



وزارة البيئة

National contingency plan for environmental Crises and disasters management



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Environmental Crises



Is a set of phenomena ,or cascading events (natural or man-made) limited impact individually, but the growing combined effects could lead to acute negative effects, which invite the community to take exceptional measures, which if did not fit with the evolution of events, inevitably lead to a disaster.

Environmental Disasters



An accident resulting from natural factors or human action, which causes severe damage to the environment and requires resources beyond the local means.

Management Ability:



- It is the ability of the parties concerned to disaster management , in order to reduce potential impacts.

Risk Assessment:



It Is an integrated process for the identification and analysis the risks, to implement measures to reduce the crisis and the disaster ,or mitigate its effects.



Types of Disasters

Natural

Man Made

Mixed

First : Naturel Disasters



A disaster which is controlled by nature, not man any role in the occurrence, but it may cause an increase in losses from these disasters.

First : Naturel Disasters



Natural disasters become an environmental disaster, when it leads to sudden liberation of chemical, biological or radioactive material to the environment elements

Natural Disaster Divided to :

1 - Climatic and geological disasters:



Such as,

earthquakes, floods, flash floods, hurricanes.

2- Biological Disasters



From time to time, a biological hazards appears, in the forms of viruses and agricultural pests

- Such as, pathological epidemics, and agricultural pests, such as ,locusts

3- Cosmic Disasters :



- Such as,
the fall of meteors, and meteorites, and cosmic radiation.

All these disasters may have a direct, or indirect impact on the environment, which may cause an environmental disaster.

Second :
Man Made Disasters



Divided to parts :

- **Voluntary disasters or planned.**
- **Involuntary Disasters.**

1- Voluntary disasters or planned:



Such as, **disasters caused by wars**, as well as **,the use of weapons of mass destruction**, and **arson** , and **nuclear waste**, as well as resulting from the lack of efficiency of the maintenance of public utilities, and infrastructure industries, mines and oil wells and nuclear reactors

2 - Involuntary Disasters.



It is man-made Disasters , and did not deliberately its events , but neglect the human plays a key role in, Such incidents of structural collapse, as a result of negligence in the design or implementation.

. Also , Incidents of land ,sea and air transport, incidents of nuclear reactors, and leaks of toxic gases, and petroleum pollution of the seas ,and soil accidents

Third:

Joint disasters between man and nature



These disasters ,either **start** with human activities , and the nature plays a key role in increasing its size, and effects , such as fires which may start limited as a result of the human negligence , then the wind speed plays a role in the spread until reach to the point that comes to the village, .

Or vice versa any disaster begins by nature ,then leads of human misconduct to increase the size of the losses, such as defending individuals in the event of earthquakes .



All these types of disasters

become an environmental disaster ,when it leads to the liberation of chemical, biological ,or genetically modified materials, to different environmental elements, and lead to serious damage to the environmental components fail local capacity to face

Main principles in preparing Environmental Disasters Management Plans

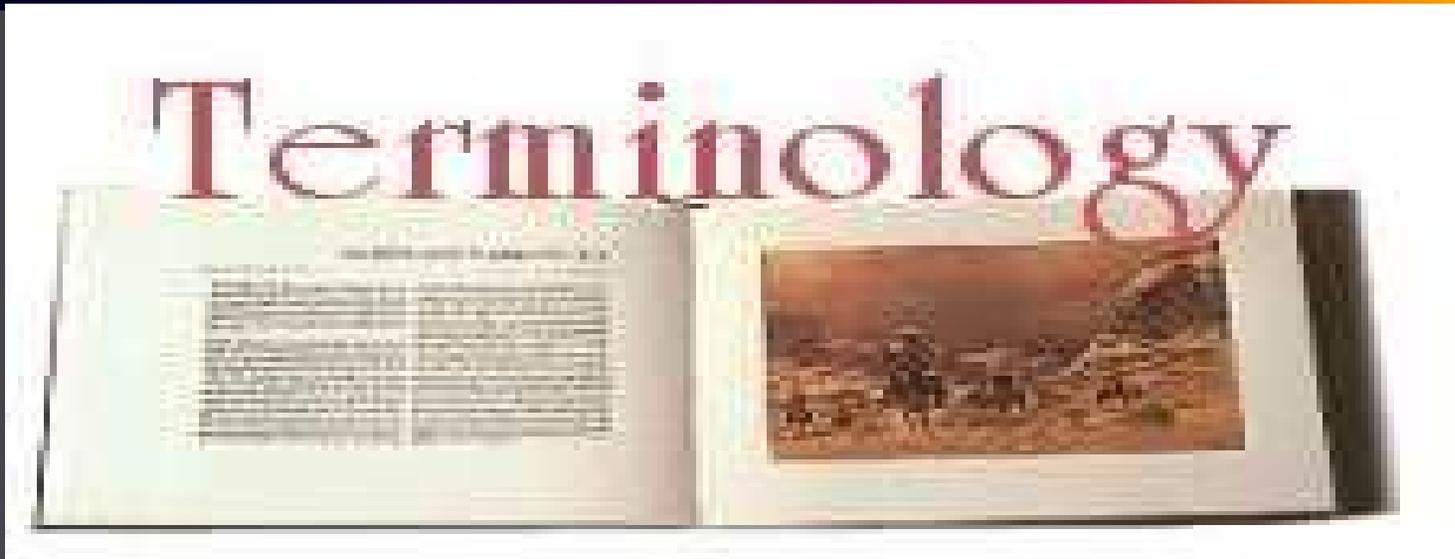
certain common features must be
applied includes:

- *Realism:*
- *Flexibility:*
- *Clarity:*
- *Coordination:*
- *Responsibility:*
- *Usability:*



Plan components

Terminologies and Concepts



Group of used terminologies have been aggregated and classified according to law no 4 in 1994 which relate to environment protection.

Chapter 1

Contents:

- I. Ministry of Environment Policy in dealing with environmental disasters
- II. The goals of the national contingency plan to control environmental disasters,
- III. Environmental disasters threats

1. The ministry's policy in dealing with environmental disasters

- The General Framework for Environmental Policy in Egypt are:

- Achieve sound environmental management ,
- use of cleaner production with energy-efficient ,
- pollution Reduction
- Improve solid waste management practices
- To achieve ecological balance, by sustainable environmental tourism, and good natural resources management.

1- The ministry's policy in dealing with environmental disasters

- Achieve compatibility and harmonization with the national system for disaster and crises management under the chairmanship of the Ministers Council.
- Developing the scientific trends of environmental disaster management, which confirm that, it does not only mean disaster response, but also, means the important actions that taken by all stakeholders, to reduce the risk from different types of disasters, to achieve sustainable development requirements.
- Extrapolate the indicators and possibilities of the potentials for environmental disasters, to take measures to mitigate their effects.

II. The goals of the national plan to control environmental disasters



The overall objective of the plan:

- Reduction in casualties and lives.
- Minimizing the destruction of the environmental parameters (air -water - soil).
- Reducing damage to the national economy.

II. The goals of the national plan to address environmental disasters

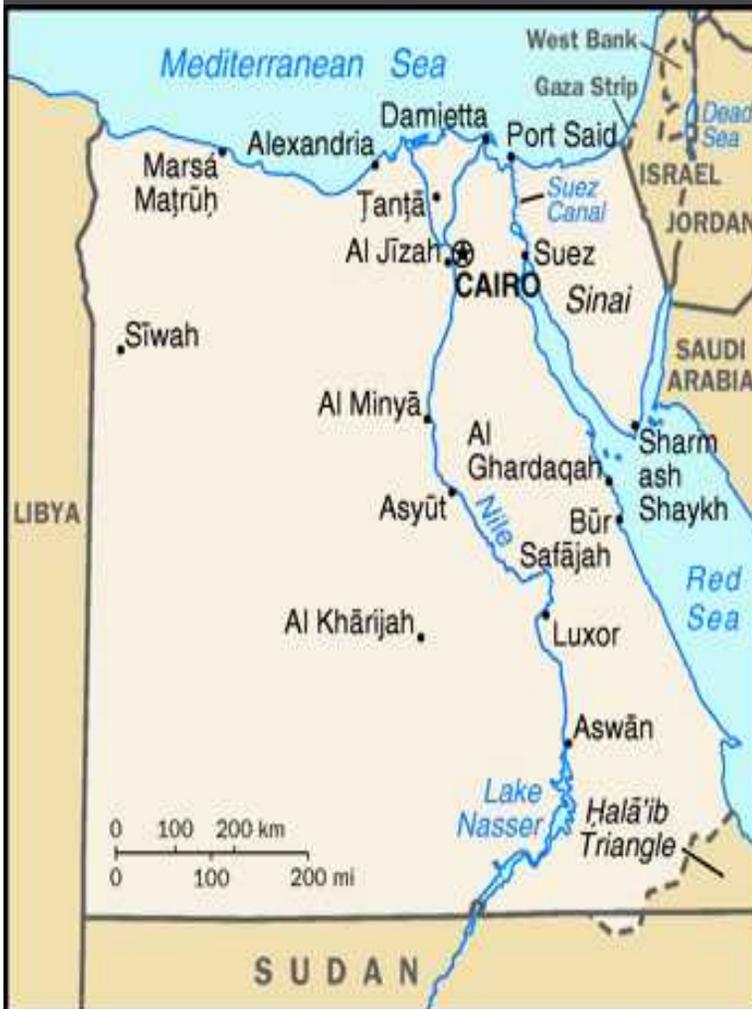
The detailed objectives of the plan:

- Provide a framework for the implementation of a general plan to cope with environmental disasters as an umbrella for a group of specialized contingency plans.
- Provide a framework of action plans for facing environmental unpredictable disasters.
- Confirmed on coordination and cooperation with relevant ministries and agencies at the central government level and at the tactical level and operational level.

Scope of the work plan

Spatial scope

The qualitative scope



- Sudden leakage of chemicals, hazardous substances, or biological materials
- Accidents, fires and explosions that lead to hazardous emissions or leaks of materials affect the quality of the environment.
- The destruction of sensitive ecosystems.

Chapter II

Legislation and laws



Law No. 4 of 1994 and its regulation:

- (Article 25) of the Law and (Article 21) of its Regulation.

The relevant articles of the law:

- Laws and decisions of the President, the Prime Minister, the Minister for all Ministries and relevant organizations.

Chapter III



Potential environmental disasters Risks In Egypt

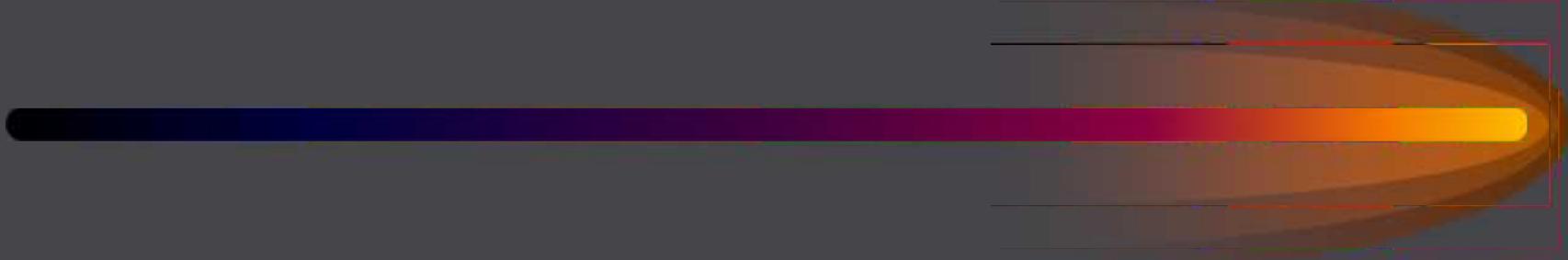
. Environmental disasters threats

a) Industrial facilities



- It includes handling facilities (production - use - storage) of hazardous substances (toxic - inflammable - radioactive - has potentially explosive - harmful).

. Environmental disasters threats



b) Transportation Risks

. *Environmental disasters threats*

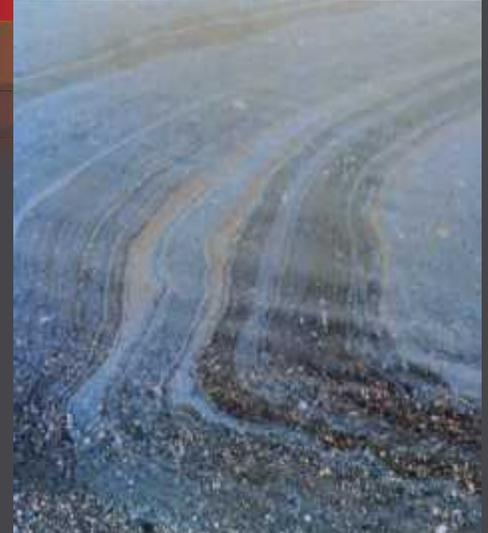
- *Air Transport Risks:*



Fall of aircraft accidents loaded with hazardous materials, leads to the spreading of a huge amount of hazardous materials

. *Environmental disasters threats*

- Maritime Transport Risks :



There are possibilities for a collision, Oil Spill, or fire accident, or the sinking of any of ships carrying hazardous substances at territorial waters in the (Mediterranean - Red Sea - Suez Canal) could lead to environmental disaster on a national level.

. Environmental disasters threats

- River Transport Risks:



- There are more than 357 river cruise ship and more than 400 barge transporting goods (raw materials, products,)

. *Environmental disasters threats*

- **Railways Risks:**



- Railways penetrate Egypt's cities with highly over populated districts .

. Environmental disasters threats

- Land transportation Risks : highways



- Road transport is used heavily in the transfer of fuel and hazardous materials, explosive or toxic such as (chlorine gas and other materials)

. Environmental disasters threats

Pipelines Risks:



- SUMED pipeline facilities
- Pipelines, a subsidiary of the oil pipe lines of petroleum products company.

- pollution of fresh water and the River Nile and its' branches



- Discharge (sewage - Agricultural - Industrial)
- Solid Wastes
- Tourist facilities

Storage facilities and activities



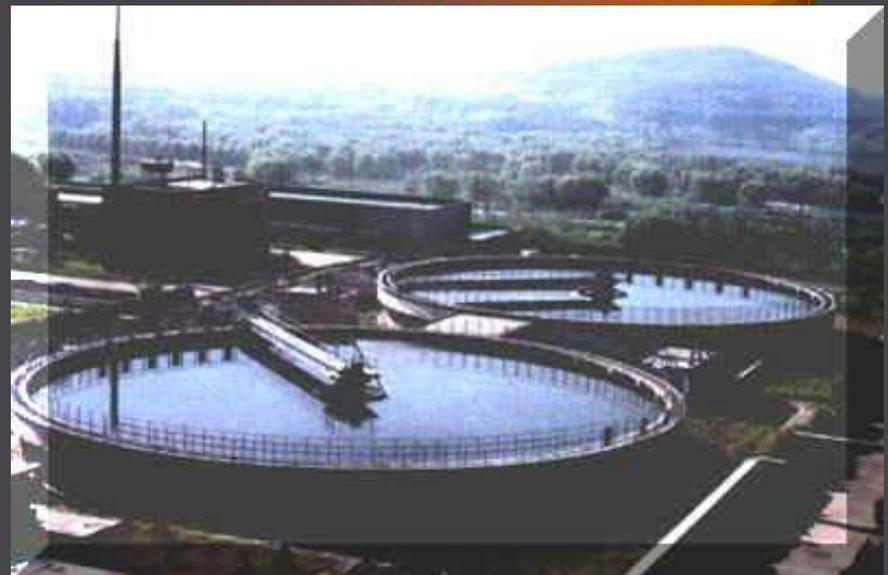
- Strategic fuel tanks, chemical and petrochemical storage facilities at ports (Alexandria - Port Said - Damietta - Suez - Nuweiba - Safaga) and other sources of hazards are considered the main cause of environmental disaster.

Solid Hazardous and waste dumps



Total daily 40 thousand tons of Municipal solid waste
(Urban areas 30 thousand tons/day and 10 thousand
tons/day in rural areas)

Drinking water and sewage treatment facilities:



drinking water and wastewater treatment stations are considered environmental disaster sources facilities.

Oil extracted from offshore wells



- Representing the oil extraction activities from offshore wells is one of environmental potential disasters sources

Chapter 4



*Main stages for
the management of
environmental disasters*

Main stages for the management of environmental disasters



1. Phase prior to the occurrence of the disaster.
2. Phase when disaster is at its peak.
3. Phase of removing the effects of the disaster.
4. Phase of recording the results of the disaster and the lessons drawn there from.

1- Phase prior to the occurrence of the disaster

- Potential environmental risk management
- Estimate the potential and abilities available.
- Set the legislation and policy.
- Assess the vulnerability of communities.
- Coordination among stakeholders and defining their roles.
- Set the plans and scenarios.
- Training on how to manage the environmental disaster.
- The establishment of appropriate databases.
- Collecting available information locally and internationally.
- **Constructing and equipping of a central operations room.**



2- Phase when disaster is at its peak

- Do the necessary measures, to reduce the environmental negative effects.
- Examine the incident site accurately, to determine the Environmental damage.
- Sampling from the incident site and conducting tests And measurements.
- Do the necessary measures to control the actions and liberated hazardous materials or spills.
- Identify safety ways of cleaning and sterilization.
- Safe disposal of hazardous materials and wastes..



3- Phase of removing the effects of the disaster.

- Determine the participation methods of various stakeholders to remove the effects of the disaster.
- Develop plans to improve performance.
- Raising public awareness of the way to deal with disasters.

4- Phase of recording the results of the disaster and the lessons drawn there from.

- Recording the economic and social effects of the disaster.
- Recording the lessons learned from dealing with each disaster.
- Proposals to avoid deficiencies and shortcomings that emerged during the confrontation.

The organizational structure of the team whom cope with environmental disasters



- Leadership section.
- Public relations .
- Operations Section.
- Planning Department .
- Department of Environmental Assessment.
- Finance & Administration department.

Chapter 5

Environmental disaster management using computer programs and technologies



These programs are designed to help teams cope with environmental disasters in the area,

Predict the course of the fate and effects of sudden liberation of chemical resulting from accidents.

Field survey and assessment of environmental damage



By using:

- Ariel survey,
- Land survey,
- Marine survey
- Collect information

Chapter 6



*The roles and responsibilities of
stakeholders in
the environmental disaster
management stages*

The roles and responsibilities of stakeholders in the stages of the environmental disaster management

- The roles of all ministries and stakeholders at all stages of crisis management and environmental disasters were determined after coordination with them, to eliminate duplication or omission of the role of some parties, also were identified the lead actors, and supporting actors according to the type of disaster.

Compensation in the face of environmental disaster mechanism



- Urgent compensation.
- Not urgent compensation.

Chapter 7

Training and building capacity



- Implementing training plans, carrying out practical exercises not only to raise the level of workers, but also help to develop the plan itself.
- that's implementation of training plans make sure of plans quality and validity.



Thank,,,,,,