The Egyptian Cabinet
Information & Decision Support Center

National Strategy For Crisis/ Disaster Management And Disaster Risk Reduction

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This Strategy was prepared by the Advisory Committee for Crisis/ Disaster Management and Disaster Risk Reduction

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Introduction

The Egyptian government's embarked on developing the current national system for Crisis/ Disaster Management and Disaster Risk Reduction (DRR);

By taking a number of relevant measures and steps, including the preparation of The National Strategy for Crisis/ Disaster Management and DRR; Based on the following:

- The international approaches in the area, on top of which is the International Strategy for Disaster Reduction (ISDR), Hyogo Framework (2005 - 2015) and the experience driven from the United Nations International Decade for Natural Disaster Reduction (1990-1999).

- Crises and Disasters are not confined to one particular area, or to developing rather than developed countries. However, losses entailed are larger in developing than developed countries. It sometimes amounts to 20 folds the risk in the latter, according to UNDP reports.

- The successful management of crises and disasters can be summarized in a number of precautionary steps and measures in the pre crisis/ disaster; containment during the crisis/ disaster, and rehabilitation in the post crisis/ disaster stages.

The NSCDMDRR has been prepared in the context of improving the national system of crisis/ disaster management and DRR, coordinating efforts on all levels, institutions and national sectors as well as stressing collective participation and achieving objectives referred to under Chapter One (Objectives and Priorities). The preparation of the NSCDMDRR adopted a methodology of current situation analysis, desired ambitions and describing the relevant achievement roadmap.

Structure of the Strategy:

The NSCDMDRR contains nine chapters. Chapter one reviews the objectives and priorities of the national action plan on crisis/ disaster management and DRR. Chapter two reviews the current situation analysis: the real and prospective crises and disasters in the country. Chapter three links between the MDGs and risk reduction of crises and disasters. Since the institutional base of crisis and disaster management is the cornerstone of a sound and effective management, Chapter four presents the institutional framework for crisis/ disaster management and DRR in the Arab Republic of Egypt. Chapter five introduces the existing national laws and legislation in force on crisis and disaster management and the need to develop a legislative system in harmony with the current national and international requirements. Chapter six explains the methodology of raising awareness to build the right culture of crisis/ disaster management and DRR. Chapter seven deals with the executive measures of crisis/ disaster management and DRR. Chapter eight provides the methods of monitoring and evaluation of these measures, and chapter nine reviews the means and frameworks of international and regional cooperation in the field of crisis and disaster management. In addition, the document includes two annexes: the former contains existing national legislation in force on crisis and disaster management and the latter introduces the proposed implementation indicators of the National Program of Crisis/ Disaster Management and DRR,
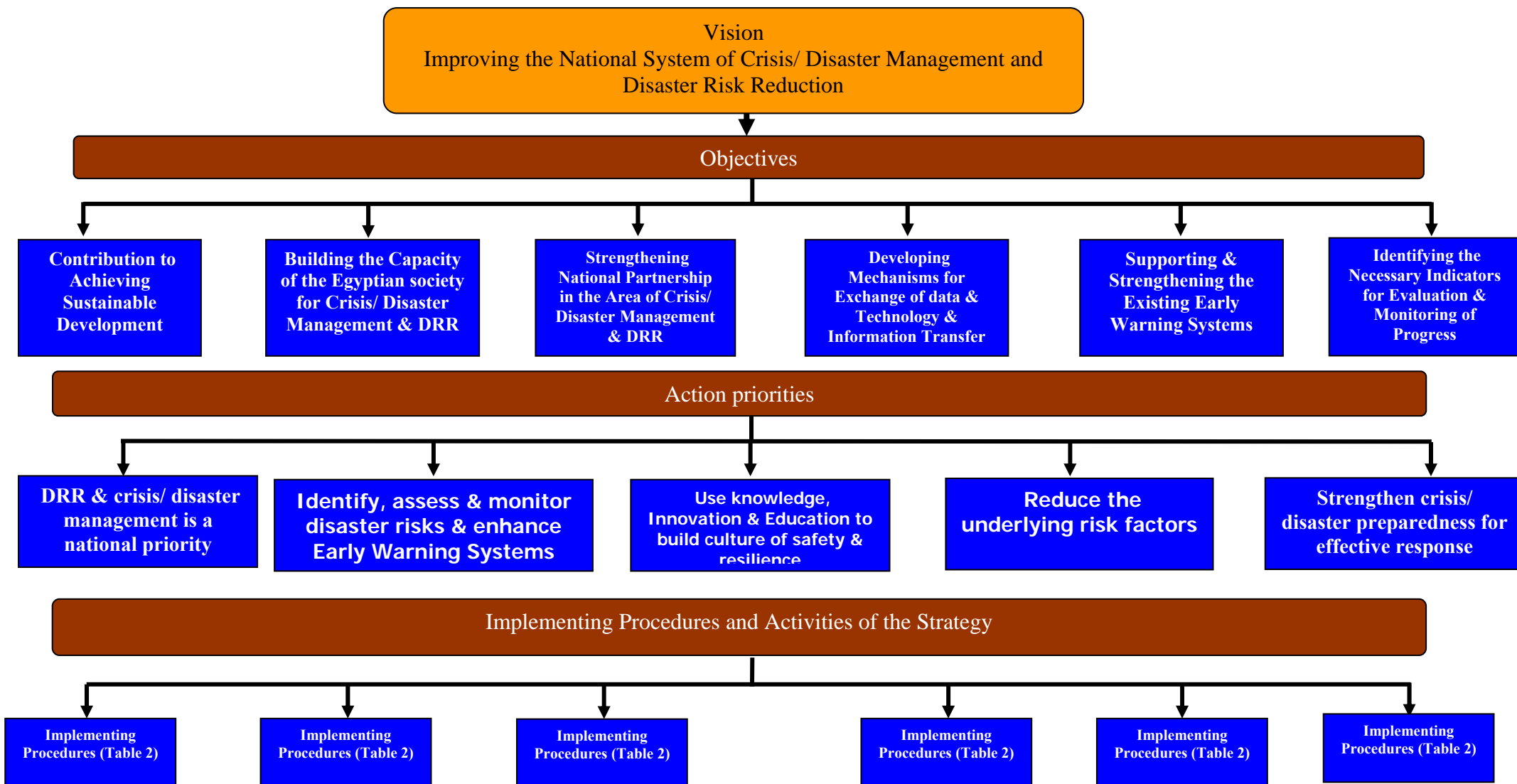
Figure (1) introduces the overall summary of the strategy in terms of vision, objectives and priorities of implementation, and activities in relation to crisis/ disaster management and DRR.

Endorsing the National Strategy for Crisis/ Disaster Management and DRR shall consequently result into:

- Incorporating the strategy in sustainable development policies, and identifying it as a national priority based on an effective institutional and legislative foundation.

- Providing and allocating financial resources hand in hand with supporting human resources and institutional capacity. This is intended for implementing the programs and activities outlined in the strategy in accordance with the proposed implementation stages and indicators.

- Defining the financial requirements by the concerned ministries, agencies, institutions and state sectors. This will involve incorporating such requirements in their respective annual budgets. In collaboration with the Ministries of Foreign Affairs and International Cooperation, it is also possible to raise part of the required fund through donor agencies

The principle of strengthening national and voluntary partnership must be adopted in order to engage the business sector and civil society in supporting the efforts and contributing to raising the required fund.

Figure (1)

Overall Summary of the National Strategy for Crisis/ Disaster Management and Disaster Risk Reduction

Vision
Improving the National System of Crisis/ Disaster Management and Disaster Risk Reduction

Objectives

Contribution to Achieving Sustainable Development	Building the Capacity of the Egyptian society for Crisis/ Disaster Management & DRR	Strengthening National Partnership in the Area of Crisis/ Disaster Management & DRR	Developing Mechanisms for Exchange of data & Technology & Information Transfer	Supporting & Strengthening the Existing Early Warning Systems	Identifying the Necessary Indicators for Evaluation & Monitoring of Progress

Action priorities

DRR & crisis/ disaster management is a national priority	Identify, assess & monitor disaster risks & enhance Early Warning Systems	Use knowledge, Innovation & Education to build culture of safety & resilience	Reduce the underlying risk factors	Strengthen crisis/ disaster preparedness for effective response

Implementing Procedures and Activities of the Strategy

Implementing Procedures (Table 2)	Implementing Procedures (Table 2)	Implementing Procedures (Table 2)	Implementing Procedures (Table 2)	Implementing Procedures (Table 2)	Implementing Procedures (Table 2)

Chapter One

Objectives and Priorities

First: Objectives:

The National Strategy for Crisis/ Disaster Management and Disaster Risk Reduction in the Arab Republic of Egypt contains the breadlines of a number of measures, arrangements and preparations, previously agreed upon to deal with the pre, during and post crises and disasters. These preparations can be generally applied at the national level, either in ministries, governorates, institutions, authorities, etc.

The NSCDMDRR aims at the following:

1. Contributing to the achievement of sustainable development through incorporating the concept of crisis/ disaster management and DRR into sustainable development policies and planning.

2. Building capacities of the Egyptian society for facing crises and disasters at all phases, levels and sectors. This can be done through developing and promoting a national mechanism of crisis/ disaster management and DRR and preparing a legal and legislative review aiming to strengthen development and application of the crisis/ disaster management and crisis/ disaster plans.

3. Promoting national partnership in the field of voluntary work and social partnership in managing crises/ disasters and DRR, by building dialogue with the civil society, particularly NGOs and social associations and allow them to contribute in pushing forward the different operations of crisis/ disaster management and DRR.

4. Developing mechanisms for exchanging data, and information as well as technology transfer on crisis/ disaster management and DRR, among stakeholders of crisis/ disaster management and DRR.

5. Promoting the existing early warning systems and creating the required ones to enhance the forecast of crisis/ disaster management and DRR at the national, regional and international levels.

6. Identifying and detecting the required indicators of follow up, assessment and progress of the activities in facing crisis/ disaster management and DRR. This can be done by setting out the required matrixes for the executive measures of plans and measures in place for crisis/ disaster management and DRR.

Second: Priorities:

The NSCDMDRR in the Arab Republic of Egypt sets out five national priorities for the executive work on crisis/ disaster management and DRR, including the working priorities of the Hyogo Framework 2005 - 2015 as follows:

1. Ensure that crisis/ disaster management and DRR is a national and local priority based on a strong institutional basis and legally binding legislation.

2. Identify, assess and monitor the different disaster risks and enhance the means of early warning and alarm systems.

3. Use knowledge, innovations and education in building a culture of safety and resilience and a national orientation at all levels of crisis/ disaster management and DRR.

4. Reduce the underlying risk factors.

5. Strengthen disaster preparedness for effective response at all levels.

Chapter Two

Current Situation Analysis

Crises and Disasters in Egypt: Reality and Prospect

Incidents had proven that most of the countries that are unable to face or most seriously affected by crises and disasters are either developing or less developed; accordingly, Egypt is required to focus its attention on crisis/ disaster management and DRR.

Egypt is subject to a host of different kinds of crises/ disasters such as those: resulting from natural disasters, environment pollution and negligence in areas such as transportation accidents (cars, ships, aircrafts and trains). These crises and disasters can be divided into two kinds: Natural Disasters and Man-made Disasters. Figure (2) presents the classification of the most important disasters that Egypt face (actual and potential). It covers both natural and man-made disasters. In the figure, the red color represents the most frequent disasters.

Figure (2)

Classification of the most important disasters Egypt is subject to
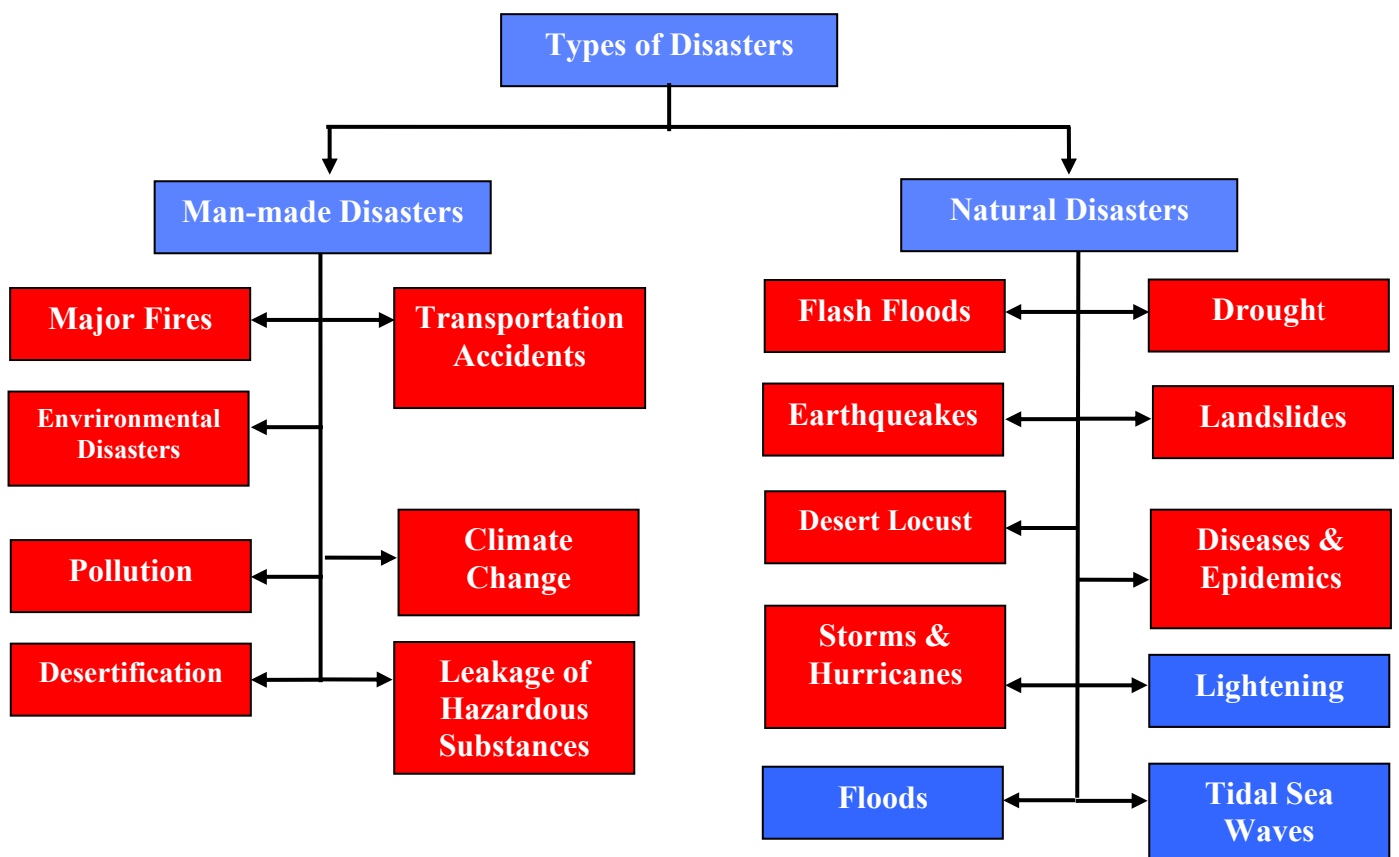
Natural disasters:

Egypt is subject to so many natural disasters causing major human and financial losses. The following table (Table 1) introduces a number of statistics on losses resulting from natural disasters which Egypt experienced during the period 1987-2008.

Table (1)

Losses occurred due to natural disasters in Egypt in (1987-2008)

Number of disasters	20
Number of deaths	1469
Annual average deaths	67
Number of victims	259,324 persons
Annual average of victims	11,787 persons
Financial losses	US$ 1,342,000
Annual average financial losses	US$ 61 million

Source: http://www.preventionweb.net/english/countries/statistics/?cid=54

Details of selected types of natural disasters that Egypt experiences are as follows:

1. Earthquakes:

Earthquakes are considered one of the strong natural disasters that hit both developed and undeveloped societies. The history and data of earthquakes in Egypt is as old as the 5000 years old Egyptian civilization. Old historical books, sources and catalogues on earthquakes described them before the 20th century. It shows that Egypt had been subject to as many as 83 hits for more than 5 degrees on the Richter scale. In the pre-historic era, Egypt was subject to 7 earthquakes, and 76 from the Gregorian calendar till 1899.

Egypt is considered one of the first countries in the world in detecting and archiving records of earthquakes. It started this process in 1903 at the beginning of the 20th century. The historic and modern records of earthquakes show that Egypt was subject to a number of strong earthquakes, particularly in the northern coastal governorates overlooking the Mediterranean, like Alexandria, Rosetta and Damietta. The northern part of the Red Sea, at the meeting junction Al Aqaba and Suez Gulf has been an active area of earthquakes too, particularly Shedwan Island. Earthquakes in this area extend to the Canal, Red Sea, Cairo and Delta governorates. The history of earthquakes shows that many destructive earthquakes hit this area from 1969-1972. The Aqaba Gulf shelf and its extension till the eastern rim of Antakya is one of the most active areas around Egypt. Records demonstrate a medium and above medium levels of earthquake activities in this area, in addition to a high frequency rate from 1993-1995. Egypt is highly impacted by earthquakes in the Al Aqaba gulf area, particularly, South Sinai governorate and the areas around the gulf up until the Egyptian northern governorates and eastern Delta region.

In October 12, 1992, a medium range earthquake of 5.8 on the Richter scale had hit Egypt and claimed the lives of 370 people, and 3000 injured. The epicenter of the earthquake was the southwestern part of Cairo, Dahshour area, close to the governorates of Fayoum and Giza, about 35 km. southwest Cairo. Medium range earthquakes hit this area. Three strong ones occurred, one was in the 19th century 1847, and two in the 20th century from 1920-1992.

Earthquakes in the southern part of the Arab Republic of Egypt, is relatively less than the northern part of it, however, it is affected by a number of scattered earthquake spots all along the Nile valley, which has been known for historic and modern earthquakes, such as Sohag, Aswan and Abu Simbel. The old historic earthquakes led to a rift in Abu Simbel (Ramses II) and El Karnak Temples, Luxor. During the 20th century another one hit the el Gilf el Kabir area, and it was the first occurrence of its kind in a desert area (1978), but no one died because it is far away from inhabited areas. Another 5.6 earthquake hit Kalabsha area, south of Aswan in 1981. It was felt by residents all along the valley till Assiut governorate.

2. Flash floods:

Floods happen when torrential rains exceed the level of saturation in the soil, which leads to water running over the surface towards lower narrow areas. This speeds up the water floods and increases its power of destruction, sweeping off human beings, fauna, flora and facilities and leads to humongous losses in lives, properties and infrastructure.

Egypt lies in the global belt of the hot arid desert with scarce rains. The Eastern desert has a grid of intertwined ancient valleys. When water falls above the level of saturation in these deserts, it concentrates in these valleys and pours either into the Red Sea or the Nile Valley. Geographic features assist in giving water a momentum to destroy anything. If it runs from West to East – through some short valleys – it flows through the tourist resorts on the western coast of the Red Sea.

As for torrential rains in the Sinai peninsula, it results from the host of valleys filled with water, moving west to the Red Sea or the Suez Gulf (such as Tiran and Firan valleys) or east to the Al Aqaba Gulf (such as Watir valley) or north to the Mediterranean, where Al Arish valley flows and it is the only valley that out charges there. It is the biggest in the Sinai peninsula and extends to 17200 km^2, in other words it is 28% of the total area of the peninsula which is 61000 km^2.

By examining torrential rains in Egypt, it is demonstrated that six floods hit the country in the period from 1979-1997 as follows:

- Torrential rains in 1979 over Awlad Abu Salama, El Qussier, Marsa Alam and Qena-Al Qusseir road, and it claimed the lives of 19 people.

- Torrential rains over Suez city in 1987 swept large amounts of clustered rocks from Ataqa mount through Hagul valley, blocked the Suez-Red Sea road, and seized 30 cars.

- Torrential rains continued running for seven hours over Marsa Alam in August 1991 and left behind 370000 m^3 of water and 20000 m^3 of valley sediments.

- Torrential rains on 1 and 2 November 1994 led to huge floods in Upper Egypt governorates (Assiut, Sohag, Qena) and other areas in the country.

- Torrential rains as high as 20 mm/ day over Saint Catherine on 18/10/1997 and similar amounts on Al Qusseir, Ras Benas, Ras El Naqb and Aswan on the same day, led to a deluge of floods.

In addition, a number of Egyptian governorates including: Aswan, North Sinai, South Sinai, Red Sea, Qena were exposed on 17 and 18 January 2010 to strong flash floods causing 13 deaths (including a foreign tourist), 49 injuries and 12,401 victims. It also caused major financial losses in properties as well as the impact on many vital sectors, services and facilities such as: electricity, water, sanitary drainage, communications, roads, etc.

3. Hurricanes:

As for hurricanes, strong sandy storms that block vision affect Egypt every now and then and lead to closing airports and seaports.

4. **Drought and Scarcity of Water Resources:**

The concept of drought is completely different in Egypt in comparison to many other countries. The general definition of drought is having extended periods of unusually dry weather, with below than average levels of rains and humidity, and higher than average levels of global warming and wind speed. Some of these definitions identify a period of more than 15 days where the level of rain reaches 0.2 mm/ day. However, this does not directly apply to Egypt. It is possible that a whole year passes without any rains, but the country does not suffer from drought. And the only reason for that is that 95% of the water resources in Egypt are from the Nile River which flows from overseas sources and runs for thousands of kilo meters before reaching the Egyptian borders.

The other water resources in Egypt include rains on the Mediterranean and the Red Sea coast lines, the seasonal surface water resulting from rains, shallow ground water in coastal areas and deep ground water in the Western and Eastern deserts and the Sinai Peninsula.

Drought is different than the other natural disasters which happen suddenly. Drought has many indicators that may extend over so many years. No doubt that establishing the High Dam, as one of the main reservoirs in the country was one of the reasons for eliminating drought problems in Egypt, or breaking its cycle middle way or in the end it by having rains over the Nile sources and refilling the Dam once again. In addition to that, having ground water reservoirs with billions of sq. millimeters of water also protects the country from the drought disasters.

A sweeping wave of drought hit the African continent for around 10 years from 1977-1987, where the levels of water reserves in lake Nasser dropped to ominous levels of risk. It was threatening to totally halt generating electricity from the High Dam. However, this period was followed by high level of water flow; matters were back to normal allaying the fears of citizens, executives and politicians.

However, this period of reduced Nile water levels, drew people's attention to the prospective risks of this phenomenon. It was believed that overpopulation in itself with the high living standards, and its subsequent increase in the need of drinking water and home, agricultural and industrial use of water, in addition to the national need of water to face the increasing number of tourists, to protect the environment from pollution etc., bearing in mind the same fixed levels of water provision, would decrease the water quota per capita. So what would happen if above all there were extended periods of low water levels?!! How can these periods be overcome without creating reeking havoc with people's lives and national stability, safety and security?

By entering the 21st century, the per capita quota of water in Egypt decreased to less than 800 m^3 per annum.

5. **Landslides and Rock Streams:**

Many landslides and rock streams took place at el Moqatam area, the most recent one was on Saturday September 6, 2008 at el Doweiqa area. It claimed the lives of 107 people and injured 58 others. This was not the first of its kind. A rock stream had hit at dawn on

December 14, 1993 at the northern shelf of el Moqatam over houses at the western part of the garbage collectors' area. Experts say that such incidents might be recurrent at stronger levels due to climate change. In other words, the geological and morphological conditions are fixed while the levels of water leaking into limestone are increasing. There are two kinds of reasons behind rock streams in el Doweiqa area: reasons related to the geological and morphological nature of el Mokatam plateau and others related to environmental factors and the misuse of the plateau. In addition to that, the continuous change in the environmental patterns due to the leakage of sewage water from the worn out grids and the shanty areas over terraces, burning wastes and garbage, represents a critical factor for the recurrence of these disasters and probably in a stronger manner.

6. Locusts and Insects Invasion:

Desert locusts are an extraordinary destructive pest. During their long periods of subsidence, desert locusts exist in small numbers without causing any harm in the desert. But when there are suitable conditions for reproduction, they increase tremendously and undertake group behaviors. In a few months large swarms of locusts launch their way with the wind looking for food.

The western and north western part of Africa has been subject to ferocious attacks of locusts in the 80s (1987-1989), which was detrimental to agricultural produce in these areas. The cost of fighting locusts during this period amounted to 300 million dollars. The crisis recurred again in the past few years in the same areas. It was considered the worst of its kind since the 80s crisis. Countries in the region, even Egypt were highly affected by locust attacks, but with various degrees. They ranged between full hunger, as in Mauritania and Mali in Western Africa and limited attacks in Jordan, Israel and some South European countries like Cyprus and Greece. That was the worst and most dangerous disaster ever, at least in the past 10 years, although international efforts succeeded to large extent in containing it.

7. Epidemics:

When infectious diseases turn into epidemics they sometimes lead to disasters sweeping lives and wealth, and history is rife with these examples. Life losses from epidemics exceeded wars and natural disasters. In the 16th century more than 60 million people died in the world because of smallpox. Approximately half of the population of Siberia died in the 18th century. Cholera and Plague used to sweep off towns and armies. Due to the threatening danger of epidemics on both lives and economies, countries and international organizations have been working on eliminating their risks through detection and tracing. In statistics provided by the UN International Strategy for Disaster Reduction, epidemics are described as the most hazardous and fatal disasters of impact. They are ranked third on the list of natural disasters in 1970-2005, with a rate of 11.2%. They are particularly unique in crossing borders and continents. Since Egypt is in Africa –a bed of epidemics and infectious diseases – concentrated studies, concern, detection, follow up and expectations should take place and budgets should be allocated to fighting them.

On the local level, Egypt has been suffering from avian influenza since 2006, when it first erupted. It affects both birds and human beings who directly deal with infected birds. In May 2009, a large number of Swine Influenza cases had been reported and immediately addressed according to the relevant plan.

Man made Disasters:

The human factor is critical in causing these disasters, either intentionally or due to negligence, relaxation or misuse, such as:

1. Fires:

Fires are one of the most dangerous disasters. They leave behind destroyed houses and facilities and huge losses in lives and properties. The core problem of fires in Egypt is that Egypt did not put a code for fire fighting before 1999, which means it is 50 years lagging behind other countries including Arab countries. This code includes the fundamentals of fire fighting and securing congested buildings against them.

Most of the fires take place in facilities or houses due to lack of awareness or internal safety of these facilities and houses. It is also due to neglecting the regular check up on fire extinguishers or changing them before and not after fires stroke. Figures indicate that Egypt in 2008 witnessed around 31000 fires that claimed the lives of 326 people and 753 injured. The material losses amounted to 400 million Egyptian pounds. Certainly, these figures are copious in comparison to neighboring Arab and African countries.

2. Transport and Transportation Accidents (ground, maritime and air transportation):

Transportation accidents in Egypt are one of the major chronic problems that cause annual high tolls of death and economic losses. They are highly recurrent on daily basis. The whole Egyptian society suffers from this problem. It has been particularly increasing in the past few years. It is a social burden and the number of victims amounts to 8000 deaths and 32000 injured/ year. In addition to that, the economic losses are estimated by more than 6 billion Egyptian pounds. Other estimates indicate that Egyptian roads witness at least one accident every 6 hours.

As for trains, accidents analysis demonstrated that railway accidents from January 2001 till May 2006 amounted to 59 accidents, with a rate of 7.1 accidents/ year with a total of 6000 persons killed and injured (including trains hitting passers by and other means of transportation).

Maritime accidents in Egypt led to huge human and economic losses, like for instance 'El Salam 98' ferry accident in the Red Sea, which killed more than 1000 people in February 2006.

Although Nile accidents in Egypt are not recurrent, their probability is still high and imminent due to the negligence and inaction in applying the safety and security standards. These accidents could cause colossal human and economic losses and it can have a huge impact on the public opinion in Egypt. There are several examples on that in history: the drowning of the Nile ship 'El Asher men Ramadan" at Wadi Halfa area behind the High Dam in 1983, killing 317 people Egyptians and Sudanese. Another accident was the drowning of "Dandara" Nile ferry in May 1959 during its trip from the anchorage (Marsa) of Rod El Farag to El Qanater El Khaireya, killing 120 people and injuring 50.

3. Environmental Disasters:

When development projects started to prevail, particularly industrialized development of daily consumption products of all kinds, human beings did not think about anything else, except the production process, its development, improvement and producing better quality with more speed to double annual profits and achieve a boost in economic growth. During all this mayhem, human beings did not take the necessary precautions in dealing with hazardous materials, wastes and pollutants resulting from most of these industrialized activities and affecting air, soil and water. They affect their quality and value, consume their resources and damage their living beings. Accordingly, environment hazards started to erupt and reflect on the health of human and other beings. Several environmental disasters took place in different countries around the world killing thousands of victims and disrupt the ecological system.

In light of the imminent threat of environment disasters, the international community and the regional and local communities had to continuously and persistently work on preserving the natural environment and its components as much as possible. Particularly, to keep the natural balance and safety standards in place, or at least to reduce the different forms of aggression against the environment, deteriorating both its quality and value. Environment concerns are no more a luxury or an option; it is an imminent necessity to protect human and other beings.

Scientific and technological development achieved much progress in creating better means to preserve the environment, its resources and reduce pollution. However, this level of development cannot alone provide this required protection, unless there are firm and binding controls, obliging people to avoid environment threatening acts and maintaining the right protective behavior including its resources.

Egypt was recently hit with a number of environmental crises, most importantly:

- Oil pollution incidents from land and offshore oil production activities.
- Gas leakage incidents in gas fields.
- Air pollution and seasonal black cloud (smog).
- Water contamination.

4. Global Warming and Climate Change:

Climate change is a threat to the lives and means of living of millions of human beings. It obstructs the achievement of MDGs, and creates a dire and growing need to push forward with the implementation of Hyogo Framework (2005-2015: according to the ability of nations and societies to face disasters). It deals with the means of merging the strategies of eliminating disasters with the policies of adaptation with climate change and reducing their negative impact. The 2nd session of the Global Platform for disaster reduction was held at Geneva, Switzerland in June 2009, with growing concerns over climate change and means of adaptation. Political leaders emphasized that dealing with these negatives became a fundamental issue of top priority. Participants underscored the dire need to take all necessary measures to strike a balance between disasters and adaptation with climate changes and to expand this relation in a larger framework that includes the eradication of poverty and maintenance of sustainable development. Global warming and climate change and their effects have been at a higher level of concern, even on the agenda of G8 summit at L'Aquila, Italy in July 2009.

Climate change is also different than the other disasters because it is global by nature. It is a global threat that transcends all borders. Thus, it is necessary to examine climate

change at the international level and to focus on it in Egypt, particularly at the northern coast, and some parts of the Delta and the Nile River. Studies should also include the size of damage it causes to resources and its social, economic and cultural effects.

According to the World Bank, Egypt is ranked third on the list of countries that might have the worst effect of climate change, after Bangladesh and Vietnam. It is expected that Egypt would face a disastrous impact, because more than one third of the Delta basin would be affected by climate change in a way or another. Certainly, the economy and Egypt's ability to provide food for its population shall be affected too.

Chapter Three

The Millennium Development Goals and

Disaster Risk Reduction

Risks of natural disasters are strongly related to human development and the efforts exerted to achieve the millennium development goals MDGs. Disasters endanger development, meanwhile, choices of sustainable development taken by individuals, societies and nations can also develop the threat of new disasters. It is not supposed to be the case. Human development and MDGs should have a major contribution to disaster risk reduction.

UNDP report 2004 stated that 70% of the world population lives in areas vulnerable to natural disasters (earthquakes, hurricanes, floods, drought…etc) at least once a year. Until now, the effects left behind by natural disasters over human development and MDGs are not known. The report demonstrates that human development has a strong role in demonstrating the material effects of natural disasters.

The report shows that 11% only of the enlisted countries in the lower category are subject to natural risks. They represent 53% of the annual registered number of deaths. Countries at the higher ranks of human development are subject to natural disasters by the rate of 15%, but they only represent 1.8% of the registered deaths.

Egypt works hard on achieving MDGs by the end of 2015. In June 2002, the UN issued its first report on the Egyptian progress on MDGs, shows that the human development indicator at the national level has been continuously improving since 1993. However, analysis at the level of governorates indicates fixed levels of poverty in rural areas and in Upper Egypt. Thus, policies and measures on eradication of poverty should be intensified. Since, the civil society is usually effective in reaching out to poor and marginalized societies and families, eradication of poverty strategies should benefit from their participation and presence in poor governorates.

The MDGs assessment of Egypt indicates that it is moving towards achieving most of them at the national level. Despite the fact that the UN had initiated to put and design these concepts as national goals, the analysis of MDGs in the Egyptian governorates is useful in evaluating the degree of improvement and its speed at the local level.

This chapter provides an analysis of Egypt's progress in the field of human development and efforts exerted to achieve MDGs and tying them to crisis and disaster management and risk reduction. This shall be through a review of the indicators relating to disaster risk reduction and MDGs in Egypt and the measures of disaster risk reduction which should be included in the development strategies.

Relating Disaster Risk Reduction with MDGs:

Losses incremented by disasters and their mismanagement represent a serious threat to the efforts exerted to achieve the MDGs. Damaging the infrastructure and means of life is one of the direct results of natural disasters. Meanwhile, losses incremented from disasters interact with the financial, political, health, social and environmental crises and they might also aggravate them. These negative effects can lead to a setback in social investments that aim to mitigate poverty, hunger, education opportunities, health services, secure housing,

drinking water, sewerage and environment protection. In addition to the economic investments that provide jobs and income opportunities.

MDGs represent a strong momentum to reconsider the management of disasters and crises and risk reduction. MDGs direct the process of sustainable development planning towards the priorities of disasters and crises risk reduction. These priorities can contribute to the reduction of human vulnerability in facing crises and disasters. Progress in MDGs and how far they are tied to these priorities will decide the extent of disasters and crises risk reduction. This means that there is a reciprocal relation between the kind of developmental planning which can lead to MDGs and the other development operations tied to the increment of disasters and crises.

Development Strategies and Crisis/ Disaster Risk Reduction:

Development can increase the level of crises and disasters. There are so many examples on the economic development and social improvement approach towards creating new crises and disasters, such as the quick urban transformation. It is known that growth of slums and poor areas in the middle of cities leads to creating unstable environments. These slums are mainly built in narrow alleys or over steep slopes, or plains and valleys subject to floods and torrential rains, or beside transportation lines and hazardous industries.

Life in rural areas is endangered by the huge diversity in the economic and social structure and its interaction with the environment. There are special recurrent features for sustainable development in forming disasters and crises in rural areas. Poverty in the countryside is one of the main factors in exposing them to so many crises and disasters.

Risks of Crises and Disasters and Planning for Sustainable Development:

Reduction of crises and disasters risks can be incorporated in sustainable development planning. It is quite certain that the repetition of natural disasters and crises should put their elimination on top of the priorities set forth by planners of sustainable development. These plans differentiate between two kinds of crisis and disaster management:

- Prospective management of crisis and disaster risks should be incorporated in the sustainable development planning. Development programs and projects should be reviewed to identify their potentials in eliminating vulnerability and risks or their aggravation (medium and long term).

- Compensatory management of crisis and disasters such as preparation and confrontation should be compatible with developmental planning. It mainly focuses on reducing vulnerability and the natural risks that incremented during the past development plans. Compensatory policies are necessary for eliminating the current risks (short term).

This combination of disasters and crises risk reduction and the MDGs require three main steps:

1. Collecting basic data on natural disasters risks and developing planning tools to track the relation between the development policy and the risks of crises and disasters.

2. Collecting and publishing the best practices in development planning and policies in the field of natural crises and disasters risk reduction.

3. Mobilizing the political will to redirect the development sectors and to eliminate the risks of disasters and crises.

Factors and Operations of Sustainable Development that Affect Risks of Disasters and Crises:

Analysis of economic and social changes in light of international developments and risks of natural crises and disasters (earthquakes, hurricanes, floods and torrential rains) highlights the relation between crises and disasters risks and the development operations themselves. For instance, risks of earthquakes increase in countries with higher urban growth rates and exposure to material life. These comparisons are very important for statistics, because they show the importance of urban and rural life transformation as a context for development and its contribution to crises and disasters risks.

In the end, the concept of crises and disasters management and risk reduction should be incorporated in sustainable development policies and planning to effectively achieve development goals and reduce the negative impact of crises and disasters at all levels. More efforts should be exerted to gather all data related to crises and disasters at the local/governorates (sub national). This kind of information is important for putting these considerations of crises and disasters risks in the national development policies. Specified local data can highlight the ways risks of natural disasters interact with man- made disasters, to allow for more policy enhancement.
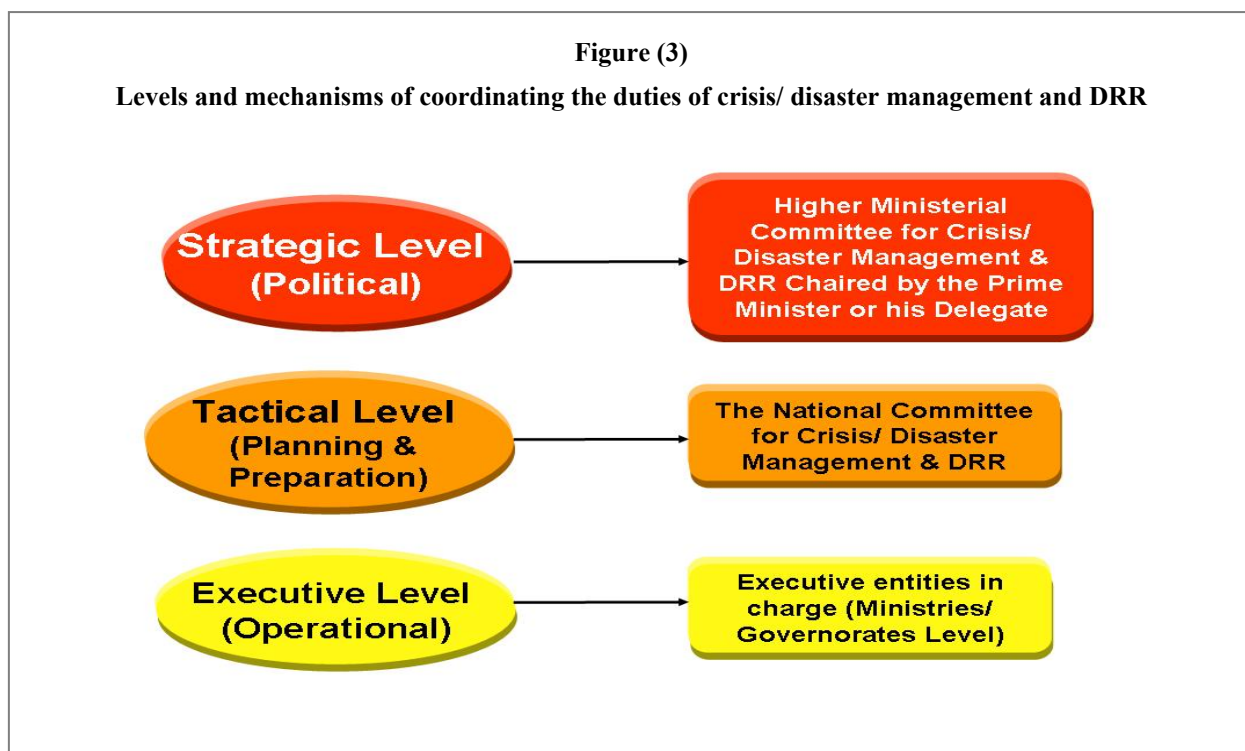
Chapter Four

The Institutional Framework

For Crisis/ Disaster Management And Disaster Risk Reduction

- In the framework of the country concern with crisis/ disaster management and DRR, in 2006, the Information and Decision Support Center (IDSC) undertook the following steps in response to the instructions of H.E the Prime Minister of Egypt:

  - Forming a national committee in coordination with Crisis management at the armed forces, comprising the concerned ministries and competent decision making bodies, who can easily communicate and coordinate with the different government authorities and the civil society organizations to face crises the moment they occur.

  - Establishing departments for crisis/ disaster management at the concerned ministries and bodies. It shall be fully equipped with all the required material, information and data, maps of critical sites of concern, resources centers and the instant means of communication with operators and users.

- Lessons learnt from past experiences and more than 30 meetings for the national committee of crisis/ disaster management and DRR in light of the country concern

- Referring to the recommendations and results of international conferences on crisis/ disaster management and DRR, on top of which, the international strategy on disaster reduction and Hyogo Framework 2005-2015 for capacity building of nations and societies in facing disasters, adopted in the global conference on disaster reduction (Kobe, Hyogo-Japan: 18-22 January 2005), which was signed by the Arab Republic of Egypt. Besides, Johannesburg plan issued by the World Summit for Sustainable Development (Johannesburg, South Africa 26 August- 4 September 2002).

- Recognizing the principle of decentralization and granting all required competencies of crisis/ disaster management and DRR at all levels, to achieve a quick response to saving lives and creating the spirit of initiation and innovation. Referring to the Prime Minister's decree no. 1537/ 2009 with regards to forming a national committee for crisis/ disaster management and DRR at the cabinet, with reference to the aforementioned efforts, the institutional framework of crisis/ disaster management and DRR in Egypt comprises six main elements: the Higher Ministerial Committee for Crisis/ Disaster Management and DRR, the National Committee for Crisis/ Disaster Management and DRR, the Advisory Committee for Crisis/ Disaster Management and DRR, the Crisis/ Disaster Management and DRR Sector at IDSC, Crisis/ Disaster Management Departments at different Ministries, Governorates, Bodies, Civil Society Organizations and the Private Sector. The objectives and tasks of the Egyptian institutional framework for crisis/ disaster management and DRR are as follows (Figure 3):

First: The Higher Ministerial Committee for Crisis/ Disaster Management and DRR:

- **Committee composition:** The higher committee is presided by the Prime Minister and composed of the following members:

  - Minister of Defense and Military Production.

  - Minister of Interior.

  - Minister of Foreign Affairs.

  - Minister of State for Local Development.

  - Minister of Information.

  - Minister of Health.

  - Representative of Public Intelligence Body.

  - The Minister concerned with the crisis/ disaster.

  - Ministers according to the type of crisis/ disaster.

  - The committee invites heads of institutions, experts, representatives of the civil society or the private sector, if need be.

- **Committee Objectives:**

  Developing the national system for crisis/ disaster management and DRR.

- **Committee Tasks:**

  - Dealing with crises and disasters in the country and reducing risks.

  - Issuing directives required for improving the crisis and disaster management and risk reduction.

  - Taking all necessary measures to ensure the country institutional readiness to effectively and efficiently deal with crises and disasters.

- **Frequency of the Higher Ministerial Committee Meetings:**

  - The committee convenes when crises, disasters or emergencies happen. If necessary, the Prime Minister can delegate someone else for the chairmanship of the committee and representatives of the concerned ministers can attend.

  - The committee holds at least one annual meeting to review the degree of readiness of the country institutions and to review the annual report prepared by the NCCDMDRR in this respect.

Figure (3)

Levels and mechanisms of coordinating the duties of crisis/ disaster management and DRR

Strategic Level (Political) → **Higher Ministerial Committee for Crisis/ Disaster Management & DRR Chaired by the Prime Minister or his Delegate**

Tactical Level (Planning & Preparation) → **The National Committee for Crisis/ Disaster Management & DRR**

Executive Level (Operational) → **Executive entities in charge (Ministries/ Governorates Level)**

Source: Information and Decision Support Center.

Second: The National Committee for crisis/ disaster management and DRR:

The national committee for crisis/ disaster management and DRR sets out the national mechanism/ platform required by the UNISDR. It is defined by the strategy as the general term of the national system, mechanism or committee for coordinating and directing policies of risk reduction, if they are multi-sectoral and of overlapping disciplines. The public and private sectors and the civil society take part and it comprises all the other concerned bodies.

- **Committee Membership :**
- Chairman of the Egyptian Cabinet Information and Decision Support Center.
- Head of Armed Forces Crises Center.
- Representatives of ministries, governorates and other entities' experts and specialist in areas of relevance to Crises/ Disasters Management. Representatives shall be designated by chairpersons of such bodies and names of the same shall be notified to the committee.
- Representatives of the following authorities and bodies.
  o General Intelligence Service.
  o Suez Canal Authority.
  o Central Agency for Public Mobilization and Statistics.
  o The National Center for Planning State Land Uses
- Head of the Advisory Committee for Crises/ Disasters Management and Disaster Risk Reduction.

- Representatives of civil society, the Egyptian Red Crescent and representative of the private sector.

- **Committee Objectives:**

    The committee seeks to reduce the effects of disasters by promoting a multi-sectoral coordination and supporting cooperation among the government institutions, the civil society and the private sector. Also to develop the national mechanisms and capacities to enable them to contribute –regularly- to build the capacity to face prospective risks and achieve the following objectives:

1) To propose and develop national policies and frameworks of crisis/ disaster management and DRR.

2) To Strengthen the technical and scientific capacity to develop and apply methodologies, studies and models to assess vulnerabilities to and the impact of geological, weather, water and climate-related hazards on it.

3) To enhance the use and provide advanced technology to strengthen crisis/ disaster management and DRR.

4) To promote and enhance cooperation among scientific communities and experts in the field of crisis/ disaster management and DRR.

5) To promote a national programme for providing easily understandable information on disaster risks and protection options, to all citizens.

- **Committee Tasks:**

    In order to learn about the tasks of the National Committee for Crisis/ Disaster Management and DRR, initially, an outline of the relevant three phases must be done: pre crisis/ disaster (preparedness and DRR), management, response and containment (during crisis/ disaster) and post crisis/ disaster (balancing, rehabilitation and reconstruction) as indicated in figure (4).

Figure (4)

The three phases of crisis and disaster management and risk reduction
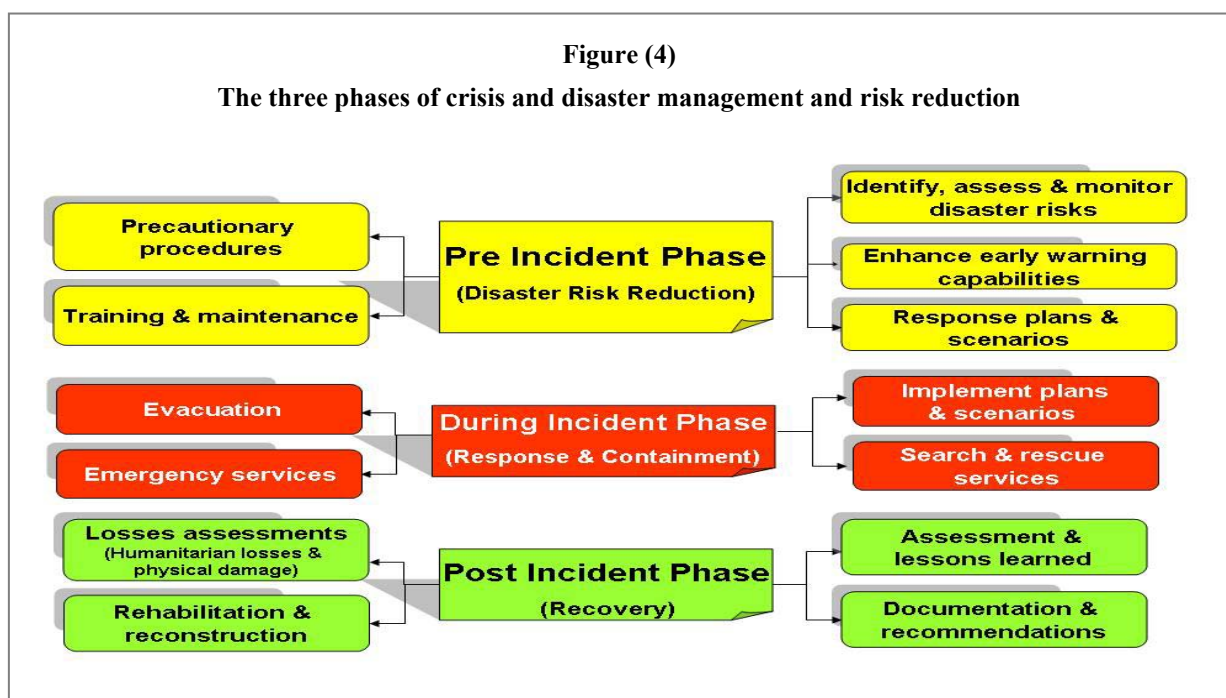
The National Committee for Crisis/ Disaster Management and DRR undertakes the following tasks in the three different phases of crisis/ disaster management and DRR:

A. Pre crisis/ disaster:

The committee shall put the national institutional framework into action in a compatible manner with the requirements of the ISDR, namely:

1. Formulating national policies and frameworks concerned with crisis/ disaster management and DRR at the national level.

2. Developing mechanisms for the integration of risk reduction associated with existing climate variability and future climate change in the programmes and plans for the reduction of disaster risk and adaptation to climate change; and ensuring that the management of risks associated with the natural disasters, are included in these programmes and plans.

3. Preparing plans and programmes aiming at building the capacity of governorates/ localities toward enhancing their self capacities to respond to disasters.

4. Issuing the executive procedures related to each phases of crisis/ disaster management (Pre, during and post the crisis/ disaster).

5. Following up on the development of monitoring and early warning mechanisms in the field of crisis/ disaster management and DRR.

6. Developing a national program aimed at organizing societal and cultural awareness campaigns in the field of crisis/ disaster management and DRR.

7. Revising plans and programs of the competent ministries, governorates, and agencies responsible for preparing resilient plans and response to crisis/ disaster management and DRR.

8. Providing assistance and advice to the competent ministries, governorates and agencies in drafting their preparedness and response plans for crisis/ disaster management and DRR.

9. Developing the general framework of the national plan for training on crisis/ disaster management and DRR.

10. Reviewing and assessing training plans of different ministries and governorates on crisis/ disaster management and DRR.

11. Building an integrated national database related to crisis/ disaster management and DRR.

12. Assuming the roles and responsibilities of the National Platform for Disaster Risk Reduction set out in the United Nations ISDR and the priorities of Hyogo Framework for Action.

13. Developing the relations with the international and regional agencies and organizations concerned with crisis/ disaster management and DRR, and rescue activities. When necessary, consider accession/ endorsing/ ratification of international or regional conventions related to crisis/ disaster management and DRR.

B. Management during the crisis/ disaster:

1. Following up the crisis/disaster and being continuously updated on the development of the situation, evaluating it and identifying the measures required to deal with it through the central Operational room for crisis and disaster management.

2. Following up all the executive works and measures taken to contain the crisis/disaster and to mitigate its negative impact.

3. Coordinating with the concerned bodies, when the crisis/disaster extends to more than one agency/ governorate. Also mobilization of resources from other parties if required.

4. Running a regular and comprehensive evaluation of the situation during the crisis/disaster and identifying the required measures, providing the proposed solutions to contain the crisis/disaster and reduce its negative impact.

5. Preparing the final reports on the response means during the crisis/ disaster.

C. Post crisis/ disaster:

1. Reviewing the final reports on the methods of dealing with the crisis/disaster and the executive measures taken, pinpointing the points of weakness and lessons learnt, and evaluating the measures taken to deal with it during the phase of confrontation and containment.

2. Following up the relief measures and operations and the possible recovery and rehabilitation in the post crises/disasters and improving them, including reconstruction operations.

3. Documenting and drawing the lessons learnt, using them in avoiding the negatives of the plans, providing the required recommendations and proposals and submitting them to the concerned bodies.

4. Submitting an annual report to the Prime Minister about the level of preparedness to deal with crises and disasters on the national level, supported with a number of recommendations to improve the national system of crisis/ disaster management and DRR.

- **The levels and mechanisms of the system of coordinating the works of crisis/ disaster management and DRR:**

    The national Committee shall issue a decree determining the levels and mechanisms of actions coordinating system for crises/ disasters management, alerting system, and procedures of reporting in accordance with the size of the crisis/ disaster.

    A Central Operational Room shall be set up at the Egyptian Cabinet Information and Decision Support Center.

- **Committee chairmanship:**

    - Chairman of the Egyptian Cabinet Information and Decision Support Center shall assume head position of the Committee during both the pre- and post- disaster/ crisis stages.
    - During the crisis, the minister concerned shall chair the Committee based on the type of the disaster/ crisis.
    - The Committee shall, on regular basis and upon invitation of the Committee's chairperson, be called for convention.

- **The Committee's Secretariat:**

    The Crisis/ Disaster Management and Disaster Risk Reduction Sector at the Egyptian Cabinet Information and Decision Support Center, shall act as the technical secretariat for the NCCDMDRR.

Third: The Advisory Committee for Crisis/ Disaster Management and DRR:

    In line with the measures and executive steps taken by the government to improve the current national system of crisis/ disaster management and DRR, to reduce the ensuing losses in lives, economic and natural resources and the huge negative impact on sustainable development programs;

    Recognizing the state keenness on the full effective participation of all concerned parties, on top of which are the scientific community and specialized national prominent experts in all fields related to the crisis/ disaster management and DRR;

    Building on that, an advisory committee on crisis/ disaster management and DRR was established. It comprises a selective group of prominent scientists and specialized experts to provide the scientific and technical support for the NCCDMDRR in this field, in line with the requirements of the international strategy on disaster reduction and Hyogo framework 2005-2015.

- **Committee Composition:**

    The advisory committee on crisis/ disaster management and DRR is established by a decision issued by the chairman of the NCCDMDRR, and it is recomposed every three years.

- **Committee chairmanship:**

    The committee is headed by the director of the crisis/ disaster management and DRR sector at IDSC.

- **Committee membership:**

    The committee comprises a number of prominent experts and specialists in the different fields of knowledge related to crisis/ disaster management and DRR.

- **Committee objectives:**

1. Examining the proposals, policies and national frameworks of work in the field of crisis/ disaster management and DRR.

2. Proposing and providing the means to promote the technical and scientific capacities to update and apply the methods and studies to assess the vulnerability to, and the impact of geological, weather, water and climate related hazards on it.

3. Providing and developing the use of advanced technology in crisis/ disaster management and DRR, in accordance with the national requirements and international context.

4. Working on promoting cooperation among research institutes and the scientific institutions concerned with crises and disasters and the executive bodies in the field of crisis/ disaster management and DRR. Making the best possible application of the scientific research in this field.

5. Examining the national program for providing simple information on the risks of disasters and the options of prevention and how to make them available to the public in a simplified way.

- **Committee's tasks:**

    The committee's tasks are to provide technical and scientific support to NCCDMDRR as follows:

1. Preparing technical reports and providing the required scientific consultations on the topics proposed by the NCCDMDRR.

2. Evaluating the current situation of the measures and plans related to crisis/ disaster management and DRR and the early warning systems and to propose the suitable scientific and technical solutions for improvement.

3. Participation in preparing/ reviewing all the plans and programs on crisis/ disaster management and DRR, in preparation to submitting them to the NCCDMDRR for review.

4. Proposing national plans and programs aimed at including the knowledge related to disasters, their management and risk reduction in the school curricula at all levels, since it is a critical element in the UN pact on education for sustainable development (2005-2015).

5. Examining and preparing mechanisms for the integration of risk reduction associated with existing climate variability and future climate change in the programmes and plans for the reduction of disaster risks and adaptation to climate change; and ensuring that the management of risks associated with the natural disasters, are included in these programmes and plans.

6. In coordination with all the concerned ministries and agencies developing, the national adaptation strategy to climate changes that would be eventually submitted to the NCCDMDRR and Higher Ministerial Committee for Crisis/ Disaster Management and DRR.

7. Preparing proposals on the implementation of local programs for vulnerability assessments and preparedness at schools and higher education institutions.

8. Preparing plans and programs for incorporating crisis/ disaster and DRR - in a better way - within the national development plans and programs.

9. Assisting in establishing an integrated system of risk management for all potential natural disasters.

10. Documenting lessons learnt from previous disasters and circulating them.

11. Proposing the research and study needs in the field of crisis/ disaster management and DRR and its relation to development plans and circulating them to the national research institutions.

12. Any other scientific or technical tasks in the field of crisis/ disaster management and DRR.

- **The Committee's technical secretariat:**

    The Crisis/ Disaster Management and Disaster Risk Reduction Sector at IDSC undertakes the tasks of the committee's technical secretariat.

Fourth: The crisis/ disaster management and DRR sector:

The institutional framework of crisis/ disaster management and DRR in Egypt needs a central administrative structure (IDSC's crisis and disaster management and risk reduction sector) to coordinate national efforts in this important field and to assume the tasks of the technical secretariat of the national committee on crisis/ disaster management and DRR and the advisory committee. Also to assume the responsibility of following up the implementation of the national plans and programs on crisis and disaster management and risk reduction, prepare different training programs, raise cultural awareness on crisis and disaster management and risk reduction and prepare the technical support required for different country's sectors to enable them to prepare their crisis and disaster management and risk reduction programs and plans.

- **Tasks of the crisis/ disaster management and disaster risk reduction sector:**

   1. IDSC's Crisis/ Disaster Management and DRR sector assumes the technical secretariat tasks for the following:
      - The NCCDMDRR.
      - The ACCDMDRR.

   2. Improving the crisis/ disaster management and DRR system in accordance with the ISDR, Hyogo framework and the tasks and objectives of the NCCDMDRR.

   3. The role of the IDSC's Crisis/ Disaster Management and DRR Sector is divided – in addition to the aforementioned – to three phases (pre, during, post crisis/ disaster), detailed as follows:

   A. Pre crisis/disaster:

      1. Preparing binding guidelines for all ministries, governorates, government departments, public institutions and authorities concerned with the preparation of crisis/ disaster management and DRR plans.

      2. Preparing the national policies and working frameworks on crisis/ disaster management and DRR.

      3. Proposing/ developing and monitoring implementation of mechanisms for the integration of risk reduction associated with existing climate variability and future climate change in the programmes and plans for the reduction of disaster risk and adaptation to climate change; and ensuring that the management of risks associated with the natural disasters, are included in these programmes and plans.

      4. Preparing the required plans and programs to support self-capacity building at the level of localities/ governorates to face all potential disasters.

      5. Following up the development mechanisms of monitoring and early warning in the field of crisis/ disaster management and DRR with all concerned ministries and authorities.

      6. Preparing a national program for organizing campaigns for raising cultural and social awareness in the field of crisis/ disaster management and DRR.

      7. Developing the relations with the international and regional agencies and organizations concerned with crisis/ disaster management and DRR, and

rescue activities. When necessary, consider accession/ endorsing/ ratification of international or regional conventions related to crisis/ disaster management and DRR.

8. Reviewing plans and programs of ministries, governorates and concerned authorities in the field of crisis/ disaster management and DRR.

9. Providing assistance and consultancy to the ministries, governorates and concerned authorities in preparing the crisis/ disaster response plans and DRR plans.

10. Preparing the general framework of the national plan for training in the field of crisis/ disaster management and DRR.

11. Reviewing and evaluating the training plans of ministries and governorates in the field of crisis/ disaster management and DRR.

12. Establishing an integrated national database on crisis/ disaster management and DRR, and making it available for all parties involved with the related national plan.

13. Establishing a national database containing all existing national data, researches and information at all ministries and concerned authorities related to climate change, to serve the preparation of the national strategy for the adaptation to climate change.

14. Supervising/ assisting ministries and concerned authorities in preparing simulation exercises in the field of crisis/ disaster management and DRR.

15. Raising cultural awareness on crisis/ disaster management and DRR.

16. Setting out the national program for implementing specialized training courses/ workshops for the ministries, governorates and concerned authorities to improve the efficiency of country employees in this regard.

17. Following up the implementation of roles and responsibilities of the National Platform for DRR set out in the UNISDR and the priorities of Hyogo Framework for Action.

18. Preparing regular reports on the progress achieved on the national level in the field of crisis/ disaster management and DRR.

B. During the crisis/ disaster:

1. Receiving regular reports from the bodies concerned with crisis/ disaster management.

2. Gathering, classifying and analyzing information on the afflicted/ harmed areas from all possible sources.

3. Putting a comprehensive and detailed evaluation to the situation and providing the suitable solutions and proposals. In addition, submitting regular reports to the General Secretariat of the Cabinet/ the Higher Ministerial Committee for Crisis/ Disaster Management and DRR in this respect.

4. Continuously monitoring and evaluating the development of the incident. Also the measures required to deal with it through the central operational room.

5. Maneuvering with resources among different ministries/ governorates, if necessary toward effective response.

C. **Post crisis/disaster:**

1. Continuously following up the relief measures and operations, potentials of recovery and rehabilitation and improving them, including reconstruction. In addition, submitting regular reports to the General Secretariat of the Cabinet/ the Higher Ministerial Committee for Crisis/ Disaster Management and DRR.

2. Evaluating measures taken – by different bodies – in dealing with the crisis/ disaster during response and containment operations.

3. Documenting events and drawing lessons learned therein to avoid negatives, if any, developing and updating plans accordingly.

4. Providing the required recommendations, proposals and channeling them to the concerned authorities through the NCCDMDRR.

Fifth: Crisis/ disaster management and DRR departments in different sectors:

1. A contact point shall be designated by all ministries, governorates, and the agencies concerned to provide and receive information to and from the NCCDMDRR. It shall also be responsible of implementation and follow up of plans and programmes to respond to disasters.

2. All ministries, governorates, governmental agencies and public institutions shall be committed to submit their detailed plans of crisis/ disaster management and DRR, proposed measures including early warning systems to face any disasters or potential crisis, and any possible amendments thereto, to the technical secretariat of the NCCDMDRR at the Egyptian Cabinet IDSC in order to present it to the NCCDMDRR for approval.

3. All ministries, governorates, and agencies concerned shall have to advise the technical secretariat of the NCCDMDRR at the Egyptian Cabinet IDSC, of names of a well qualified representative capable of taking decisions in the committee's membership. In such a case, the crisis/ disaster management and DRR department shall fall under his direct supervision.

Sixth: The civil society and private sector institutions:

Recognizing the country policy in developing and promoting partnership with the civil society/ NGOs and the private sector, it is necessary that all sectors concerned with crisis/ disaster management and DRR should participate in developing and promoting the role of civil society/ NGOs and the private sector to achieve full partnership of the whole society in this significant national activity.

Chapter Five

The National Legislation and Laws

Concerned with Crisis and Disaster Management

Any national system for crisis and disaster management needs enforceable laws and legislation, accurately identifying the measures and plans, not only to manage crises and disasters, but also for the three phases of the pre, during and post crisis. These laws and legislation shall accurately, state the tasks, levels and measures required to deal with the crisis or disaster.

This required examining the current legislative framework on crisis and disaster management to check its sufficiency in dealing with the crisis or disaster, realize the current legislative changes and examine the need of having an integrated legislative framework, in harmony with the national and international developments in the field of crises and disasters and fill the gap in the current legislative changes, if any.

First: the current national legislation concerned with crisis and disaster management:

By reviewing the current legislation concerned with crisis and disaster management, a number of laws and presidential and ministerial decrees organizing work in the areas related to crisis and disaster management (annex 1) were demonstrated, mainly:

1. **Law no. 179/1956 on civil defense:**

The said law aims to prevent civilians and secure facilities and transportation against air raids and military operations. Also to secure the organized flow of work through organizing the alarm and firefighting systems and the exchange of relief aid among different cities and other kinds and means of rescue at time of air and military operations.

The 2nd item in article three of the said law deals with the civil defense authority, ministry of interior competence in facing public disasters, that is under a cabinet decree. It may directly request from any ministry to provide the required personnel, resources and tools. It may also use the civil defense forces. The law hereto is composed of 25 articles, organizing all the works of the civil defense. Provisions of this law were amended several times in law 10/1965, and law 20/1974, law 175/1981 and law 107/1982. It is also noteworthy that the said law had included establishing a higher council for civil defense presided by the Minister of Interior.

2. **Presidential Decree no. 300 on establishing the Search And Rescue Centre at the Ministry of Defense:**

In light of this Decree, the Centre of 'Search And Rescue' was established at the Ministry of Defense in Cairo. The decree specified its tasks and objectives.

The law stated on forming the committee of search and rescue, comprising a number of representatives of the concerned ministries.

3. Law no. 4/1994, by adopting a law for protection of the environment and its executive regulations:

The law basically aims to protect the environment from pollution, maintain its natural resources and achieve the balance required between development and environment in light of the concept of sustainable development.

In this respect, the law includes a number of articles concerned with crisis and disaster management, such as article 25 that identifies the competences of the Egyptian Environment Affairs Agency EEAA, in terms of the preparation of an emergency plan to manage environment disasters. Article 26 also deals with securing the availability of all required resources in all public and private bodies to manage environment disasters. Articles 53, 54 and 55 address accidents of oil ships, which can or may lead to polluting the regional sea or the economic zone of Egypt.

Second: The current national legislation that contributes to risk reduction of crises and disasters:

Since global approaches give major significance to the measures of disaster risk reduction in the pre crisis/disaster stage, there are currently a number of national laws and decrees that contribute to the reduction of crisis/disaster risks such as:

1. Law no. 4/1994, for enacting law on protecting of the environment and it executive regulations:

As mentioned previously, the said law is basically meant to protect the environment against pollution, to maintain natural resources and achieve a balance between development and the environment under the concept of sustainable development.

The said law also included some articles that curbed down the risks of crises and disasters, namely; no. 19,20,21,22 and 23 in chapter one dealing with development and the environment, within the scope of part one on protecting the environment from pollution.

These articles organize the process of requesting all the new development facilities to prepare their environment impact assessment for the facility applying for a license. The law hereto covers all the new expansions or renewals of the existing facilities under the same provisions stated in the said articles.

2. Presidential Decree no. 153/2001, for establishing the National Centre for the Land Use Planning at the country level:

Recognizing the importance of establishing a national policy to organize and plan the land use at the country level. The country initiated in May 2001 establishing the national centre for land use planning at the country level. The centre coordinates several competences with the concerned bodies, such as:

- Counting and assessing the out of zone state lands and preparing the general planning for developing and using them in light of the general country policy.
- Preparing a map of country land off border usages in all purposes, in coordination with the Ministry of Defense.
- Handing each ministry a map of the lands allocated for its activities.
- Counting the annual programs for the development and use of land for each ministry and the revenue and expenses budget of development.
- Participating in choosing and identifying the sites required for the main new development projects in the country.

-   Holding the technical and environment studies and research required for the use of off border country lands in coordination with the concerned ministries and bodies.

3. Prime Minister's Decree no. 1537/2009 of constituting the Cabinet - National Committee for Crisis/ Disaster Management and Disaster Risk Reduction:

In the framework of the country's concern with developing the national system for crisis/ disaster management and DRR, the Prime Minister's decree n. 1537/2009 was issued constituting the National Committee for Crisis/ Disaster Management and Disaster Risk Reduction. The committee is mandated with activating the national institutional framework aligned with UNISDR or what is called National Platforms for disaster risk reduction. Concurrently, the decree sets out the committee's objectives, jurisdictions and tasks, representation level of ministries, governorates, concerned entities and other national agencies. The decree stipulates as well constituting the Advisory Committee comprising selected prominent scholars and specialists to provide the NCCDMDRR with technical and academic assistance.

Annex (1) lists down laws, presidential and ministerial decrees issued to date in the relevant areas to crisis/ disaster management and DRR in Egypt.

Third: Evaluating the current legislative situation:

It has been observed that the current laws had been issued years ago lacking the following basic elements:

1. The absence of a legislative integration to deal with crises and disasters.

2. The current legislation does not include any articles to implement the requirements of the international or regional conventions Egypt is party to.

3. Most of the current laws and decrees deal with crisis or disaster confrontation and they do not focus on the measures that should be taken pre or post the crisis/disaster.

4. The absence of measures for DRR according to international developments.

5. Most of the legislation should be updated according to the new national, regional and international developments.

Fourth: Measures required for developing an integrated national legislation for crisis and disaster management:

Recognizing the aforementioned, issues and aiming to develop an integrated national legislation for crisis/ disaster management and DRR, there should be a full and accurate counting of all the current laws and legislation concerned with crisis/ disaster management and DRR and classifying them as follows:

-   Laws and legislation that should be fully updated.
-   Laws that have loopholes should be completed in harmony with the current requirements.
-   Identifying the areas needing new legislation to complete the national system of legislation on crisis/ disaster management and DRR.
-   It might be reasonable in light of these measures to examine issuing an integrated national legislation, including the elements of the national system for crisis/ disaster management and DRR.

Fifth: A proposal for a national legislative system for crisis/ disaster management and DRR:

In light of the results of the studies and measures related to counting all the current legislation and laws concerned with crisis/ disaster management and DRR, including for instance and not exclusively the following elements:

- Part one: the general provisions and definitions.

- Part two: the national institutional framework for crisis/ disaster management and DRR.

- Part three: the measures, phases and levels of leadership and control to face crisis/ disaster management and DRR throughout the three phases.

- Part four: measures concerned with crisis/ disaster management and DRR, for instance:

    1. The use of lands.

    2. Earthquakes, fires, floods etc. codes.

    3. Early warning systems.

    4. Including setting out binding standards and conditions for the owners of public and private projects and facilities before establishment and during operation.

- Part five: Civil Protection measures and responsibilities.

- Part six: organizing the search and rescue measures and tasks during the crisis/ disaster.

- Part Seven: organizing the measures and tasks of all, the country agencies in the activities of relief, rehabilitation, reconstruction, counting losses and documentation, including the organization of compensation payment measures.

- Part eight: measures of developing the role of the civil society and the private sector during the three phases of crises and disasters.

- Part nine: imposes strict penalties for not implementing the conditions and exposing lives, economies and resources to disaster risks.

Chapter Six

Raising Social Awareness on

Crisis/ Disaster Management and Disaster Risk reduction

One of the main principles for disaster reduction and avoiding their destructive impact is making use of the knowledge, innovations and education in building a safety culture and the ability to face crises at all levels. It is called the cultural awareness on the graveness of the destructive effects of disasters, raising preventive public awareness, and social and cooperative awareness on operations of management and avoiding aftermath.

This principle emanates from the idea that there is a big possibility to reduce risks if the concerned bodies spread among civilians the culture of prevention from disasters and the means of practical and effective confrontation. This requires dissemination of the suitable knowledge and information on the risks that some might be exposed to. It shall also identify the causes and deepen the public cultural dimension of thought in a bid to eliminate their recurrence. Further, explain the ability to officially and voluntarily interfere in confrontation operations, to reduce the element of surprise. Besides, it shall arrange the priorities of intervention and dealing with the event, which would lead in the end to lessening the destructive effects over facilities and buildings and losses in lives and properties. This requires working on two main pivots:

- Managing, providing and exchanging information.
- Training, education and building culture.

The first pivot: managing, providing and exchanging information includes the following:

1. Providing simple and digestible information on disaster risks and means of prevention. Making this information available to civilians in vulnerable areas that are constantly exposed to recurrence and repercussions of disasters. The purpose of that is to encourage civilians and enable them to work on risk reduction and effective capacity building in confrontation.

2. Benefitting from experts information in this area, either in the field of management or confrontation. Transferring these experiences to all bodies concerned with planning, management and confrontation of disasters.

3. Benefitting from the scientific circles findings of research and studies in the fields of planning, management and confrontation and disseminating the significant conclusions for disaster reduction.

4. Scrupulously examining projects before approving their establishment, to avoid exposing them to areas close to environment or health hazards.

Second pivot: Training, education and building culture, includes:

1. The necessity of including the scientific knowledge on disaster reduction in the suitable branches of curricula and at all levels.

2. Encouraging studies and research related to preparedness and readiness to disasters in education institutions from school to university.

3. Setting out education and training programs dealing with disaster risks and the means of reduction and informing leaders in these programs, particularly those responsible for emergencies, local administration and confrontation of disasters.

4. Benefitting from all resources available in forecasting disasters at the regional and local levels and putting preparations in place.

5. Strengthening the role of media in giving momentum to the society to embrace the culture of confronting disasters and participating in avoiding their effects.

Building a social culture to assist mitigating the effects of disaster risks on the following tracks:

- **Building a social culture for the prevention of disasters:**

It should heed the geographic nature of Egypt, where some areas might be more vulnerable to recurrent risks than others. For instance, Sinai and the Red Sea areas are more vulnerable to the occurrence of floods and earthquakes. The area between Luxor and Aswan is vulnerable to fires and drowning of Nile cruisers etc. Thus, program of developing preventive awareness and confrontation methods should have a different focus in each area according to the nature of disasters it is exposed to.

This culture and information should be first and foremost disseminated among residents of these areas, then the leaders responsible for managing the incidents, then those in charge of crisis and emergencies management each in his/her area of specialization. Since some disasters are inevitable - a fact which makes it difficult to manage and deal with their effects- thus, cultural awareness should include measures to be taken, according to their priorities and to prepare the resources required accordingly.

- **Early Warning:**

1. Informing civilians with the different means of alarm, according to the degree of risk involved, and usually different media platforms (Radio, TV) are used to perform this role.

2. Making use of the climate map and the calendar in identifying the dates of disaster occurrence if it is recurrent, such as floods or hurricanes, by tracing the patterns of hurricanes and forecasting their prospective tracks. The calendar or dates assist in identifying the dates of sea storms in the Egyptian coastal cities.

3. Raising universal awareness of the society on the risks looming in a certain area. Alerting them with the rough date of occurrence and educating them on the required positive behavior and the negatives they should avoid.

- **Evaluating Risks and educating all civilians:**

Official bodies should put into consideration, during alert, the worst scenarios possible and to strike a balance between exaggeration and allayment in doing so. It should be cautious in securing civilians lives and properties. It might require – to reduce losses – putting the worst scenarios as top priority. Civilians should respond to this alert, particularly that practical experience has the crucial hand in proving the credibility of risk assessment or its randomness. This credibility would certainly lead to a public response to the disseminated risk alarms. Force can be used in implementation if there is no response, for the sake of securing lives.

- **Education in schools and universities:**

1. Social culture and prevention from disasters and their prevention starts from schools and until universities. It even extends to the professional sphere. The information digested by students at these early stages remains in their mind after graduation.

2. Adding a discipline to all stages of education, according to the student's level from primary to university, including all sorts of information related to disasters, their causes, types, means of avoiding them and the measures of intervention required from any civilian living within the area of recurrence of a certain disaster.

3. Taking a gradual logical approach in developing the curricula and focusing on the kind of risks involved in the students' area of residence. This will give information more credibility and help them maintain it, which would certainly lead to an effective level of implementation in case the event/disaster happens.

- **Training in companies, institutions and other national authorities:**

1. Simulations or practical training is more effective in raising social awareness for disaster management. In addition to the studies and information required to primary and university stage students, civilians should receive practical training- at all professional levels, for instance on the best means of dealing with and preventing disasters.

2. Promoting training programs for all companies, institutions, factories and ministries concerned with disaster management and the tailored curricula with the means of prevention, leadership and confrontation. Also, providing them with practical training courses, as much as possible, such as scenarios of major events and develop their management leadership and operation capacities.

3. Running simulations and scenarios on major accidents in densely populated areas, such as commercial centers and huge buildings that are over crowded.

- **The role of scientific research centers:**

    Expanding the role of the scientific centers and bodies concerned with crises and disasters management. They have a major role in the raising social awareness on risk reduction and mitigation of the aftermath. These centers possess plenty of scientific researches and scientific dissertations, which would be useful if they were provided to the public and officials responsible for crisis and emergency management in a simple and easy language. Those researches usually deal with several aspects of scientific prevention and planned management. They also involve designating the aforementioned roles for the intervention parties, to avoid contradicting decisions, and the element of surprise in case a disaster or crisis takes place.

- **Developing the role of media:**

    Preparing focused media programs, useful in communicating simple information to all strata of the society on the risk of disasters, means of prevention and the right and positive behavior required in each individual situation. These programs should be prepared by specialized experts, with simple information and a demonstration of the destructive impact of disasters and the means of recovery. They must be constantly developed, according to the probability of occurrence. All social categories should be prepared to tolerate the results and effects of natural disasters, in particular. The aim of holding these programs is to prepare and qualify civilians to tolerate risks and to avoid their detrimental results. This role shall naturally precede the disaster. As for the post

disaster stage, the role of media in this case is significant, critical and effective on public opinion. It can, by disseminating facts, highlight the efforts exerted by the official, government bodies and civil society organizations in disaster management. Thus, it shall create a positive public opinion, instead of frustration and gloomy pictures, which might have a negative effect on the society as a whole.

- **Developing the participation of the civil society and private sector in disaster management:**

    NGOs and civil society organizations such as the Red Crescent have an effective and critical role in mitigating the aftermath. They also assist in raising preventive awareness, by publishing flyers, promulgating information on preventive and security measures, which aim to raise social awareness among the whole society. They also play an effective role during the crisis/disaster, in collaboration with the different government bodies in assuming their duties. Besides, their major role in relief activities and assisting afflicted civilians, by providing the emergency medical treatment, means of living and shelter camps, until the concerned bodies restore their balance and uproot the problem.

    The private sector has an effective and influential role in promoting the country resources in this area. In addition to its major and significant role in securing its own industrial facilities and activities.

Chapter Seven

Implementation Framework

An implementation framework was developed in order to achieve the goals of the National Strategy for Crisis/ Disaster Management and Disaster Risk Reduction (NSCDMDRR). This framework comprises a set of implementation procedures that demonstrate the national action priorities in light of the main goals of NSCDMDRR (see Chapter One), and the entities responsible for and assisting in the implementation of such goals. Each entity must fully identify and describe their role and responsibilities within a year as of the adoption of the strategy in accordance with Table (1).

In addition to the above-mentioned framework, the implementation procedures include a general procedure manual for crisis/ disaster management and DRR, which identifies the roles and duties of the different responsible entities in case of crisis or disaster. These implementation procedures comprise a group of national plans developed to respond to some frequent crises and disasters that were faced in Egypt lately. The plans identify the entities responsible and those assisting according to the nature of the crisis or the disaster. These plans are:

- The national plan on floods and their risk reduction.

- The national plan on major fires and their risk reduction.

- The national plan on earthquakes and their risk reduction.

- Major trade centers evacuation manual.

- The emergency plan on Nile-related crises and their risk reduction.

- The national plan on droughts and their risk reduction.

The implementation phases of the proposed programs of action:

The implementation of the proposed programs in table (2) will follow a timeline according to the implementation priorities:

A. Short-term stage (two years) referred to as (+).
B. Medium-term stage (five years) referred to as (++).
C. Long-term stage (ten years) referred to as (+++).

Each competent entity will provide full identification and description of its role as indicated in table (2).

Table (2)

The implementation program of action for crisis and disaster management and risk reduction

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
1. Contributing to achieving sustainable development by incorporating the concept of crisis/ disaster management and DRR in sustainable development policies and planning.	1.1 Incorporating crisis/ disaster management and DRR in development policies and planning on all levels. This includes strategies and sectors of poverty reduction and multi-sectoral policies and plans.			+

Table (2) Continued

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
2. Building the Egyptian Society's capacity to manage crises and disasters at the different stages, on all levels and in all sectors. This is done through developing and supporting a national mechanism for crisis/ disaster management and DRR, reviewing laws and legislation in order to allow supporting the preparation and applying management plans of crisis and disasters.	2.1 Supporting the establishment and strengthening an integrated national mechanism for DRR that would be responsible at all local and national levels for facilitating the cross-sector coordination			+
	2.2 Adopting or amending legislations in order to support DRR, including systems and mechanisms to encourage compliance and enhance the incentives offered for carrying out DRR and mitigation activities.			++
	2.3 Assessing the capacities of the human resources available to reduce disaster risks at all levels, while developing plans and programs to build capacities in response to the current and future needs.			++
	2.4 Identifying clear priorities for the allocation of resources to develop and implement policies, programs, laws and by-laws on DRR in all sectors and relevant authorities at all levels of administration and budget.			+

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
3. Enhancing the national partnership in the field of volunteerism and community participation in crisis/ disaster management and DRR.	3.1 Raising public awareness: ▪ Enhancing the contribution of mass media in urging the society to adopt the culture of facing disasters and promoting the media's strong participation in general sustainable educational campaigns and the public consultations at all the levels of society.			+
	3.2 Environment and natural resources management: ▪ Improving land use planning and development activities in order to reduce risks and vulnerability. ▪ Encouraging the sustainable use and management of natural resources. ▪ Implementing integrated approaches for the management of the environment and natural resources including disaster risk reduction, such as the integrated flash flood management. ▪ Incorporating the risk reduction associated with existing climate variability and future climate change in DRR strategies. This includes clear identification of climate-related risks, the development of specific risk reduction measures and utilizes the climate risk data on the part of planners and decision-makers.			++ +++ +++ +

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
Objective 3 (continued)	3.3 Social and economic development practices: ▪ Incorporating DRR planning in the health sector, advancing the goal of "disaster-safe hospitals", and implementing disaster mitigation measures to enhance the existing health utilities especially those providing primary health care. ▪ Protecting and enhancing the public utilities and material infrastructures via sound design, modernization, and reconstruction in order to make them sufficiently able to face risks. ▪ Implementing social security networks with the aim of assisting the poor and other disaster-struck brackets of the population. ▪ Incorporating DRR measures in the processes of post-disaster rehabilitation. ▪ Introducing a mechanism for financial risk sharing especially insurance and reinsurance against risks. ▪ Enhancing the partnerships between the public and the private sectors in order to improve the contribution of the private sector in DRR activities and encourage it to promote disaster risk prevention culture.			+ ++ ++ ++ ++ +++

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
Objective 3 (continued)	3.4 Land use planning and other technical measures: ▪ Incorporating disaster risk assessment in urban planning and management in disaster-prone human settlements especially areas of high population density and rapid urbanization settlements. Informal or temporary houses must be tackled together with high-risk housing locations within the framework of urban poverty reduction and poor district improvement programs. ▪ Taking into consideration disaster risk concerns in planning major infrastructure projects including standards of project design, approval and implementation and the concerns relating to social, economic and environmental impact. ▪ Developing, completing and encouraging the use of general guidelines and monitoring tools for disaster risks within the context of land use and planning. ▪ Incorporating disaster risk assessment in planning and management of flood-prone rural and coastal areas via identifying accessible and safe areas for establishing human settlements. ▪ Revising or introducing new rules and standards of construction together with the current reform and reconstruction practices in order to make them more applicable especially in informal and marginal human settlements and enhancing the ability to apply, monitor and implement such rules in order to promote disaster-proof construction.			+ + + + ++

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
Objective 3 (continued)	3.5 Developing and regularly reviewing preparedness plans and policies for disaster and emergencies at all levels, with special focus on the most vulnerable regions and groups. Regular simulation exercises should be conducted on readiness for disasters with the aim of ensuring the rapid and effective response to disasters and the provision of basic relief, as need be.			+
Objective 3 (continued)	3.6 Introducing specific mechanisms to urge the stakeholders including the local communities to effectively participate in DRR activities, and control them, especially the reliance of volunteerism.			++
Objective 3 (continued)	3.7 Strengthening participation of local communities in reducing disaster risks by adopting specific policies, improving networks development, strategic management of volunteers' resources, assigning roles and responsibilities and delegating and providing necessary authorities and resources.			++

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
4. Developing mechanisms for the exchange of the information and data required in crisis/ disaster management and DRR.	4.1 Research: ▪ Introducing improved methods for projection-based assessment of the various risks, the analysis of economic and social benefits and costs of risk reduction initiatives at all levels and incorporating such methods in the decision-making process at the local and national levels. ▪ Enhancing the technical and scientific capacity to introduce and implement methods, studies and models that would assess the vulnerable spots and the impact of the risks related to geography, meteorology, water and climate, including the improvement of regional monitoring and evaluation capacities.			++ ++
	4.2 Assessing risks at the national and the local levels: ▪ Developing and updating risk maps, and ensuring regular provision together with the relevant information on a wide scale, among decision-makers and vulnerable communities in a suitable manner. ▪ Introducing disaster risk indicators and vulnerable areas at the national and local levels to enable decision-makers to assess the disaster impact on economic, social and environmental conditions, and disseminating the results among decision-makers and vulnerable populations.			+ +

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
Objective 4 (continued)	▪ Regularly recording, analyzing, summarizing and disseminating the statistical information about the risk frequency, impact, and losses			+

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
5. Supporting and enhancing existing early warning systems, and introducing systems to enhance crisis and disaster projection efforts on the local, regional and international levels.	5.1 Early warning: ▪ Developing an early warning system with warning at specific time to be understood by the vulnerable people. Such system should take into consideration the demographic, cultural and life-related conditions of the target population and should include instructions as to how to act upon hearing the warning. ▪ Establishing information systems to be reviewed and maintained regularly as part of the early warning systems in order to ensure that rapid and coordinated procedures are taken in cases of warning/ emergency. ▪ Building institutional capacities that would ensure sound incorporation of the early warning systems in government policies and emergency management systems at the national and local levels. These systems should be tested and their performance evaluated regularly.			++ + +++
	5.2 Capacity: ▪ Supporting the introduction and the sustainability of basic structures, and scientific, technological, technical and institutional capacities required for research, monitoring, analysis and forecasting natural and other relevant risks, vulnerable areas, and disaster impacts.			++

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
Objective 5 (continued)	▪ Supporting the development and improvement of the relevant databases and the advancement of data exchange and dissemination in a complete and open fashion for the purposes of assessment, monitoring and early warning. ▪ Improving scientific and technical methods and capacities for risk assessment and monitoring as well as early warning via research methods, partnerships, technical capacity building and the advancement of land and outer-space monitoring of the earth, space technology, remote sensors, geographical information systems, the development of risk-based and risk-foreseeing models, the development of meteorological and climate-related models, communication methods, and cost and feasibility studies for risk assessment and early warning.			++ ++
Objective 5 (continued)	5.3 Regional and emerging risks: ▪ Collecting and unifying the statistical information and data related to disaster risks, impact and consequences at the regional level. ▪ Cooperating regionally and internationally with the aim of assessing and surveying the regional or cross-border risks, exchanging information, and making available early warning via the appropriate measures.			+ +

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
Objective 5 (continued)	5.4 Information management and exchange: ▪ Making available easy-to-grasp information on disaster risks and preventive options and making such information accessible to the citizens in the most risky regions in order to encourage the people and enable them to work on risk reduction and building capacities to face such risks. ▪ Supporting the existing networks between disaster experts and the officials in charge of disaster management and planning in all sectors and regions in the country. ▪ Enhancing the use, application and availability of ICT and the related services with the aim of supporting disaster risk reduction, especially for the purposes of training and information exchange and dissemination on the various beneficiaries. ▪ Urban development institutions will provide information on DRR options before any construction project or land purchase or sale.			+ + + +
Objective 5 (continued)	5.5 Education and training ▪ Incorporating DRR-related knowledge in the suitable scholastic curricula at all levels and making use of formal channels and others to send the information to the youth and children. ▪ Implementing local programs for risk assessment and preparation for disasters in schools and higher-education institutions.			++ +

Main Goal	Proposal of the implementation program	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
Objective 5 (continued)	▪ Implementing programs and activities in schools about reaching maximum mitigation of disaster consequences.			+
	▪ Developing training and educational programs about disaster risk reduction targeting specific sectors (planners in the field of development, officials responsible for emergencies, local governance officers and the like).			+
	▪ Advancing the training initiatives at the local community level in order to enhance local capacities for disaster risk reduction and disaster response.			+

Main Goal	Proposal of the implementation framework	Implementation level		Implementation priorities
		Responsible bodies	Assisting bodies	
6. Identifying the indicators required to follow up the monitoring and evaluation of the progress in crisis/ disaster management and DRR.	6.1 Proposed indicators of implementing crisis/ disaster management and DRR program (Annex 2).			+

Chapter 8

Monitoring and Evaluation

The responsibility for development – economically and socially – falls mainly on the shoulders of the government; accordingly, need be made that an adequate environment be provided for the establishment of local societies capable of withstanding relevant disasters. Due consideration must be given to ensure that international agreements pertinent to disasters and the reduction of their risks are executed and enhanced through the development of joint regional and local plans, policies and practices. Furthermore, to achieve this goal, it is also important that support be given to the establishment of communication networks that serve as a means for exchanging information, experience and periodical scientific observances of risks and vulnerabilities and that institutional capacity be developed to stand steadfast in the face of disaster risks.

The government should work on setting a relevant budget, within its financial capacity, as well as on laying down suitable institutional systems, inter-coordinating between various national institutions and cooperating with governmental as well as non-governmental organizations and the civil society. In doing so, the government will have the ability to monitor and evaluate the results and requirements of international, national and local early warning systems as well as take necessary measures needed to provide prompt and adequate response to such requirements making sure that it will have the required capacity needed to deal with them through periodical training and response reports.

Monitoring and evaluation objectives

1) Determining the comprehensiveness of the national systems, regional, national and international institutions and private organizations in reducing disaster risks;

2) Determining and treating weaknesses in the mechanisms of institutional systems responsible for conducting early warnings and reducing disaster risks;

3) Ensuring that target groups are aware of and familiar with safety procedures and ways of reducing disaster risks;

4) Offering feedback to improve the performance of early warning and risk-reducing units.

Action plan

The government should work on achieving the following:

1) Conducting national baseline evaluations of the status of disaster risk reduction and disseminating their results periodically through structured scientific studies in accordance with the capacity and needs of the country. The studies will be also conducted based on specific indicators aimed at monitoring the implementation of the relevant action plan of crisis/ disaster management and DRR (Annex 2). When appropriate, such information should be shared with the relevant local, regional and international authorities as well as citizens and experts concerned;

2) The National Committee for Crisis/ Disaster and Disaster Risk Reduction implements tasks and duties of the National Platform for Disaster Risk reduction as stipulated in the UN International Strategy for Disaster Reduction (UNISDR) and priorities of Hyogo Framework (Article Three of the Prime Minister's decree no. 1537/2009).

3) Following-up on (or developing) institutional systems responsible for early warning data and indicators as well as on the availability of their periodic data in the speed and quality required. Furthermore, following-up on DRR systems, ensuring their validity, efficiency and calibration and issuing periodicals about them;

4) Following-up on integrating DRR aspects related to current and potential climate changes in the Strategies for Disaster Risk Reduction. In addition, adapting to climate change and ensuring that the relevant disaster administration is giving due consideration to the disaster at hand – natural and climatic – for example: earthquakes, landslides and flash floods in education programs according to geographic location. At the same time, evaluating and following-up on the extent by which influential segments, like decision makers, and most effected people, like women, children and the elderly are responding.

5) Publishing a digest on DRR national programs and success stories related to the Hyogo Framework for Action, provided that it contains analyses of ongoing costs, benefits, observations and evaluations of vulnerable areas and risks related especially to those areas subject to climate changes, earthquakes and floods, as deemed relevant;

6) Conducting a comprehensive review to evaluate the risks involved in national and major industrial projects with a view to ensuring their compatibility with the industrial and environmental safety standards as well as issuing certificates proving such compatibility;

7) Following-up on and studying data pertinent to road accidents and identifying vulnerability areas as well as causes. Furthermore, attempting to increase road safety by conducting scientific studies to improve roads, vehicles and highway administrations.

Chapter 9

Regional and International Cooperation

The government, through the Ministry of Foreign Affairs and the Ministry of International Cooperation and in coordination with various other ministries concerned, is invited to cooperate with international as well as regional organizations within the limit of its jurisdiction, priorities and resources. The aim of such international and regional cooperation is to:

1) Benefit from international experiences and capacities in establishing and implementing national institutions for early warning and the reduction of disaster risks;

2) Be at par and coordinate with the international community to reduce disaster risks on the regional, and accordingly the national, level.

Plan of action

1) Developing regional programs, including technical cooperation and capacity building. Furthermore, introducing new methodologies and standards for the observance and evaluation of risks and vulnerability spots as well as sharing information and mobilizing resources effectively to strengthen national and regional efforts aimed at achieving the targets of the National Strategy for Crisis/ Disaster Management and Disaster Risk Reduction;

2) Benefiting from international and regional experiences in conducting regional and local baseline evaluations to reduce disasters;

3) Coordinating periodic reports on the progress achieved in the region with respect to restrictions and support requirements and disseminating their results. Furthermore, offering the assistance required by countries to prepare periodic national reports on their programs and progress achieved;

4) Establishing and enhancing specialized regional cooperation centers, as may be required, in the fields of research, training and education, as well as building national capacities related to the reduction of disaster risks;

5) Cooperating closely with existing networks and approaches on supporting international activities to gather data as well as predict natural disasters, vulnerable areas and aftermaths. Such initiatives should include setting standards, building data bases, developing indicators and indices, enhancing early warning systems, exchanging data fully and openly and resorting to the use of on-site as well as remote sensing observations;

6) Supporting the renovation of regional mechanisms and capacities of early disaster warnings, including climate changes, tides (tsunami) and other direct or indirect risks;

7) Furnishing information, as may be needed, on the progress achieved in reducing disaster risks to reporting mechanisms of existing international and other frameworks concerned with sustainable development;

8) Considering acceding to, adopting or ratifying international treaties on reducing disaster risks and taking relevant measures, as member countries, to implementing them, as need be;

9) Participating fully in supporting and executing the ISDR. Furthermore, cooperating in setting comprehensive approaches with a view to building nations and societies capable of withstanding disasters. This may be achieved by enhancing ties and including DRR elements in the humanitarian field as well as other sustainable development ones in general.

Annexes

Annex (1)

National Legislation on Crisis and Disaster Management

I. *Laws*

1. Law no. 179/1956 on Civil Defense.

2. Presidential Decree no. 148/1959 on Civil Defense.

3. Law no. 10/1965 on the amendment of some provisions in law no. 148/1959.

4. Presidential Decree enacting law no. 12/1970 on equating Civil Defense volunteers with popular defense volunteers.

5. Presidential Decree no. 1651/1971 on establishing a Superior Council for Civil Defense.

6. Law no. 20/1974 on the amendment of some provisions in law no. 148/1959.

7. Presidential Decree no. 175/1981 on the amendment of some provisions in law no. 148/1959.

8. Presidential Decree no. 107/1982on the amendment of some provisions in law no. 148/1959.

9. Presidential Decree no 300/1983 on establishing a Search And Rescue Center in the Ministry of Defense.

10. Presidential Decree no. 132/1992 on establishing a Superior Council for Civil Defense

11. Law no. 4/1994 on the preservation of the environment.

12. Presidential Decree no. 153/2001 on establishing the National Center for Land Use Planning for the country-owned lands.

13. Law no. 119/2008 on enacting the unified building law.

II. *Ministerial decrees*

1. Decree of the Ministers of Defense and Interior no. 16/1960 on the duty of the armed forces towards Civil Defense.

2. Decree of the Minister of Interior no. 21/1960 on cities and bodies where Civil Defense measures are applied.

3. Decree of the Minister of Interior no. 22/1960 on organizing the volunteer teams of Civil Defense.

4. Decree of the Minister of Interior no. 11/ 1966 on forming Civil Defense Committees in the governorates.

5. Decree of the Minister of Interior no. 382/1970 on forming Civil Defense Committees in the governorates.

6. Decree of the Minister of Interior no. 1394/1981 on establishing Civil Defense units in industrial zones.

7. Decree of the Minister of Interior no. 1395/1981 on establishing Civil Defense committees in public factories, utilities and establishments.

8. Decree of the Minister of Interior no. 20/1983 identifying the public factories and utilities and major facilities.

9. Decree of the Minister of Defense and Military Production no. 63/1983 identifying the duties of the armed forces and the assistance provided thereby to civil defense.

10. Decree of the Minister of Interior no. 349/1986 regulating volunteerism in Civil Defense.

11. Decree of the Minister of Social Solidarity no. 236/1994 on the provision of assistance in cases of personal or public catastrophes and disasters.

12. Decree of the Minister of Social Solidarity no. 69/2006 on the provision of assistance in cases of personal or public catastrophes and disasters.

13. Decree of the Prime Minister no. 1537/2009 on constituting a National Committee for Crisis/ Disaster Management and Disaster Risk Reduction under the Cabinet.

<p style="text-align:center">Annex (2)</p>

<p style="text-align:center">Proposal of the Most Important Indicators for the Implementation of the Program of Action on Crisis/ disaster and DRR</p>

Table (1)					
First: The Institutional Framework of Crisis/ Disaster/ Emergency Management and DRR					
	Level of progress in the implementation of procedures	Level One No progress	Level Two Minimal progress and no clear commitment	Level Three Institutional commitment and slow progress	Level Four Commitment in policies but no sufficient funding	Level Five Full implementation and sustainable commitment
Indicators					

1. Establishing/ strengthening the institutional framework of crisis/ disaster management and DRR:
  ▪ Name of Body/Center: (overview of the Body/Center)
  …………………………..
  ………………………….
  ………………………….					

	Level of progress in the implementation of procedures	Level One No progress	Level Two Minimal progress and no clear commitment	Level Three Institutional commitment and slow progress	Level Four Commitment in policies but no sufficient funding	Level Five Full implementation and sustainable commitment
Indicators						
1. Developing/ strengthening the national policy and plan framework to prepare and respond to natural disasters and emergencies.						
2. Developing/ strengthening the legal/ legislative framework on crisis/ disaster/ emergency management and DRR.						
3. Allocating the financial resources required to respond to crisis/ disaster/ emergency and DRR.						
4. Establishing a mechanism to research and identify disaster sources and places.						
5. Preparing risk maps for disaster-prone regions.						
6. Developing a database that comprises the human, technical and financial capacities.						
7. Establishing a national early warning system linked to similar regional, Arab and international systems.						

Table (2)
Second: the Pre-Disaster/Crisis/ Emergency

	Level of progress in the implementation of procedures	Level One No progress	Level Two Minimal progress and no clear commitment	Level Three Institutional commitment and slow progress	Level Four Commitment in policies but no sufficient funding	Level Five Full implementation and sustainable commitment
Table (2) Continued						
Indicators						
8. Capacity building and training. 9. Preparing public awareness programs. 10. Incorporating the concept of DRR in school curricula of different educational stages. 11. Incorporating the elements of the implementation plan in the development programs and policies and the Millennium goals. 12. Incorporating the building and land use standards in the concept of DRR. 13. Funding research and application-based projects on DRR and making available the necessary funding. 14. Developing a program for the preparedness phase monitoring and evaluation. 15. Developing a program for community participation. 16. Determining the reserves/ stocks allocated for meeting the needs of the implementation of national plans. 17. Developing procedures to facilitate the immediate mobilization of resources and equipments nation-wide.						

	Level of progress in the implementation of procedures	Level One No progress	Level Two Minimal progress and no clear commitment	Level Three Institutional commitment and slow progress	Level Four Commitment in policies but no sufficient funding	Level Five Full implementation and sustainable commitment
	Table (3) **Third: The Response Phase**					
Indicators						
1. Availability of implementation plans for loss assessment. 2. Activation of the early warning systems and operational rooms. 3. Availability and implementation of immediate response plans 4. Availability of alternatives to face the risks of crises, disasters and emergencies at the national level or requesting assistance from Arab countries according to the protocol. 5. Incorporating crisis/ disaster management and DRR in the national plans. 6. Having a program for monitoring and evaluation to trace the disaster response activities.						

	Level of progress in the implementation of procedures	Level One No progress	Level Two Minimal progress and no clear commitment	Level Three Institutional commitment and slow progress	Level Four Commitment in policies but no sufficient funding	Level Five Full implementation and sustainable commitment
Table (4) **Fourth: Post-Crisis/ Disaster/ Emergency, Phase**							
Indicators						
1. Availability of needs assessment mechanism to substitute the losses. 2. Availability of alternatives for reconstruction depending on national efforts or by requesting assistance from Arab countries according to the protocol. 3. Availability of a monitoring and evaluation program for the response phase of disaster/ crisis/ emergency.						

List of Abbreviations

ACCDMDRR	**Advisory Committee for Crisis/ Disaster Management and Disaster Risk Reduction**
CDMDRRS	**Crisis/ Disaster Management and Disaster Risk Reduction Sector**
DRR	**Disaster Risk Reduction**
GDP	**Gross Domestic Product**
HMC	**Higher Ministerial Committee**
IPCC	**Inter – Governmental Panel on Climate Change**
ISDR	**International Strategy for Disaster Reduction**
MDG	**Millennium Development Goals**
NAP	**National Action Plan**
NCCDMDRR	**National Committee for Crisis/ Disaster Management and Disaster Risk Reduction**
NGOs	**Non Governmental Organizations**
NSCDMDRR	**National Strategy for Crisis/ Disaster Management and Disaster Risk Reduction**
PPP	**Private – Public Partnership**
UNDP	**United Nations Development Program**
UNFCCC	**United Nations Framework Convention on Climate Change**