



**The Cabinet of Egypt**  
**Information and Decision Support Center**  
**Crisis Management and DRR Sector**

# **National Strategy for Disaster Risk**

## **Reduction 2030**

Summary for Dissemination

April 2017

## First: Introduction

Egypt witnessed great historic events when the Egyptian people staged the 25<sup>th</sup> January Revolution which enjoys a unique status among major revolutions that have taken place throughout human history. On June 30, 2013 tens of millions of Egyptians flooded to the country's squares to rectify the path of the 25<sup>th</sup> January Revolution. In the wake of the 25<sup>th</sup> January Revolution, Egypt faced a great deal of challenges as a result of the atrocious and lawless events which caused material and economic losses at both national and regional levels. Consequently, there arose a need for adopting a risk reduction approach as part of the emergency preparedness, response and recovery programs, particularly in view of the proliferation of risks and threats which Egypt is experiencing. These risks have increased to such a point as would pose a threat to human existence and to life on earth.

Upon updating and formulating the National Strategy for Disaster Risk Reduction (NSDRR), the Egyptian government focused on the international approaches in this area, most important of which include the Sendai Framework (2015 – 2030) adopted in March 2015 in the 3<sup>rd</sup> UN World Conference for DRR; the UN Sustainable Development Agenda (2015 – 2030) approved during the UN Summit in September 2015; in addition to the Paris Agreement on Climate Change approved in December 2015.

In the context of the recent national developments as well as regional and international obligations, Egypt issued the NSDRR 2030 in order to fulfill these obligations and to upgrade its current national system for disaster risk reduction. Towards that end, the Egyptian government took a number of relevant measures and steps, including the preparation of the National Strategy for Crisis/Disaster Management and Disaster Risk Reduction as part of its earlier publications in 2010.

## Second: Vision, Objectives and Scope of Work of NSDRR 2030:

- **Vision**

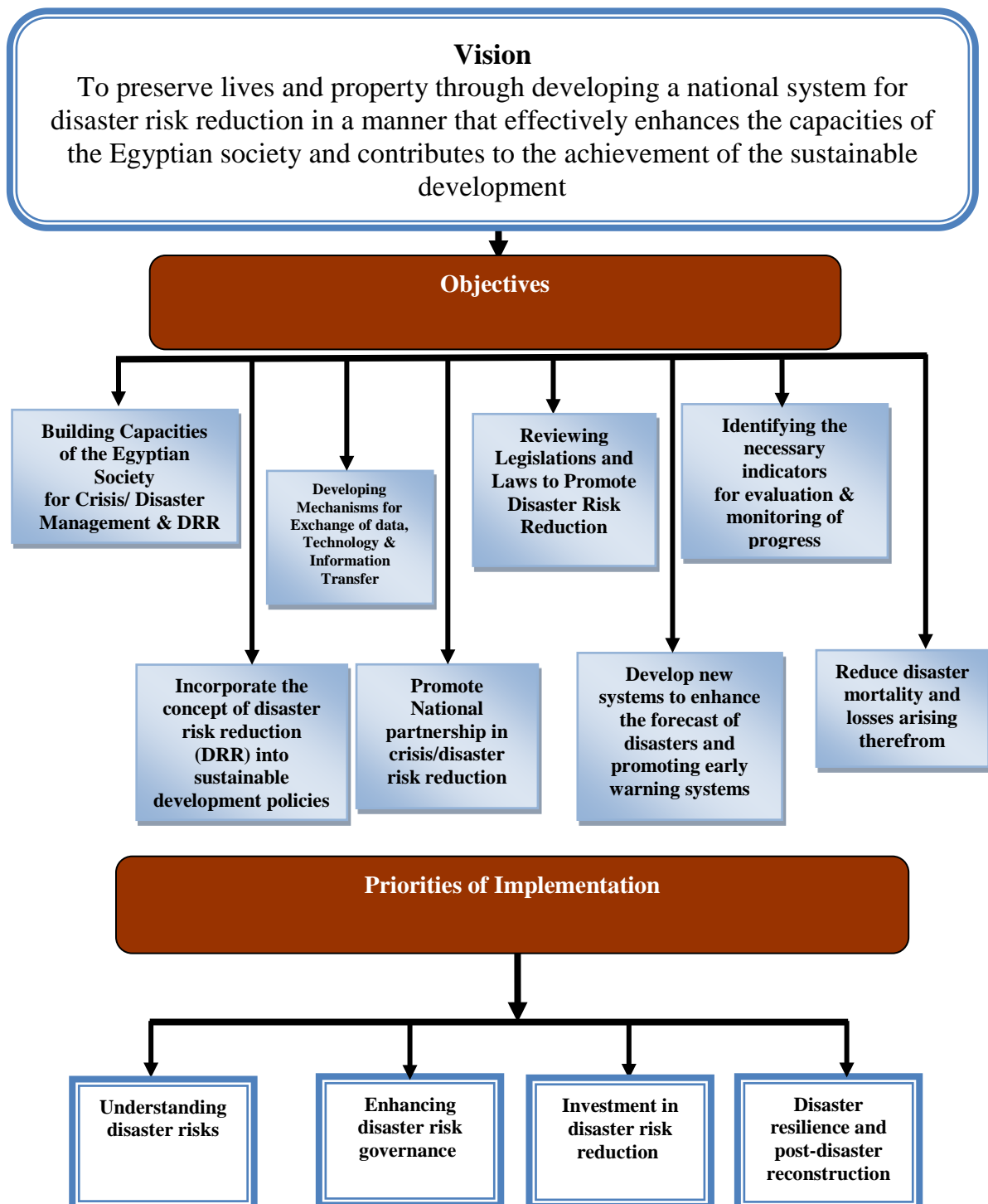
The main vision of NSDRR 2030 is:

"To preserve lives and property through developing a national system for disaster risk reduction in a manner that enhances the national capabilities and contributes to the achievement of the sustainable development".

Figure (1) introduces the overall summary of the strategy in terms of its vision, objectives, priorities of implementation and the activities relevant to crisis/disaster management and DRR.

**Figure (1)**

**Overall Summary of the National Strategy for Disaster Risk Reduction 2030**



- **Objectives**

The NSDRR 2030 aims to achieve the following objectives:

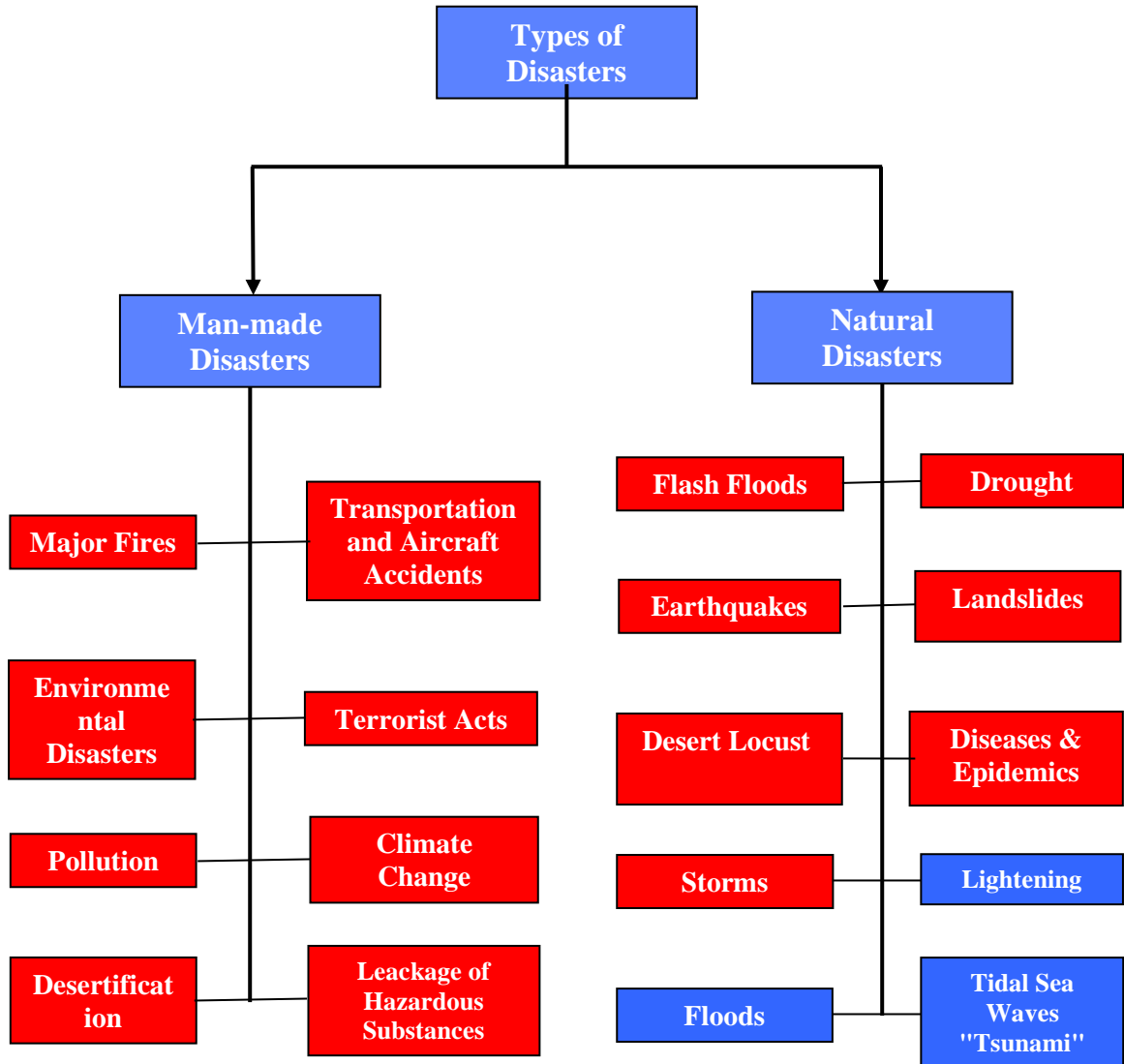
- a- Incorporate the concept of disaster risk reduction (DRR) into sustainable development policies, particularly the Sustainable Development Strategy: Egypt's Vision 2030.
- b- Build capacities of the Egyptian society for facing crises and disasters at all phases, levels and sectors. This can be done through developing and promoting a national mechanism for disaster risk reduction "**National Center for Crisis/Disaster Management and DRR**".
- c- Substantially reduce disaster mortality by 2030.
- d- Reduce direct disaster economic losses in relation to gross domestic product (GDP) by 2030.
- e- Review national laws and legislations in order to promote preparation and application of DRR plans.
- f- Promote national partnership in the field of voluntary work by building dialogue with the civil society, particularly NGOs and social associations in order to reduce the risks of disasters.
- g- Develop mechanisms for exchanging data, and information as well as technology transfer on DRR.
- h- Develop new systems to enhance the forecast of disasters and adopt the best available techniques to promote the existing early warning systems and link them to the global systems by 2030.
- i- Substantially reduce disaster damage to critical infrastructure and disruption of basic services through adopting various methods and techniques so as to build resilience against disasters.

- **Scope of Work of NSDRR 2030:**

The scope of work of the NSDRR 2030 is temporally aligned with the Sendai Framework for Disaster Risk Reduction as well as Egypt's Vision 2030 with special focus on natural disasters and man-made disasters.

**Figure (2)**

**Classification of the Most Important Disasters Affecting Egypt**

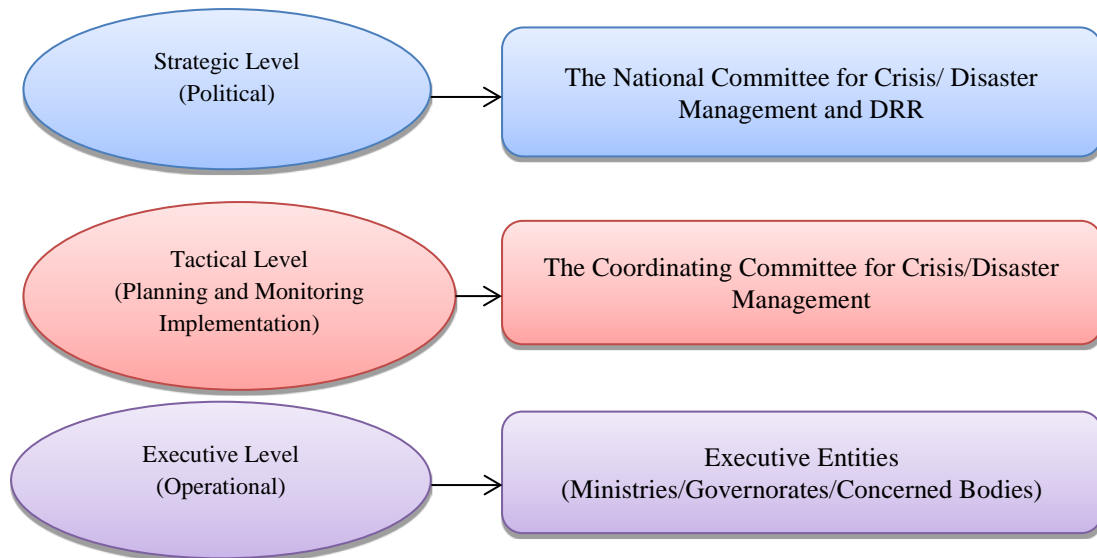


Red color reflects disasters that occur more frequently

The present edition of the NSDRR 2030 comprises six chapters: Chapter One introduces the vision, objectives and the scope of work of the NSDRR 2030. Chapter Two analyzes the current situation in Egypt as well as the efforts that have been undertaken in the area of disaster risk reduction. Since the institutional base for crisis and disaster management is the cornerstone of a sound and effective management, Chapter Three presents the institutional framework for disaster management in the Arab Republic of Egypt. Chapter Four provides the NSDRR 2030's courses of action which include understanding disaster risks, early warning, investment, finance and insurance, preparedness, scientific research, private sector and civil society, sustainable development and disaster risk reduction. Chapter Five deals with both international and regional cooperation which plays a key role in enhancing the capacities of countries in the field of disaster risk reduction. Chapter Six tackles the importance of monitoring and evaluation in achieving the objectives of the NSDRR 2030. The conclusion presents some indicators to measure the progress achieved at the level of priorities for action.

Emphasizing the principle of decentralization and granting all required powers 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. 3185/ 2016 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 Crisis Management Committee, the National Committee for Crisis/ Disaster Management and DRR, the Coordinating Committee for Crisis/Disaster Management, 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 (4)  
Levels and mechanisms of coordinating crisis/disaster management and DRR



### **Third: The NSDRR 2030's Courses of Action:**

Implementation of the NSDRR 2030 and achievement of its vision require following a set of courses of action which will enable Egypt to reduce the risks of disasters and at the same time fulfill its international obligations and come in line with the surrounding regional and international contexts. That is why the NSDRR 2030 adopts a series of courses of action that collectively represent the priorities of the implementation of this strategy. These courses of action include:

#### **1- Understanding Disaster Risks**

Disasters result from a combination of natural phenomena and vulnerabilities of any given location. Disaster assessment requires a systematic collection of data and information. Analysis of such data and information should take into account the dynamic nature of disasters, urbanization, changing the use of rural lands, the vulnerabilities arising from urbanization, environmental degradation, and climate change. Therefore, disaster assessment and mapping help motivate the citizens and prioritize the needs of the early warning systems, channel efforts into mitigating the

risks of disasters and respond to such risks. Understanding disaster risks requires the following:

- Creating a comprehensive and accurate database that helps in laying solid foundations for providing various alternative options and choosing among them.
- Mobilizing available resources and unifying the different segments of the society into a single entity in order to confront and mitigate disaster risks.
- Benefiting from previous experiences, reevaluating them and reviewing their method of management so as to learn useful lessons that assist in handling potential disasters.
- Developing specific strategies and plans (for earthquakes, flash floods, fires, etc.) while taking into consideration that such plans should be realistic and comprehensive. This is to be added to developing new and adequately flexible mechanisms for handling disasters and building an effective communication network with all parties concerned with handling the disaster.
- Stressing the importance of engaging all associations as well as government and non-government organizations.

## **2- Early Warning:**

Early warning systems are considered among the most important tools which are used in the mitigation of disaster risks. These tools play a major role in reducing material and human losses. This objective can be achieved only if the existing warning systems are new and sophisticated. A round-the-clock monitoring of natural phenomena is the first building block of the early warning systems. Likewise, analysis of data and information is considered the basic step through which the early warning systems can achieve their objectives. It is also imperative to develop specific sectoral indicators and compare the results of the analysis with such indicators.

## **3- Investment, Finance and Insurance**

Investing in disaster risk reduction is one of the essential elements of the strategic planning adopted by the Egyptian government in order to support the Sustainable Development Strategy with its policies, legislations, plans and programs which would



reduce and handle disaster risks in an attempt to enhance the economic, social, health, and cultural resilience of the society and the state in confronting disasters. Towards that end, the state has been endeavoring to steer the financial institutions towards providing funds and soft loans so as to support the various activities of sustainable development. However, priority should be given to the financing activities which contribute to enhancing capacities, education, health and public awareness in the field of sustainable development and disaster risk reduction. Promotion of this trend requires carrying out a number of procedures, including allocating the necessary resources for the achievement of this objective at all levels in order to implement the policies, strategies, plans, laws, and regulations of disaster risk reduction across different sectors. It is also important to develop the necessary organizational frameworks so as to encourage and organize lending to sustainable development projects which work towards reducing and handling disaster risks. These organizational frameworks have to be promoted through incentive and legislative measures for a stable and effective capital market. Moreover, the requirements of social justice must be taken into consideration upon undertaking organizational reforms in the financial sector, thereby making financing available to small and microenterprises as well as civil associations operating in the field of community development, environment, disaster management, development banks, agricultural banks, banking services via mobile phones, and postal banks.

Disaster risk **financing** is as important as investing in disaster risk reduction. This requires allocation of significant budgetary funds in order to reduce such risks and take the necessary measures to preserve lives and reduce losses. There are a number of innovative financing mechanisms that can be activated to sustain the course of development and reduce disaster risks. These include results-based financing, development of a mechanism to reduce financial risks and establishment of a disaster reduction fund.

One the other hand, **insurance** is necessary for the implementation of the NSDRR 2030. In this context, it is important to promote the principle of risk sharing and provision of the necessary financial protection for both public and private investments. The ultimate objective is to reduce the financial and economic impact on governments or societies which are vulnerable or more exposed to disaster risks in urban or rural

areas. In order to make this mechanism operational, the following measures should be taken: raising the awareness of all segments of the society on the insurance culture and its importance in disaster risk reduction. This has to be coupled with developing mechanisms for an effective assessment of such risks, with particular focus on production sectors, the industrial and agricultural sectors (e.g. agricultural crops, lands and livestock), various types of the transportation sector (e.g. air transport, maritime transport, river transport and land transport), and establishments. Consequently, the insured will pay premiums that are commensurate with such risks. It is equally important to create national funds for insurance against disaster risks. This is to be added to providing incentives for the companies operating in the insurance sector so as to activate the role of insurance policies in the area of disaster risk reduction.

#### **4- Preparedness:**

The NSDRR 2030 seeks to incorporate the concept of disaster risk reduction into all phases of disaster management starting from preparedness and response to recovery and rehabilitation.

Preparedness is one of the priorities of the NSDRR 2030 as it determines the efficiency of response to disasters. It also renders response and reconstruction more effective. The Sendai Framework emphasized the importance of preparedness by placing it among its four priorities for action. The NSDRR 2030 deals with preparedness based on two main pivots: **institutional preparedness and community preparedness**. As such, we need to:

- Build an integrated and comprehensive database of all major routine disasters occurring in Egypt; develop the indicators to forecast recurrence of these disasters; and identify the tasks required to respond to each disaster.
- Delineate the current core capabilities and develop scenarios for potential risks.
- Identify resource-deficient areas within each scenario.
- Draw up executive plans so as to meet the resources and core capabilities requirements within each scenario.

- Identify the overall framework for disaster confrontation requirements; aggregate the needs; and develop the timeline necessary to fulfill such requirements with regard to each residential area/ vital establishment.

#### **5- Scientific Research:**

Scientific and technological progress has facilitated the implementation of strategies and policies aiming at reducing the risks of disasters through utilization of modern methods such as satellite development programs which are used in developing the geographic information systems (GIS) which made it easy to forecast disasters, handle them, and reduce their risks. The UNISDR Scientific and Technical Advisory Group works in partnership with other task forces to develop comprehensive approaches for handling disasters. These approaches include prevention, mitigation, preparedness, response and recovery in accordance with the following criteria:

- Science and technology play a major role in stimulating and supporting capacities as well as the existing initiatives.
- Evaluation of the existing data and free access to knowledge and technology relating to disaster risks.
- Processing scientific evidences and granting rapid access to them so as to incorporate them into policies.
- Provision of scientific advice to decision makers through close cooperation and dialogue so as to define the cognitive needs and review the political options based on practical evidences.
- Monitoring and evaluating so as to ensure the utilization of the latest scientific techniques in data collection and monitoring.
- Establishing close contact between decision makers and stakeholders across different sectors as well as those interested in science and technology.
- Enhancing capacities so as to ensure the possibility of making scientific engagement and benefiting from its outputs.

## **6- Awareness, Education and Training:**

In keeping with both the national and international obligations and requirements as per the Sendai Framework (2015 – 2030) (the NSDRR: Egypt's Vision: 2030) for Disaster Risk Reduction, in addition to the disasters which have hit some Egyptian governorates over the past few years, there arose an urgent need for making greater focus on raising public awareness and provide the necessary education in order to mitigate the risks of disasters at all levels and with the participation of all the concerned parties to maintain sustainability.

Experience showed that response by the government only is not enough to confront the negative impacts of disasters on local communities (particularly those vulnerable or more exposed to disasters). These local communities are often able and willing to become an effective partner once community awareness and public education are adequately provided, in addition to deepening cultural thought among communities in an attempt to mitigate occurrence and recurrence of disaster risks.

It is worth mentioning that investment in the field of community awareness and education of all types will prove useful through reducing human and economic losses at one and the same time. This requires working on several main pivots including the following: raising awareness and public education; formal and non-formal education; training and building capacities in addition to management, provision and exchange of information. Consideration should be given also to the fact that choice of the tools and methods used to achieve this goal will basically depend on the targeted audience as well as availability of resources in the targeted local communities with the aim of enhancing community participation and behavioral change associated with the ability to confront and be prepared to respond and take the necessary measures to mitigate the risks of disasters.

## **7- Private Sector and Civil Society:**

Implementation of the NSDRR 2030 requires promoting the principle of national and voluntary partnership in order to engage the business sector and civil society in supporting the efforts aiming at implementation of the NSDRR 2030 and contributing to provide the funds required for such implementation.

NGOs can play an effective role in mitigating the negative impacts of disasters on local communities as well as in enhancing preventive awareness and raising awareness and educating the public on the risks of disasters and reduction of their negative impacts. Support must be given to these local communities in order to boost their ability to stand resilient in the face of disasters and to follow the right course of action so as to achieve this goal. This is particularly true since these local communities are capable of working closely with the different segments of the society.

Disaster risk reduction as well as disaster management depends on the coordination mechanisms both within and across sectors as it is important to develop a clear mechanism in order to define the responsibilities to be borne by stakeholders in the public and private sectors. Therefore, the NSDRR 2030 is counting on the great role which the private sector, along with the public sector, can play in mitigating the risks of disasters whether through getting prepared to handle them or addressing their negative impacts and economic, social and environmental repercussions. It is equally important to engage the private sector in enhancing the confrontation capacities of the communities that are vulnerable or more exposed to disasters by helping them take preventive measures that preserve human lives and avoid sustaining losses as far as infrastructure is concerned.

#### **8- Incorporating Disaster Risk Reduction into Sustainable Development:**

The goals of sustainable development steer sustainable development planning towards achieving those priorities which interact with mitigation of disaster risks. Sustainable development can contribute to reducing vulnerability to disasters and strengthening resilience against them. Moreover, progress in the achievement of the goals of sustainable development and the extent of their relatedness to such priorities will determine the extent at which the risks of disasters can be mitigated.

Losses resulting from disasters pose a serious threat to the efforts aiming at achieving the goals of sustainable development. Destruction of infrastructure, the negative impact on economic activities and poor living conditions are among the most important results of natural disasters. Simultaneously, the losses arising from disasters interact with other financial, political, health, social and environmental crises and may

lead to aggravation of such crises. These negative effects of disasters can trigger a relapse in social investments aiming at alleviation of poverty and hunger and provision of access to education, health services, safe housing, drinking water, sanitation and transportation services, or environmental protection. This is to be added to the economic investments that create job opportunities and generate income.

### **9- Response and Recovery:**

Disaster risk reduction intersects with the concept of response and recovery at several key areas. The principal aim of disaster risk reduction is to mitigate the risks of disasters and encourage sustainable development processes which contribute to mitigating the risks of potential disasters. Therefore, the concept of response to disasters, hence recovery, needs to transcend relief activities and provision of urgent humanitarian aid into integration and alignment with disaster risk reduction as well as sustainable development plans so as to bridge the gap between provision of urgent humanitarian aid and rehabilitation. It also requires:

- Creating an institutional system for responding to disasters wherein duties and responsibilities are clearly defined.
- Getting prepared for responding to disasters and developing the necessary plans for such response in accordance with an integrated and coherent approach wherein the roles of the state institutions as well as concerned bodies and organizations, the private sector and civil society are clearly reflected.
- Developing a mechanism for exchange of information, strengthening infrastructure required for rapid exchange of information between the concerned parties, and activating early warning systems including the community alert.
- Exchanging successful practices and beneficial lessons so as to identify the shortcomings of responding to disasters with a view to averting them in future responses.
- Ensuring that contingency plan rehearsals as well as other preparedness criteria and procedural steps of response are clearly known to all partners in the pre-disaster phase so as to ensure carrying out efficient and effective response upon occurrence of the disaster.

- Expanding and adopting the concept of community intervention teams (CIT) which will support specialized response teams. The aim is to mobilize domestic resources at disaster-stricken areas. However, this requires raising community awareness as well as provision of relevant training programs.

#### **10- Affected Sectors Which Support Disaster Risk Reduction:**

Disaster risk reduction is better addressed through developing a clearly defined vision as well as specific plans, specializations and tasks and high level coordination within and across sectors. This is in addition to the engagement of the concerned entities such as research centers, academics, and specialized experts in order to achieve a higher degree of efficiency and effectiveness in respect of mitigating the risks of disasters and shifting towards sustainable development. Examples of sectors affected by disasters include:

- **Environmental Sector:**

The NSDRR 2030 pays special attention to the sustainable development platform. Since environment is the place where we live, it is quite natural that the environmental sector becomes vulnerable to disasters associated with the efficient procedures of sustainable development. Moreover, misuse of natural resources as well as patterns of non-sustainable development contribute to increasing the frequency and occurrence of disasters.

- **Agricultural Sector:**

Agriculture is one of the most important sectors that should promote the NSDRR 2030 as it one of those sectors most affected by disasters, particularly in rural and semi-rural areas. These disasters results in increased frequency of droughts and desertification. This undoubtedly poses a threat to food security in Egypt. Consequently, the agricultural sector should develop well-defined mechanisms in order to maximize the utilization of the NSDRR 2030.

- **Water and Energy Sectors:**

There is a close relationship between the NSDRR 2030 and water and energy sectors. The risks that may arise from disasters have a very negative impact on water and energy sectors. This again poses a threat to food security in

Egypt in addition to the direct and indirect impacts on the energy sector. These impacts become all the more dangerous given the current and anticipated population density in Egypt. Furthermore, these impacts impede the progress of sustainable development in Egypt which is identified in the Sustainable Development Strategy: Egypt's Vision 2030.

- **Housing and Infrastructure Sectors:**

Housing and infrastructure sectors are highly vulnerable to disasters. That is why governments need to be fully prepared to mitigate the risks arising from them. Measures taken in this respect include developing plans, drawing maps, and providing timely, reliable and enforceable instructions. The public should be provided with clear information in respect of any risks. Further, instructions should be issued on the way individuals and groups can handle disasters. The reasons for increased impacts of disasters should be identified and a set of procedures relating to physical protection should also be taken. This is to be added to limiting long-term vulnerability to disasters through setting up infrastructure facilities, wise management of major resources, along with preserving such resources so as to enhance their functioning in confronting disasters and minimizing the probability of their exposure to the detrimental effects of all types of risks. This is in addition to increasing the efficiency of the infrastructure facilities through utilization of digital assets management systems such as bridges management systems. This can be made possible by evaluating the system's stockpiles at the national level. An example of this is Pontes Global System which works towards raising the structural and service efficiency and functions' security of key infrastructure, reducing safety risks and public health risks and measuring the rehabilitation efficiency of community support systems and services that are practicable and flexible. This should be coupled with monitoring and controlling Structural Health Monitoring (SHM) in its capacity as one of the modern means used to achieve this goal. Moreover, natural assets and cultural heritage should be safeguarded through drawing up proper plans, averting risks, raising the efficiency of responding to them via developing extraordinary, specialized plans. This should go in parallel with enhancing the



procedures of preparedness such as preserving and rehabilitating archeological establishments as may be consistent with community priorities and post-disaster plans.

#### **Fourth: International and Regional Cooperation**

International and regional cooperation is one of the mechanisms that has been approved by the International Community. Its importance has also been underscored by international and regional forums as well as the Sendai Framework so as to bridge the gap between advanced and developing countries. It has become an essential component of the development planning, particularly in the field of disaster risk reduction, emergency response systems, disaster preparedness and mitigation, sustainability of development and improvement in accordance with the best practices, activation of its role in sustainable development and planning and international cooperation in a manner that best serves the interests of the country and the citizens. This is based on the fact that management of disaster risks is the responsibility of all parties.

International and regional cooperation is of greater importance to Egypt as it provides it with the best means of implementation in accordance with its national priorities and pursuant to the applicable rules and regulations. The government, through the Ministry of Foreign Affairs and the Ministry of International Cooperation in coordination with the concerned ministries, establishes international and regional cooperation relations as per the existing interests, mutual respect and optimal utilization of the resources through coordinating these relations and enhancing their effectiveness in the field of disaster risk reduction, thereby improving economic and social well-being. This requires:

- Making regional and international, bilateral and multilateral cooperative arrangements so as to boost technological and financial cooperation and technology transfer on concessional terms.
- Making use of cooperative forums and initiatives to exchange experiences and guarantee free access to technology and information in the area of disaster risk reduction.

- Provide adequate and sustainable financial allocations for mitigation of disaster risks through collection of funds from all available resources.
- Building capacities through establishing joint cooperation relations in accordance with the international obligations.
- Diversifying the funding sources via coordination between the international organizations participating in disaster risk reduction.
- Incorporating disaster risk reduction procedures into the development assistance programs across different sectors (sustainable development – natural resources management – environment – adaptation to climate change, etc.).

#### **Fifth: Monitoring, Evaluation, and Indicators:**

The monitoring and evaluation process, with its indicators and criteria, is considered one of the most important phases of the implementation of the NSDRR 2030. It is also an integral part of the planning process and guarantees achievement of the quality of implementation and improving its efficiency, along with ensuring that plans, measures and decisions are consistent with the objectives of the NSDRR 203.

Within the limits of its financial capacities, Egypt seeks to provide the appropriate budgets and necessary institutional systems and to coordinate between its different institutions, and cooperate with government and non-government institutions and civil society so as to monitor and evaluate the outcomes and requirements of the local early warning systems. This is in addition to coordinating cooperation with international and regional systems, taking the necessary measures towards rapid and appropriate response to such requirements, along with making sure that it is able to deal with such requirements through conducting periodic training and preparing periodic response reports.

Table (1)

## Relation of Scientific Research with NSDRR Courses of Action

Priorities for Action of Sendai Framework 2015 – 2030	NSDRR Courses of Action 2015 – 2030	Target/Procedures	Short Term 3 Years	Long Term 2030
1- Understanding disaster risks	Understanding disaster risks	<ul style="list-style-type: none"> <li>- Collecting relevant data and information with practical value and analyzing, managing, using and disseminating them.</li> <li>- Carrying out periodic evaluation of disaster risks, vulnerability, and extent of exposure to them as well as the characteristics of the risks responsible for their occurrence and their sequential impacts on ecological systems.</li> <li>- Preparing information and maps on disaster risks, particularly at vulnerable places and hot spots. These information and maps should include the scenarios relating to climate change and should be regularly updated and circulated through using the applicable GIS technology.</li> <li>- Encouraging and improving dialogue, cooperation, and joint efforts between scientific and technological circles through adoption of a specific mechanism and other concerned entities, policymaker, and the public and private sector so as to link science with making effective decisions in the field of disaster risk reduction.</li> <li>- Enhancing scientific and technological capacities so as to benefit from the existing</li> </ul>	<p>√</p> <p>√</p> <p>√</p> <p>√</p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p>

knowledge and consolidate them. This is to be added to developing and implementing approaches and models for the estimation of disaster risks, vulnerability and potential exposure to all types of disasters.

## Relation of Scientific Research with NSDRR Courses of Action

Priorities for NSDRR Action of Courses of Sendai Framework 2015 – 2030	Target/Procedures	Short Term 3 Years	Long Term 2030
	<ul style="list-style-type: none"> <li>- Promoting multi-hazard early warning systems.</li> </ul>		√
Early warning	<ul style="list-style-type: none"> <li>- Promoting or supporting the development of national systems that are cost effective and easy-to-use for the exchange of information and good practices and disaster risk reduction technologies.</li> </ul>	√	√
Understanding disaster risks	<ul style="list-style-type: none"> <li>- Promoting scientific research on disaster risks patterns, causes and impacts and providing advice on the approaches and criteria of risk evaluation.</li> </ul>		√
Awareness, Education and Training	<ul style="list-style-type: none"> <li>- Developing risk models; use of data; identifying research and technological gaps; and developing recommendations on research fields of paramount importance in the area of disaster risk reductions</li> </ul>	√	√
	<ul style="list-style-type: none"> <li>- Enhance access to and support for innovation and technology, as well as in long-term, multi-hazard and solution-driven research in the field of disaster risk management.</li> </ul>		√

Table (1) – Continued

Relation of Scientific Research with NSDRR Courses of Action

Priorities for Action of Sendai Framework 2015 - 2030	NSDRR Courses of Action 2015 – 2030	Target/Procedures	Short Term 3 Years	Long Term 2030
2- Strengthening disaster risk governance to manage disaster risk	Incorporating disaster risk reduction into sustainable development	<ul style="list-style-type: none"> <li>- Enhancing and evaluating the mechanisms of disaster risk monitoring, including relevant data and information.</li> <li>- Fostering mutual learning and exchange of good practices and information.</li> </ul>	<p>√</p> <p>√</p>	<p>√</p>

3- Investing in disaster risk reduction for resilience	Investment	- Incorporating the processes of evaluation and management of disaster risks and mapping areas vulnerable to disasters into various types of rural and urban development planning processes and management of disasters at low-lying coastal areas vulnerable to sinking as well as all other areas vulnerable to drought and floods.	√	
		- Identifying areas that are safe for human settlement and at the same time preserve ecosystem functions that help to reduce risks,	√	√
		- Promoting cooperation between academic, scientific and research entities and the private sector to develop new products and services to help reduce disaster risks.		

Table (1) – Continued

Relation of Scientific Research with NSDRR Courses of Action

Priorities for Action of Sendai Framework 2015 - 2030	NSDRR Courses of Action 2015 - 2030	Target/Procedures	Short Term 3 Years	Long Term 2030

Continued - Strengthening disaster risk governance to manage disaster risk	Investment	<ul style="list-style-type: none"> <li>- Promoting cooperation between government and non-government entities, academic, scientific and research networks and the private sector to develop technologies, products and services that help to reduce disaster risks.</li> <li>- Promoting the further development of and investment in effective, multi-hazard early warning systems, where relevant, in line with the Global Framework for Climate Services.</li> </ul>	√	√	√
4- Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction	Preparedness	<ul style="list-style-type: none"> <li>- Preparing or reviewing and periodically updating disaster preparedness and contingency policies, plans and programs with the involvement of the relevant institutions, considering climate change scenarios and their impact on disaster risks.</li> <li>- Updating building codes and patterns used in accordance with the best technological practices.</li> </ul>	√	√	√
	Response and recovery	<ul style="list-style-type: none"> <li>- Support the efforts exerted by non-government associations and civil society to strengthen and implement global mechanisms on hydro meteorological issues in order to raise awareness of water-related disaster risks.</li> </ul>	√		√

Table (2)

Some Indicators on the Progress Made in the Field of Disaster Risks



## Priority for Action (1): Understanding Disaster Risks

Expected Outcome: Mitigation, prevention, and preparedness to reduce disaster risks

Activities	Indicators
<b>1. Identification of Disaster Risks</b>	<ul style="list-style-type: none"><li>– Provision of disaster geographic database (disaster map)</li><li>– Disaster Analysis<ul style="list-style-type: none"><li>✓ Provision of models to measure the extent or exposure and vulnerability.</li><li>✓ Provision of models to estimate the value of anticipated losses.</li></ul></li></ul>
<b>2. Developing an Early Warning System</b>	<ul style="list-style-type: none"><li>– Provision of an early warning system.</li><li>– System effectiveness.<ul style="list-style-type: none"><li>✓ Citizens' awareness that the system is in place.</li><li>✓ Harmonization of the systems of dissemination early warning messages.</li><li>✓ Citizens' interaction with the system.</li></ul></li></ul>

## Priority for Action (1): Governance of Disaster Risk Reduction

Expected Outcome: Mitigation, prevention, and preparedness to reduce disaster risks

Activities	Indicators
<b>1. Incorporating disaster risk reduction in all sectoral plans and strategies</b>	<ul style="list-style-type: none"><li>– Incorporating disaster risk reduction into the state's policies.</li><li>– Incorporating disaster risk reduction into the development plans.</li><li>– Circulating and incorporating disaster risk reduction into all sectors.</li></ul>

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- Developing plans and strategies that clearly support vulnerable groups.

- Making community initiatives as well as initiatives created by the civil society and the private sector to handle disaster risk reductions.

- Developing mechanisms to promote initiatives relevant to raising awareness on disaster risk reduction.

**2. Building partnerships with the civil society and the private sector**

- Defining the roles and responsibilities of the civil society and the private sector concerning handling all the different phases of the disaster.

- Incorporating the roles of the civil society and the private sector into the state's plans and strategies.

- Enacting sectoral laws to reduce risks.

- Ensuring consistency between the different sectoral laws in order to reduce disaster risks.

- Developing a standard law for handling disasters.

**3. Enacting legislations and laws that contribute to disaster risk reduction**

- Ensuring that the laws stipulate the involvement of the civil society and the private sector.

- The legislations should cover risk funding sources.

- The laws should meet the special needs, of women, most vulnerable groups and people with special needs.

- Establishing a disaster data warehouse.

**4. Transparency of and access to non-sensitive risk-related information**

- Exchange of risk-related information between the concerned entities

- Granting the citizens free access to risk-related

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information.

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### **Priority for Action (3): Financing and Investment in Disaster Risk Reduction**

**Expected Outcome: Enhancing resilience; boosting economic and social immunity of communities; and ensuring effectiveness of response**

<b>Activities</b>	<b>Indicators</b>
<b>1. Provision of funds</b>	<ul style="list-style-type: none"><li>- Allocating a percentage of the state budget for disaster risk reduction.</li><li>- Creating a disaster risk fund.</li><li>- Incorporating disaster risks into financial and fiscal instruments.</li></ul>
<b>2. Investing in natural capital</b>	<ul style="list-style-type: none"><li>- Providing incentives for investment in:<ul style="list-style-type: none"><li>✓ Protection of natural reserves and preservation of biodiversity.</li><li>✓ Protection of coastlines.</li><li>✓ Protection of agricultural lands.</li></ul></li><li>- Incorporating activities of mitigation of and adaptation with the impact of climate change and greenhouse into the state's strategies, plans and programs.</li><li>- Investing in renewable energy sources.</li></ul>
<b>3. Investing in human resources and technological capital</b>	<ul style="list-style-type: none"><li>- Investing in scientific research on disaster risk reduction.</li><li>- Supporting institutions and building capacities in the field of disaster risk reduction.</li><li>- Building capacities for developing strategies, plans and programs of sustainable development and incorporating disaster risk reduction into them.</li></ul>

	<ul style="list-style-type: none"> <li>- Establishing social solidarity networks that guarantees protection of vulnerable groups.</li> <li>- Creating community centers to raise awareness on disasters.</li> <li>- Supporting and building capacities in the field of disaster medicine and educating citizens on how to avoid disaster risks.</li> <li>- Developing new systems and technologies that contribute to disaster risk reduction.</li> </ul>
<p><b>4. Investing in structural and non-structural works</b></p>	<ul style="list-style-type: none"> <li>- Implementing disaster risk resilience projects.</li> <li>- Implementing projects aimed at protecting museums, monuments and places of historical value.</li> </ul>

**Priority for Action (3): Enhancing Preparedness, Response, Reconstruction and Rehabilitation**

**Expected Outcome: Reducing Losses and Enhancing Communities' Resilience and Recovery**

<b>Activities</b>	<b>Indicators</b>
<p><b>1- Proving the capacities necessary for preparedness</b></p>	<ul style="list-style-type: none"> <li>- Developing preparedness plans and strategies with defined roles and with the involvement of the concerned entities.</li> <li>- Enhancing resilience of infrastructure.</li> <li>- Carrying out regular training on emergency and evacuation.</li> <li>- Developing a mechanism for registering mortality data.</li> <li>- Vital facilities to be established outside disasters' range.</li> <li>- Developing plans aimed at providing</li> </ul>

psychological and social support for those affected by disaster risks.

**2- Necessary capacities should ensure recovery**

- Developing plans aimed at achieving recovery across sectors and at all levels.
- Providing funding sources to support recovery activities.
- Developing insurance policies to reduce the burden placed on individuals and communities.
- Developing programs for the promotion of living conditions.

**3- Planning and build back better**

- Enhance planning relating to use of lands.
- Finding alternatives to disaster-stricken areas.

**Task Team**

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