.
- ? Coordinating with relevant entities.
- ? Studying and evaluating crisis status after occurrence.
- ? Initialize procedures to minimize the disaster impacts.
- ? Evaluating and analyzing the disaster, and analyzing the gained lessons

Pre-disaster Operation Procedures

Receiving incident notifications

Control and monitoring section receives incident signals through:

- ? Local entities
- ? Civil Defense Central Operations Room
- ? Other entities which includes:

Meteorology Agency, Environmental Monitoring Network, Maritime Ports Authority, Coast Guard, Military and commercial ships, Military and civil aircraft, waterway police, Armed Forces Operations Room, Other governmental agencies and authorities.

Control and monitoring section prepares "incident notification" data form and forward it to the Environmental Crisis Management Unit (form # 1).

In case of receiving notification from the Civil Defense Central Operations Room, the fax issued from the operation room shall include the checklist (form # 2) that is being issued by the police officer in the police station. This list is to be attached to the notification form (form # 1).

In case of receiving notifications from local entities, the notification is being sent based on the police report . the report serial number, the date and the location of issuing this report is to be registered.

In case of receiving notifications from other entities, a checklist of incident status shall be developed and send in case of:

- ? Seawater incidents.
- ? Waterways incidents.
- ? Ambient air incidents.

The fax is to be attached to the notification report (form # 1).

The notification form (form #1) and the checklist (form # 2,)if available, are to be submitted to the Environmental Disaster Management Unit manager.

Evaluating incident status and taking necessary procedures

The unit manager evaluates the notification status and specifies the response level as follows:

First Level: means that there is a minor incident that slightly affects the Environment “ limited harmful effects. The resources of the local authorities are enough to control the impacts of the incident. This means that there is no need to call for Help from sources outside the Governorate to manage, control, and recover the incident.

Second Level: This means that the incident has more harmful effects on the environment. In this case the resources of the district or the Governorate are not enough to control the incident. It requires cooperation of more than one agency within the Governorate in order to manage the incident.

Third Level: This means that the accident resulted in an environmental disaster, which severely damage environmental elements and needs efforts of various State agencies, organizations, and ministries to manage the disaster whereas the resources of the Governorate alone are not enough.

The unit manager through the coordination and communication unit communicates with all relevant entities, if needed.

According to the situation evaluation, the unit manager specify the Level of response, prepare an evaluation report on form # 3 and send it with a notification form #1 to the environmental affairs agency director.

Evaluating Notification Report is to be submitted to the EEAA director for approval. The approval of the EEAA director is to be send to the unit manager in order to take the following actions:

- ? In case of approving the third level response , procedures to be taken according to article # 2
- ? A copy of the report is to be sending to the research and studies section for appropriate analysis.
- ? A copy of the report is to be sent to the control and monitoring section, in order to follow up the incident and receive any future notifications related to the incident.
- ? A copy of the report is to be sent to the Information section, in order to update the current

database.

Analyzing and studying situation status

The Research and studies section analyzes and categorizes the notification for statistical use related to environmental disasters.

Predicting environmental disasters and preparing confrontation plans

Research and studies section, studies each disaster type separately , and prepares predictions related to how often each type may occur.

Research and studies section prepares and updates confrontation plans on regular basis.

Gathering and updating all related environmental disaster data

The information section enters the “ incident notification” data to the environmental disasters database.

The information section prepares regular statistics on environmental crisis occurrence frequency, types and locations ..etc.

Operation Procedures during Disaster

Receiving crisis notifications

The control and monitoring section receives notifications on the incident progress status from:

- ? Local entities
- ? Civil defense Central Operations Rooms
- ? Citizens and other entities
- ? The taskforce of the EEAA

The control and monitoring section sends any notifications or data related to the disaster to the Environmental Disaster Management Unit manager (Who works as a coordinator to the disaster management committee).

Evaluating notifications and taking necessary procedures

The EDMU manager inspects all signals and notifications during the disaster as follows:

- ? Implementing procedures as in # 4.2.1 in case of receiving a notification about a new incident.
- ? Studying and evaluating all notifications and signals received during the disaster, and specify to which extent the incident develop; inform the taskforce regularly.

Coordination with relevant entities

According to the rate of incident progress. The EDMU manager communicates with the concerned agencies to inform them with the incident status and to collect any kind of information that is needed by the crisis management committee or the taskforce. This is to be done through the coordination and communication section.

Provision of all information and data related to the disaster

The information department facilitates the availability of all data and information related to the types of disasters.

The taskforce formation procedures

In case of approving the third level response, the EDMU manager submits a proposal of forming a taskforce # 1 to the EEAA director for approval.

The taskforce consists of:

- ? Egyptian Environmental Affairs Agency experts.
- ? Consultants and experts from outside the EEAA.

Those are to be chosen from the available expert's list in and outside the EEAA.

After getting the EEAA approval, the EDMU manager calls the taskforce for a meeting.

The administration affairs section arranges means and ways of transportation of the taskforce to the incident location.

Evaluating incident status

The taskforce # 1 inspects the incident on location regarding:

- ? Applying measurements for identifying disaster type.
- ? Identifying whether the incident is likely to turn into a general disaster.

The taskforce will coordinate with those relevant agencies:

- ? Civil Defense department, which is responsible of taking actual confrontations for the incidents on land.
- ? Waterways police, for incidents in the Nile River.
- ? Maritime ports authorities and concerned ministries.
- ? Any other concerned entities.

The taskforce responsibilities include:

- Implementing the developed plans to coordinate and cooperate with different entities on the operational, tactical and strategic levels.
- Decide on technical issues regarding environmental impacts.
- Allocate available resources of different entities.
- Coordinate between entities on the operational level
- Report the situation to the operations room.

The Taskforce shall develop a report "Evaluating Disaster Status" "Form # 4" and to be submitted to the EEAA director.

Declare a state of environmental disaster

Following submitting the Taskforce report to the CEO/EEAA stating that the incident has developed into an environmental disaster, the CEO shall:

- ? Notify the Minister of State for Environmental Affairs, who in turn shall notify the Cabinet of the ministers that an accident led to an environmental disaster.
- ? Notify the crisis management unit in order to prepare the operations room.

- ? Notify all sections in the EEAA

The Prime Minister shall take the procedures to declare a state of Environmental Disaster as well as the consequent commitments and authorizations at the State different administrative levels.

The members of the Supreme Council for Disaster Management shall be called to convene a meeting at the Cabinet Presidency to form the Management Committee according to the rules of the general plan for environmental disaster management.

The Management Committee shall head to the Environmental Central Operations Room to manage the disaster at the strategic level in cooperation with the Disaster Department at the EEAA.

Managing the crisis from the Central Operations Room

The Management Committee shall form a Taskforce to follow up the disaster management. The Taskforce #2 formed by the CEO/EEAA shall assist the Taskforce to work at the three state administrative levels as follows:

Strategic Level

Submitting reports on incident developments to the Management Committee

Tactical Level

Participating in operations management and developing suitable solutions and follow-ups.

Operational Level

Supporting the disaster site with the required facilities and resources and coordinate between relevant entities to overcome constraints.

The Taskforce shall develop daily reports about disaster progress based on the data received from the tactical and operational levels.

The Taskforce reports to be submitted to the Management Committee to take the necessary procedures.

After disaster operation procedures

Receiving situation notifications after disaster occurrence

Control and Monitoring section receives notifications about the incident progress after the disaster occurrence:

- ? Local entities.
- ? Civil Defense Central Operations Rooms.
- ? Citizens and other entities.
- ? EEAA Taskforce the follow up the incident development.

Control and Monitoring section sends any data or received notifications related to losses caused by the disaster to the EDMU manager.

Evaluating different notifications and taking necessary procedures

The EDMU manager studies the received notifications after the disaster and identifies the extent of environmental losses; inform the Taskforce regularly.

Coordination with concerned agencies

According to the rate of development , the unit manager communicate with the people in charge in all concerned agencies ; in order to inform them with the incident status ,and specify methods to minimize the negative impacts of the disaster. The unit manager may also need to know some data or information for the Taskforce or the Crisis management committee. This happens through the coordination and communication unit.

Studying and analyzing the disaster status after its occurrence

The Taskforce follow-up the incident development through:

- ? Evaluate the size and extent of environmental losses.
- ? Evaluate recovery requirement.
- ? Gathering experts and consultants suggestions in-order to reach the best methods in dealing with the situation.
- ? Identify the aid needed from different entities.

Identifying procedures to minimize the negative impacts of the disaster

The taskforce develop procedures to minimize the negative impacts of the disaster including:

- ? Short term plan to insure the minimum possible recovery of the disastered area.
- ? Long term plan to insure the complete recovery of the area.

Evaluating, analyzing and identifying gained lessons from the disaster

Research and studies section analyzes and evaluates the disaster; and comes up with the gained lessons.

Implementation Plan

Implementation Requirements

Organization Structure and Job description

The foundation of the center needs a detailed description of the organization structure, job descriptions, and the qualifications needed for employees.

Preparing Scenarios and Standard Operation procedure

Preparing Scenarios and measuring procedures for disaster confrontation. This means to prepare expected scenarios to disasters then specify standard operations procedures to be implemented for each scenario separately.

Building Information system

There should be a fully accurate ,and integrated information system in the center , to help in the decision making process. Building such a system requires identification of data types, database specification and application characteristics.

Training

Theoretical and practical training should be given to EDMU personnel, so all related personnel can get acquainted with the proper procedures. Training should include a simulated practice of a hypothetical disaster management.

The implementation phases

Establishment phase:

Includes preparing and equipping all center requirements, and developing a project prototype to manage a disaster.

Implementation phase:

Includes operating and monitoring a disaster during its occurrence and the evaluation of the operation process after the disaster, and extracting the learned lessons.

4.1 Proposed Work Plan

5.2.1 Time Schedule (During the establishment phase)

Activity	Year 2000					year 2001											
	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Prepare and Issue the Framework for NEDP																	
Plan first draft																	
Consultants review																	
Prepare the initial Framework for NEDP																	
Present and discuss with EEAA/CEO																	
Conduct internal workshop																	
Send plan copies to relevant entities																	
Conduct workshops for external entities																	
Receive proposals from external entities																	
Prepare the final Framework for NEDP																	
EEAA/CEO approval for final Framework																	
The MInister approval for final Framework																	
The Cabinet approval for final Framework																	
EDMU Establishment																	
Define administartive and organizational requirements																	
Conduct similar local and international centers																	
Define work rules and regulations																	
Design operational documents																	
Prepare work site and recrute employees: 1st stage																	
Prepare work site and recrute employees: 2nd stage																	
Prepare work site and recrute employees: 3rd stage																	
Train employees: 1st stage																	
Train employees: 2nd stage																	
Train employees: 3rd stage																	
Select experts and consultants																	
Prepare central operation room for use																	
Define and Collect Basic Data and Information																	
Define nature and sources of information																	
Determine information collection plan and methodolgy																	
Determine information documentation and indexing procedure																	
Specify and collect relevant information in EEAA																	
Define coopeartion protocols with external entities																	
Collect data from external entities																	
Collect relevant information worldwide																	
Document and analyze collected data																	
Building Information System																	
Analyze needs and define requirements																	
Prepare information system framework																	
Design information system																	

C1	Crisis Management Consultant	Outsider Consultant
C2	Information System Consultant	Outsider Consultant
C3	Environment Consultany	Outsider Consultant
S1	IS Analysis Specialist	Information Section Head
S2	ES Analysis Specialist	Environmental Analyst
S3	Programming Specialist	Programmer
S4	Data Specialist	Communication Specialist
S5	Documentation Specialist	Outsider Specialist
A	Administrator	Administrartor
S	Secertary	Secertary
O	Office boy	Office boy

EDMU staffing recruitment is proposed as follows:

Phase 1 – September 2000	EDMU manager Administration Section Head Information Section Head Communication Section Head Communication Specialist Environmental Analysis Specialist
Phase 2 – January 2001	Communication Specialist Environmental Analysis Specialist Programmer (2) Database Administrator
Phase 3 – April 2001	Administrator Communication Specialist Control and Monitoring Section Head Control and monitoring Specialist (2)

Human resources are allocated on activities as follows:

Activity	Jobs (manmonth)											
	C1	C2	C3	S1	S2	S3	S4	S5	A	S	O	
Prepare and Issue the Framework for NEDP												
Plan first draft												
Consultants review												
Prepare the initial Framework for NEDP	1										1	
Present and discuss with EEAA/CEO												
Conduct internal workshop	1									1	1	
Send plan copies to relevant entities										1	1	

Conduct workshops for external entities									1	1
Receive proposals from external entities									1	
Prepare the final Framework for NEDP	1									1
EEAA/CEO approval for final Framework										
The MInister approval for final Framework										
The Cabinet approval for final Framework										
EDMU Establishment										
Define administartive and organizational requirements	1									
Conduct similar local and international centers	1	1								
Define work rules and regulations	1								1	
Design operational documents	1	1								
Prepare work site and recrute employees: 1st stage									1	1
Prepare work site and recrute employees: 2nd stage									1	1
Prepare work site and recrute employees: 3rd stage									1	1
Train employees: 1st stage									1	
Train employees: 2nd stage									1	
Train employees: 3rd stage									1	
Select experts and consultants										
Prepare central operation room for use									1	
Define and Collect Basic Data and Information										
Define nature and sources of information	1	1								
Determine information collection plan and methodolgy	1	1								
Determine information documentation and indexing procedure									1	
Spfecify and collect relevant information in EEAA							4			
Define coopeartion protocols with external entities									1	
Collect data from external entities							5			
Collect relevant information worldwide							1			
Document and analyze collected data			1				1	1		
Building Information System										
Analyze needs and define requirements	1	1								
Prepare information system framework	1	1								
Design information system			2			2				
Prepare data bases			2			8				
Record and update data							10			
Develop information system applications	1	2				12				
Validate and test the system	1	2				4				
Implement the system			1			2	2		1	
Develop a Pilot Project on a City/Governorate Level										
Prepare project document										
Approve project document										
Start project										
Define existing disasters types										
Collect detailed information										
Record collected data										

Define disasters scenarios												
Define standard operational procedures												
Define mutual cooperation policies with other entities												
Execute training programs												
Validate and test computer applications												
Define NEDP Implementation Methodology on the State Level												
Specify national environmental disasters			4		1							
Specify scenarios for different disasters types	1		4		1						1	
Specify disasters management procedure					1						1	
Specify standard operational procedures			8		2						1	
Specify NEDP monitoring and assessment procedure	1				1						1	
Define mutual cooperation policies with state entities	1				1						1	
Specify required training programs	1		1		1						1	
Specify public awareness and orientation program	1		1		1						1	
Specify media policies	1		1		1						1	
Develop an experimental project to manage an environmental disaster												
Prepare project document					1						1	
Approve project document												
Coordinate with relevant entities					1							
Execute required training	1		1		1						1	
Implement environmental disaster management project	1		1	1	1	1	2				1	1
Analyze and assess project outcomes	1		1	1	1							
	16	6	24	16	15	29	25	2	17	17	0	

5.2.3 Total Cost Estimates

Job code	Description	Man month	Number	period	LE/m	Total
C1	Crisis Management Consultant	17	1	Full time	5000	85000
C2	Information System Consultant	6	1	6 mon	5000	30000
C3	Environment Consultancy	24	8	2 mon	5000	120000
			1	8 mon		
S1	IS Analysis Specialist	16	1	Full time	2000	32000
S2	ES Analysis Specialist	15	1	9 mon	2000	30000
			6	1 mon		
S3	Programming Specialist	29	1	Full time	2000	58000
			1	12 mon		
S4	Data Specialist	25	1	Full time	1000	25000
			1	8 mon		
S5	Documentation Specialist	2	1	2 mon	1000	2000
A	Administrator	17	1	Full time	750	12750
S	Secretary	17	1	Full time	500	8500

O	Office boy	17	1	Full time	300	5100
	Subtotal					408350
	Other Items:		Number		Cost	Total
	Workshops		3		5000	15000
	Computers		8		5000	40000
	Copying m/c		1		5000	5000
	Fax m/c		1		2000	2000
	Subtotal					47000
	Total					425350

Note: Developing a Pilot Project on a City/Governorate Level has no cost (It is recommended by EEAA staff to be carried out as an EEPP project)

APPENDIX A

EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY
ENVIRONMENTAL DISASTER MANAGEMENT UNIT

FORM # (1)
INCIDENT NOTIFICATION FORM

- INCIDENT SERIAL # -----.

TIME:-----, DATE : ---/---/-----

NOTIFICATION TIME:-----.

ENTITY OF NOTIFICATION: -----.

METHOD OF NOTIFICATION:-----.

INCIDENT LOCATION:----- GOVERNORATE:-----DISTRICT:-----.

- KIND AND TYPE OF INCIDENT:

- PROCEDURES TAKEN ON DISTRICT/ CITY LEVEL:

- LOSSES OR INJURIES:

APPENDIX (B)

EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY
ENVIRONMENTAL DISASTER MANAGEMENT UNIT

FORM # (2)
CHECKLIST AND INCIDENT REPORT

- TIME:----- DATE :---/---/2000.

- NOTIFICATION TIME:-----.

- INCIDENT LOCATION:----- GOVERNORATE:-----

- DISTRICT:-----.

- BOARDER OF INCIDENT LOCATION			
NORTH	SOUTH	EAST	WEST
----	----	----	----

ENTITY OF NOTIFICATION: -----.

INCIDENT DESCRIPTION:

FIRE	EXPLOSION	DROWNS	DESTRUCTION
-----	-----	-----	-----

- INITIAL LOSSES THAT CAUSED BY THE INCIDENT.

HUMAN BEINGS: INJURIES ----- DEATHS -----

FINANCIAL: TYPES ----- QUANTITIES -----

PLANTATIONS: TYPES ----- QUANTITIES -----

ANIMALS: KINDS---- NUMBERS----INJURIES----DEATHS-----

- POLLUTION DIRECT CAUSE:

- TYPE OF MATERIAL THAT CAUSED POLLUTION:

- EMISSION QUANTITY:

- NATURAL PROTECTORS GEOGRAPHIC DIRECTION
DISTANCE

1- -----

2- -----

HUMAN ACTIVITIES SURROUNDING THE INCIDENT AREA:

- FACTORIES GEOGRAPHIC DIRECTION
DISTANCE

1- -----

2- -----

- TOURIST RESORTS GEOGRAPHIC DIRECTION DISTANCE

1- -----

2- -----

- STRATEGIC OIL TANKS GEOGRAPHIC DIRECTION DISTANCE

1- -----

2- -----

- PORTS AND ITS GEOGRAPHIC DIRECTION DISTANCE
STORAGE ROOM

1- -----

2- -----

- WAYS LEADS TO GEOGRAPHIC DIRECTION DISTANCE
INCIDENT SITE

1- -----

2- -----

*ALTERNATIVE WAYS GEOGRAPHIC DIRECTION DISTANCE

1- -----

2- -----

- AVAILABLE MEANS OF TRANSPORTATION TO INCIDENT SITE:

- PROPOSED LOCATION FOR THE OPERATION ROOM IN THE INCIDENT AREA.

- PROPOSED LOCATION FOR CONFRONTATION TASKFORCE AND THEIR EQUIPMENT.

- WAYS AND MEANS OF TRANSPORTATION FOR TRANSPORTING THE CONFRONTATION TASKFORCE EQUIPMENT.

- PROBABILITY OF IMPLEMENTING THE EVACUATION PLAN

_ YES _ NO

- IS THERE IS A NEED TO DECLARE A STATE OF DISASTER

- YES - NO

- ENTITIES INFORMED WITH THE INCIDENT.

- ENTITIES WHICH ARE REQUESTED TO INTERFERE.

- IMMEDIATE PROCEDURES THAT HAD BEEN TAKEN.

- ONGOING PROCEDURES.

NAME AND TITLE OF THE POLICE
OFFICER:

POLICE OFFICER
ENTITY :

APPENDIX (C)

EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY
ENVIRONMENTAL DISASTER MANAGEMENT UNIT

FORM # (3)
EVALUATING INCIDENT NOTIFICATION

-INCIDENT #-:-----

- INCIDENT TYPE AND KIND:-----

- INCIDENT PROGRESS EXPECTATIONS: -----

- EVALUATION OF THE ENVIRONMENTAL IMPACT CAUSED BY THE INCIDENT:

-

-

LOSSES AND INJURIES EXPECTATIONS:

--

--

-EVALUATING INCIDENT LEVEL:-----

FIRST LEVEL / SECOND LEVEL / THIRD LEVEL

-

-

- ADDITIONAL DATA:

--

- THE ENVIRONMENTAL DISASTER MANAGEMENT UNIT MANAGER VIEW:

-

-

APPENDIX (D)

EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY
ENVIRONMENTAL DISASTER MANAGEMENT UNIT

FORM # (4)
ASSESSMENT OF A DISASTER SITUATION

THE INCIDENT #:----- THE DISASTER #:-----

- TIME:----- DATE:---/---/2000

- INCIDENT AREA:----- GOVERNORATE:-----

DISTRICT: -----

- TYPE AND NATURE OF THE INCIDENT:

--

- TYPE AND VALUE OF MEASUREMENTS TAKEN:

- INCIDENT PROGRESS POSSIBILITIES :

- POTENTIAL ENVIRONMENTAL DISASTER:

- TYPES AND ENTITIES OF COOPERATION :

- SUGGESTED CONFRONTATION PROCEDURE:

- TASKFORCE LEADER VIEW:

- CEO/EEAA VIEW::

- MINISTER OF ENVIRONMENT APPROVAL

APPENDIX (E)

EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY
ENVIRONMENTAL DISASTER MANAGEMENT UNIT

FORM # (5)
DISASTER DAILY MONITORING REPORT

THE INCIDENT #:----- THE DISASTER #:-----

- TIME:----- DATE:---/---/2000

- INCIDENT AREA:----- GOVERNORATE:-----

DISTRICT: -----

- TYPE AND NATURE OF THE INCIDENT:

- SUMMARY OF PRE-DISASTER INCIDENTS:

- INCIDENT PROGRESS :

- ENVIRONMENTAL IMPACT EXTENT:

- LOSSES AND INJURIES EXTENT:

- ACTIONS TAKEN TO MINIMIZE THE DISASTER NEGATIVE IMPACT ON THE ENVIRONMENT:

- COOPERATED ENTITIES:

- INCIDENT PROGRESS EXPECTATIONS:

