National Disaster Management Strategy of Islamic Republic of Iran

National Disaster Management Organization of Iran

Ministry of Interior

I.R. of Iran

July 2021

Foreword

The National Disaster Management Law was adopted by the Islamic Consultative Assembly (Parliament) on July 29, 2019. It was then approved by the Guardian Council on August 18, 2019. Finally, as a law, it was notified to the Ministry of Interior for implementation by then President of the Islamic Republic of Iran, H.E. Dr. Hassan Rouhani under the letter No. 68739 dated August 26, 2019. According to Article 9 of the Law, development of the National Disaster Management Strategy of the country was entrusted to the National Disaster Management Organization of Iran.

In accordance with the National Disaster Management Law and other laws and regulations, the current document specifies orientations, principles, criteria and methods necessary for disaster prediction, prevention, risk reduction, preparedness, response, reconstruction and rehabilitation by entities subject to the Law and determines public participation will take place in the processes of disaster management. In order to achieve this, it was necessary to compile the vision, goals, strategies and priority measures of the disaster management at the macro level within this document.

The national disaster management vision has been defined in conformity with the policies notified by the Supreme Leader as the most important upstream document and other upstream documents for the horizon of 2025. In order to draft the developed vision, indigenous foundations and values of the country, past experiences and theories, scientific examples and practical national and international experiences as well as international documents have been taken into consideration. Based on the vision, the main goals of the National Disaster Management Strategy include improving the governance system and capacity development with an emphasis on integrated and coordinated management, realizing decision-making, decision-taking and policy-making in disaster management on the basis of a correct and comprehensive understanding of risks, prioritizing and developing risk reduction and investment in increasing resilience, effective response to disasters and incidents and community based reconstruction in all physical, economic, social, institutional and environmental dimensions and realization of a community-based disaster management.

To draft National Disaster Management Strategy, strategic themes were identified and categorized and their relationship with challenges, capacities and upstream documents were defined. Finally, a macro approach was adopted to define the strategies and priority actions. This document functions as a guideline for the systematic and purposeful development of the national disaster risk reduction plan, the national preparedness and response plan, and the national reconstruction and rehabilitation plan. The present document is in tandem with realization of goals expected in each of the plans, bylaws and executive instructions pertaining to the National Disaster Management Law.

National Disaster Management Strategy has been developed as the result of the efforts of numerous expert working-groups at the Natural Disaster Research Institute (NDRI) and various researches and studies carried out by this institution along with the participation of Iranian specialists and thinkers in the field of disaster management, professors and researchers of universities and scientific centers, as well as managers and authorities of

public administrations. The studies and the participatory process of the preparation of the national strategy has been documented in a supporting report by the NDRI that can be presented to interested parties and researchers.

In the end, it is incumbent upon me to appreciate the valuable and effective efforts made by all of my colleagues and particularly Seyed Amirhossein Garakani, the director of the Natural Disaster Research Institute and the head of this project for drafting documents, bills, bylaws and executive instructions of the National Disaster Management Law.

Ismail Najar
Director of the National Disaster Management Organization of Iran
and Secretary of the Supreme Council of Disaster Management

Preface

The human life and its relationship with nature and surrounding environment are becoming ever-increasingly more complex. Concurrently, the amount of human interventions in natural trends and processes has increased the vulnerability of human societies to disasters and incidents. Under such circumstances, climate change has exacerbated the situation by increasing the number and severity of atmospheric and climatic hazards. Studies show that the rate of losses and damages caused by disasters across the world has increased three to four folds over the last two decades and most of the losses have occurred in low-income, middle income and developing countries, particularly in Asia. By the same token, the great diversity of natural hazards in our country as well as the occurrence of various man-made disasters signify the importance and necessity of having an efficient and comprehensive management system concerning disasters.

In 2008, the Islamic Consultative Assembly (Parliament) approved the pilot execution of the law on establishing the National Disaster Management Organization for five years. The drafted law was approved on May 21, 2008. After five years of its execution, this law was extended for another year. A new bill by the National Disaster Management Organization (NDMO) was submitted to the parliament in 2015.

Finally, the new law on the national disaster management was approved by the Islamic Consultative Assembly on July 29, 2019 which was notified to all executive entities of the country by Dr. Rouhani, then honorable President, under the letter No. 68739 dated August 26, 2019. Pursuant to the communication of this law, Mr. Ismail Najar, the honorable secretary of the Supreme Council of Disaster Management and the director of the National Disaster Management Organization devolved responsibilities for drafting all bills, executive bylaws and decrees of this law to the Natural Disaster Research Institute (NDRI) under the letter No. 124089 dated September 16, 2019. As per this directive, drafting 23 documents including the National Disaster Management Strategy, plans for national risk reduction, preparedness and response, reconstruction and rehabilitation as well as instructions and bylaws required and stipulated in the law were put on the agenda of the NDRI.

Following this communiqué, a secretariat was established at NDRI for drafting bills, executive bylaws and decrees related to the National Disaster Management Law. In addition, specialized committees were formed to compile the required documents. In light of maximizing the scientific capacity of the country, over 300 professors from related specialized disciplines of universities, research institutes and scientific centers were identified and invited to cooperate as members of advisory councils in each of the relevant committees. Considering time limits stipulated in the Law, not only regular expert meetings were held but also in observance of paragraph D of Article 13 of the National Disaster Management Law, authorities and representatives of agencies subject to Article 2 of the Law were also invited to participate in specialized committee meetings and focus group discussions; an invitation which was received well by them and resulted in their active participation in the processes of document development.

As the upstream document for all plans, instructions and bylaws of the aforesaid law, the National Disaster Management Strategy specifies orientations, principles, criteria and methods for disaster prediction, prevention and risk reduction as well as preparedness, response, reconstruction and rehabilitation by all related institutions and determines the procedures for public participation, in accordance with the general policies communicated by the Supreme Leader and the national development plans. Drafted by the NDRI, the Strategy has been prepared in two parts; namely the main document (the present one) and a supporting report.

Appreciating the confidence entrusted upon the NDRI by the National Disaster Management Organization and his director, H.E. Eng. Najar, to develop documents related to the abovementioned law, I would like to thank all esteemed professors and representatives of public administrations for their contribution to the development of bills, executive bylaws and decrees of the National Disaster Management Law. Additionally, I would like to express my heartfelt gratitude to all the representatives of the executive institutions, scientific advisors and senior experts of the Natural Disaster Research Institute. It is hoped that development of this document and the implementation of its directives in national plans would lead to improvements in the process of disaster management in the country and all of these measures would form an effective step towards achieving a wisdom-based, integrated, coordinated, effective and efficient disaster management.

Seyed Amirhossein Garakani
the director of the Natural Disaster Research Institute
and the chairman of the UNESCO Chair on Natural Disaster Management

Table of Contents

Foreword I
Preface III
Introduction 1
1. Approaches Adopted for Drafting the National Disaster Management Strategy of Iran 3
2. Policies Notified by Supreme Leader and Iran's Twenty-year Vision 4
3. Identification of Status quo 4
3.1. Identification of Hazards 4
3.2. Analysis of Vulnerabilities 5
3.3. Role of Stakeholders 7
3.4. Capacity Assessment 8
4. Analysis and Prediction of the 10-year Risk Trend 9
5. Principles 10
6. National Disaster Management Vision for the Next 10 Years 11
7. Goals, Strategies and Priority Measures 12
8. Execution Mechanism 19
9. Monitoring and Evaluation 22
List of Contributors for Drafting the National Disaster Management Strategy of Iran 24

Introduction

The present document entitled the National Disaster Management Strategy together with other documents and bills related to the National Disaster Management Law approved on July 29, 2019 has been drafted to stipulate an integrated disaster management system through mapping the desired future for disaster management in the country for the next 10 years. The Strategy has been developed to function as a roadmap for realization of goals at the national level. According to the aforesaid law, the National Disaster Management Strategy is an upstream document for the national plans on risk reduction, preparedness and response, reconstruction and rehabilitation. The Strategy shall play the same role for other developed bylaws, instructions and standards of the law as well.

In addition to approval of the National Disaster Management Law, other factors highlight the necessity of drafting the current documents as well. The increasing trend of hazards in the world and in our country is one of them. Natural disasters occurring in recent years have been unprecedented in terms of severity, frequency, extent of damages and fatalities. Increasing number of disasters, the changing priorities and increased damages caused by them in the country underline the necessity of drafting a well-prepared plan pertaining to disaster management at various levels in order to increase resilience, especially at the national and strategic levels. As an important factor in risk reduction of disasters, increasing resilience is a goal that should be taken into account in a multi-sectoral manner and in relation to various hazards. Development of the National Disaster Management Strategy provides an excellent opportunity to create a correct understanding of the importance of addressing this issue, to integrate it into disaster-related decision-making processes and to incorporate it into the developmental goals of the country.

Iran is a developing country and the relationship between development and disasters in its context is a dynamic and very complex one. Disasters and their consequences might leave severe negative effects on the process of economic and social development of the society. On the other hand, disaster management especially in the reconstruction and rehabilitation phase can provide valuable opportunities for policy makers and planners to review plans and make optimal use of resources and expedite the process of implementing the development goals and plans. Hence, a part of the necessity of drafting the National Disaster Management Strategy is rooted in the protection of achievements of economic and social development of the country.

Last but not least, the most fundamental reason corroborating the necessity of drafting the current document is creating coordination and elevating existing capacities in order to respond to managerial needs concerning disasters. In other words, the Strategy can set the ground for more effective use of the country's scientific and practical capacities concerning disaster management in order to achieve more resilience and less risk. Consequently, the National Disaster Management Strategy can pave the way for correct decision-making at all levels from the individual to national management levels by facilitating the utilization of valuable experiences existing in the country in this field, scientific and academic knowledge of institutions and the organizational and public capacities.

A strategic process has been used in preparing the National Disaster Management Strategy. Strategic planning does not merely aim at creating preparedness to encounter the future; rather it is more focused on shaping the future and influencing it. As a result, a vision of a desirable future is defined, goals to achieve this vision are set and methods of realizing these goals are identified via strategies. The problem-oriented strategic planning model has been used to develop the present document. According to this model, identification of the status quo leads to identifying challenges and issues related to intended area and subsequently goals, strategies and actions are formulated in accordance with prioritization of issues. This model of strategic planning is applied in areas where resources are limited but issues are numerous. Needless to say, disaster management of the country has these very features.

Responding to the necessities mentioned requires an integrated and coordinated approach of disaster management. Therefore, the main function of the National Disaster Management Strategy is to present a roadmap for creating an integrated management in the disaster management system through coordinating all policies, programs and actions of different organizations, sectors and stakeholders. To do this, the vision of this document clarifies orientations, goals direct the performance of different sectors and stakeholders especially the role of people in the realization of the vision, strategies define the methods of achieving goals and finally the monitoring system sets the criteria and methodology for evaluating the extent to which the vision is realized.

1. Approaches Adopted for Drafting the National Disaster Management Strategy of Iran

The macro approach adopted for drafting the National Disaster Management Strategy is maintaining and elevating the maximum safety and health of people, protecting their assets and the environment against hazards through improving country's resilience when faced with disasters. Based on the law, disaster management consists of strategies, approaches, plan and actions aiming to improve prediction, prevention and risk reduction, preparedness and efficient response along with reconstruction and rehabilitation, envisioned in law as the three phases of the cycle of disaster management. Unlike the previous approaches to disaster management, this document does not exclusively focus on stages of disaster response and the subsequent reconstruction; rather it encompasses all considerations before, during and after disasters.

Given the fact that the development of the country is one of the main determinants of its resilience, the emphasis on a developmental approach to disaster management issues contributes dramatically to improvement of the performance of the disaster management system; a system comprised of laws, plans, programs and different stakeholders. Consequently, adoption of multi-hazard, multi-sectoral and multi-stakeholder approaches shall determine the path for achieving an effective system.

The multi-hazard approach makes it possible to identify and compare actions concerning different disasters and identify synergies or inconsistencies in risk reduction methods. In addition, such an approach shall lead to the creation of a common conceptual and lexical framework in all planning related to the disaster management.

Other approaches taken into account in compiling the current document are the multi-sectoral and the multi-stakeholder approaches. Based on these approaches, various sectors and stakeholders need to assume responsibilities and play roles in all stages of disaster management in order to achieve an efficient and agile management. There are different classifications concerning types of roles for different sectors and stakeholders in disaster management. In light of inherent duties and available capacities of different stakeholders, they have been assigned different roles in this document and the national and provincial programs, namely "responsible institution", "collaborating institution" and "supporting institution".

- Responsible institution: An institution that has been assigned legal duties concerning the intended action.
- Collaborating institution (partner): Any organization that is missioned to undertake a part of the tasks and is accountable for the assigned responsibility in line with its legal authorities, in accordance with its executive capacities and in coordination with the "responsible institution". The cooperation mechanism is determined based on the agreement made between the "responsible institution" and the "collaborating institution".

- Supporting institution: Any organization that plays a role considering its capacities and resources and in coordination with the “responsible” and “collaborating” institutions. The supportive mechanism is determined based on the agreement made between the “responsible institution” and the “collaborating institution”.

2. Policies Notified by Supreme Leader and Iran’s Twenty-year Vision

The main orientations followed in developing the National Disaster Management Strategy were policies communicated by the Supreme Leader as the most important upstream document especially the “The general policies of the government for preventing and reducing risks of natural and unpredicted disasters”, the Twenty-year Vision Document of the country as the general roadmap and the national development plans. These documents have particularly been taken into account in the development of the vision statement.

3. Identification of Status quo

To plan more efficiently, it is necessary to draw an overall picture of the current situation in the country as the first step and to consider the different components affecting disaster management.

3.1. Identification of Hazards

According to the National Disaster Management Law, hazard is a natural phenomenon or human action (excluding military, security and social roots) that can turn into a disaster and a detrimental incident if it occurs in a vulnerable environment or society. With this definition, the National Disaster Management Strategy encompasses natural and man-made hazards with the exception of hazards caused by or rooted in military, security and social actions.

As one of the most hazard-prone countries, Iran faces a wide range of hazards. Through deliberations of specialized committees, the potential natural and man-made hazards in the country were identified and categorized, descriptions of which can be found in the supporting report. Hazards have been prioritized at the national level based on their severity (as per the number of people and assets that might be vulnerable), the probability of occurrence, the maximum threat rate (in terms of human fatalities and asset damages) and the history of hazards. Prioritization of hazards was undertaken to provide a correct picture of the current situation of the country. It is important to note that the present document does not only address the priority hazards but includes all possible hazards in the country.

The list of the priority hazards in the country are as follows:

- Fires (wildfires at forests and pastures as well as fires in industrial and construction areas)
- Plant pests and diseases contracted by livestock, poultry and aquatic animals
- Air pollution
- Overcrowding

- Desertification
- Epidemics and pandemics
- Mass wasting (mass movement)
- Road transportation accidents
- Droughts
- Earthquakes
- Floods
- Land subsidence
- Dust storms
- Cold waves (extreme cold event)

In the course of the implementation period of the Strategy, the list of priority hazards could be updated depending on needs and in light of potential emerging hazards. It should be noted that the priority of hazards at lower levels, especially at the provincial levels shall be specified in accordance with conditions of provinces.

3.2. Analysis of Vulnerabilities

Hazard vulnerability originates from many sources, the most important of which include the growing population of high-risk areas, rapid urbanization, high rate of aging, poverty, culture of risk management, non-compliance with standards, failure to implement the plans and follow priorities, and the performance of organizations active in this area. Like other countries, Iran faces a variety of vulnerabilities in terms of disasters. Vulnerabilities are a set of factors and conditions that make an individual, society, asset or process susceptible to hazards. Vulnerabilities are usually classified into physical, social, economic, environmental and organizational categories.

In Iran the most notable areas of physical vulnerability include infrastructure and housing, procedures of managing natural resources especially water, rural and urban development and the energy sector. Some of the most important causes of physical vulnerabilities are deteriorated textures and informal settlements on the periphery of metropolitan cities. Physical vulnerability is largely a function of the quality of construction. Although the quality of construction has improved in recent years, especially after the enforcement of national building regulations and other legal requirements, it is still far away from the optimal situation on the grounds of various reasons including poor supervision and poor attention to compliance with rules and regulations. In terms of vulnerability, most of villages, peripheries of metropolitan cities and deteriorated urban textures are in poor conditions. Additionally, notwithstanding significant costs spent for the development and construction of buildings and infrastructures, the cost-benefit ratio for their safety is still not acceptable which increases their vulnerability.

Infrastructure vulnerability is one of the most important parts of physical vulnerabilities in the country. For instance, transport infrastructure, especially road transport, plays a significant role in the vulnerability of society and the country. Some studies indicate that traffic accidents alone have imposed damages equivalent to 6 to 8% of the GDP of the

country. In addition, physical vulnerability of the transport system components particularly bridges to hazards such as flood creates more vulnerability. Another factor contributing to physical vulnerability of the country is the development of infrastructure in high-risk contexts that might lead to the creation or intensification of hazards and reciprocal vulnerabilities.

Social vulnerability includes areas such as losses, injuries as well as psychological, social and familial damages. Generally, the social vulnerability is higher in the cities with higher population. The vulnerability of a settlement increases at a very steep slope when a certain threshold of population is crossed. Therefore, metropolitan cities are the most vulnerable settlements. In addition to population, other factors such as immigration from rural to urban areas and marginalization also contribute dramatically to the increase of this type of vulnerability. Another important factor that currently affects the social vulnerability of the country is the decline of the social capital in the disaster management system which reduces the amount of planned social participation.

Economic vulnerability includes two categories of direct financial damages including the cost of compensation for physical damage as well as indirect financial damages including unearned wealth and added value due to disasters. Fluctuations in inflation, declining economic growth, unbalanced distribution of income and wealth, declining levels of public welfare, declining employment rates and high costs imposed on the national economy for various reasons including sanctions, together with factors such as poor investment in various sectors to increase safety and lack of a comprehensive and effective insurance system for disasters, have all increased the economic vulnerability in the country. There are necessary measures to reduce economic damages in disasters; some of which include making livelihoods and jobs sustainable, diversifying compensation methods and making them transparent, and creating access to resources such as information, markets, and credits to ensure continuity.

Environmental vulnerability which includes damages to natural resources and their erosion has increased in our country due to lack of attention to the environment, excessive use of natural resources, insufficient attention to ecosystems and climate change. In addition to the above-mentioned factors, performance vulnerabilities including lack of a comprehensive risk management plan, lack of databases of hazards and vulnerabilities, poor knowledge of institutions about their responsibilities, lack of necessary will to implement developed plans, inconsistency in the behavior of organizations, failure in correct risk understanding, insufficient attention to environmental criteria and especially climate change in planning and decision-making, poor performance of organizational structures and lack of an integrated management in the field of disaster management have increased the level of organizational vulnerabilities of the country.

As most of the geographical area and a significant percentage of urban and rural settlements of the country are exposed to hazards, in addition to vulnerability, exposure plays a decisive role in reducing risks and increasing resilience in the country. Constructions near faults or within high-risk zones and unbalanced urban development, especially in metropolitan areas, are a few examples of exposure of people, assets, and capital to risks.

3.3. Role of Stakeholders

Stakeholders include individuals, groups, and organizations that have been affected by disaster management activities or can affect them. Capacities of single organizations are usually limited therefore they are unable to manage risks of disasters on their own especially since in many cases disasters not only have local impacts but also impacts on regional, and sometimes national and international levels. On the other hand the affected people and communities cannot single-handedly handle these disasters either. That is why disaster management requires cooperation, coordination and empathy of public administrations and institutions, NGOs, associations, volunteers, the private sector and people. To achieve this goal, it is necessary to identify different groups of stakeholders and then specify their duties, responsibilities and manners of their participation in all stages of disaster management. Clarification of duties and procedures of participation for different stakeholders will be stipulated in the disaster risk reduction, preparedness and response, as well as reconstruction and rehabilitation plans.

The main stakeholder groups related to disaster management are as follows:

1. The legislature, judiciary and their affiliated organizations

2. The Cabinet and public administrations including the National Disaster Management Organization, ministries and affiliated organizations

3. The armed forces including the Ministry of Defense and Armed Forces Logistics, the General Staff of the Armed forces of the Islamic Republic of Iran, the Army of the Islamic Republic of Iran, the Islamic Revolutionary Guard Corps, the Police of the Islamic Republic of Iran and affiliated organizations including the Basij Organization

4. Public non-governmental organizations including the Red Crescent Society of the Islamic Republic of Iran, Iran's Municipalities and Village Administrations Organization, Imam Khomeini Relief Committee, the Mostazafan Foundation, the Housing Foundation and the like

5. The civil society including public institutions and associations, religious groups and people particularly those affected by disasters

6. Academia and research centers

7. International forums and actors including the United Nations, the World Bank, other countries and international organizations

8. Media including public, private and social media

3.4. Capacity Assessment

There is an effective and direct relationship between the capacity of the disaster management system and the country's abilities in terms of disaster risk reduction. In many cases, risk reduction and disaster management measures are not implemented due to capacity weaknesses and lack of an efficient and planned framework for identification of needs and deficiencies related to capacities. Hence, identifying the status of existing capacities is one of the most important steps to achieve efficient disaster management.

Given the existing situation in Iran as a disaster-prone country, one of the most important capacities available is the acquisition of knowledge gained through various experiences in the field of disaster management, particularly knowledge related to response and reconstruction stages.

Currently, civil society is one of the most fundamental capacities of the country for disaster management. Despite the lack of an effective plan for making use of public forces, it should be highlighted that the spirit of altruism, faith and religious beliefs of people and operational forces in the face of disasters have been some of the most important factors in dealing with chaotic and critical situations during all the past disasters. Activating capacities of NGOs, non-profit organizations, associations and especially the people could be an effective step in elevating the resilience of the country.

Concerning the organizational capacity, it is highly needed to strengthen cooperation and coordination mechanisms as well as monitoring and supporting systems in the disaster management system. Approval of the National Disaster Management Law and its associated documents and bills are some examples of existing capacities in the organizational field.

Examining the existing situation in the country indicates that the national disaster management system demonstrates higher capacity in the field of response and reconstruction than that of risk reduction and preparedness. Risk reduction and prevention measures are not in the optimal position. Therefore, coordination and strengthening of this sector within defined plans is essential. By the same token, provision of credit resources for preventive measures as well as conducting trainings and researches on disasters should also be given priority in the country's planning and budgeting system.

The human capacity for the disaster management of the country is not in a good condition. It is necessary to improve risk knowledge and strengthen the scientific and professional positions in the disaster management system. Similarly, the financial capacities and investment mechanisms of the private sector as an accompanying force for the public sector are in poor condition in the country. Planning to make purposeful investments and utilizing financial capitals of the private sector can be instrumental in enhancing financial capacities of the country.

4. Analysis and Prediction of the 10-year Risk Trend

The climate change projections presented by the Intergovernmental Panel on Climate Change (IPCC) as periodic assessment reports indicate that by the end of the 21st century, if current trends do not change, the average temperature of Iran would rise, the average precipitation from the Mediterranean to Afghanistan would decrease, the largest decline of precipitation in Iran would be in the Zagros region and the northwest of the country and in general the country would face an intensification of drought. In addition to the highest decline in the rainfall, the Zagros region would also face the highest temperature increase. The only region with a possibility of increased rainfall would be the southeast of the country where the behavior of rainfall would create sudden floods.

In addition to the above-mentioned points, the declining trend of surface runoffs in the country, the increase in river flood indexes in spite of declining average rainfalls and changes in the shares of climatic zones, all signify the severity of the impacts of climate change on Iran.

In general, consequences of the climate change for the future of the country can be summarized as follows:

- Increasing climatic fluctuations
- Emerging extreme weather conditions
- Increasing occurrence of atmospheric-climatic hazards
- Occurrence of heavy and unexpected rainfalls (in spite of the overall decline in average rainfalls)
- Increased storms
- Increase in the severity of floods
- Occurrence of unexpected temperature changes
- Reduction of food security
- Increased risk of investment in agricultural sectors
- An increase in various human, animal and plant diseases
- Reduction of biodiversity
- Changes and metamorphosis in vegetation and animals
- Reduction of water resources
- Significant reduction of humid climate zones and increase of dry climate of the country
- An increase in the process of desertification
- Declining the quality of the bioclimatic index
- Increased soil erosion;
- Reduction of forest levels particularly Zagros forests
- Increase immigration from areas exposed to climatic hazards
- Social and cultural changes and transformations
- Economic consequences such as declining tourism and rising costs of disasters

According to this analysis, among the priority hazards, the country would face the hazards of drought, desertification, dust, floods, cold waves, fires, plant pests and epidemics within the next 10 years.

Unevenness of the land, sloping surfaces and mountainous zones are prominent topographic features of the country. Considering these facts together with topographic conditions, geology, land use, river drainage networks, faults and vegetation, one can predict that in the 10 upcoming years there would be the possibility of increase in the number and volume of mass wasting or mass movement.

The geomorphological conditions of the country and the frequency of earthquakes indicate that earthquakes would continue to be one of the main hazards for the country in the future. It should be noted that due to the current trends of expansion of settlements, especially dense settlements such as metropolises, the country would be significantly vulnerable to this hazard.

In light of development of urban and rural areas in core zones of rivers and failure in regular dredging of riverbeds and reservoirs of dams as well as occurrence of sudden and unexpected floods emanating from the climate change, floods are another potential hazard for the country in the future.

The increase in urban population in Iran significantly intensifies effects of the climate change and its relevant hazards. Additionally, if enough attention is not paid to the considerations of risk reduction in settlements, the stage will be set for emergence and intensification of hazards such as air pollution, road transport accidents, overcrowding, and social abnormalities. Increasing urban population accompanied with the increasing urban density in areas such as metropolitan areas or some deteriorated textures would challenge emergency response operations as well.

Although urbanization is not the only source of these hazards, the increasing urban population means more demand for energy, food, water and more waste. In addition, the increasing aging population and a significant decline in births as well as the emission of airborne particles, greenhouse gases and solid particles and land use changes in urban regions increase vulnerabilities and hazards. Additionally, some human interventions emanating from the population growth, such as mining, construction of subway tunnels and excessive consumption of groundwater increase the probability of subsidence in the country.

In general, the country would be exposed to greater hazards in the next ten years and if the current trend continues, its vulnerability will increase as well.

5. Principles

The principles governing the formulation of the vision, goals and strategies of the national disaster management are as follows:

- Disaster management should be undertaken with the aim of maintaining and ensuring the safety, welfare, health, dignity and capital of the Iranian society in the face of disasters.
- The main responsibility of disaster management at the national, regional and local levels rests with the government. Disaster management requires a common responsibility to be assumed by the government as well as national, regional and local stakeholders.

- Disaster management focuses on the maximum realization of national goals and interests and it follows national security policies of the Islamic Republic of Iran.
- Officials at various levels as well as local communities should enjoy sufficient authorities for taking measures to reduce risks of disasters.
- Disaster risk reduction management should be carried out by the government with the active participation of authorities at various local and national levels, different stakeholders, the private sector and international organizations.
- The government should ensure the effective and complete roles of all executive and governing institutions at various levels from the local to national ones. Furthermore, the government should explicitly clarify details of the responsibilities of the public and private sector stakeholders.
- Disaster risk management is concerned with reducing the consequences and scope of disasters and preventing their spread to other areas.
- Disaster management should be pursued with the participation and involvement of the whole society as well as utilization of the capacities of civil institutions. This participation needs to be pursued without any discrimination and with special attention to vulnerable groups of the society.
- Disaster management requires all-hazard and multi-hazard approaches as well as decision-making processes based on disaster risk knowledge founded on the exchange and dissemination of accessible, up-to-date, comprehensible, science-based data and utilization of indigenous knowledge.
- In disaster management, attention should be paid to macro environmental and climatic changes, sustainable development goals, food security and health.
- Policy-making and planning for the development of the country should account for disaster risk reduction and increased community preparedness.
- It is essential to observe laws, adhere to rules and follow the plans for disaster risk reduction, preparedness and response, as well as reconstruction and rehabilitation.

6. National Disaster Management Vision for the Next 10 Years

To develop the vision statement for the National Disaster Management Strategy, the policies communicated by the Supreme Leader have been regarded as the basis. In addition, the 20-year vision of the country and international priorities have been taken into account. The national disaster management vision for the next 10 years is as follows:

‘In 2031, the national disaster management system shall be a wisdom-based, integrated, coordinated, effective and efficient management which through increasing the resilience and adaptability of society to disasters, and climate change and based on spatial planning and reducing risk, in a community based manner and in collaboration with all sectors and stakeholders, and using education and experiences, up-to-date knowledge and technology

and future oriented research shall engage in planning, decision-making and policy-making regarding prevention, preparedness, response, reconstruction and rehabilitation based on a correct understanding of risks, and in accordance with physical, environmental, social, cultural, economic, political and organizational conditions of the country and shall play a key role in achieving sustainable development of the country and ensuring the safety, welfare, health and dignity of the Iranian society."

7. Goals, Strategies and Priority Measures

In order to move towards the vision, five main goals have been defined. Each of these goals encompasses strategies that clarify the path towards achieve these goals. For every strategy, some priority measures have been determined in the sphere of disaster management in light of the current conditions of the country.

Goal 1: Improving governance and developing capacities with an emphasis on integrated and coordinated management

Strategy 1: Strengthening organizational structures and inter-agency coordination as well as defining duties of different stakeholders with an emphasis on integrated and coordinated management

Priority measures:

1- Determining roles and responsibilities of various institutions and groups of stakeholders in line with creating an integrated and coordinated disaster management system

2- Promoting participation of all beneficiaries at local, regional and national levels to achieve the integrated and coordinated management

3- Strengthening the position, elevating the expert capacities, upgrading the managerial and leadership capacities and reforming the structure of the national disaster management organization and agencies subject to Article 2 of the National Disaster Management Law in accordance with the job description and requirements stipulated in the Law

4- Strengthening and developing international cooperations in various stages of disaster management

5- Strengthening and providing necessary hardware, software, legal and regulatory requirements and structures for inter-agency coordination to achieve integrated and coordinated disaster management

6- Establishing the National Risk Management Center as an institution for coordinating and organizing various institutions and organizations and taking effective measures for risk management

Strategy 2: Reviewing and developing efficient and effective rules and regulations and monitoring mechanisms for the disaster management system

Priority measures:

1- Strengthening and improving legal and executive mechanisms to ensure performance of duties;

2- Reviewing, updating and developing laws, regulations, by-laws, standards and technical and sectoral regulations on disaster management in accordance with temporal and spatial requirements

3- Strengthening and developing mechanisms for monitoring, supervising and assessing the national disaster management system

4- Making use of social capacities of public institutions, media and NGOs for the continuous supervision over plans of the disaster management system

Strategy 3: Strengthening and developing capacities and efficient use of existing and potential resources for disaster management

Priority measures:

1- Identifying existing capacities to elevate physical, economic, social, institutional and cultural resilience of the society against disasters, the climate change and environmental changes

2- Developing, diversifying and providing the financial resources needed for risk reduction, preparedness, response, reconstruction and rehabilitation

3- Developing and strengthening organizational capacity and human resources in order to optimally manage disasters with an emphasis on making use of experiences of managers, experts and practitioners

4- Establishing a scientific-specialized council /think tank for disaster management

5- Creating necessary capacities for cultural-promotional activities as well as offering public and specialized trainings by making use of capacities of scientific centers, universities, non-governmental organizations and associations

6- Capacity building to increase cooperation and participation of public institutions, media and non-governmental organizations (NGOs) in the disaster management system.

Goal 2: Realizing decision-making and policy-making based on a correct and comprehensive understanding of risk in disaster management

Strategy 1: Strengthening integrated information management and deepening risk and probable scenarios awareness

Priority measures:

1- Integrating disaster management information and creating a comprehensive disaster risk management system

2- Assessing risks continuously and conducting future-oriented studies on risks of disasters including exposure to hazards and vulnerability of capitals with a multi-hazard approach and considering reciprocal impacts of risks and their periodic updates, with an emphasis on climate change

3- Setting the ground and facilitating the access of different stakeholders to information systems

4- Developing a national atlas of hazards with a multi-hazard approach and its continuous updating while anticipating emerging hazards

Strategy 2: Promoting education and research and utilizing modern technologies and indigenous knowledge to achieve an effective and future-oriented disaster management system

Priority measures:

1- Increasing effective interactions and collaborations between policy makers and different groups of stakeholders particularly scientific, research, and professional communities and civil institutions

2- Strengthening the system of documenting experiences, lessons learned and achievements of disaster management

3- Expanding and supporting researches, studies, technological developments and setting the ground for related innovations in the disaster management system with an emphasis on using the capacity of knowledge-based companies

4- Strengthening the understanding of risks at all organizational levels and across different walks of life through education

Strategy 3: Making effective use of disaster management knowledge and information for developing and implementing national developmental plans at national, provincial and local levels

Priority measures:

1- Integrating plans and measures of risk reduction into national and local developmental plans, especially spatial planning at all levels with an emphasis on the climate change

2- Drafting the risk reduction appendix for national plans and their equivalents

3- Improving common methods, instructions and frameworks for risk assessment and reduction

4- Strengthening and developing governance mechanisms that are legally-binding or offer incentives and support for the implementation of principles of safety, prevention and response to disasters, especially in retrofitting, improvement and renovation of residential units, educational centers, health centers and highly-valued centers

5- Updating and improving policies and plans of improving the resilience of national health system with a participatory approach

6- Prioritizing and paying attention to contextual conditions for the development of plans in the field of disaster risk management

7- Observing principles of resilience in designing, implementing and maintaining critical infrastructures along with continuous monitoring

8- Assessing the needs and developing special risk reduction plans for vulnerable groups

9- Comprehensive and integrated management of drainage basins with emphasis on climate change

10- Reducing the vulnerability of national infrastructures and manufacturing industries, especially in relation to food security during disasters

Goal 3: Prioritizing and developing risk reduction and investment measures in line with increasing resilience

Strategy 1: Strengthening, diversifying and optimizing public and private investments in risk reduction measures in physical, economic, social, cultural, organizational and environmental domains with an emphasis on creating added value

Priority measures:

1- Assessing needs, providing financial resources in a timely manner at various levels from the national to local levels and defining, strengthening and diversifying effective financial instruments in line with implementing risk reduction plans

2- Strengthening and developing necessary mechanisms to encourage, offer financial supports and promote governmental and non-governmental investments for reducing vulnerabilities especially in marginal and informal settlements and deteriorated textures and financial empowerment of local development and managerial institutions in order to reduce vulnerabilities with an emphasis on creating added value

3. Making investment to improve resilience including fortification, ensuring sustainability, and increasing maneuverability in order to access infrastructural services (including transportation, water, electricity, gas, communication networks, and health services) during emergencies

4- Identifying capacities and planning to attract participation of public and private sectors in order to implement risk reduction plans

5- Investment in creating the necessary institutions and required infrastructure to strengthen the risk management knowledge

Strategy 2: Sustainable development of the disaster insurance system in order to reduce risk and improve resilience

Priority measures:

1- Developing insurance coverage and specifying mechanisms and processes of promoting the insurance culture in order to reduce and transfer risks

2- Establishing efficient, sufficient and transparent financial compensation mechanisms after disasters

3- Preparing and presenting insurance products, coverages and insurance-linked securities commensurate with the risk of disasters

4- Using disaster insurance and reinsurance available at insurance companies and issuing disaster insurance-linked securities

5. Diversifying and developing insurance coverages for movable and immovable property in the private and public sectors against all types of hazards

Strategy 3: Developing supportive and encouraging mechanisms to strengthen resilience at microeconomic and macroeconomic levels in the field of disasters

Priority measures:

1- Strengthening supportive and encouraging financial mechanisms of the private sector in order to increase resilience of microeconomics with an emphasis on offering special supports for livelihood and productive capitals

2- Establishing a disaster risk prevention and reduction fund as well as a disaster insurance fund

3- Defining livelihood supportive plans for low-income households and vulnerable groups, compensation and development of public and supportive insurance

Goal 4: Effective response to disasters and community-based reconstruction in all physical, economic, social, institutional and environmental dimensions

Strategy 1: Enhancing preparedness for effective response to disasters

Priority measures:

1- Developing formal and informal education in all organizational levels and strata of the society in order to improve risk knowledge and to change behaviors in disaster risk management

2- Quantitative and qualitative improvement of specialized exercises / maneuvers for probable scenarios according to results of risk assessment and previous events at different levels

3- Ensuring the sustainability of existing and new critical infrastructures in order to ensure preservation of safety, efficiency and effectiveness during and after disasters for the continuation of essential services and their continuous monitoring

4- Compiling and updating response structure and plan and the disaster early warning system at different levels based on disaster leveling

Strategy 2: Improving organizational, operational and social capacities in order to formulate effective responses to disasters with an emphasis on unified management and command

Priority measures:

1- Determining the chain of coordination and command for emergencies in the form of national response structure/ framework and specifying authorities of disaster managers

2- Development of organizational emergency response plan by organizations subject to Article 2 of the Law, in line with the national preparedness and response plan

3- Establishing, developing and updating the national response control and coordination centers in order to guide and support pillars of the disaster management system for emergency situations from the local to national levels

4- Establishing necessary mechanisms for effective and coordinated use of capacities of armed forces in response to disasters and incidents at the national level

5- Developing and operating the integrated systems of monitoring, anticipating and early warning for priority hazards in an effective manner and on the basis of the up-to-date knowledge and technologies

6- Capacity building and developing methods of relief, search and rescue and rendering health services during emergencies with an emphasis on modern technologies

7- Drafting comprehensive emergency management plans for metropolises

8- Mobilizing capacities of governmental institutions, non-governmental organizations, NGOs, armed forces and the private sector in order to increase the ability to respond to disasters at the national level with an emphasis on unified management and command;

9- Integrating studies of probable scenarios resulted from the continuous risk assessment into disaster preparedness and response plans and their continuous updating

10- Developing guidelines needed for proper preparedness and response together with legal requirements

11- Designing an emergency supply and distribution network for basic items including medicine, food, tents and other essential needs for their fair distribution and with the observance of the dignity of the affected people

Strategy 3: Community-based recovery, rehabilitation and reconstruction with the “build back better” approach

Priority measures:

1- Reviewing and modifying recovery, rehabilitation and reconstruction plans based on the “build back better” framework

2- Integrating studies of probable scenarios in pre-disaster recovery, rehabilitation and reconstruction plans and their continuous updating

3- Reforming the organizational structure and creating a social affairs unit in the organizations responsible for reconstruction and rehabilitation

4- Prioritizing the adoption of a people-centered reconstruction policy and recruiting local forces in the reconstruction of the affected areas

5- Prioritizing the adoption of the in-situ policy rather than the policy of relocation of residential complexes during risk reduction and reconstruction phases

6- Developing necessary guidelines for “build back better” by taking measures such as needs assessment, particularly a scientific and technical assessment of post-disaster damages along with legal requirements

7- Assessing, expanding, integrating and prioritizing the response to needs of vulnerable groups (elderly, children, women, people with physical and mental disabilities and patients with rare diseases) in all support, reconstruction and rehabilitation plans by responsible organizations

8- Compiling, developing and updating policies, plans and guidelines for rendering physical, psychological and social rehabilitation services to victims of disasters

Goal 5: Realizing a community-based disaster management

Strategy 1: Making use of the active and effective participation of individuals and non-governmental organizations in promoting the culture of safety, prevention and disaster risk reduction

Priority measures:

1- Creating the legal mechanisms required to realize the participation of people in planning and actions with an emphasis on the correct understanding of risk reduction

2- Developing documents of local participation framework in line with enhancing resilience

3- Training, organizing and empowering volunteers and specifying their roles as well as those of NGOs and local forces for their participation in risk reduction, preparedness, response, reconstruction and rehabilitation plans with an emphasis on neighborhood-centered plans

4- Applying indigenous knowledge in the disaster management process in conformity with geography, climate, culture and capacities of every region

Strategy 2: Enhancing the social capital in disaster management by strengthening public trust and social solidarity

Priority measures:

1- Prioritizing macro policies of enhancing the social capital for mobilizing human and economic resources of communities in disaster management;

2- Specifying executive, promotional and supervisory mechanisms with the aim of observing principles of responsibility, transparency and human dignity in all decisions, resolutions and actions of key stakeholders and responsible institutions

3- Strengthening public trust in the responsible relief organizations by creating transparency in presenting periodic reporting about services and actions

4- Training the forces in order to understand social and cultural contexts of communities and ways of building cooperation and participation in order to increase the trust of responsible organizations in abilities of local people

5- Expanding plans of enhancing mental and social health of affected families and communities

6- Coordinating media policies with communication approaches/strategies in disaster management

Strategy 3: Reviewing and modifying existing mechanisms to maximize the absorption, organization and effective distribution of domestic and foreign voluntary and humanitarian aid during disasters with an emphasis on protecting the dignity of the affected community

Priority measures:

1- Online management of absorbing, directing and distributing domestic and foreign voluntary and humanitarian aid through the comprehensive disaster risk management system

2- Strengthening and increasing the quality of domestic and foreign inter-agency cooperation and establishing supervisory and coordination structures including drafting cooperation agreements for effective response during emergencies

3- Improving and strengthening domestic infrastructures to increase absorption of the foreign humanitarian aid

4- Strengthening financial protective mechanisms concerning domestic and foreign aid including tax/customs duty exemptions

8. Execution Mechanism

The National Disaster Management Strategy has been developed to be used by all stakeholder groups including agencies subject to Article 2 of the Disaster Management Law, non-governmental organizations, non-profit organizations, businesses, local communities and all members of the society. The vision, goals and strategies enshrined in this document are required to be placed on the agenda of all the enumerated groups and need to be considered as the basis for decisions related to actions at all levels from the national to local.

Table 1 shows the potential applications of the National Disaster Management Strategy by different stakeholders. Depending on the type of their decision-making processes, different stakeholders can make use of the content of this document.

Table 1: Relationship between the National Disaster Management Strategy and various types of decisions made by different stakeholders

Types of decision	Individual	Society	Governmental organizations	Non-governmental organizations and institutions	Private sector	NGOs
Public policy			*	*		*
Developmental decisions			*	*	*	
Investment and spending	*	*	*	*	*	*
Rules and regulations			*	*		*
Resource planning		*	*	*	*	*

According to the National Disaster Management Law, it is necessary to implement the National Disaster Management Strategy through the development of five-year plans for “disaster risk reduction” and “preparedness and response” at the national and provincial levels and the plan of “reconstruction and rehabilitation” at the national level. These plans need to focus on measures required for the realization of strategies defined in the present document. These plans should be prepared within maximum three months of the development of the National Disaster Management Strategy and in collaboration with the agencies subject to Article 2 of the aforesaid Law. The strategic process initiated in this strategy will lead to implementation in the triple programs mentioned above. Furthermore, bylaws and guidelines developed for the Law shall complete the contents of the present document on specific issues such as hazardous materials (HAZMATs), domestic and international aid, etc.

Structures of the national plans should contain the following elements:

- Stipulating the mission statement and operational goals pertaining to the focus area of the plan and in conformity with the vision and goals presented in the National Disaster Management Strategy
- Defining actions related to the focus area of the plan and in line with strategies presented in the National Disaster Management Strategy
- Clarifying expected outcomes along with the timing for their realization in relation to any planned action
- Determining the responsible, collaborating and supporting agencies for every planned action

Other implementation mechanisms are provided below:

- As per the National Disaster Management Strategy and triple national plans of disaster risk reduction, preparedness and response and reconstruction and rehabilitation, the National Disaster Management Organization is obliged to propose funds required for the agencies subject to Article 2 of the National Disaster Management Law for undertaking

relevant measures and submit the proposal to the Planning and Budget Organization. As stipulated in the National Disaster Management Strategy, the Planning and Budget Organization shall be required to open a chapter entitled “disaster management” under the economic affairs in the annual budget so that these actions are carried out. Additionally, the agencies subject to Article 2 of the Disaster Management Law are obliged to prepare a report on the spending procedures of allocated funds in relevant areas on a semi-annual and annual basis and submit the report to the National Disaster Management Organization.

- All institutions subject to Article 2 of the National Disaster Management Law must set necessary mechanisms for implementation of the National Disaster Management Strategy.
- It is incumbent upon the National Disaster Management Organization to establish a disaster management monitoring and assessment center in order to continuously monitor the plans in order to assess and analyze the performance of agencies that are directly or indirectly responsible for the implementation of this document and its relevant plans. In addition, the Organization shall supervise these agencies in order to prevent deviation or negligence in the course of implementation of the strategy and plans.
- In order to facilitate the coherence, coordination and synergy of activities performed by agencies subject to Article 10 of the National Disaster Management Law, disaster management headquarters shall be established at national, provincial and local levels at relevant disaster management organizations or governorates. These centers are called Prevention, Coordination and Command Headquarters for Disaster Response (hereinafter called Headquarters).
- In order to fulfill duties set forth in Articles 10, 11 and 12 of the National Disaster Management Law and to create inter-agency coordination in the process of disaster management, the national, provincial and local Headquarters shall establish four committees chaired by the director of the National Disaster Management Organization at the national level, the director general of disaster management at the provincial level and the disaster manager at the city level to undertake measures for creating necessary coordination:

  A) Technical Committee of Prevention and Risk Reduction: This committee focuses on planning, coordinating and monitoring actions of institutions subject to Article 2 of the Law in the field of prevention and reduction of disaster risks

  B) Technical Committee of Preparedness and Response: This committee focuses on planning, coordinating and monitoring the measures taken by agencies subject to Article 2 of the Law in the domain of preparation and response.

  C) Technical Committee of Reconstruction and Rehabilitation: This committee focuses on planning, coordinating and monitoring measures taken by agencies subject to Article 2 of the Law in the in the field of reconstruction and rehabilitation.

D) Committee of Educational Affairs and Media Management: This committee is formed to plan, coordinate and monitor actions of the agencies subject to Article 2 of the Law in the field of educational affairs and media management such as awareness raising, readiness, drills, maneuvers, advertising and informing different stakeholders.

9. Monitoring and Evaluation

Since monitoring and evaluation are two of the most important components of the National Disaster Management Strategy and as monitoring and assessment is an effective tool through which strengths and weaknesses are identified and activities and measures are guided and corrected in order to achieve the predicted goals; this section of the document deals with procedures of monitoring and evaluating the National Disaster Management Strategy. The main purpose of monitoring and evaluating this document is to determine a mechanism to ensure that the National Disaster Management Strategy is incorporated into the agenda of development plans. The other purpose of monitoring and evaluating this document is to measure its success and effectiveness in achieving its goals.

In this regard, the following tasks and responsibilities related to monitoring and evaluation are defined:

1. In order to monitor the realization of the objectives of the Law, the National Disaster Management Organization (NDMO) is obliged to cooperate with agencies subject to the Law in order to develop macro indicators of assessing effectiveness of the disaster management in the country such as fatality rate related to disasters and the amount of direct damages imposed by disasters. In addition, the NDMO is required to cooperate with those organizations to draft and publish a relevant annual report. Accordingly, in order to set the ground and build capacity for the monitoring and evaluation system, the NDMO needs to prepare a comprehensive database for exclusive use by disaster managers within the comprehensive disaster risk management system. This should be carried out after the approval and communication of the National Disaster Management Strategy

2. Since the effectiveness of the development and implementation of the National Disaster Management Strategy is reflected in the two variables namely losses and damages over time, the main measures of disaster management effectiveness are as follows:

- Mortality rate
- Number of injured
- Total value of damages
- Total number of residential units assessed uninhabitable

3. Each of the agencies covered by the National Disaster Management Strategy and appointed as the responsible body in this document and in risk reduction, preparedness and response, reconstruction and rehabilitation plans, is required to define key performance indicator(s) in their respective field of operation and present them to the National Disaster Management Organization within maximum three months after the adoption and

notification of these plans. These indicators should have clear, measurable and achievable goals and they should be related to at least one of the strategies enshrined in the current document. In addition, it should have the possibility to be reviewed and analyzed within a minimum one year time frame.

4. Key performance indicator(s) of all agencies subject to Article 2 of the Law should be ratified by the National Disaster Management Organization. Then, the relevant agencies are required to prepare a performance report about relevant indicators on an annual basis and submit it to the NDMO for summarization and presentation to the National Disaster Management Headquarters.

The National Disaster Management Strategy shall be reviewed after the end of the initial 10-year period, with the view of the progress made during the implementation period and with the consideration of the needs of the country at the time. Updating and amending this document during the 10-year implementation period shall be done as requested by the National Prevention, Coordination and Command Headquarters, taking into account conditions of the country and implementation status of the three national plans, i.e., disaster risk reduction, preparedness and response, and reconstruction and rehabilitation and after the approval of the National Supreme Council of Disaster Management.

List of Contributors for Drafting the National Disaster Management Strategy of Iran

A. Project Manager	
Dr. Seyed Amirhossein Garakani	Natural Disasters Research Institute (NDRI)
B. Authors (in alphabetical order)	
1. Dr. Mahsa Bashiri	Natural Disasters Research Institute (NDRI)
2. Dr. Morteza Bastami	International Institute of Earthquake Engineering and Seismology
3. Eng. Morteza Jafari	Natural Disasters Research Institute (NDRI)
4. Eng. Maryam Lavi	Natural Disasters Research Institute (NDRI)
5. Eng. Atefeh Soleimani	Natural Disasters Research Institute (NDRI)
6. Eng. Sadaf Tabatabaie	Natural Disasters Research Institute (NDRI)
C. Representatives of National Disaster Management Organization for Development of the Strategy	
1. Eng. Ismail Najar	National Disaster Management Organization of Iran
2. Eng. Mohammadhossein Yazdani	National Disaster Management Organization of Iran
3. Dr. Behnam Saeedi	National Disaster Management Organization of Iran
4. Eng. Mohammadfarid Latifi	National Disaster Management Organization of Iran
5. Eng. Amir Ghaderi	National Disaster Management Organization of Iran
6. Eng. Ali Bakhtiari	National Disaster Management Organization of Iran
7. Mr. Morteza Akbarpour	National Disaster Management Organization of Iran
8. Eng. Ali Khalili	Ministry of Interior
9. Eng. Hasan Shabaniaghdam	Ministry of Interior
D. Specialized Advisors (in alphabetical order)	
1. Dr. Majid Abdollahi	Iran's Municipalities and Village Administrations Organization
2. Dr. Ismail Alizadeh	Mofid Rahbar Institute
3. Dr. Mahmoud Asad Samani	Central Insurance of I.R. of Iran
4. Dr. Seyed Mohammad Ali Banihashemi	University of Tehran
5. Dr. Ali Beytollahi	Road, Housing & Urban Development Research Center
6. Dr. Hamidreza Eskash	Iranian Red Crescent Society
7. Dr. Farzin Fardanesh	UN Habitat
8. Dr. Shahrokh Fateh	Iran Meteorological Organization
9. Mr. Shahin Fathi	Iranian Red Crescent Society
10. Dr. Mohammad Reza Ghaemmaghamian	International Institute of Earthquake Engineering and Seismology

11. Eng. Mohammad Hasanabadi	Advisor to the Natural Disasters Research Institute (NDRI)
12. Dr. Seyed Majid Jedi	Imam Hossein University
13. Dr. Amirhossein Keshavarz	Fire Department
14. Dr. Hamidreza Khankeh	University of Social Welfare and Rehabilitation Sciences
15. Dr. Vahid Majed	University of Tehran
16. Dr. Ebrahim Moghimi	University of Tehran
17. Dr. Mostafa Mohaghegh	UNESCAP Asia and Pacific Centre for Development of Disaster Information Management (APDIM)
18. Dr. Ali Ashraf Mojtahed Shabestari	OCHA, Iran-Tajikistan Friendship Association
19. Dr. Alireza Monfared	Ministry of Intelligence
20. Eng. Seyed Mohammad Mousavi	Ministry of Agriculture
21. Eng. Mohsen Nadi	Tehran Disaster Mitigation and Management Organization
22. Eng. Reza Nafisi	Ministry of Road and Urban Development
23. Mr. Kambiz Norouzi	Legal adviser
24. Dr. Abbas Ostadtaghizadeh	Tehran University of Medical Sciences
25. Dr. Ahmad Sadeghi	Islamic City Council of Tehran, Rey and Shemiranat
26. Dr. Ali Salajegheh	University of Tehran
27. Dr. Ismail Salehi	University of Tehran
28. Dr. Jaleh Shaditalab	University of Tehran
29. Dr. Ahmad Soltani	Iranian Red Crescent Society
30. Dr. Mojgan Taheri Tafti	University of Tehran
31. Eng. Jabbar Vatan Fada	Development of Water and Power Company
32. Eng. Bijan Yavar	Allameh Tabataba'i University