The Hashemite Kingdom
of Jordan

National Center for Security
& Crises Management

Jordan National
Natural Disaster Risk Reduction Strategy

(2019 – 2022)

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Table of Content:

List of Acronyms

ASEZA	Aqaba Special Economic Zone Authority
CADRi	Capacities Assessment for Disaster Risk Initiative
CCA	Climate Change Adaptation
DOS	Department of Statistics
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EDP	Economic Development Plan
EU	European Union
GDCD	General Directorate of Civil Defense
GDP	Gross Domestic Product
HCCD	Higher Council of Civil Defense
HFA	Hyogo Framework for Action
ICT	Information and Communications Technology
IUCN	International Union for Conservation of Nature
JCD	Jordan Civil Defence
JICA	Japan International Cooperation Agency
JNBC	Jordan National Building Council
JRP	Jordan Response Plan
JSO	Jordan Seismological Observatory
M&E	Monitoring and Evaluation
MENA	Middle East and North Africa
MoPIC	Ministry of Planning and International Cooperation
MWI	Ministry of Water and Irrigation
NCSCM	National Center for Security and Crises Management
PDTRA	Petra Development and Tourism Region Authority
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
SF	Sendai Framework
UNDP	United Nations Development Programme
UNISDR	United Nations International Strategy for Disaster Reduction
UN-OCHA	United Nations Office for the Coordination of Human Affairs
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization

Foreward

Natural disaster risk management and reduction have become a global top priority and are imposed across national, regional and international levels in various aspects of human life threatening the present and future generations. The dangers and negative impact stemming out of natural disasters are increasing rapidly on lives of citizens, infrastructure and natural resources.

As part of the Jordanian government commitment to execute international agreements which are in accordance with its national plans and programs, and from the willingness of all governmental and non-governmental institutions towards reducing these dangers and achieving sustainable development, an initiative from the National Center for Security and Crisis Management (NCSCM) and in collaboration with the United Nations Development Program (UNDP), to prepare the National Strategy for Disaster Risk Reduction and Action Plan (2019-2022) in Jordan, which is a roadmap for a common understanding of the prevalent disaster risk and the evaluation of the current DRR system and its capacities to the disaster risk reduction goals and targets. A result from great cooperation and efforts made by the participants and the authors of this document.

Natural disasters are increasing worldwide, with more devastating effects than ever before, and while the absolute number of disasters around the world has almost doubled since the 1980s, the average number of natural disasters in the region has almost tripled over the same period. In the Middle East and North Africa (MENA), the natural disasters, rapid urbanization, water scarcity, and climate change have emerged as a serious challenge for policy making and planning.

Jordan as one of the countries within the region affected by many types of climate change related disasters (flash floods, land-slides, rock falls and droughts) is facing more frequent events that cause losses of lives and economic damage.

This strategy is a road map to have a common understanding of the DRR sector. It is guided by Jordan's development priorities and aims specifically at achieving a set of objectives, including setting basic disaster risk reduction, increasing awareness and knowledge of disaster risk reduction approaches and opportunities, establishing legal and institutional bases for effective planning and implementation of disaster risk reduction, and contributing to the inclusion of disaster risk reduction in development policies, programs and projects.

The strategy contributes fundamentally to sustainable development in the country through the programs and actions embedded in the action plan, which will harness more proactive approach to reduce exposure of human and our national assets to disasters. This requires promoting collaborative framework from all concerned international and national stakeholders to ensure effective implementation.

While I am pleased to present this important document as the first national strategy for disaster risk reduction, I sincerely thank and appreciate the collaborative effort of all those who contributed to its preparation.

Ali Bin Al-Hussein
Head of the National Center for Security and Crisis Management

Custodianship and Status of this Document

The custodianship of this strategy lies with the National Center for Security and Crises Management (NCSCM), operationally implemented by all stakeholders involved in DRR in the country. The principles and responsibilities contained in this strategy guide disaster risk reduction throughout the country.

Definitions

Following are the main definitions which are applicable to this document (UNISDR, 2009):

Acceptable Risk	The level of potential losses that a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.
Adaptation	The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
Capacity	The combination of all strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.
Capacity Development	The process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.
Climate Change	a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcing, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.
Contingency Planning	A management process that analyses specific potential events or emerging situations that might threaten the society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.
Coping Capacity	The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.
Disaster	A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.
Disaster Risk	The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

Disaster Risk Management	The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.
Disaster Risk Reduction	The concept and practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. *Note: Disaster risk reduction is therefore part of disaster risk management but does not focus primarily on (although it does link with) disaster response and recovery.*
Disaster Risk Reduction Plan	A document prepared by an authority, sector, organization or enterprise that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives.
Disaster Risk Reduction Strategy	Is a document prepared by an authority, sector, organization or enterprise that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives.
Early Warning System	The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and act appropriately in sufficient time to reduce the possibility of harm or loss. *Comment: This definition encompasses the range of factors necessary to achieve effective responses to warnings. A people-centred early warning system necessarily comprises four key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received. The expression "end-to-end warning system" is also used to emphasize that warning systems need to span all steps from hazard detection through to community response.*
Emergency Management	The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.
Exposure	People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.
Hazard	A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.
Mitigation	The lessening or limitation of the adverse impacts of hazards and related disasters.
National Platform for Disaster Risk Reduction	A generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multi-sectoral and inter-disciplinary in nature, with public, private and civil society participation involving all concerned entities within a country.

Natural Hazard	Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.
Preparedness	The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.
Prevention	The outright avoidance of adverse impacts of hazards and related disasters.
Public Awareness	The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.
Recovery	The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.
Residual Risk	The risk that remains in unmanaged form, even when effective disaster risk reduction measures are in place, and for which emergency response and recovery capacities must be maintained.
Resilience	The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.
Response	The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
Risk	The combination of the probability of an event and its negative consequences.
Risk Management	The systematic approach and practice of managing uncertainty to minimize potential harm and loss.
Risk Transfer	The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Vulnerability	The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

1. Introduction and Objectives

1.1. The Jordan National DRR Strategy

This strategy is basically a road map to get from common understanding of the prevalent disaster risk and the evaluation of the current DRR system and its capacities to the disaster risk reduction goals and targets that are decided by the National Center for Security and Crises Management (NCSCM) as the designated high-level authority supported by national multi-stakeholder consultations.

This strategy is guided by and aligned with the development objectives and priorities of the country. It is also, designed for the context of the society and environment as defined by relevant hazards, high priority risks and the socio-economic setting.

1.2. Linkage to Sendai Framework:

The four priorities of action and guiding principles of Sendai Framework were followed as the base for the approach and requirements of the Jordan National DRR strategy. Based on this guidance, and recognizing that disaster risk governance is seen as the system of institutions, mechanisms, policy and legal frameworks and other arrangements to guide, coordinate and oversee disaster risk reduction, the following elements have been identified as the core requirements for Jordan National DRR strategy:

- Be based on legislative or regulatory frameworks to mainstream and integrate disaster risk reduction within and across all sectors;
- Have a governance mechanism that is transparent and inclusive for effective and efficient management of disaster risk;
- Promote policy coherence and compliance notably with the SDGs and the Paris Agreement, and between national and local level;
- Guide public and private sectors with clear roles and responsibilities for whole-of-society;
- Have clear time frames, targets and indicators;
- Be based on a comprehensive assessment of disaster risk from all hazards as well as evaluation of technical, financial and administrative disaster risk management capacity at the local and national level to inform the DRM measures; and
- Have explicit objectives and measures aimed at preventing the creation of risk, reducing existing risk, and strengthening economic, social, health and environmental resilience.

To ensure the DRR strategy can be implemented successfully, the following enabling elements have been identified:

- Strong Governance Mechanism and Legal Frameworks;

- Understanding of Disaster Risk and Coping Capacities to Inform the DRM Measures;

- Technical and Institutional Implementation Capacities;

- Sufficient and Stable Financial Resources Dedicated to Implement the Strategy; and

- Strengthened Mechanisms to Follow-up, Periodically Assess and Publicly Report on Progress.

1.3. Main Considerations in the Jordan National DRR Strategy

Following are the main considerations that were agreed while developing this strategy:

- While a DRR Strategy is an input element, it leads to disaster risk reduction as an outcome only if it is implemented;

- Disaster risk reduction is closely linked with sustainable development. Development projects should be informed by disaster risk reduction planning and activities;

- Disaster risk reduction is influenced by a number of factors (such as climate change, economic and regional growth and development, capacity to implement planning, etc.) and the country has to think carefully and in new ways about effectively reducing its disaster risks;

- Managing the risk and consequences of disasters/potential disastrous events/incidents in line with the national and international disaster risk management strategic approach, is everybody's business and a partnership between government, the private sector and communities; and

- This is a living document, which is the product of consultation and inputs by various stakeholders. The success of this strategy lies on its effective implementation and monitoring throughout the country. This can however only be achieved through co-operation and partnership between all stakeholders in disaster risk reduction in the country.

1.4. The Need for this Strategy

It is clear that disasters can have a significant negative impact on the economy as well as the people so that disaster risk reduction should be a national priority.

The nature, spread and cost of disasters call for mainstreaming of Disaster Risk Reduction at both the national and local levels. Disaster risk reduction strategies and activities contribute to the decrease of disaster risks as well as the negative impacts of disasters and attainment of sustainable development and poverty alleviation, by facilitating the integration of disaster risk reduction into development and day to day risk-deduction-related decision making.

Disaster risk reduction needs to be planned and implemented in a focused manner and hence the need for this strategy to guide and act as a framework for disaster risk reduction implementation in the country.

1.5. Objectives of this Strategy

This strategy aims to achieve the following objectives:

- To establish and incorporate the foundational guiding arrangements for disaster risk reduction in the country;

- To increase the awareness and knowledge of disaster risk reduction methods and opportunities;

- To inform the legal and institutional basis for the efficient disaster risk reduction planning and implementation;

- To contribute towards the inclusion of disaster risk reduction into development policy, programmes and projects;

- To establish a strategic platform for public-private-sector co-operation in disaster risk reduction;

- To contribute to community resilience against the threats and effects of disasters;

- Strengthening of risk management capacities; and

- Creation of safe and resilient communities from disasters.

2. Situational Analysis

2.1. Disaster Risk in Jordan (Main Hazards and Risks)

Disasters are increasing worldwide, with more devastating effects than ever before. While the absolute number of disasters around the world has almost doubled since the 1980s, the average number of natural disasters in the region has almost tripled over the same period (EM-DAT, OFDA/CRED International Disaster Database, www.emdat.net). In the Middle East and North Africa (MENA), the synergy of natural disasters, rapid urbanization, water scarcity, and climate

change has emerged as a serious challenge for policy and planning. This increase in disasters is mainly due to an increase in exposure and vulnerability across the region.

Jordan as one of the countries within this region has been affected by many types of these disasters. Climate changes related disasters (flash floods, land-slides, rock falls and droughts) are becoming more frequent events that cause losses of lives and costs millions of economic losses every year in different parts of the country.

Disasters Inventory in Jordan showing that during the last three decades, flash floods in Jordan resulted in the death of 120 people and affected hundreds of thousands more with economic loss of hundreds of US Dollars (Table-1).

Jordan's three largest cities (Amman, Zarqa and Irbid) are located within 30 km of the main source of the seismic activity (Jordan Dead Sea Transform Fault) and house more than 80 percent of Jordan's population (Figures 1 and 2). The recent major seismic event occurred in November 1995 with an epicenter located around 90 km south of Aqaba. It was strongly felt in Amman and the northern area of Jordan. Although no deaths were reported from this earthquake, the initial panic and confusion triggered more interest for preparedness and earthquake risk reduction.

Table-1: Major Disasters in Jordan Since 1927 (compiled from EM-DAT Database and Jordan Civil Defence Statistics)

Disaster	Date	Killed	Affected	Disaster	Date	Killed	Affected
Earthquakes	1927	242	No Data	Flood	2008	6	185
Flood	1963	25	No Data	Flood	2009	6	265
Flood	1964	6	No Data	Flood	2010	7	522
Flood	1966	259	No Data	Flood	2011	7	132
Flood	1987	9	29	Flood	2012	6	491
Flood	1991	11	18,000	Flood	2013	0	2214
Flood	1997	2	No Data	Flood	2014	0	540
Drought	2000	0	150,000	Flood	2015	4	300,000
Storm	2000	9	200	Flood	2016	3	200,000
Storm	2002	5	125	Flood	2018	35	150,000 Approx
Flood	2007	9	169				

In 2011, The World Health Organization (WHO) developed an e-atlas of disaster risk that is modeling the distribution of natural hazards and population's exposure and provides baseline data and maps needed to advocate for resources to improve disaster preparedness; aid emergency response measures; and assist in identifying, planning and prioritizing areas for mitigation activities. The results for Jordan are summarized in figures 3-6.

In Nov, 2016, National workshop was held (organized by the NCSCM and represented by all national stakeholders in the country) for prioritizing the potential risk that threatening the country, below is list (as per INFORM Index: Risk = (Hazard * Vulnerability) / (Coping Capacity))
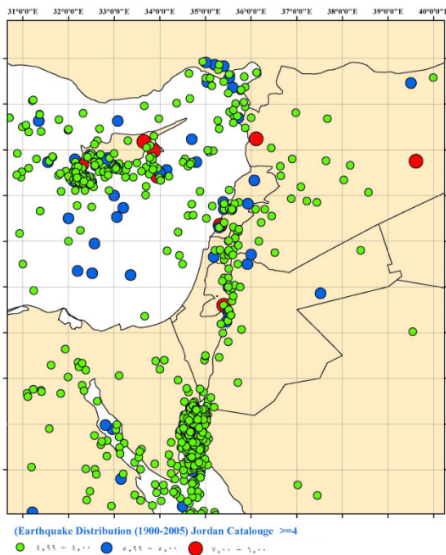
Figure-1: The Regular Seismic Activity in Jordan is Concentrated Around the Dead Sea Transform Fault – Jordan
(Jordan Seismological Observatory, 2015)

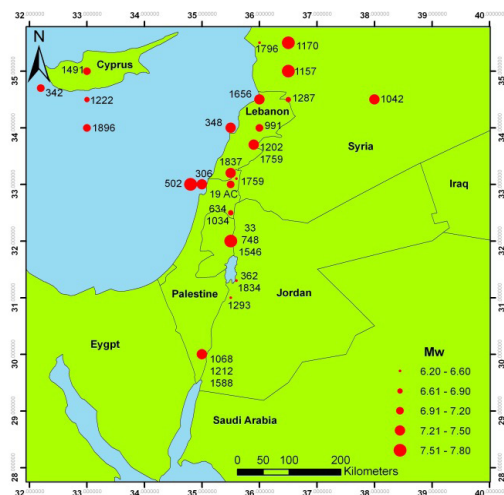**Figure-2:** Historical Earthquake Activity within the Jordan Dead Sea Transform Fault Region
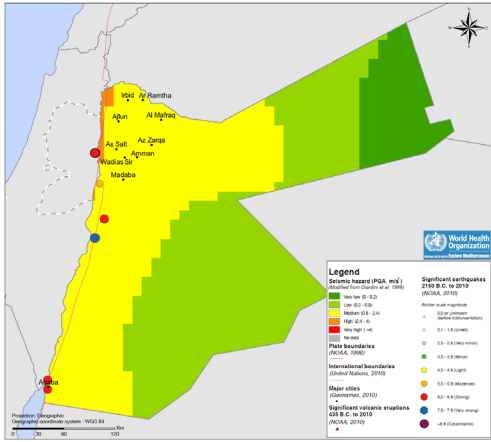(Jordan Seismological Observatory, 2015)

Figure-3: Seismic Hazard Distribution Map of Jordan (WHO, 2011)
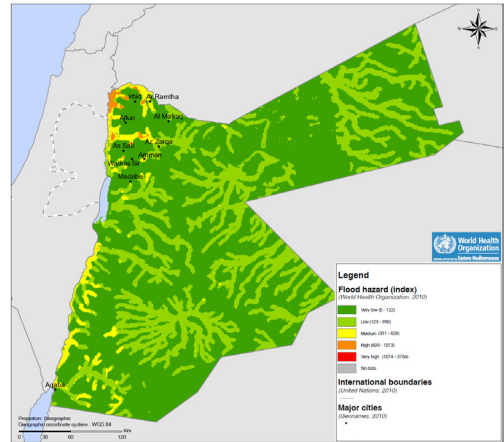

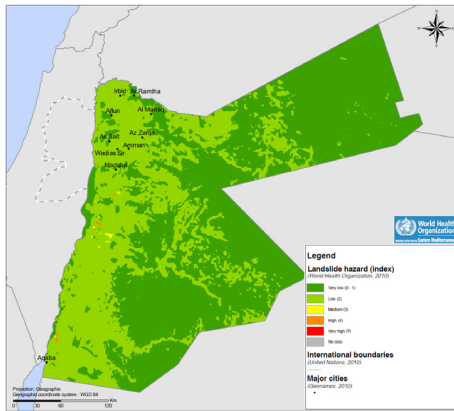**Figure-4:** Flood Hazard Distribution Map of Jordan (WHO, 2011)

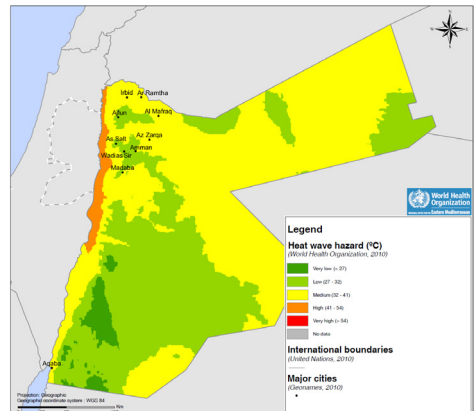**Figure-5:** Landslides Hazard Distribution Map of Jordan (WHO, 2011)

Figure-6: Heat Wave Hazard Distribution Map of Jordan (WHO, 2011)

Table-2: Prioritized Risk in Jordan as per Inform Index (NCSCM, 2016)

Risks	Coping Capacity	Vulnerability	Hazard	Risk = (Hazard * Vulnerability) / (Coping Capacity)	Priority
Earthquakes	1.70	2.80	2.66	4.38	1
Flash Floods	1.80	2.60	3.00	4.33	2
Landslides	1.50	2.20	2.00	2.93	3
Extreme Temp	2.10	2.00	2.33	2.22	4
Drought	2.00	1.80	2.33	2.07	5
Snow Storms	2.30	1.80	2.33	1.80	6
Sandstorms	1.60	1.20	2.00	1.50	7
Locust	2.10	1.60	1.33	1.01	8

2.2. Vulnerability and Capacity

Disasters continue to occur more frequently and with more devastating effects in rich and poor countries. Smaller-scale disasters, which are often cyclical and include droughts, floods and extreme temperatures, are also increasing. Small but recurrent disasters often cause more cumulative negative effects than larger disasters, but they receive less international attention and fewer resources.

Disasters are not only increasing in number; they are becoming more multifaceted. The effects of climate change, environmental degradation, economic inequality, population growth, political unrest and migration have weakened community resilience in many countries.

Jordan's natural hazards profile is characterized by seismic activity, flash flooding, drought and desertification. In view of the range of natural hazards, high vulnerability and low coping capacities of the population, Jordan requires an integrated approach to disaster risk reduction.

The vulnerability of the Jordanian society and economy to natural hazards and climate change induced disasters owe to the limited proactive approach to disaster prevention and mitigation, insufficient institutional capacities at the national and local levels, limited trained human resources, lack of awareness amongst senior officials

and communities about disaster preparedness, and unsatisfactory implementation of existing policies.

2.3. Main Challenges and Gaps to be addressed
(as per Sendai Framework Priorities)

It is clear that there is a lack of common vision for DRM i.e. commonly agreed objectives and targets across sectors and levels to fulfil the country's commitment to the Sendai Framework for Disaster Risk Reduction and ultimately the SDGs

Priority-1: Understanding Disaster Risk

- Lack of comprehensive risk information accessible to decision makers;

- Fragmentation of information between climate and disaster data, between humanitarian and development data, between sectors and ministries, between the national and municipal level; and

- Lack of access to risk information, across ministries, across municipalities as well as by private sector and the general population.

Priority-2: Strengthening Disaster Risk Governance to Manage Disaster Risk

- The legislative and policy framework for DRM in Jordan is still nascent;

- The overlap and lack of clarity in the allocation of mandates, roles and responsibilities between institutions at central and between the central and local level;

- There is no central entity capacitated to lead disaster response, preparedness as well as prevention and recovery efforts across sectors and levels; and

- There is no effective mechanism to ensure coordination of DRM activities between sectors and between the central and local level.

Priority-3: Investing in Disaster Risk Reduction for Resilience

- Lack of a coherent planning framework between sectors and levels underpinned by a spatial / urban planning strategy;

- Limited technical skills and access to information to integrate DRM in national and local plans;

- Lack of technical capacities to integrate measures to reduce exposure to earthquake, as well as flash floods in construction/housing investment;

- Lack of capacities to enforce existing regulations;

- Limited information management system to share risk information within the sectors of water, agriculture and environment; and

Priority-4: Enhancing Disaster Preparedness for Effective Response, and to «Build Back Better» in Recovery, Rehabilitation and Reconstruction

- Responsibilities for disaster response are centralized and concentrated;
- Early warning capacities are limited, there is no integrated early warning system in place for slow and rapid onset disasters;
- Available hazard and risk assessments are not used for preparedness purpose;
- Information management and analysis skills across Disaster Management structures are low, much of the data is not updated regularly or obsolete;
- Data is held at the different ministries on all levels, but not regularly updated, not systematically shared based on established protocols, and not enough used/applied;
- There is no legislation on information management and communication protocols for DRM and DRR; and
- Absence of predictable budget for response and recovery at national and sub-national level.

3. The Jordan National Strategy for Disaster Risk Reduction

3.1. Vision and Mission

Vision: *Strengthened Resilience and Comprehnsive Security for Jordan*

Mission: *Creation of coordinated and integrated efforts for disaster risk reduction, stakeholder collaboration and innovative use of skills, technologies and resources*

3.2. Strategic Goals for Disaster Risk Reduction Strategy (2019 - 2022)

By 2022 Jordan is seen achieving the following specific strategic goals for disaster risk reduction; these objectives are aligned with Sendai Framework priorities:

Sendai Framework for Disaster Risk Reduction (2015-2030) - Priorities for Action
P-1: Understanding Disaster Risk
P-2: Strengthening Disaster Risk Governance to Manage Disaster Risk
P-3: Investing in Disaster Risk Reduction for Resilience
P-4: Enhancing Disaster Preparedness for Effective Response, and to «Build Back Better» in Recovery, Rehabilitation and Reconstruction

3.2.1. Legal and institutional basis for efficient disaster risk reduction is improved. (P-2)

This goal can be achieved by:

- ✓ Review the laws and regulations governing the process of managing and reducing disaster risks of and crises, in order to identify duties and responsibilities and prevent interference between different institutions concerned;
- ✓ Analysis and evaluation of the institutional framework for managing and reducing disaster risks and crisis risk (duties, responsibilities, structures and capacity) and identifying weaknesses and strengths for improvement;
- ✓ Adopting a clear and binding mechanism for coordination and cooperation between the components of disaster management and disaster risk reduction and crisis management system, and fully cooperating with the National Center for Security and Crisis Management, which is the umbrella for coordination and consolidation of national efforts in dealing with crises and disasters;
- ✓ Establishing the necessary instructions and principles for harmonizing and coordinating national institutions DRR efforts in their various forms at the national and local levels; and
- ✓ Strengthening the decentralization of activities related to disaster management and disaster risk reduction and crisis management.

3.2.2. Integrating disaster risk reduction and crisis management concepts is mainstreamed into sustainable development plans and programs and adaptation to climate change. (P-2 & P-3)

This goal can be achieved by:

- ✓ Mainstreaming and integrating disaster risk reduction within and across all sectors and review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies; and
- ✓ Promoting the mainstreaming of disaster risk assessments, mapping and management into land-use policy development and implementation, including urban planning and into rural development planning and management.

3.2.3. National DRR Platform is Institutionalized and functioning properly to serve as a coordination mechanism to enhance multi-stakeholder collaboration and coordination for the sustainability of DRR activities, and to foster an enabling environment for developing a culture of prevention, through advocacy and awareness-raising on DRR. (P-2)

3.2.4. Increase awareness of disaster risk reduction methods and opportunities through information sharing, strategic partnerships, education and training. (P-4)

This goal can be achieved by:

- ✓ Strengthening public education and awareness in disaster risk reduction, including disaster risk information and knowledge, and build the culture of prevention and mitigation through campaigns, social media and community mobilization; taking into account specific audiences and their needs;
- ✓ Establishing community centres for the promotion of public awareness and the stockpiling of necessary materials to implement rescue and relief activities;
- ✓ Spreading and consolidating the culture of volunteering among community different sectors and preparing for community training programs to cope with crises and disasters and reduce their risks; and
- ✓ Cooperating with international organization in the implementation of training programs and capacity building in disaster and disaster management and risk reduction.

3.2.5. Scientific research on disaster risk reduction and forecasting is encouraged and supported and the science-policy-management linkages is strengthened. (P-1 & P-4)

This goal can be achieved by:

- ✓ Investing in, develop, maintain and strengthen people-centred multi-hazard, multisectoral forecasting and early warning systems, disaster risk and emergency communications, mechanisms, social technologies and hazard-monitoring telecommunications systems;
- ✓ Promoting investments in innovation and technology development in long-term, multi-hazard and solution-driven research in disaster risk management and reduction to address gaps, obstacles, interdependencies and social, economic, educational and environmental challenges and disaster risks;
- ✓ Enhancing the scientific and technical work on disaster risk reduction and its mobilization through the coordination of existing networks and scientific research institutions at all levels, and creation of effective partnerships between universities, institutes and research centers as well as between stakeholders at the national and local levels;
- ✓ Promoting scientific research on disaster risk patterns, causes and effects; disseminate risk information with the best use of geospatial information technology; and

✓ Providing guidance on methodologies and standards for risk assessments, disaster risk modelling and the use of data.

3.2.6. Disaster risk reduction capacity at national, district, community and household levels are improved, and disaster preparedness is improved. (P-1 & P-4)

This goal can be achieved by:

✓ Building the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning; and

✓ Promoting regular disaster preparedness, response and recovery exercises, including evacuation drills.

3.2.7. DRR activities are advanced through more holistic and effective management of the "DRR" to meet national socio-economic priorities. (P-2 & P-3)

3.2.8. The national DRR strategy is properly synergized and integrated with other relevant national strategies, such as water and agriculture strategies and climate change policy. (P-2 & P-3)

This can be achieved by:

✓ Reviewing existing strategies, policies, plans and activities related to DRR aspects to explore possible synergies and integration; and

✓ Publish/promote regional best practices, case studies and good examples.

3.3. List of Initiatives and Activities to Support Achieving the Strategic Goals:

Following are the proposed key initiatives and activities to support achieving the set strategic goals:

• Revision of all related DRM and DRR national legislations, frameworks and policies;

• Including DRR in contingency planning and related arrangements;

• Conducting municipality-level disaster risk assessments to be integrated as national disaster risk assessment;

- Formalizing and enhancing volunteerism at local level. Volunteerism is an inexpensive and effective mechanism to be used in disaster risk reduction;
- Developing disaster risk reduction plans for each municipality and each sector;
- Creating awareness throughout the country; that disaster risk reduction is part of everybody's daily work and lives and is a bottom-up approach, beginning at communities;
- Ensuring that disaster risk management and disaster risk reduction are included in the detail and key performance indicators of all development and strategic plans, policies, programmes and projects;
- Investing in disaster risk reduction: Ensure sufficient budget, staff and other resources for the NCSCM;
- Placing capacitated, dedicated disaster risk management and reduction focal point staff in each municipality, reporting directly to the NCSCM;
- Drafting a detailed disaster risk reduction communication and awareness strategy for country;
- Confirming/establishing memoranda of understanding, mutual aid agreements and public-private partnerships on disaster risk reduction;
- Ensuring cross-border co-planning and integration on disaster risk reduction;
- Integrating disaster risk reduction into the school curricula;
- Enhancing and extending internal and cross boundary early warning mechanisms and systems, such as flood management systems, climate indicators, etc.; and
- Planning and executing simulation exercises.

3.4. Guiding Principles to the Above Initiatives and Activities:

The following are general guide principles for the above goals and initiatives:

- Disaster risk reduction requires that responsibilities should be shared by central Governments and relevant national authorities, sectors and stakeholders, as appropriate to their national circumstances and systems of governance;
- Disaster risk reduction requires an all-of-society engagement and partnership. It also requires empowerment and inclusive, accessible and non-discriminatory participation, paying special attention to people

disproportionately affected by disasters, especially the poorest. A gender, age, disability and cultural perspective should be integrated in all policies and practices, and women and youth leadership should be promoted;

- Managing the risk of disasters is aimed at protecting persons and their property, health, livelihoods and productive assets, as well as cultural and environmental assets, while promoting and protecting all human rights, including the right to development;

- Disaster risk reduction requires a multi-hazard approach and inclusive risk-informed decision-making based on the open exchange and dissemination of disaggregated data, including by sex, age and disability, as well as on easily accessible, up-to-date, comprehensible, science-based, non-sensitive risk information, complemented by traditional knowledge;

- The development, strengthening and implementation of relevant policies, plans, practices and mechanisms need to aim at coherence, as appropriate, across sustainable development and growth, food security, health and safety, climate change and variability, environmental management and disaster risk reduction agendas. Disaster risk reduction is essential to achieve sustainable development;

- While the drivers of disaster risk may be local, national, regional or global in scope, disaster risks have local and specific characteristics that must be understood for the determination of measures to reduce disaster risk;

- Addressing underlying disaster risk factors through disaster risk-informed public and private investments is more cost-effective than primary reliance on post-disaster response and recovery, and contributes to sustainable development;

- In the post-disaster recovery, rehabilitation and reconstruction phase, it is critical to prevent the creation of and to reduce disaster risk by "Building Back Better" and increasing public education and awareness of disaster risk; and

- An effective and meaningful global partnership and the further strengthening of international cooperation, including the fulfilment of respective commitments of official development assistance by developed countries, are essential for effective disaster risk management.

4. Tools for Implementing the Strategy

4.1. Jordan National DRR Platform

National Platforms for DRR, officially designated, express the interests of various national and local stakeholders in DRR.

National Platforms for Disaster risk reduction and their establishment have been recommended in a number of United Nations General Assembly Resolutions. It is one of the Sendai Framework target "substantially increase the number of countries with national and local disaster strategies by 2020". In 2017, the Government of Jordan delegated the responsibility of establishing and institutionalizing the National DRR Platform to the NCSCM.

With the participation of more than 50 different organizations (governmental, non-governmental, military and para-military organizations, academia and research centers, NGOs, CBOs and private sectors) NCSCM succeeded in identifying the strategic goals and responsibilities as below:

Strategic Goals

- Coordination mechanism to enhance multi-stakeholder collaboration and coordination for the sustainability of DRR activities through a consultative and participatory process in line with the implementation of the international frameworks;

- Fostering an enabling environment for developing a culture of prevention, through advocacy of and awareness-raising on DRR and the necessity and importance of integrating DRR into development policies, planning and programmes; and

- Facilitating the integration of DRR into national policies, planning and programmes in various development sectors as well as into international or bilateral development aid policies and programmes.

Responsibilities

- Coordinate all national efforts to reduce disasters and crises;
- Identify and prioritize all types of risks that may affect Jordan;
- Updating legislation in line with the recommendations of disaster risk reduction;
- Coordinate with all national authorities to build capacity, to reduce and mitigate the effects of crises and disasters;

- Set up a fund to deal with disasters;
- Provide information and data and national base in the field of disaster reduction;
- Provide awareness of disaster risk reduction;
- Identify urgent needs aimed at disaster risk reduction;
- Policies for disaster reduction and a review of national legislation drawing;
- Provide the required advice to decision-makers;
- Creating a national strategy for disaster reduction;
- Ensure the development of strategic, operational and sustain plans to protect the lives and property; and
- Develop mechanisms to ensure follow-up and evaluation of the implementation of risk management plans.

4.2. Disaster Risk Reduction Through Effective Response, Recovery and Reconstruction

The risks of certain disasters can be reduced through effective response, recovery and rehabilitation activities. For example, buildings, roads or bridges can be reconstructed in such a place or way that it will not suffer the same fate as in the past when the hazard (like a flood) reaches it. When new structures are designed, disaster risk reduction through environmental design techniques should be taken into account. It is therefore important that disaster risk reduction is a deliverable of post-disaster impact and risk assessment recommendations.

4.3. Effective Integration and Mobilization of Indigenous Knowledge, Women and Children and Marginalized Groups

The indigenous knowledge of communities regarding disaster risk reduction, for example the way in which traditional structures are built and knowledge about weather patterns, is a valuable source of disaster risk reduction information and should be integrated into all disaster risk assessments and disaster risk reduction planning (Petra Siq is a good example for the such indigenous knowledge).

Women can play a key role in day-to-day disaster risk reduction activities and awareness, from household to community-based organization level. Equally important are the children who are the future implementers of disaster risk reduction, and if they are educated and capacitated in disaster risk reduction thought and activities, they will form a cornerstone for sustainable disaster risk reduction in the country.
The specific needs of marginalized groups such as the elderly, disabled persons

and the poor, should be taken cognizance of and integrated into disaster risk reduction planning. Specific disaster risk reduction projects and programmes can be developed in this regard.

4.4. Decentralization

During the last few years (supported by the law on decentralization, 2016) Jordan government have progressively decentralized a range of their responsibilities from national to local levels. This could have positive consequences on risk reduction. Sharing responsibilities between central and local levels of government helps to mainstream DRR across government structures, as well as giving local levels a greater sense of ownership. Being closer to the communities involved, staff in local organizations of all kinds are more likely to understand or even share their needs, and they are more accountable. Local government institutions may be less politicized than those of central government, and it may be easier to develop partnerships between the public and NGO sectors to strengthen local capacities.

4.5. Creating Partnerships - Private Sector Partnerships

Partnership-building is not simple or straightforward: it requires a great deal of time, negotiation, sustained effort, transparency, trust, commitment and institutional support. Organizations that take on such leadership roles should seek to support the partnership process, not direct it. Partnerships that are based upon existing institutions and connections may achieve good results more quickly.

The role of the private sector in disaster management is sometimes a contested issue, especially with regard to potential clashes between commercial interests and broader social and humanitarian objectives. Disasters can create profit-making opportunities for businesses.

Nevertheless, attempts have been made to encourage initiatives to mitigate risks that are both commercially viable and support poor and vulnerable groups, for example through micro-insurance. More effort is also going into making businesses aware that they depend on local people, resources and infrastructure, and should take steps to protect these as well as their own premises and goods.

Although companies of all kinds are often keen to give cash and in-kind support to emergency relief, they appear to be far less involved in longer-term DRR. The degree of business engagement with DRR issues may be related to the general level of awareness of these issues.

Where there is business activity, it is usually ad hoc and short-term and, significantly, addresses only the immediate symptoms of need or vulnerability, not the root causes – for which businesses may in part be responsible.

4.6. Technology and Innovation

Technology is more than construction, equipment, machinery and other forms of hardware and software. It is a combination of materials, tools and equipment, knowledge and skills, organization and products. DRR planners and project managers have a wide range of technology choices on offer to apply to different aspects of the disaster problem. One of the main areas of technological intervention has traditionally been through structural engineering to control hazards, protect facilities and provide places of safety at times of disaster.

More recently, innovations in technical products, processes and services have greatly improved capacity to identify the location and probability of hazard threats, assess risk and vulnerability, provide long- and short-term forecasts of hazard events and estimates of their probable impacts, transmit warnings of impending disasters to populations at risk, assess disaster damage and needs and coordinate emergency response. Many organizations are exploring and developing the considerable potential of internet, mobile telephone and social media technologies as data-gathering, communications and coordination tools.

Just because technology is effective in reducing risk does not mean it will be adopted by households and communities, or even that it is suitable for every household, since each has its own needs and priorities. Moreover, technology diffusion does not happen automatically. Technologies of all kinds must be promoted and their users must have the necessary resources to obtain them, and the skills to utilize them. Access to technology can be encouraged in different ways, including giving training to communities and local extension workers, sharing information or collaborating with other organizations engaged in scientific and technological work, and improving people's own capacities to innovate and adapt technologies in a changing environment.

4.7. Resource Mobilization and Funding

A disaster risk reduction resource inventory and mobilization plan need to be developed by the NCSCM. The resource inventory should take into account all possible disaster risk reduction resources on national, district and community level.

Technology and equipment, such as disaster risk management systems, early warning systems and gauging stations, internet connectivity, basic telecommunication, etc., and the effective management and maintenance thereof, are crucial support tools for disaster risk reduction and need to be procured and enhanced.

Disaster risk reduction funding will be accessed in terms of the national policy. It is crucial that the NCSCM endorse and recommend funding for the costs related to disaster preparedness and relief. Each Ministry, Sector and District should include disaster risk reduction in its budget. The Ministry of Finance and the Ministry of Planning and International Cooperation should ensure that Ministries/Departments make provision for prevention, mitigation and preparedness programmes in National Development Plans and budgets.

External funding for disaster risk reduction should constantly be sourced, through the NCSCM. This funding includes funding for specific disaster risk reduction capacity and initiatives by UN agencies (UNDP, UN-OCHA…), international development agencies (USAID, SDC, JICA…), international related organization (WB, EU, IUCN…) and other potential partnering and funding sources.

4.8. Assignment of Responsibilities

Since each stakeholder should identify its own role in disaster risk reduction as part of its own disaster risk management and disaster risk reduction planning, all sectors and ministries should include disaster risk reduction in their annual strategic planning processes.

5. Alignment of the National DRR Strategy with the National Priorities, Visions, Strategies and Policies

5.1. Jordan Vision 2025

Jordan 2025 charts a path for the future and determines the integrated economic and social framework that will govern the economic and social policies based on providing opportunities for all. Its basic principles include promoting the rule of law and equal opportunities, increasing participatory policy making, achieving fiscal sustainability and strengthening institutions.

Jordan 2025 is based on identifying a set of goals that we aspire to, how they can be achieved through certain procedures and policies that will be adopted on the sector level according to a flexible timetable that takes into account the developments on the global and regional levels and how to adapt to those changes.

The most important goal that The Jordan Vision 2025 seeks to achieve is improving and securing the welfare of citizens and ensuring continued delivery of essential services at all times. In fact, this is ultimate goal for the DRR, which is protecting people, properties and the environment at all time (especially in the presence of potential risks).

The parameters for transforming the development model of Jordan Vision 2025 include legal and ethical accountability, equal oppurtuinty, culture of active citizinship, emulating global best practices, dynamic regional hub, sustainable and inclusive growth, institionalized decision making. All these parameters were considerd as a refernce for achieving the National DRR Strategy, stategic goals were alignend with these pillars

The vision analyzes the various national sectorial challenges within four pillars; citizens, the society, the business sector and government. This is very much aligned with analysis that the National DRR Strategy showed for achieving its strategic goals.

In many occasions, the vision has emphasized on different aspects of DRR such as food, energy and water security, environment protection, good governance, decentralization and may other related topics, for example Jordan Vision 2025 specifically emphasized on:

- Strengthening local partnership between government agencies, municipalities, civil society institutions and the private sector for promoting local development;

- Enabling municipalities in the area of planning and development and improve and secure the quality of their services to perform their role in development;

- Promoting respect for vulnerable and marginalized categories and supporting people with disabilities to participate in all society activities;

- Mitigating the negative effect of environmental changes on human;

- Raising public awareness in the field of environmental protection; and

- Improving institutional efficiency of enterprises operation in the environment sector.

5.2. The National Climate Change Policy of the Hashemite Kingdom of Jordan 2013-2020

Climate change is predicted to increase the frequency and severity of certain types of hazard event in the country. Gradual climatic changes are also likely to have a significant impact on people's vulnerability. There is also a large degree of uncertainty about future climate change risks and their impacts: climate change may generate new threats which Jordan and its populations have no experience of.

Development, DRR and CCA are interdependent and mutually reinforcing areas of policy, strategy and action. The key challenge is how to achieve this convergence at conceptual, strategic and operational levels. In many ways, DRR and CCA have overlapping aims and involve similar kinds of intervention. They share the aim of reducing the impacts of shocks by anticipating risks and addressing vulnerabilities.

The Jordan national climate change policy called for more integration approach for DRR and CCA; it justified this need for many reasons such as:

- DRR and CCA overlap a great deal through the common factor of weather and climate and the similar tools used to monitor, analyze and address adverse consequences;

- Risk reduction is a common converging goal for CCA/DRR;

- DRR/CCA are not sectors in themselves but must be implemented through the policies of other sectors, in particular, those of agriculture, water resources, health, land use, environment, finance and planning. There are also linkages with other policies, most notably poverty reduction; and

- Linking DRR/CCA can learn from each other in term of knowledge, tools and practice. Equally, many of the approaches being developed for CCA, such as vulnerability assessments, sector and national planning, capacity building and response strategies, are directly supportive of DRR.

There should be more coordinated and integrated approach, as well as a common institutional approach for more effective climate change adaptation and disaster risk reduction. The policy identified the climate change priorities, main measures and instrument in disaster risk reduction as below:

- Plan and implement a comprehensive awareness program especially for decision-makers on topics of CCA and DRR and on the importance of the linkage between them, particularly in light of poverty and other development issues;

- Develop specific training and capacity building program for the actors on CCA and DRR;

- Establish data and information base system on CCA and DRR to support the planning and create active follow-up and monitoring mechanisms;

- Activate the role of research institutions by linking them to available functioning projects implemented by or through various stakeholders and ministries;

- Promote the knowledge and experience sharing initiatives between different research institutes;

- Review the current plan of DRR and modifying it using participatory mechanisms and provide practical link with CCA in a realistic and practical technical based methodology;

- Attract funds to support applied researches related to CCA and DRR. This should be done in close collaboration with different ministries, in various sectors and establishing active cooperation with international donors to gain their support in this field; and

- Design and implement pilot projects at community/governorate level to strengthen the harmonization and integration between DRR and CCA. Emphasis to be placed for bottom-up approaches that combine DRR and CCA.

5.3. National Water Strategy of Jordan, 2016 – 2025

Jordan looks to Water as central to a nexus of social, economic and political issues that affect agriculture, energy, cities, trade, finance and national security.

The National Water Strategy for Jordan (2016-2025) defines the steps to ensure a sustainable future for the water sector in Jordan. The strategy clearly linking the water issue to the national security and its link to the disaster risk reduction, for example: The National Water Strategy identifies the drought as challenge, while the National DRR Strategy is considering it as one of main risks at national level, both strategies agreed that drought management and adaptation to climate change will need to be addressed through proper policies and regulations in integrated manner. Below are some other examples quoted from this strategy:

The current volatile and insecure regional situation triggered MWI to increasingly adopt and implement a Water Resource Security Plan. The plan aims at strengthening and safeguarding resources from risks including terror acts. Security measures will be introduced on three levels: the introduction of a real time monitoring and alarm systems, safety and security capacities of the administrative and technical staff and infrastructure barriers to increase security.

The efforts will be an integral part of the national security plan and will be coordinated and implemented in coordination and participation of security organizations and authorities in Jordan. The information regarding and security risk will be shared with concerned authorities. The plan scope will cover all water bodies and infrastructure including dams, reservoirs, conveyance and distribution systems, pumping stations and wells, water treatment plans and facilities, wastewater treatment plants and sewer truck lines and collection as well as the administrative buildings.

The Government will continuously monitor the quality of surface and groundwater and the impact of potentially polluting activities. It will initiate corrective measures to reduce the risk of pollution by establishing and expanding protection zones for both surface and groundwater.

The rapid and accelerated influx of Syrian refugees over-burdened the infrastructure and the ability of systems to cope, knowing that Jordan was already suffering from deficient quality, and inadequate capacity, to serve its own population.

The Government has put in place a multi-sector Jordan Response Plan (JRP) for refugee response and resilience strengthening in the host communities. Public investment is urgently needed in sectors that are under particular pressure, including but not limited to education, health, water and sanitation, energy and municipal services.

Vulnerability to climatic changes and water shortages, current crisis water management and economic and security risks prevalent in the region that directly affect the quality of life in the country. Conflicts in neighboring countries have added an additional burden on Jordan (hosting and providing essential needs; mainly water) for displaced populations.

These challenges are considered for Jordan to be disaster-ready by systematically addressing risks in real time and protecting its populations from shocks and negative consequences of disasters and conflicts. Given the scale and complexity of the humanitarian crisis in the region and its direct and adverse impact on Jordanians with regard to water and sanitation, MWI will work to streamline sectoral coordination mechanisms that will optimize the utilization of resources for the benefit of the Jordanian (and Syrian) populations within Jordan's borders affected by the crisis.

Preparedness and response for natural disasters such as severe weather, flooding and extreme temperatures, and external and internal conflicts will be part of this strategy, MWI to consider a nationally developed and resourced humanitarian response plan specifically for WASH as a priority adaptation measure.

5.4. Jordan's Way to Sustainable Development - First National Voluntary Review on the implementation of the 2030 Agenda

In 2016, the government of Jordan presented its roadmap to creating ownership and implementing the 2030 Agenda and the SDGs, the roadmap includes various priority action points and covering many topics, these are clearly supporting and supplementing most of the disaster risk reduction and management priorities and actions, such areas include:

- Raising awareness of the 2030 Agenda and its goals, targets, indicators and means of implementation, with the aim of enhancing national ownership of the Agenda and advocating for achieving its goals;

- Mapping and ensuring coherence of goals, targets and indicators with national policy and planning frameworks. This entails mapping the SDGs, targets and indicators with those in the "Jordan 2025" document as well as the objectives, policies, initiatives and indicators of the Executive Development Programmes (EDP), which constitute the country's national plan for the coming years;

- Mainstreaming the SDGs into national development plans and planning frameworks, thus ensuring their priority implementation;

- Mainstreaming within sub-national plans or at the governorate level (localizing), starting with two governorates on a pilot basis, and then gradually reaching all governorates;

- Strengthening national statistical systems and availability of data through the categorization of SDG indicators into Tier I, Tier II, and Tier III indicators1, provision of technical and financial support to the Department of Statistics (DOS) and other institutions to disaggregate data, and improve data availability and quality;

- Gender mainstreaming through mapping the SDGs (especially SDG5) with the current and future EDPs and national strategies, in addition to identifying disaggregated indicators needed to monitor progress;

- Further strengthening of institutional mechanisms, building on the policy structures and frameworks already in place for "Jordan 2025" and EDP coordination and implementation;

- Financing through internal and external sources; and

- Capacity development and provision of technical support in all areas related to the 2030 Agenda, including mainstreaming of SDGs, targets and indicators at the national and sub-national levels and monitoring and evaluation.

5.5. Assessment of National and Local Capacities in Disaster Risk Management in Jordan, 2017

In response to the UN Resident Coordinator request to the CADRi Board, the CADRi Partnership organized a scoping mission to Jordan on 24-26 October 2016 with the objective to define the scope, thematic focus, modality and timeline of engagement of the CADRi Partnership in Jordan. The CADRI Partnership mission was undertaken in collaboration with UNISDR with the following objectives:

- Facilitate a comprehensive multi-sectoral analysis of existing capacities, needs and gaps of the DRM system in Jordan based on interviews at central and local levels; field visits in minimum 3 locations presenting varying hazard profiles; and document analysis;

- Undertake a mapping of risk information available across government and partners; and

- Recommendations for reinforcement of capacities in areas identified as requiring adjustment/ support.

One of the main recommendation of CADRI mission was to "Develop a comprehensive national DRM strategy". Specific recommendations were identified to develop such strategy:

- The design of the comprehensive Disaster Risk Reduction Strategy should be done through a series of participatory and inclusive consultations leading to the prioritization of measures;

- Such process must involve all sector ministries, as well as a diverse representation of local authorities;

- The Strategy must be reflective of the needs and demands of vulnerable groups (women, children, disabled, migrants, displaced, refugees) as well as the needs and demands of private sector stakeholders (construction, tourism, ICT for instance);

- The National Platform for DRR established under NCSCM leadership can serve as a consultative mechanism for the development of the Strategy provided the membership includes both Emergency Response focal points appointed to NCSCM as well as other sector representatives to cover aspects of climate and disaster risk prevention;

- For the Strategy to be contextualized, it must be based on a common understanding of the exposure and vulnerability of different population groups (including refugees), and the exposure and vulnerability of the Jordan economy to climate and disaster risks;

- The Strategy shall be built around Jordan socio-economic priorities spelled out in Jordan 2025, the SDGs and the Jordan Economic Growth Plan 2018-2022 and other national strategies and policies;

- The Strategy shall include a clear M&E Framework (the Sendai Monitor) supported by a participatory M&E mechanism linked to the SDG monitoring mechanism under MOPIC.

- For the Strategy to be nationally owned and driven, the design process should provide sufficient time for internal review by the sector ministries and other entities in charge of implementing the Strategy; and

- The national DRM Strategy must be supported by a communication and dissemination plan to all sector ministries, governorates and municipalities, as well as key entities such as the Chambers of Commerce and Industry.

6. List of Annexes

Annex-1: The Sendai Framework of Disaster Risk Reduction 2015 -2030

The Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted at the Third UN World Conference in Sendai, Japan, on March 18, 2015. It is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters. The Sendai Framework represented a unique opportunity for countries:

- To adopt a concise, focused, forward-looking and action-oriented post 2015 framework for disaster risk reduction;

- To complete the assessment and review of the implementation of the Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters;

- To consider the experience gained through the regional and national strategies/institutions and plans for disaster risk reduction and their recommendations, as well as relevant regional agreements for the implementation of the Hyogo Framework for Action;

- To identify modalities of cooperation based on commitments to implement a post 2015 framework for disaster risk reduction; and

- To determine modalities for the periodic review of the implementation of a post 2015 framework for disaster risk reduction.

1.1 Scope and Purpose

The present framework will be applied to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors scope and purpose.

1.2 Expected Outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

1.3 Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.

1.4 Targets

- Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015;

- Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015;

- Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030;

- Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;

- Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;

- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030; and

- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

1.5 Priorities for Action

Priority-1: Understanding disaster risk

Disaster risk management needs to be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment

Priority-2: Strengthening disaster risk governance to manage disaster risk

Disaster risk governance at the national, regional and global levels is vital to the management of disaster risk reduction in all sectors and ensuring the coherence of national and local frameworks of laws, regulations and public policies that, by defining roles and responsibilities, guide, encourage and incentivize the public and private sectors to take action and address disaster risk

Priority-3: Investing in disaster risk reduction for resilience

Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment. These can be drivers of innovation, growth and job creation. Such measures are cost-effective and instrumental to save lives, prevent and reduce losses and ensure effective recovery and rehabilitation

Priority-4: Enhancing disaster preparedness for effective response, and to «Build Back Better» in recovery, rehabilitation and reconstruction

Experience indicates that disaster preparedness needs to be strengthened for more effective response and ensure capacities are in place for effective recovery. Disasters have also demonstrated that the recovery, rehabilitation and reconstruction phase, which needs to be prepared ahead of the disaster, is an opportunity to «Build Back Better» through integrating disaster risk reduction measures. Women and persons with disabilities should publicly lead and promote gender-equitable and universally accessible approaches during

1.6 Guiding Principles

- Primary responsibility of States to prevent and reduce disaster risk, including through cooperation;
- Shared responsibility between central Government and national authorities, sectors and stakeholders as appropriate to national circumstances;
- Protection of persons and their assets while promoting and protecting all human rights including the right to development;
- Engagement from all of society;

- Full engagement of all State institutions of an executive and legislative nature at national and local levels;

- Empowerment of local authorities and communities through resources, incentives and decision-making responsibilities as appropriate;

- Decision-making to be inclusive and risk-informed while using a multi-hazard approach;

- Coherence of disaster risk reduction and sustainable development policies, plans, practices and mechanisms, across different sectors;

- Accounting of local and specific characteristics of disaster risks when determining measures to reduce risk;

- Addressing underlying risk factors cost-effectively through investment versus relying primarily on post disaster response and recovery;

- «Build Back Better» for preventing the creation of, and reducing existing, disaster risk;

- The quality of global partnership and international cooperation to be effective, meaningful and strong; and

- Support from developed countries and partners to developing countries to be tailored according to needs and priorities as identified by them.

Annex-2: General Picture of Disaster Risk Management and Reduction National Structure

2.1. Legal and Institutional Analysis of Disaster Risk Management and Reduction Practice in Jordan:

A number of laws related to disaster management and reduction in Jordan have been enacted indicating that regulations aimed at protecting people and properties are in place. These laws, however, are implemented by many authorities working in coordinated manner.

Some of these laws have been enacted almost tens of years ago when threats to lives and economic assets were not as severe as today. Risks to security, safety, health, among others, are getting more complicated and have challenged the capacities of the country. Below are some of the most relevant legislations related to disaster risk management:

- Public Security Law no. (38) of 1965 and its Amendments.
- Jordan National Red Crescent Society Law no. (3) of 1969.
- The Jordanian National Construction Law No. (7) of 1993 and its Amendments.
- Labor Law No. (8) of 1996.
- Industry and Trade law no. (18) of 1998 and its amendments.
- Civil Defense Law No. 18 of 1999 (amended in 2003) established the Higher Council of Civil Defense (HCCD) at the national level.
- The Jordanian Armed Forces Temporary Law No. (64) of 2001.
- Nuclear Energy and Radiation Protection Law No. (29) of 2001.
- Temporary Agricultural Law No. (44) of 2002.
- The Municipalities Law No. 41 of 2015, and its Amendments.
- National Center for Security and Crises Management Regulation No. (20) of 2015.
- The Public Health Law No. 54 of 2002.
- Environmental Protection Law No. 6 of 2017.
- Customs Law and its amendments No. (20) of 1998.
- The Temporary Traffic Law and its amendments No. (47) of 2001.
- The Regulatory Authority for the Energy and Minerals Sector Law No. 8 of 2017.

- The Jordanian Atomic Energy Commission Law No. (42) of 2007.

These laws have created a web of organizations with responsibilities related to risks management and reduction and requiring a vast amount of resources. The efforts on disaster management and reduction are highly centralized where inter-agency coordination remains unclear. There are no systematic programs for information, education and communications on hazards, vulnerability and risks and modern disaster risk management and reduction practice has yet to be introduced at many key national institutions.

2.1.1. National Level

At the national level, the Higher Council of Civil Defense (HCCD) is granted with the authority to deal with disasters through the Civil Defense Law No. 18 of 1999 which was amended in 2003. The HCCD is intended to be the policy and coordinating agency for emergency management in the country. However, it seems to lack the commensurate financial and administrative support in order for the Council to work more effectively. The implementation of this law is centralized, thus reducing the effectiveness in dealing with disaster risk management issues at the local level.

The recent approved regulation (No. 20 of 2015) of the National Center for Security and Crises Management (NCSCM) Regulation has created a new player in the Disaster Risk and Crisis Management and reduction system in the country. These regulations assigned the responsibility of "coordination between the various relevant entities on the national level concerns crisis response" to the NCSCM, it also tasked the center to develop strategies and policies related to disasters and crises management and reduction at the national level and endorse plans and programmes needed to implement the duties and tasks of the centre.

2.1.2. Municipality (Local) Level

The Municipalities Law No. 41 of 2015 provides several responsibilities to the Municipality. It addresses several issues and concerns that include city plans and buildings, sanitation and health, fires, flooding, aid to victims, risk prevention, and financial requirements. Several issues addressed by the law listed below:

- Prepare strategic and development plans and prepare a guide to the needs and priorities of the municipality area and submit them to the Executive Council;
- Monitoring open land and assigning their owners to erect fences around it and take all measures to protect streets and roads;
- Take precautions to prevent fires, in coordination with the administrative governor;

- Take precautions to prevent damage in case of flash floods and snow, and contribute to the relief of fire, flash floods, earthquakes and other disasters, collect donations and distribute them, and contribute to the establishment of public shelters and places and take the necessary measures to preserve the lives of citizens in coordination with the competent authorities;

- To take all necessary precautions and procedures to maintain public health and prevent outbreaks of epidemics among people in coordination with the competent authorities and has the right to contribute to the implementation of the work and projects of public hospitals and health centers and other health facilities;

- Waste recycling and treatment; and

- To take the necessary decisions to demolish the dilapidated buildings which are feared to fall and to make the necessary decisions regarding buildings that are harmful to public health or which emit unpleasant and harmful smells after warning the owners, occupants or those responsible for them.

2.2. Organizational Structure for DRM and DRR in Jordan

As previously mentioned, the country's disaster relief operations are highly centralized by virtue of Civil Defense Law No. 18, 1999 (amended in 2003) which established the Higher Council of Civil Defense (HCCD). The HCCD is chaired by the Minister of Interior with the Director General of Civil Defense as vice-chair.

2.2.1. Members of HCCD

Members of HCCD and its committees in the administrative divisions perform the plan's actions. The HCCD includes the Minister of Interior who acts as the Chairman and the Director General of Civil Defense as the Vice-Chairman. It also includes the following officials as members of the Council:

- Secretariat-General of Prime Ministry;

- Secretary general of all ministries;

- Secretary general of the higher council of youth;

- Jordanian armed forces deputy assigned by the chairman of Jordanian Armed forces;

- Public security deputy assigned by the public security general director;

- Public intelligence deputies assigned by the director of public intelligence directorate;

- Amman municipality deputy;

- The chairman of the Jordanian red crescent society;

- The Hashemite Charity Organization;

- The chairman of the trade chambers union;

- A chairman for one of the industrial chambers assigned by the Ministry of industry and trade; and

- The President of the Council may invite any person or expert to seek his opinion in the matters before the Council without having the right to vote on resolutions.

The duties of the HCCD are comprehensive. These range from response planning at the national level, entering into international agreements on disaster relief and similar state duties to operations like forming civilian volunteers at the local level, training of citizens and others. The HCCD duties are summarized below:

- Setting public plans and procedures to encounter emergencies and disasters and specifying duties of private and public parties;

- Setting necessary plans to provide protection against chemical, radioactive, bacterial contamination, and toxic gases in cooperation with specialized concerned parties;

- Issuing directives to organize the council's duties, and managing its operation rooms and the operation rooms of the parties represented within as well as the operation rooms of civil defense committees in the governorates and provinces;

- Specifying duties and tasks of civil defense committees formed in governorates in accordance with the rules of this law;

- Setting the duties of Armed Forces and Public Security at emergencies and disasters to support civil defense actions;

- Forming voluntary teams of civilians with ages ranging from 18 to 50 years old to support civil defense actions;

- Establishing and equipping public shelters;

- Demonstrating techniques of warning citizens against emergencies and disasters, and specifying required methods;

- Setting financial estimation required in case of emergencies and disasters, and submitting it to the Cabinet for possible inclusion within the public budget; and

- Recommending the Cabinet to obligate concerned local departments, organizations and authorities in allocating funds from their annual budgets to carry out duties and tasks determined by the council.

2.2.2. Operational Management through the Interior Minister

In case of emergencies and disasters, the Interior Minister, who sits as the Chair of HCCD, is authorized by the Prime Minister under Civil Defense Law No. 18, 1999 (amended in 2003) in accordance with Article No. 8 to give orders and undertake the following procedures during the time required by these situations.

- Laying hands on all means of transportation, restricting their moves and moves of drivers, laying hands on their spare parts, and restricting sale;

- Laying hands on required immovable properties and buildings for establishing public shelters, hospitals, and necessary centers for the purpose of ambulance services, nursing and other civil defense affairs;

- Taking hold of various types of flammable materials, restricting use and the way of storing;

- Organizing, specifying, distributing foods and all required materials in order to encounter emergencies and disasters for the stability of people's living;

- Organizing the use of electricity and water resources in coordination with concerned parties;

- Maintaining the work of radio and wired communications;

- Preventing general staff, doctors, pharmacists, male and female nurses, the staff at any institution or utility of public services, the staff of food trading manufacturing field, and transportation laborers from leaving their jobs without permission signed by the minister or his representative. Besides, the minister has the right to impose prevention upon any other parties, if their works were necessary for the stability of living;

- Charging any person- of those who has the required ability- with contributing in civil defense comprehensive services. If this person works in free business field, he has to put the equipment he has under the disposal of civil defense;

- Charging any public employee with running civil defense services all the required time;

- Charging any of the public/private organizations with delegating one of their senior officials for working as liaison officer between the organization and civil defense committees in order to coordinate with them as soon as possible;

- Issuing any directions, orders, and other decisions necessary for comprehensive civil defense requirements; and

- Establishing coordination and cooperation through signing agreements with neighboring countries, Arab states, European countries and international organizations.

As described above, the central body through the Interior Minister is vested with a broad span of control in dealing with emergency situations. Authority to act has not been delegated to the local level where action should be taken more efficiently. It is also obvious that there are many overlap and responsibilities among the key bodies working in the DRM and DRR; this is showing the urgent need to review the laws and regulations governing the process of managing and reducing disaster risks of and crises, in order to identify duties and responsibilities and prevent interference between different institutions concerned

2.2.3. The National Security and Crisis Management Center (NCSCM)

The center was established for the purpose of coping with challenges and managing crises at the strategic level in the country. Its vision is efficient and effective management of national crises, while the message is to integrate and coordinate all national agencies' efforts to face all types of national crises so as to maintain a secure and stable environment. (more on the NCSCM is found in Annex-3)

2.2.4. General Directorate of Civil Defense

The General Directorate of Civil Defense (GDCD) reports to the Ministry of Interior. It is organized as a para-military organization with mandate over response planning and relief operations in the case of disasters.

Tasks and Duties:

According to the article-13 of the Law-18 for the year 1999 The General Directorate of Civil Defence executes the following functions and duties:

- Providing emergency medical services, firefighting, and rescue operations, and qualifying the staff to perform such operations effectively, as well as raising the public awareness to deal with emergencies, and providing necessary equipment, vehicles and communications, beside preparing related studies to the Civil Defence work;

- Maintaining, supervising and organizing disasters and air raids warnings systems and tools;

- Maintaining the public shelters ready for use;

- Detecting and locating Explosives and calling the Public Security forces and the professional Directorates of the armed forces to handle them;

- Participating in the detection of any radioactive or chemical leakage in cooperation with the concerned parties;

- Recommending the approval to establish fuel stations and gas distribution agencies according to the prevention and self-protection requirements;

- Identifying the prevention and self-protection requirements for the purposes of issuing storing, selling and manufacturing permissions for explosives, fire-works and hazardous materials and chemicals;

- Training the voluntary groups from both public and private sectors on the Civil Defence actions in the entire kingdom;

- Representing the kingdom in the local, regional and national conferences and organizations which concerned with Civil Defence and the Civil Protection;

- Studying multi-story building drawings that are intended for industrial, commercial, and tourist purposes, to check the availability of safety requirements in these buildings;

- Checking the availability of prevention and Self-Protection means, alarms and firefighting systems in commercial and industrial occupancies; and

- Carrying out any other task related to the Civil Defence field, which the Minister of Interior deemed necessary.

2.2.5. Jordan Command and Control Center - Public Security Directorate

Consistent with the developments in the field of communications technology developments and information technology and the resulting developments on the command and control and promotion of joint field operations, and in line with the modernization of command and control operating in the public security system requirements, and due to the necessity of developing the respond capacity; it was decided to the establishment of the leadership system and new control shared between the Directorate of Public Security and the General Directorate of Civil Defence, which is the main governmental military bodies involved in dealing with the daily accidents and emergency events in the country. The General objectives of the system of command and control are:

- Reducing the rate of crime and to promote a feeling of security and safety of the community;

- Reducing the rate of traffic accidents and adjusting the security of the road in effective and efficient manner;

- Raising the efficiency of human resources and development at all levels to become high-skill professional force;

- Consolidation and modernization of the administrative and technical infrastructure of the Directorate of General Security; and

- Using a strategic approach to achieve the goals efficiently and effectively.

Annex-3: The National Center for Security and Crises Management (NCSCM)

It is his Majesty's (King Abdullah II) vision to establish a body at the national level that is capable of facing the outcomes of the strategic environmental dynamics.

Vision

Efficient and effective management of national crises

Message

To integrate and coordinate all national agencies' efforts to face all types of national crises so as to maintain a secure and stable environment.

Tasks

- To enhance the chances and capabilities of early prediction of crises by establishing a comprehensive national database according to the NCSCM concept of operations;

- To make the necessary recommendations on policies and procedures related to crises management that must be applied at the national level;

- To Develop and implement national capacity-building programs to address the various types of crises in coordination with the public and private sectors;

- To make the necessary recommendations to develop programs and policies related to establishing and securing the national database;

- To evaluate the ability and contingency plans of vital institutions' infrastructure in cooperation with the public and private sectors;

- To Develop, coordinate and evaluate national plans to address various types of crises in coordination with the public and private sectors;

- To plan and implement training programs related to crises management;

- NCSCM functions as a National Command and Control Center to enable decision-makers at all levels to make rational decisions based on accurate, timely and related information;

- To take part in evaluating the crisis outcomes (Damage and Casualties) with the correlated authorities;

- To take part in evaluating the performance/procedures taken by the Crisis Management Team as a member within the correlated authorities; and

- To contribute with the associated authorities in reconsidering the necessary recommendations for recovery and damage repair.

Future Outlook

- To prepare the Risk Record for potential crises that could help in rational planning and appropriate response.;

- To plan a specialized courses in Crisis Management at both national and regional level to enhance the human skills and technical capability (NCSCM becomes as Regional Training Center);

- To plan and implement an Integrated Training Programs on the national institutions considering the role of media within the process;

- To benefit from the international experience in the field of crises management to enhance our capabilities in this regard;

- To link NCSCM with regional crises management centers in order to meet common challenges;

- To develop programs for Jordanian youth at universities, institutes and schools through voluntary work and raise their awareness to crises; and

- To follow-up the establishment of operation centers at ministries and state institutions as well as train liaison officers from these ministries and institutions.

NCSCM Structure
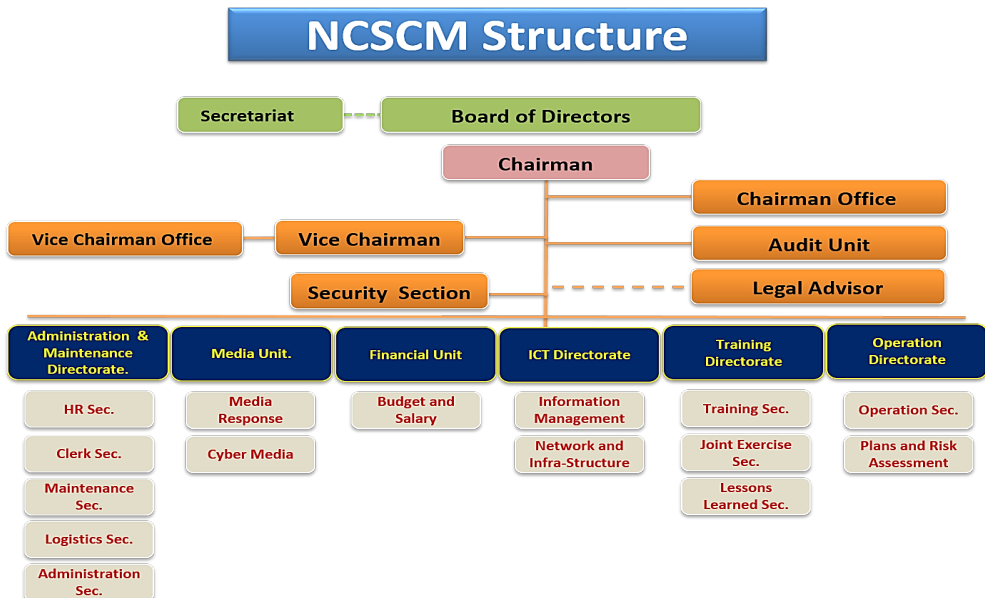
Concept of Operations

In case of potential imminent crisis or upon occurring, the Board of Directors will be held to decide the nature and the level of the crisis, then appoints the Crisis Commander. The Crisis Commander practices his authorities from NCSCM premises using all available assets to accomplish the mission. Coordinating the efforts needed to be recovered after contributing in evaluating the performance of the Crisis Management Team.
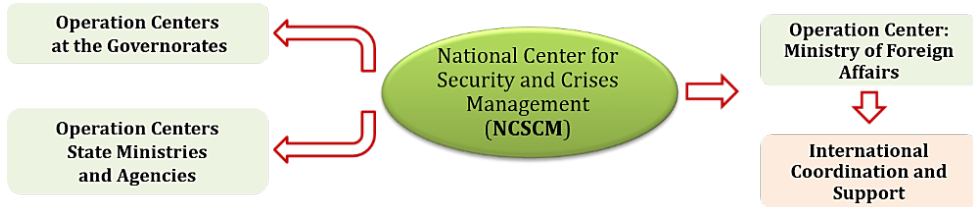
Annex-4: Sample of Key Projects, Initiatives and Activities Related to Disaster Risk Management and Reduction:

Title	**Seismic Hazard Mitigation**
Duration	2003-2009
Implementing Agency	Royal Scientific Society
Budget and Main Donors	The Swiss Agency for Development and Cooperation (**SDC**)
Main Objectives and Key Results	• Assess the risk of the population living in identified earthquake hazard zones in Aqaba, Jordan • Reduce human casualties and infrastructure damage in the case of an earthquake.

Title	**Support to Building National Capacities for Earthquake Risk Reduction at Amman Municipality of Jordan**
Duration	Apr, 2007 – Mar, 2009
Implementing Agency	Jordan Civil Defence
Budget and Main Donors	Co-funding by the United Nations Development Programme (**UNDP**), Government of Jordan and the Swiss Agency for Development and Cooperation (**SDC**) contributing US $ 600,000
Main Objectives and Key Results	• Establish a sound institutional and legal framework for an effective Disaster Risk Management system. • Fully integrate Disaster Risk Management into the ongoing governance, business, and economic processes in the city. **Key Results include:** • Review of Current Institutional and Legislative Mechanisms. • Risk Reduction Profile for Amman City. • Earthquake Risk Assessment of Amman City. • Framework for Disaster Risk Reduction Master Plan - Amman Municipality. • Training and Awareness Programme.

Title	**Support to Building National Capacities for Earthquake Risk Reduction at Aqaba Special Economic Zone in Jordan**
Duration	Apr, 2009 – Aug, 2011
Implementing Agency	Aqaba Special Economic Zone Authority
Budget and Main Donors	Co-funding by the United Nations Development Programme (**UNDP**), Aqaba Special Economic Zone Authority (**ASEZA**) and the Swiss Agency for Development and Cooperation (**SDC**) contributing US $ 560,000 and was implemented by **ASEZA**

Main Objectives and Key Results	• Replicate most the activities conducted for Amman with more resolution and focusing more on measured results on the ground; • Institutionalization of DRR within the structure of ASEZA resulting in establishing of the ASEZA DRR Unit. **Key Results include:** • Review of Current Institutional and Legislative Mechanisms. • Risk Reduction Profile for Aqaba City. • Earthquake Risk Assessment of Aqaba City. • Framework for Disaster Risk Reduction Master Plan – Aqaba Special Economic Zone Authority • Training and Awareness Programme. • Establishing DRR Unit within ASEZA structure

Title	**Promoting Awareness on Earthquake Risks in Jordanian Public Secondary Schools**
Duration	2009-2010
Implementing Agency	"Local Company "**MOSHARAKA** for Researches and Studies
Budget and Main Donors	SDC funded a mobile exhibition about earthquake was launched in collaboration with the Ministry of Education (MoE).
Main Objectives and Key Results	• The major objective of this exhibit was to raise the awareness and knowledge of seismic activity and hazards among youth and teachers in secondary public schools as well as local communities. The specific purposes of this exhibit include: ✓ Enhance the knowledge about earthquakes and seismic hazards of pupils in 11 secondary public schools. ✓ Promoting the local communities to express interest in the earthquake exhibition and to be more aware of earthquake activities, hazards and risks.

Title	**Seismic Risk Assessment for Irbid City**
Duration	2010 – 2013
Implementing Agency	Yarmouk University – Jordan
Budget and Main Donors	EMME, Earthquake Model for Middle East Region - JIF

Main Objectives and Key Results	• Evaluate the potential earthquake hazard and associated risk and losses within the premises of Irbid city • Evaluate the geographical distribution of potential human and material losses due to proposed earthquake scenarios **Key Results include:** ✓ Earthquake hazard analysis specific to Irbid City. ✓ Mapping elements at risk (buildings, population and lifelines). ✓ Vulnerability analysis of elements at risk. ✓ Estimation of risk and loss: building damage, casualties and economic losses. ✓ Recommendations for urban planning strategy based on seismic hazard and risk investigation including transportation and recreation infrastructure.

Title	**Enhancing Institutional Capacities to Reduce Disaster Risk and to Integrate Climate Change in Jordan**
Duration	Nov, 2011 – Dec, 2013
Implementing Agency	Implemented by four different implementing partners; (**ASEZA**), (**PDTRA**), (**GDCD**) and the Ministry of Public Works and Housing – Jordan National Building Council (**JNBC**)
Budget and Main Donors	Co-funded by the United Nations Development Programme (**UNDP**), Aqaba Special Economic Zone Authority (**ASEZA**), Petra Development Tourism Region Authority (**PDTRA**), JTI Foundation (**JTIF**) and the Swiss Agency for Development and Cooperation (**SDC**) contributing US $ 1,482,750
Main Objectives and Key Results	• Include other potential risks that are related directly to Climate Change such as flash-flood, landslides and rock fall • Focus more on some technical capacities within the country (such as setting up an Early Warning System for flash-flood risk and integrated risks assessment in Petra, updating the Seismic Building Code, assessing building against the seismic risk and some others. **Key Results include:** • Comprehensive Risk Assessment for Petra Region • Setting up Early Warning System for Petra Region • Initiate DRR Neighborhood Volunteers Activities in Aqaba and Petra Region • Update Seismic National Building Code and Enhance the National Capacities for Seismic proofing buildings and rehabilitation process.

On-Going Projects:

- Establishing and Institutionalizing National DRR Platform
- EU Twining Project - Jordanian Civil Defense.
- The Civil Defense volunteers in cooperation with the German Federal Agency for Technical Relief (THW)

Annex-5: List of Organization and Experts Involved in Developing the Strategy