Guiding Document for the Localization of Disaster Risk Management in Jordan

2025

الدليل الارشادي لممارسة إدارة مخاطر الكوارث في الأردن على المستوى المحلي

Acknowledgement

The Ministry of Local Administration (MoLA) extends its sincere thanks and appreciation to all partners who contributed to the development of the **"Guiding Document for the Localization of Disaster Risk Management in Jordan"**

The Ministry led this national effort in cooperation with the National Center for Security and Crises Management, on behalf of the Government of Jordan, through the Crisis and Emergency Management Unit headed by Engineer Jumana Al-Abbadi.

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This national achievement would not have been possible without the commitment and collaboration of all partners, working with a strong sense of responsibility and collective action. Such cooperation has enhanced the preparedness of national institutions, strengthened their resilience, and contributed to laying the foundations for a safer and more sustainable future.

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Chapter 1: Introduction

1. Introduction

1.1 Objective

The main objective of this work is to develop a guiding document to support local level disaster risk management practices in Jordan and address the specific risks they face. This document is developed as a strategic framework for integrating local disaster risk management practices into the governance structure in Jordan and enabling local governments to play proactive roles in risk reduction, preparedness, response and recovery.

1.2 Rationale for Localization

Jordan's geographical diversity and demographic composition, coupled with its exposure to natural and human-made hazards, require that disaster risk management be responsive to local needs and risks. Local disaster risk management is essential for timely responses, resource efficiency, and culturally relevant risk management practices, especially in high-risk areas. Jordan's specific risk profile – ranging from flash floods and earthquakes to refugee influxes – requires that disaster risk management be adaptable and responsive at the local level. Global experience has shown that engaging local communities in disaster risk management can significantly reduce response times and improve recovery efficiency.

1.3 Vision of the Guiding Document

Jordan envisions a future where communities and local governments are empowered to lead effective disaster risk management, supported by strong local governance, sustainable resource use, and meaningful partnerships.
In this vision, a decentralized system enables local authorities to take proactive, informed action aligned with the national disaster risk management framework, with clear roles and responsibilities across all stakeholders, fostering a cohesive and collaborative approach that strengthens resilience.

1.4 Strategic Alignment of the Guiding Document

This document is aligned with international frameworks and guidelines (such as the Sendai Framework for Disaster Risk Reduction), and relevant national priorities, strategies and policies, such as Jordan's National Strategy for Disaster Risk Reduction (NSDRR) (2023-2030), the National Climate Change Policy of the Hashemite Kingdom of Jordan (2022-2050), Youth for Climate Action - Engaging Jordanian Youth in Climate Policy Making, and others to ensure a coherent approach that meets international standards and national requirements.

1.4.1 The Alignment of the Guiding Document with the Requirements of the National Strategy for Disaster Risk Reduction (2023-2030)

The issue of decentralization in risk management at the local level was mentioned in the National Strategy for Disaster Risk Reduction (2023-2030) in more than one place.

It was mentioned as one of the weaknesses in the analysis of strengths, weaknesses, opportunities and challenges:

- "There is no effective mechanism to ensure coordination of disaster risk management activities between sectors and between the central and local levels"
- "Lack of a specific budget for response and recovery at the national and local levels"
- "Overlap and lack of clarity in defining roles and responsibilities between institutions at the central level and between the central and local levels"

This topic was also mentioned in the guidelines for the proposed key initiatives and activities that could support the achievement of the strategic objectives: "Disaster risk reduction requires the sharing and distribution of responsibilities by the central government and relevant national authorities (as appropriate, taking into account their governance system) and the various sectors and stakeholders."

It was also mentioned in the proposed tools for implementing the strategy: "Decentralization – strategic planning at the national level, practical implementation at the local level." We quote from the strategy: "Over the past few years (and with the support of the Local Administration Law of 2021), the Jordanian government has systematically delegated a range of responsibilities from the national (central) to the local (decentralized) levels, where this action can have positive results on disaster risk reduction. Sharing responsibilities between the central and local levels of government helps to mainstream disaster risk reduction across government structures, as well as giving local levels a greater sense of ownership and responsibility as they are closer to the affected and directly involved communities. "The application of the principle of decentralization can have positive results because local government institutions are less politicized than central government institutions, which can facilitate the development of partnerships between the public sector and NGO sectors to strengthen local capacities."

In the annex of duties at the national level within the national strategy, the Ministry of Local Administration was mentioned among the entities supporting the process of "analyzing and evaluating the institutional framework concerned with the process of managing and reducing disaster and crisis risks (tasks, duties, structures and capabilities) and identifying its strengths and weaknesses with the aim of improving them" as well as "setting the necessary instructions and foundations to achieve harmony and coordination between national institutions in their various forms and at the national and local levels".

1.4.2 The Alignment of the Guiding Document with the Sendai Framework for Disaster Risk Reduction (2015-2030)

The Sendai Framework for Disaster Risk Reduction (2015-2030) is a global framework that aims to enhance resilience and reduce disaster losses through inclusive planning, community engagement, and national and local capacity development. It focuses on promoting decentralization and building municipal capacity among its priorities for action and guiding principles.

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The Sendai Framework also focuses on adopting a decentralized approach and supporting local authorities (municipalities) in carrying out risk reduction and crisis management activities at the local level. This is reflected within its guiding principles- for example, paragraph 19-f-: "It is essential to empower local authorities and communities in disaster risk reduction, including through the provision of resources and incentives and the delegation of decision-making responsibilities, as appropriate". It is further reinforced in Priority 2, which focuses on strengthening disaster risk governance to manage disaster risk, particularly in paragraph 27-h: "Empower local authorities, as appropriate, through regulatory and financial means, to engage and coordinate with civil society, local communities, indigenous peoples, and migrants in disaster risk management at the local level.". This topic was emphasized in several pivotal points within this framework. This guide aligns its output with the Sendai Framework by focusing on the following:

Alignment with the Sendai Framework Priority-1: Understanding Disaster Risks:

- Establishing local information systems to analyze and assess risks using tools such as geographic information systems (GIS).
- Raising local communities' awareness of risks through educational campaigns and training programmes.

Alignment with Sendai Framework Prioritiy-2: Strengthening Governance for Disaster Risk Management:

- Promoting decentralization by enabling municipalities to develop integrated local risk management plans.
- Developing clear legal and regulatory frameworks that define the role of municipalities in risk management in coordination with national authorities.

Alignment with Sendai Framework Priority-3: Investing in Disaster Risk Reduction to Enhance Resilience:

- Improving local infrastructure to be more resilient to disasters, such as developing drainage systems to cope with floods.
- Encouraging private and public investments in sustainable risk reduction projects.

Alignment with Sendai Framework Priority-4: Strengthening Preparedness and Effective Response:

- Developing updated and comprehensive local emergency plans based on local risk assessment.
- Establishing and regularly training local response teams in collaboration with national and international authorities.

1.5 Important Considerations

The main objective of this work is to develop a guiding document to support local level disaster risk management practices in Jordan and address the specific risks they face. This document is developed as a strategic framework for integrating local disaster risk management practices into the governance structure in Jordan and enabling local governments to play proactive roles in risk reduction, preparedness, response and recovery.

- This guiding document has been prepared based on an understanding of the main tasks and objectives of the project titled "Development of a Guiding Document for the Localization of Disaster Risk Management (DRM) in Jordan.", which is being implemented by Mercy Corps in cooperation with the United Nations Development Programme and the Ministry of Local Administration. It also supports another project being implemented simultaneously, titled "Preparing Preparedness Plans at the Municipal Level".
- The project aims to develop a comprehensive and practical guidance document for the practice of disaster risk management at the local level, enabling municipalities to efficiently integrate the National Strategy for Disaster Risk Reduction (2023-2030) into their local planning processes, while addressing cross-cutting issues such as sustainable development and climate change.
- The guiding document will serve as a framework to strengthen local implementation capacities, address specific local needs, determine resource allocation, and establish performance monitoring mechanisms, while promoting coordinated efforts across all levels of government.
- This project operates under the supervision of the Ministry of Local Administration in partnership with the National Center for Security and Crises Management, and upon final approval of these guidelines, their ownership and responsibility for their implementation will be with the Ministry of Local Administration.

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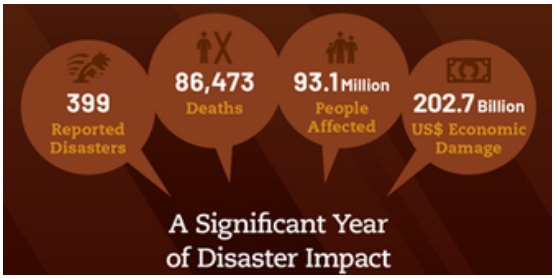
Chapter 2: Jordan's Risk Profile

2. Jordan's Risk Profile

2.1 General Description

The risks of disasters and the resulting crises are increasing all over the world, with more devastating effects than ever before. International reports and statistical information indicate that the year 2023 had unprecedented disaster impacts, resulting in 399 disasters, more than 86 thousand deaths, and more than 93 million injured, in addition to economic losses exceeding 200 billion dollars (Figure-1). These international reports and statistics also indicate that earthquake risks have the greatest impact on human losses, with a death rate exceeding 35 thousand deaths annually, while flood risks were the most frequent, with an average of 170 floods annually during the past twenty years (2003 - 2022). While storm risks were the main cause of economic losses, with an annual loss rate exceeding 95 billion US dollars (Figure-2).



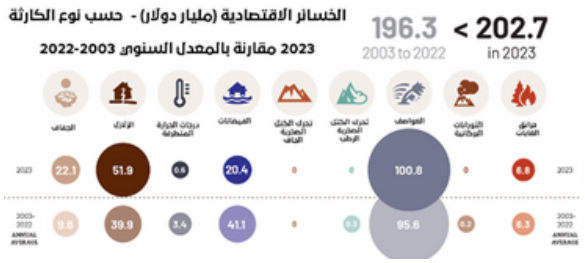
Number of disasters during the year 2023

Disaster type 2023 compared to annual average 2003-2022

Figure 1: Number of disasters during the year 2023, compared to the 2003 – 2022 annual average

CRED. 2023: Disasters in Numbers. Brussels: CRED, 2024. https://files.emdat.be/reports/2023_EMDAT_report.pdf

Deaths by disaster type 2023 compared to 2003-2022 annual average



Economic losses ($ billion) by disaster type 2023 compared to 2003-2022 annual average

Figure 2: Human and Economic losses during the year 2023, compared to the 2003 – 2022 annual average

CRED. 2023: Disasters in Numbers. Brussels: CRED, 2024. https://files.emdat.be/reports/2023_EMDAT_report.pdf

These figures are consistent with the situation in Jordan, where official reports and statistics (NSDRR 2023-2030) show that weather-related risks (with the increasing impact of climate change) are the most frequent and have the greatest impact on human and economic losses.The flash flood that took

place on October 25, 2018, is considered one of the greatest natural disasters to have happened in Jordan since the Ma'an flood in 1966; Only 22 minutes of rain caused deadly floods that killed 21 people, including 16 students, in Wadi Zarqa Ma'in in the Dead Sea region. Two weeks following the disaster, on November 10, 2018, another flash flood hit several areas, including the tourist area of Petra, killing 12 people, forcing thousands of tourists to leave the area. The risk of earthquakes in Jordan (if they happen, God forbid) will lead to huge losses of life and property, according to the studies of assessing the seismic risk of the cities of Amman and Aqaba during the period (2007-2011) with support and implementation by the United Nations Development Program. Following is a detailed description of the main risks in the country.

2.2 Seismic Hazard - Earthquakes

Most of the literature and credible references describe the seismic hazard in Jordan as being at a medium level, this means that this hazard should not be overlooked, but it also should not be exaggerated. The destructive seismic risk in Jordan (more than 6 degrees on the Richter scale) is characterized by its moderate to low probability of occurrence, however, the consequences could be catastrophic. For that reason, we need to be prepared for any scenario that may have a disastrous impact – plan for the worse and hope for the best. The seismic risk profile of Jordan, produced by the Global Earthquake Model (GEM) Foundation summarizes key metrics of seismic risk, allowing stakeholders in risk management to get an overview of the risk in the country. The profile presents relevant information, such as social indicators, risk indicators, and maps depicting the geographical distribution of hazard, exposure, and losses. The risk values presented are the results of an event-based risk analysis, where 100,000 years of earthquakes are simulated (Figure-3).

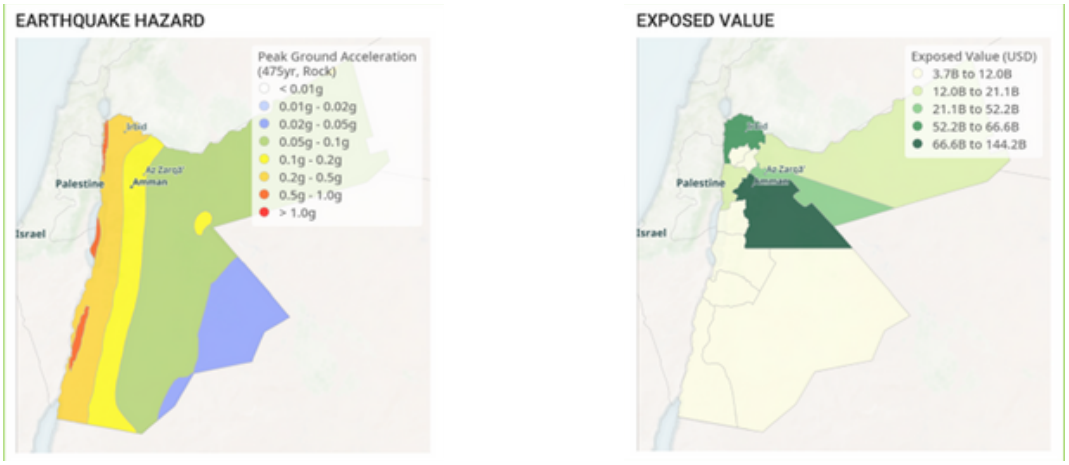


Figure 3: Jordan earthquake hazard (represents the peak ground acceleration for an average return period of 475 years on rock) and the exposed value (represented by the subnational distribution of the replacement value of residential, commercial, and industrial buildings - costs are representative of 2021 US Dollars.

(Reference: Global Seismic Risk Profiles v2023.0.0 - https://github.com/gem/risk-profiles/tree/v2023.0.0)

Northern Syria on the Turkish border, consisting of key parts, including the Gulf of Aqaba, Wadi Araba, and Jordan Valley) is the main source of earthquakes in Jordan. About 80% of Jordan's

population lives at a distance of less than 30 km from the fault, therefore, the impact of seismic hazard can lead to catastrophic results when its magnitude exceeds 6 degrees on the Richter scale. Figure-4 shows the Deaggregation of probabilistic ground motion for selected cities with 475, and 2475 years return periods.

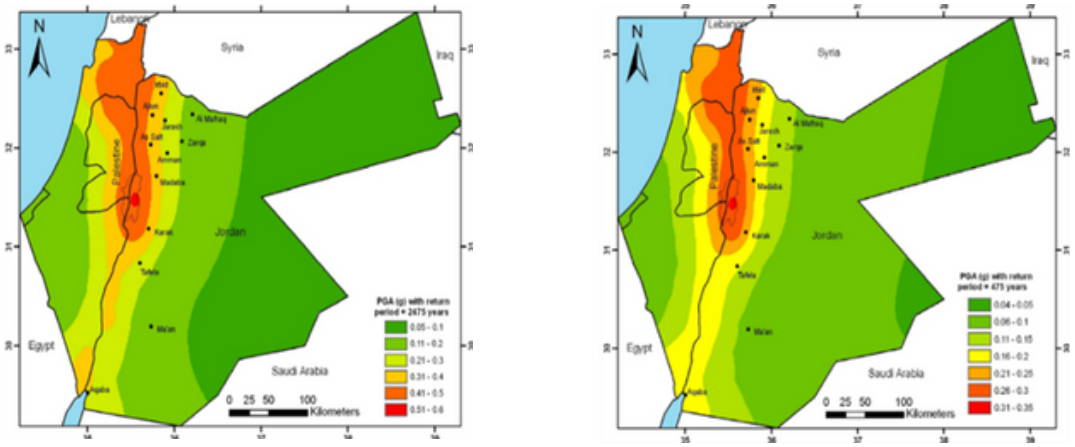


Figure 4: Deaggregation of Probabilistic Ground Motions for Selected Jordanian Cities, 2008.

(Reference: Rasheed A. Jaradat, et al - Jordan Journal of Civil Engineering, Volume 2, No.2, 2008)

Over the last two decades, many detailed seismic risk assessments have been conducted at the local level. The most recent was carried out in 2022 as part of the project "Strengthening Civil Protection and Relief Capacities in Jordan – Mafraq Risk Assessment." The results of this study indicate that the Mafraq area is located at a relatively safe distance compared to other regions in the country. Due to the area's geology, as well as the nature and urban culture of Mafraq, it is considered one of the least vulnerable areas to seismic risk. However, the assessment also found that some parts of Mafraq may be relatively more affected than others, based on risk indicators. Planning and implementing practical mitigation measures can significantly reduce the impact of seismic risk (Figure 5).

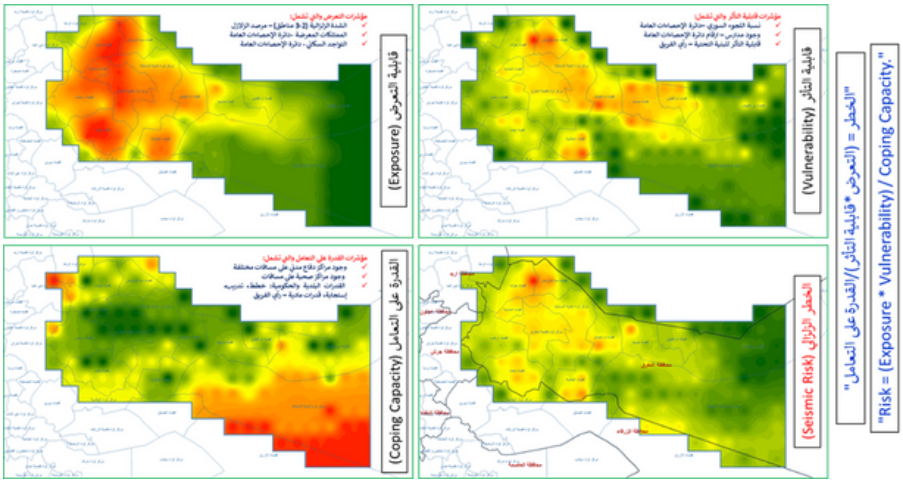


Figure 5: Seismic risk assessment for Mafraq Area based on different risk indicators and based on the formula of: Risk = (Exposure * vulnerability) / Coping Capacities. Reference: Project "Strengthening Civil Protection and Relief Capacities in Jordan" - Mafraq Risk Assessment, 2022.

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The seismic risk in Jordan varies from one region to another based on the geology settings, distance to the seismic sources, building types and classes, this can be confirmed by GEM study last validated by Feb 2024, Figures 6 - 8.

(https://www.preventionweb.net/publication/jordan-seismic-risk-profile)

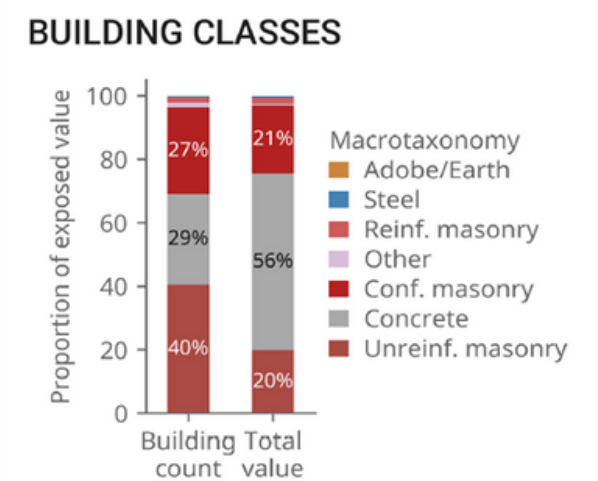

Figure 6: Building classes: The proportion of the building stock in terms of count and replacement value distributed to different macro taxonomy classes.

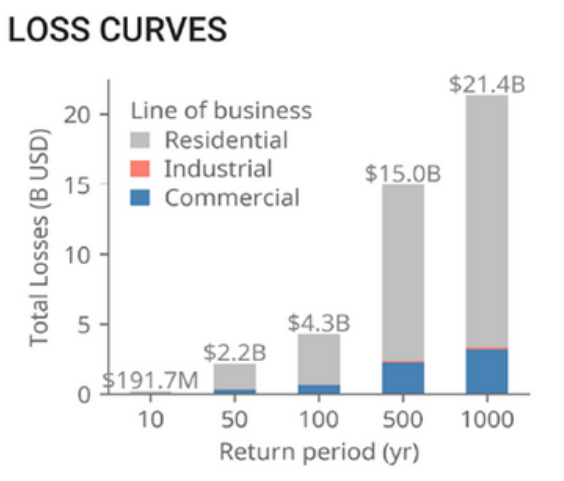

Figure 7: Loss curves: The mean return period losses for average return periods of 10, 50, 100, 500, and 1,000 years.

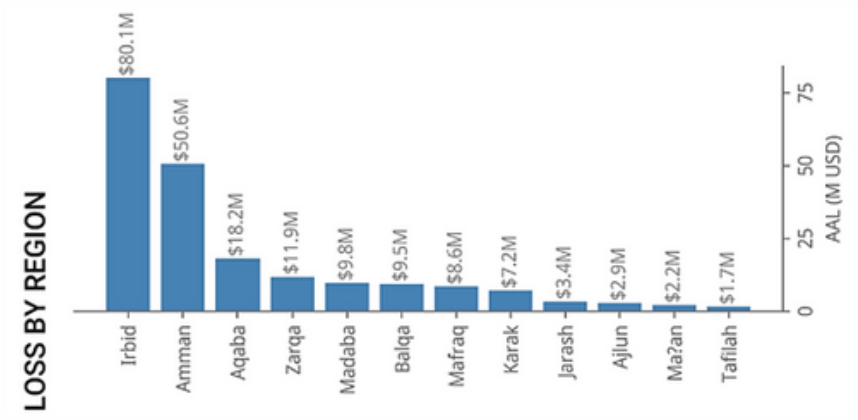

Figure 8: Loss by region: The average annual loss (AAL) by subnational boundary.

2.3 Flash Flood Hazard

Jordan faces significant flash flood risk, particularly as climate change intensifies the frequency and intensity of rainfall events. Flash flood risk in Jordan is driven by multiple factors, including seasonal rainfall variability, topographical and morphological features, and land use changes.

Jordan's climate is characterized by arid to semi-arid conditions with high temperature variability

and limited but intense rainfall episodes. Flash floods often occur after heavy rainfall that exceeds the absorptive capacity of soil and urban surfaces. In addition to the intense rainfall, the following factors are the main contributors to flash flood in Jordan:

- Wadi Systems: The natural valley systems channel rainwater during intense storms, increasing runoff speed and the likelihood of flash floods.
- Soil Types: Impermeable soils in certain regions reduce water infiltration, causing rapid surface runoff.
- Urbanization: Dense urban areas, especially Amman, lack sufficient stormwater drainage, increasing surface water accumulation during heavy rainfall.

According to the above, following are the main susceptible areas for flash floods in Jordan

- Northern Highlands and Ajloun Region: This region has the highest rainfall in Jordan, receiving between 400-600 mm annually. The combination of steep slopes and limited vegetation cover leads to rapid surface runoff, making areas around Ajloun and Jerash prone to flash flooding.
- Amman and Zarqa Basin: The urban areas in Amman and Zarqa Basin face flash flood risks due to urban sprawl and inadequate drainage infrastructure. Low-lying areas and valleys within Amman, particularly in downtown districts, are recurrent flash flood sites due to water pooling.
- Wadi Mujib and Wadi Zarqa: Wadi Mujib is one of the most susceptible areas due to its steep topography and tendency to funnel large amounts of runoff into lower areas. The Zarqa Basin, another significant flood-prone area, collects water from both urban and agricultural lands, leading to sedimentation and water accumulation that can impact the surrounding towns.
- Southern Regions and Dead Sea Basin: While the southern regions of Jordan are drier, they still experience flash floods. The Dead Sea Basin, for instance, is vulnerable due to rapid drainage from the surrounding highlands into the low-lying basin, especially during rare but intense rainfall events.

In 2019, WFP produced flash flood hazard map for Jordan, this map was produced at district level through integrating the watershed modelling system outputs with GIS spatial analysis tools, this map was produced based on national rainfall intensity data of MWI (Ministry of Water and Irrigation) using the IDF Curve, a Digital Elevation Model of 30m and district boundaries (second-level administrative unit) (Figure-9).

The results showed that the northern areas of ten districts (Ramtha, Bani Kinana, Al Shuna Al Shmalyah, Kora, Al Mazar Al Shamali, Qasabet Ajloun, Kofranja, Qasabet Al Salt, Ayn Al Basha and Al Jame'ah) are more susceptible to floods and therefore were classified as High level of flood hazard, while the eastern and southern parts of the country showed low susceptibility to flood occurrence.

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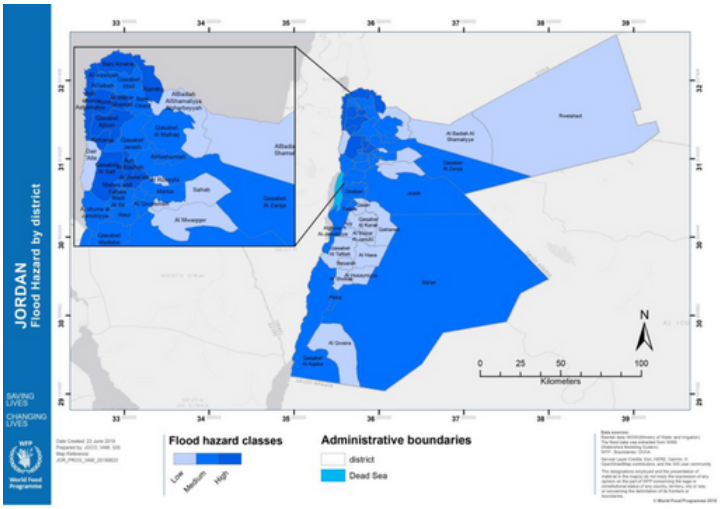

Figure 9: UN World Food Programme (WFP), Flood hazard map for Jordan, June 2019.

2.4 Drought Hazard

The water sector policy for drought management developed by the Ministry of Water and Irrigation in 2023, defines drought as the situations and conditions resulting from lack of water storage due to shortfall of rainfall over a period of time. Drought can be categorized into several types, including meteorological, agricultural, and hydrological drought, all of which have adverse effects on both economic and social aspects. Data from the Jordan Meteorological Department and results from different local and international studies indicate negative changes in temperature and rainfall in Jordan and a potential increase in incidence and severity of droughts. Records for the period 1978-2021 show a clear evidence of climate change at the national level as shown in the figure-10:

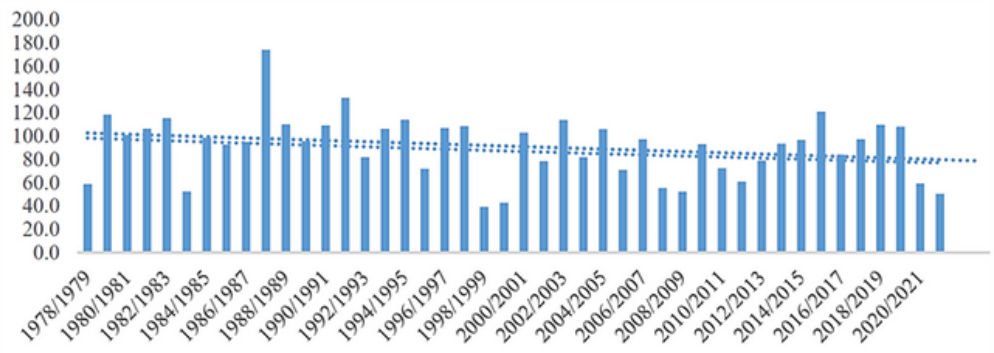

Figure 10: The Pattern of rainfall in Jordan during 1978-2021

Several studies have indicated that Jordan River Basin will experience more severe droughts in the period 2031-2060 compared to 1961-1990, with an expected increase in severe and extreme drought events. Jordan has experienced successive droughts at least three times over the past 40 years. The frequency is expected to increase every 20-25 years, with a mild drought-event every 3 to 4 years and a severe or extreme drought every 6 to 7 years. Subsequently, with the increase drought events and the negative impact of climate change, the internal long-term conventional water resources availability will decrease even further from current levels of 65 m^3/ca/yr. to 46 m^3/ca/yr. (NWMP 2020).

Impacts of drought will not be confined to water sector, but they will also extend to the agricultural sector through shortage and misdistribution of rainfall resulting in lower volumes of crops production, in addition to the health sector, which will be directly and indirectly affected by droughts. The known impacts are related to water shortages or the use of marginal water sources, which may adversely affect the health services provided to the population. Historically, droughts in Jordan have led to the drying up of springs and reduced discharge in others, groundwater level has decreased by approximately 1 meter/year in the past 30 years, decreased base flow of surface water and side wadis of Jordan Valley and decreased water storage rates (by less than 50%) in the main dams in the past 20 years.

2.5 Weather-Related Hazards

Climate-related hazards have increasingly affected Jordan in recent times, such as extreme temperatures and storms, and even associated hazards, such as droughts, flash floods, and landslides. These threats are increasing in frequency and intensity due to climate change. Climate change affects different sectors including agriculture, biodiversity, urban systems, society, water, and health sectors, where adaptation options are needed to mitigate its impact.

The statistics of climate events over the past decade (according to national DRR strategy and based on records from the Jordan meteorological department) show that Jordan has been exposed to many of these events, which have caused significant human and material losses. Vulnerability to these risks has also become greater than in the past, due to vulnerable infrastructure, unplanned urban growth not considering these risks, the spread of informal housing, affecting not only Jordan, but all regions of the world.

2.6 Locust Hazard

Desert locusts are among the most dangerous pests threatening agricultural production, food, and means of living. They are considered one of the oldest recorded insect threats due to their ability to breed under a wide range of environmental and climatic conditions across vast areas. Given the ability of desert locusts to fly long distances and rapidly migrate from place to place, locusts are considered an international plague that cannot be controlled by a single country or even a group of countries without international cooperation.

Locust infestations pose a significant risk to Jordan, given its geographic location in the Middle East, a region occasionally affected by swarms of desert locusts originating from Africa, the Arabian Peninsula, and other neighboring areas. The risk of locusts is considered one of the risks that cause catastrophic effects on the agricultural, environmental and economic levels. Since Jordan is dependent heavily on agriculture (as this sector contributes about 5% of the gross domestic product), this risk must be viewed in terms of its consequences that affect livelihoods and food security as well. The impact of locusts on the environment may constitute an additional reason for more efforts to prepare and deal with this risk, as locusts have the ability to consume most of the vegetation cover and thus may lead to land degradation and consequently desertification, the vegetation cover in Jordan is fragile and highly susceptible to the effects of increasing climate change.

Managing the locust hazard in Jordan requires close cooperation and high coordination with neighbouring countries that are considered the corridor for locust swarms that can threaten crops, trees, and vegetation in general. The Ministry of Agriculture follows up and monitors this hazard, particularly when appropriate environmental and climatic conditions exist in source countries. Municipalities play a vital frontline role in addressing locust risks. Their proximity to affected communities, ability to mobilize resources, and coordination with national strategies make them essential for preventing, mitigating, and recovering from locust infestations. The main challenges for municipalities in this regard are the resource limitations, where many municipalities may lack the technical expertise, equipment, and funding needed for effective locust control. Also, there is a coordination challenge that may lead to delay response times, in addition to the limited awareness among people that may hinder effective implementation of control measures.

2.7 Health Risks

The health risks that Jordan faces are diverse, including communicable and infectious diseases, which municipalities play an important role in managing. These include the spread of infectious diseases such as measles, viral hepatitis, and seasonal influenza, as well as food- and water-borne diseases such as cholera. They also include non-communicable diseases such as heart disease, hypertension, diabetes, and cancer, resulting from unhealthy lifestyles such as physical inactivity and smoking (municipalities have a limited role, focused on awareness and education). Among the health risks that pose an ongoing challenge to municipalities are air and water pollution, as well as the risks resulting from the spread of insect-related diseases (such as dengue fever), challenges

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Accordingly, municipalities play a significant and pivotal role in preparing for and responding to health risks. Municipalities are the closest entities to local communities and have a direct impact on the health and safety of residents. In this context, their role should focus on the following key aspects:

- Planning and coordination: By developing comprehensive plans to address health risks such as epidemics or environmental pollution and coordinating and cooperating with various health agencies from the public and private sectors to ensure an integrated response.
- Awareness and education: By implementing educational programs on disease prevention, such as vaccination and public hygiene, and disseminating information by providing accurate and timely information to the community about health risks and response methods.
- Supervising public hygiene and monitoring water and sanitation: By ensuring safe waste collection and treatment to prevent the spread of diseases, ensuring the availability of safe drinking water, and effectively managing the sewage system.
- Implementing preventive measures: By implementing campaigns to combat disease-carrying insects such as mosquitoes and rodents, and monitoring markets, restaurants, and public facilities to ensure compliance with health standards.
- Providing appropriate community support: by providing additional services to the most vulnerable groups such as the elderly and children, as well as encouraging and organizing volunteer teams to support health efforts in times of crisis.

To activate the role of municipalities in this area, these guidelines recommend the following:

- Strengthening local health infrastructure by investing in waste management and water quality systems.
- Providing municipalities with the financial and human resources necessary to implement health prevention projects.

- Building partnerships with NGOs and the private sector to enhance health efforts.
- Improving monitoring and inspection systems to ensure food and water safety.
- Providing training programs for municipal employees on health crisis management.

This guide also recommends comprehensive guidelines on the role of municipalities in preparing for and responding to health risks. These guidelines should systematically guide municipal work, contribute to the integration of national efforts, and enhance effective partnerships that ensure the availability of resources. These guidelines could include the following key areas:

- Chapter One – Introduction: The introduction defines the health risks that affect the health of individuals and communities. It also highlights the important role of municipalities in addressing these risks, considering Jordan's unique characteristics, such as increasing population density, increasing refugee numbers, environmental changes, and other factors.
- Chapter Two – Operational Framework: This includes institutional planning, including the formation of specialized working groups, the development of health emergency plans based on multiple scenarios, and the definition of roles and responsibilities for all relevant stakeholders. This chapter may also include a summary of current health legislation and policies, linking them to national priorities, strategies, and plans.
- Chapter Three – Preventive Measures: These measures include public hygiene, represented by programs for safe waste collection and treatment, and raising public awareness of best practices for waste management, such as waste sorting and recycling and using it as fertilizer in agricultural areas. This chapter may also include water and sanitation monitoring programs in cooperation with relevant authorities, as well as epidemic control through vaccination campaigns and the control of disease vectors such as mosquitoes.
- Chapter Four – Health Emergency Management: This chapter may include early warning through the development of community health surveillance systems to report potential disease outbreaks, analyze health data, and identify critical hotspots in cooperation with relevant authorities. It may also include immediate response through the establishment of health emergency operations centers within municipalities (when necessary), and support and assistance in providing emergency healthcare services such as mobile clinics.
- Chapter Five – Awareness and Capacity Building: This chapter may include awareness programs targeting schools, markets, and local communities, and protocols for using media to disseminate accurate information on disease prevention and safety measures. It may also include training programs for municipal staff on health crisis management, and the organization of specialized workshops in cooperation with the Ministry of Health and relevant international bodies.
- Chapter Six – Resource Mobilization and Management: This chapter explores the allocation of local budgets directed towards health risk management and the search for

funding opportunities from international aid to support health projects.

- Chapter Seven - Strengthening Partnerships: This chapter includes pre-established coordination mechanisms with the Ministry of Health, Civil Defense, Public Security, and other relevant authorities to ensure a unified response, as well as strengthening the role of non-governmental organizations and local associations in supporting the health response. Additionally, the chapter may include guidance on leveraging programs from international organizations, such as the World Health Organization (WHO) and UNICEF, to support health-related projects.

2.8 Refugee Crises

Political and economic stability, the availability of the elements necessary for a decent life in Jordan, and the welcoming nature of Jordanian society are important factors that have prompted those affected by security and political unrest and wars from neighbouring countries to seek a safe haven in Jordan. This is in addition to the close ties with neighbouring countries, particularly in terms of economy and trade, and even social ties, kinship, and intermarriage between Jordanians and residents of neighbouring countries. Despite the numerous challenges Jordan has faced as a result of receiving millions of refugees over the past decades, Jordan has consistently been committed to fulfilling its humanitarian and Arab duties in this regard, continuing to support these refugees and providing them with support, protection, and care, despite limited resources, environmental impacts, and security repercussions due to the large, rapid, and successive waves of refugees.

Attention must be given to both direct and indirect costs of asylum. Direct costs include humanitarian and relief aid provided in refugee camps and host communities, as well as field hospitals, medical and therapeutic supplies, and other food aid. Indirect costs include development plans that the country seeks to implement, either directly in refugee-hosting areas or generally to develop service facilities to enable them to withstand the pressures they face. These include water and electricity projects, sewage networks, and other facilities and services. It must also be noted that refugee response plans must ensure a transition from the emergency phase of dealing with refugees to a phase of recovery from the significant impact of the refugee crisis on Jordan, and then a transition to a phase of ensuring long-term sustainable development. This must be done in a manner that does not impede local development processes and plans in the country in all areas and at all levels.

Municipalities in Jordan have faced significant economic challenges during various refugee crises, particularly those related to high unemployment rates in host communities. Refugees compete with local populations for job opportunities in sectors such as construction, agriculture, and services, as well as increased burdens resulting from the provision of basic services such as water, sanitation, education, and health. Even when international support exists to accommodate refugees, this support is not sustainable due to numerous political, financial, and other factors. Municipalities have also faced social challenges, including societal tensions resulting from competition with local populations over limited resources and job opportunities. Cultural differences stemming from

differences in customs and traditions can lead to misunderstandings between host communities and refugees. Furthermore, the difficulty of integrating refugees into local communities due to legal or cultural restrictions is compounded by the difficulty of integrating refugees into local communities.

Significant health and environmental challenges have also emerged as a result of the number of refugees exceeding the local population in some refugee areas in Jordan (for example, some areas of Mafraq Governorate). This has exacerbated pressure on natural resources (water and energy), weakened municipalities' ability to manage waste effectively, and strained health facilities, rendering them unable to provide adequate care. Additional challenges have also arisen in the fields of education, security, and other essential services. Municipalities in Jordan play a major role in managing the refugee risk through effective planning, improved services, and enhanced community integration. To achieve success in this area, it is essential to cooperate with the central government and specialized international and local organizations to ensure a comprehensive and sustainable response. In this area, municipalities can play an effective role through the following steps:

- **Planning and Management:** By developing local emergency plans to manage refugee-related crises. These plans should be based on a comprehensive assessment of current needs and available capacities to deal with refugees, with a focus on education, health, housing, and sanitation.
- **Enhancing basic services:** This includes improving infrastructure, such as expanding and upgrading sewage networks, water supplies, and energy to accommodate increasing populations, and supporting education and health services in coordination with government agencies and international organizations to support schools and health centers in host communities.
- **Developing green infrastructure projects**, such as water parks, to absorb floodwater, benefiting from the experiences of countries that have developed similar projects.
- **Updating laws and regulations** regulating urban planning in high-risk areas—for example, prohibiting construction within valleys exposed to the risk of flash floods.
- **Managing health risks:** By monitoring public health, such as developing health surveillance systems for early detection and prevention of disease and coordinating the provision of health services that ensure access to refugee and host communities.
- **Promoting community integration:** This can be achieved by developing programs that support both refugees and host communities, including training initiatives, community projects, and job opportunities that promote mutual understanding and cooperation. Additionally, awareness campaigns should be implemented to educate local communities about the role of refugees in society and the importance of solidarity.
- **Cooperation with international and local organizations:** This can be achieved by coordinating funding and aid. Municipalities can act as key partners for humanitarian organizations to coordinate efforts and ensure effective aid distribution. They can also

exchange expertise by leveraging the experiences of other countries and strengthening institutional capacities through international partnerships.

- **Sustainable financing:** This is achieved by managing financial resources based on developing funding strategies to support refugee-related projects and cooperating with donor organizations to secure financial support.

3

Chapter 3: Analysis of the Current Risk Management Practice

3. Analysis of the Current Risk Management Practice

3.1 Current Disaster Risk Management Practices at the National and Local Levels - Challenges and Opportunities for Improvement

3.1.1 The Disaster Risk and Crises Management System in Jordan

The disaster risk and crisis management system in Jordan has a comprehensive framework that aims to enhance the country's capability to confront crises and mitigate their effects, ensure effective response, and achieve rapid recovery. The system consists of a set of policies, procedures, competent authorities, infrastructure, and modern technologies, and seeks to focus on integration and coordination between different sectors.

The National Center for Security and Crises Management is the primary entity responsible for leading and managing risks and crises at the national level. It is responsible for identifying priorities, developing national strategies and plans, and supervising, supporting, and monitoring the performance of local plans and procedures. The Center collaborates with relevant ministries and institutions that have specific roles in crisis response. For example, it works with the Ministry of Health and the Jordan Center For Disease Control during health crises, with the Ministry of Interior in security-related crises, and with the Ministry of Local Administration in coordinating with municipalities and local authorities. The Center also cooperates closely with other relevant institutions, such as the Jordanian Civil Defense Directorate, which spearheads rescue and relief efforts and works on training and implementing emergency plans.

It is also worth noting that the National Center for Security and Crises Management has the authority to manage crises and lead the Crisis Cell at the national level, in accordance with the Center's bylaws. In local crises that do not require exceptional efforts, leadership of the Crisis Cell falls under the administrative governor, in direct coordination with the National Center for Security and Crises Management. Although the risk and crisis management system in Jordan shows cooperation and integration between the institutional, technological, and societal aspects, there are many challenges and obstacles that must be carefully considered to ensure the development of this system by benefiting from global expertise and focusing on enhancing national resilience.

3.1.2 Challenges at the National Level

There are a number of challenges facing Jordan at the national and local levels, represented by the lack of adequate coordination between the parties due to the lack of clarity of roles

responsibilities and the lack of specialized human competencies, in addition to the overlapping administrative procedures that hinder the implementation of actions within the appropriate time. There is also a major challenge in financing risk reduction activities, and changing funding priorities in favor of other sectors, as resources are diverted to other national priorities, which affects the implementation of preventive and rehabilitation plans.

Climate change poses an additional challenge, as it exacerbates extreme weather events such as drought and floods, increasing pressure on water and agricultural resources. Geological and tectonic nature (earthquakes) and geographical terrain are additional factors that increase the likelihood of natural disasters. As for societal challenges, they include increasing population density in major cities, which increases pressure on infrastructure and makes it difficult to implement evacuation and relief plans. This is compounded by a lack of community awareness, as public awareness of how to act in emergencies remains limited in some areas. In addition, humanitarian crises (receiving refugees) place pressure on resources and infrastructure and increase the complexity of crisis management.

3.1.3 Challenges at the Local Level - Municipalities

The challenges at the local level align with national challenges, particularly the weakness of institutional capacities. This is reflected in the lack of administrative structures and human resources trained in crisis management, as well as the unclear distribution of powers due to the absence of clearly defined roles and responsibilities between municipalities and central authorities. Such gaps often lead to overlap and delays in decision-making. Additionally, there is a lack of effective coordination mechanisms—both between municipalities and central institutions, and among municipalities themselves.

The issue of insufficient funding and resources is also evident, as limited budgets hinder the implementation of appropriate procedures for local risk management plans. This shortage primarily affects the availability of essential equipment and infrastructure needed to respond to crises, such as rescue tools and early warning systems.

As for societal challenges, they are represented by the lack of awareness among the population about the roles they can play in mitigating risks or responding to crises and the weak involvement of people and civil society institutions in planning and implementation, and the disparity of capacities between regions - municipalities in rural or less developed areas face greater challenges compared to major cities. Local geology and geography also affect the diversity of risks between municipalities, such as floods, earthquakes, drought, and desertification, which increases the complexity of developing harmonious local plans - the specificity of risks according to the region, environment, and the effects of climate change on them.

3.1.4 Opportunities for Improvement to Enhance Decentralization and Disaster Risk and Crises Management at the Local Level

Municipalities in Jordan can play a pivotal role in enhancing risk and crisis management by adopting a decentralized approach characterized by local planning, capacity building, and

community activation. Despite the significant challenges they face, taking advantage of available opportunities and activating cooperation between different parties will enable municipalities to achieve a better and more flexible response to crises. Opportunities for improvement to enhance decentralization and risk management at the local level will be discussed as the main components in developing this guide, where these opportunities are summarized in the following points:

- **Developing the institutional capacities of municipalities:** by qualifying administrative structures, such as establishing specialized units within municipalities to manage risks and crises, which undertake the preparation and implementation of local plans, and building human capacities by organizing sustained training programs for municipal workers in cooperation with government agencies and international institutions.
- **Enhancing local financing:** by building partnerships with the private sector, such as involving local companies to support municipalities' efforts in managing risks by financing equipment or training and benefiting from international organizations that support enhancing local capacities in disaster and risk management.
- **Empowering municipalities to make decisions:** by delegating powers and granting municipalities more autonomy in making decisions related to risk management in line with their local needs and encouraging financial decentralization to enable municipalities to flexibly manage financial resources to meet crisis management needs.
- **Enhancing community awareness and participation:** by implementing awareness programs for people on how to act during crises and promoting volunteer work.
- **Linking sustainability to local planning:** through sustainable resource management to improve the use of local resources to reduce waste and enhance response efficiency, as well as mainstreaming climate change adaptation measures within local development plans.

3.2 Diagnosing Local Risk Management Capabilities

This chapter is based on a detailed analysis of the questionnaire prepared for this purpose (which includes 60 questions covering six main themes: disaster risk management and awareness, governance and institutional organization, local preparedness, capacity, resources, community communication / engagement, capacity building and training needs, and recovery and resilience).

Based on statistical criteria, the ideal survey result would be a full score of 100%, while the score achieved at the municipal level was approximately 30%. Tables 2 and 3 show a summary of the results at the national level (averaged for all governorates). Figures 11-17 also show the variation between governorates and districts across the different thematic areas.

Chapter 3: Analysis of the Current Risk Management Practice

Governorate	DRM Awareness	Governance & Institutional Organization	Local Readiness, Capacity & Resources	Community Outreach	Capacity Building & Training Needs	Recovery & Resilience
Amman	45.0 %	43.8 %	43.1 %	52.2 %	38.8 %	31.9 %
Zarqa	33.8 %	34.2 %	32.1 %	32.5 %	19.2 %	19.2 %
Irbid	35.0 %	40.9 %	32.1 %	31.6 %	14.8 %	16.8 %
Balqa	42.0 %	46.0 %	44.0 %	44.0 %	36.0 %	30.0 %
Mafraq	36.3 %	31.0 %	31.5 %	35.0 %	12.3 %	17.0 %
Ajloun	32.5 %	41.7 %	36.7 %	31.7 %	25.0 %	20.0 %
Jerash	50.5 %	39.0 %	35.5 %	56.5 %	39.5 %	29.0 %
Madaba	46.9 %	41.3 %	39.4 %	36.9 %	18.8 %	32.5 %
Tafila	44.4 %	32.5 %	48.8 %	35.6 %	16.3 %	16.3 %
Karak	43.0 %	42.5 %	35.5 %	43.5 %	32.3 %	30.5 %
Ma'an	38.5 %	37.0 %	37.5 %	31.5 %	21.0 %	26.0 %
Aqaba	37.0 %	30.0 %	32.5 %	27.0 %	7.0 %	14.0 %
Average	39.7 %	38.0 %	36.1 %	38.3 %	22.6 %	23.0 %

Table 2: Summary of results at the governorate level according to the main topics

Question topic - (Average Rate)	Question	Average Rate - at Local Level
1. Disaster Risk Management and Awareness (39.7 %)	1. Does the municiplity have an up-to-date register of expected risks?	48 %
	2. Have specific risks been identified for your area?	57 %
	3. How frequently are disaster risk assessments conducted?	40 %
	4. Does the municipality collaborate with external experts to identify disaster risks?	16 %
	5. Is there a disaster risk management committee?	29 %
	6. Are citizens effectively alerted about risks and how to act?	58 %
	7. Does the municipality keep a register of previous disasters?	23 %
	8. Does the municipality have strategies, and implementation plans to reduce disaster risks?	38 %
	9. Are early warning systems available and effective?	24 %
	10. Are disaster risk awareness campaigns conducted for citizens?	42 %
2. Governance and Institutional Organization (38 %)	1. Does the municiplity have a formal disaster management plan?	42 %
	2. Are roles and responsibilities for disaster management clearly defined?	45 %
	3. Does the municipality have a dedicated disaster management team?	35 %
	4. Are disaster risk reduction policies integrated into urban planning?	27 %
	5. Is there a budget allocated to administrative structures responsible for dealing with disaster risks?	23 %
	6. Is there coordination between the municipality and national disaster management authorities?	54 %

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2. Governance and Institutional Organization (38 %)	7. Are disaster management roles institutionalized and permanent?	41 %
	8. Are disaster preparedness reports reviewed regularly by relevant ministries and agencies?	47 %
	9. Is there a clear and defined role for partners such as NGOs and the private sector in the risk management and preparedness response process?	23 %
	10. Are disaster response procedures formally reviewed after an incident?	56 %
3. Local Readiness, Capacity and Resources (36.1%)	1. Are emergency shelters available for disaster victims?	32 %
	2. How many emergency vehicles are available?	47 %
	3. Are emergency response equipment available in sufficient quantities?	58 %
	4. Are backup power systems available for critical infrastructure?	23 %
	5. Are there adequate water supplies for emergencies?	39 %
	6. Are evacuation routes mapped and communicated to the public?	14 %
	7. Are hospitals prepared for mass casualty events?	45 %
	8. Does the municipality have an emergency command center (other than a winter emergency center)?	16 %
	9. Are municipal staff trained in emergency response protocols?	35 %
	10. Are critical facilities (such as schools and government offices) resilient to disasters?	50 %
4. Community Outreach (38.3%)	1. Is there a system in place to issue warnings to the public?	34 %
	2. How frequently are awareness and community engagement campaigns (risk workshops with different community groups) implemented?	28 %
	3. Does the municipality collaborate with local leaders to raise awareness?	59 %
	4. Are community groups trained in disaster response?	19 %
	5. Are awareness and educational materials on disaster preparedness available in a clear and understandable manner?	24 %
	6. Are specialized risk management trainings conducted (understanding risks, risk assessment, preparedness and response, etc.)?	21 %
	7. Are vulnerable groups (e.g. women, elderly, and people with disabilities) targeted in communication efforts?	26 %
	8. Is disaster information shared via social media?	60 %
	9. Are there feedback mechanisms for the public to report risks?	54 %
	10. Are local media involved in disaster awareness campaigns?	53 %

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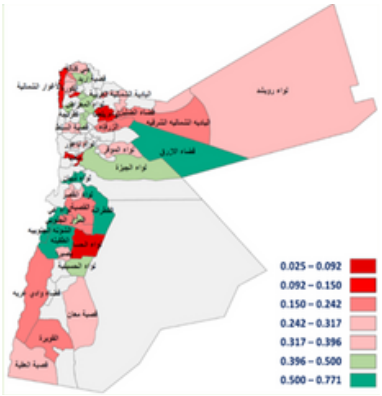
5. Capacity Building and Training Needs (22.6%)	1. Are disaster management training programmes implemented for staff?	24 %
	2. How frequently are simulation exercises conducted?	19 %
	3. Are new staff trained on disaster risk management upon joining?	18 %
	4. Are educational materials distributed to citizens?	19 %
	5. Is disaster response training tailored to specific roles?	17 %
	6. Are financial resources allocated for training?	24 %
	7. Do training programmes include climate change impacts?	23 %
	8. Is local expertise used in disaster training programmes?	29 %
	9. Are external trainers invited for specialized disaster topics?	15 %
	10. Is the effectiveness of the training evaluated after the program?	24 %
6. Recovery and Resilience (23%)	1. Are disaster recovery plans reviewed regularly?	29 %
	2. Is financial support available for recovery efforts?	19 %
	3. Does the municipality collaborate with NGOs in recovery efforts?	22 %
	4. Does the municipality have post-disaster psychological support services?	9%
	5. Is data from previous disasters used to improve recovery plans?	26 %
	6. Are resilience building projects funded by the municipality?	16 %
	7. Is the risk assessment updated after the recovery phase (increase in severity and frequency of hazard, location, priority, impact)?	27 %
	8. Do recovery plans include vulnerable groups (e.g. women, elderly, people with disabilities)?	23%
	9. Are recovery measures evaluated for effectiveness?	21 %
	10. Are lessons learned from previous disasters incorporated into future planning?	39%

Table (3): Summary of results at the national level (average for all governorates) according to the different topics

At District Level



At Governorate Level

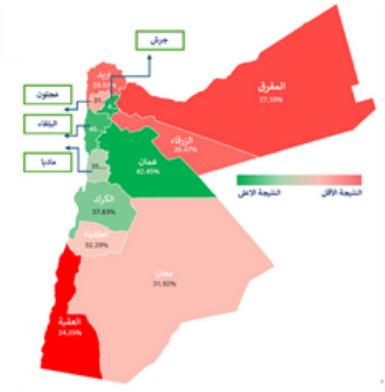


Figure 11: Diagnosis of local risk management capacities for municipalities – all Factors and Indicators

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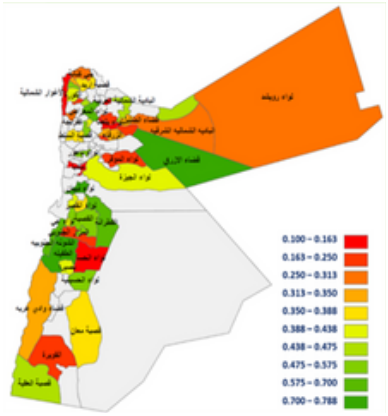
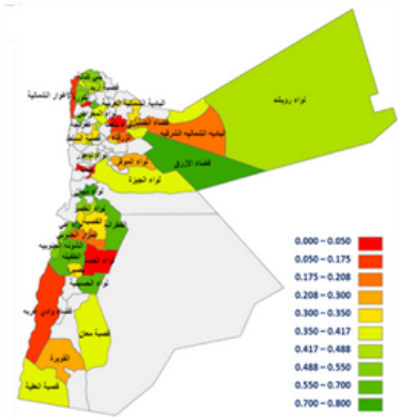
At District Level



At Governorate Level

Figure 12: Diagnosis of local risk management capacities of municipalities - Disaster Risk Management and Awareness

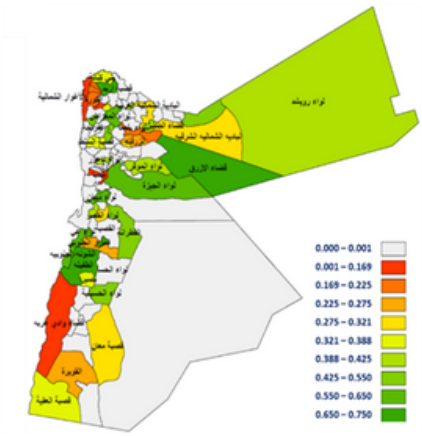
At District Level



At Governorate Level

Figure 13: Diagnosing local risk management capacities of municipalities – Governance and Institutional Organization

At District Level



At Governorate Level

Figure 14: Diagnosing local risk management capacities of municipalities – Local Readiness, Capacity and Resources

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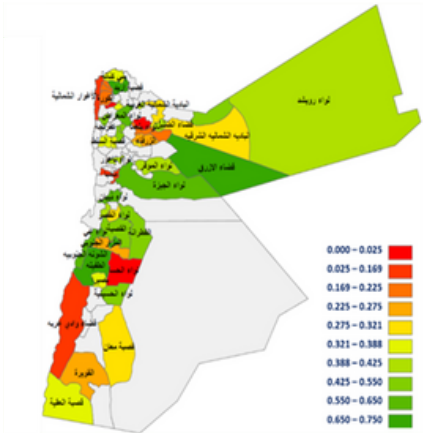
At District Level



At Governorate Level

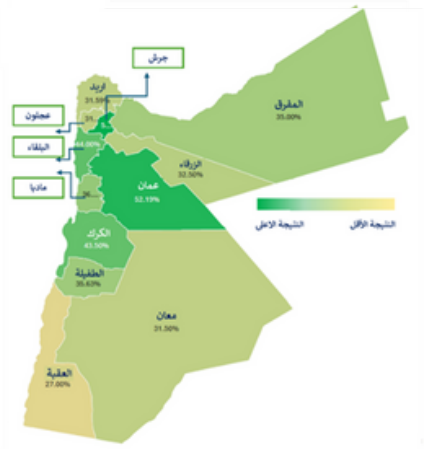
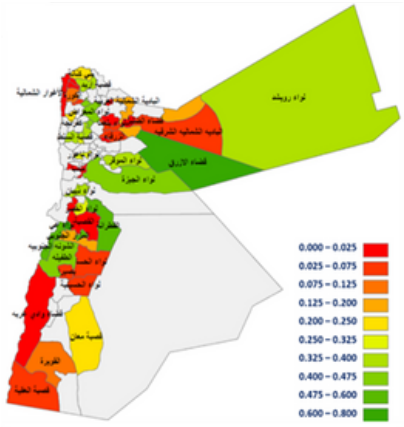


Figure 15: Diagnosing local risk management capacities of municipalities – Community Outreach

At District Level



At Governorate Level

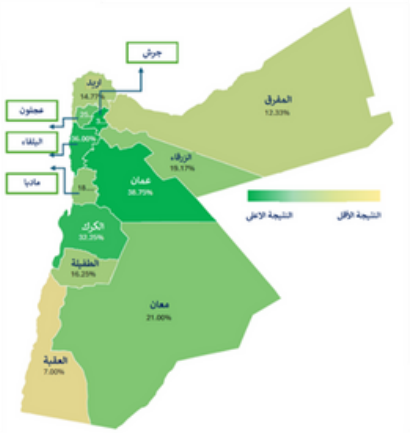
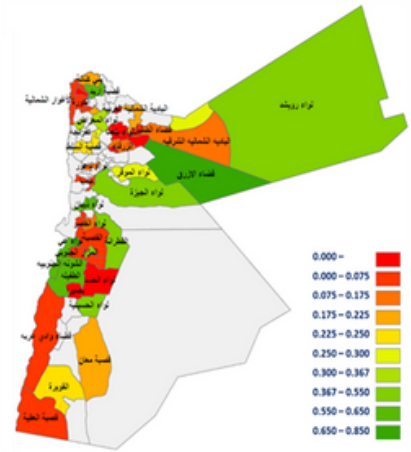


Figure 16: Diagnosis of local risk management capacities of municipalities – Capacity Building and Training Needs

At District Level



At Governorate Level

Figure 17: Diagnosing local risk management capacities of municipalities – Recovery and Resilience

3 Chapter 3: Analysis of the Current Risk Management Practice

The results of this questionnaire are consistent with the expectations of risk and crisis management practitioners at the national and local levels, as they confirm the lack of institutionalization of risk management in Jordan, limited resources, insufficient training and awareness, and failure to benefit from and draw lessons from local and regional experiences). The questionnaire's results generally confirm the following facts:

- It is clear in general that municipalities suffer from a lack of full understanding of the risks threatening their areas, and they lack knowledge of the tools that document these risks in detail (the risk register with its various components), in addition to not assessing risks with the help of specialized experts. There are limited efforts regarding raising awareness of local communities about risks and correct actions. There is no comprehensive strategic planning regarding risk and crisis management, and executive plans and early warning systems are very limited.
- There is no institutionalization of disaster and crisis management in a typical way, as municipalities lack a full understanding of the roles and responsibilities related to risk and crisis management within the municipal cadres, as well as between municipalities and other parties (such as the private sector and civil society organizations). There is also limited coordination between municipalities and other government authorities. There is a great need to support municipalities to prepare clear action plans with performance indicators that help monitor progress in reducing risks and help integrate risk reduction policies into urban planning for cities.
- As for community awareness, there is a significant weakness in producing appropriate awareness materials for citizens, and the use of media and social media is limited when it comes to raising awareness about potential risks and how to act correctly, as no workshops targeting the community are organized, and vulnerable groups are not targeted in an acceptable manner.
- As for training, the efforts of municipalities in this area seem very modest, as appropriate training materials are not developed, and specialized training courses are not held for employees sufficiently, as is evident from the lack of budgets allocated for training, and the lack of use of external parties that can help municipalities in this area, such as donors or academic or research institutions.
- There is no sufficient financial support (or limited support) for municipalities in the recovery phase (after the impact of risks has ended and an attempt is made to return to normal), and in the case of funding, municipalities do not take vulnerable groups (such as women, the elderly, and people with disabilities) into consideration, and psychological support services are not available after the disaster for affected individuals. Municipalities seem unable to cooperate with specialized organizations that support recovery efforts. In general, municipalities do not pay enough attention to the issue of resilience

4

Chapter 4: Institutional Coordination and Governance

4. Institutional Coordination and Governance

Institutional coordination and governance are critical for localizing disaster risk reduction (DRR) at the local level in Jordan. Effective coordination ensures that resources, policies, and stakeholders align to reduce vulnerabilities and enhance resilience. Strong institutional frameworks form the backbone of successful local DRR efforts, ensuring that initiatives are cohesive, inclusive, and sustainable—ultimately strengthening the country's capacity to manage and mitigate disaster risks at the grassroots level.

This guide proposes the establishment of an organizational unit at the level of municipalities and at the ministry of local administration for the purpose of streamlining decision-making processes, enhancing multilevel governance, improving policy implementation, and fostering collaboration among stakeholders. The proposed unit will also play a key role in strengthening preparedness and response, building local capacities, ensuring the sustainability of DRR efforts, and enhancing resilience at the grassroots level. The following is a brief on the proposed unit:

4.1 Establishing an organizational unit (department, section or unit) - responsible for managing disaster risks, emergencies, and crises

4.1.1 Introduction

To ensure the effectiveness and sustainability of disaster risk management, emergency, and crisis management activities in Jordan at the local level, this guide proposes the establishment of an organizational unit within municipalities (a department, section, or unit, depending on the municipality's category). This unit should be linked to the Ministry of Local Administration to ensure coordination between the local and national levels and to promote the decentralization of disaster risk reduction and emergency and crisis management.

The process of establishing organizational units within existing institutional entities presents institutional challenges that must be addressed by clearly defining the structure, tasks, and functional relationships of the units to be created, establishing a policy governing their core operations, and developing action plans that include precise objectives and performance indicators that contribute to achieving the targeted results. This includes a number of practices, the most important of which are:

Coherence and Clarity	Comprehensiveness and Alignment	Control and Governance	Accuracy and Measurement
Forming its structure in line with the basic structures of the organization and accurately defining its tasks and job titles.	Covering all the work, tasks and functions it performs, and their compatibility with the basic activities of the organization.	Controlling its work and governance by providing an integrated policy that defines its frameworks, governance foundations and powers.	Providing measurable goals and interconnected performance indicators within a clear strategy and integrated work plans.

Establishing organizational units with primary mandates for disaster risk reduction and crisis management is essential for addressing various types of risks and mitigating their threats and impacts at the local level. This includes:

- Establishing an organizational structure for the organizational unit, defining its tasks and necessary job titles.
- Developing the unit's work plan at the strategic and operational levels, including its performance indicators.
- Developing a policy governing the unit's work, defining its framework and ensuring its governance.

4.1.2 Methodology and Information Gathering

Emphasizing the importance of information, the process of preparing the organizational structure of the Disaster Risk Reduction and Crisis Management Unit relied on gathering the greatest possible amount of information relevant to the nature of the targeted work, ensuring accuracy and timeliness. It also relied on the participation of stakeholders to determine the requirements for its establishment at the municipal level within the Ministry of Local Administration. The following steps were implemented:

- Reviewing the National Strategy for Disaster Risk Reduction (2023-2030).
- Reviewing the Ministry's Strategic Plan.
- Studying and analyzing the Ministry's approved organizational structure.
- Reviewing the directions and recommendations of the entities managing the project (Ministry of Local Administration, UNDP, and Mercy Corps).
- Reviewing global and regional experiences of similar units in various institutions and countries.
- Holding two workshops for partners, most notably municipalities, to obtain advice and feedback, gather their opinions and directions, and bring their perspectives closer together regarding the foundations of the Disaster Risk Reduction and Crisis Management Unit.
- Representatives of several municipalities of various categories (A, B, and C) from various regions of the country (north, central, and southern) participated in the two workshops. The workshops were held in February 2025 over four days, as follows:

  - The first workshop: (22) participants representing (11) municipalities from the northern and central regions participated, in addition to a representative from the Civil Defense Directorate, representatives from the Ministry of Local Administration, the United Nations Development Program, and Mercy Corps.
  - The second workshop: (15) participants representing (7) municipalities from the southern region participated, in addition to a representative from the Civil Defense Directorate, representatives from the Ministry of Local Administration, the United Nations Development Program, and Mercy Corps.

4.1.3 Workshop Outcomes Based on Participants' Interventions and Suggestions

Challenges facing municipalities, identified by participants:

- The responsibilities placed on municipalities are greater than their available resources.
- The lack of integrated databases and information that identify and classify risks.
- The organizational structure of municipalities does not include an emergency management and risk reduction unit.
- The aging of municipal infrastructure and the weakness of the road network.
- The aging of machinery, a large portion of which is out of service, and the lack of budgets for regular maintenance.
- Weak funding and budgets.
- Sometimes, superfluous appointments cause administrative slack that hinders work, sometimes resulting in the lack of offices for some employees, resulting in weak employee commitment.
- Weak partnerships with private sector institutions.
- Municipalities' limited knowledge of how to cooperate with donors and international financing institutions.
- Lack of precise identification of hotspots within municipalities.
- The vast geographic area of some municipalities.
- Weak institutional culture of positivity and cooperation.
- Limited training opportunities, both quantitatively and qualitatively.
- Weak mechanisms for enhancing local community participation.
- Difficulty in coordination between organizational units within municipalities.
- The difficult geographic and topographical nature of some areas.
- Generally weak awareness among community members regarding risk management.
- Community members' reliance on municipalities primarily compared to their capabilities.
- Citizens' lack of knowledge about proper handling of waterways and culverts.
- Occasional interference by citizens in municipal work due to the elected nature of municipal councils and mayors.
- Occasional citizen neglect and failure to assume responsibility or report risks, malfunctions, etc.

- Resistance to change by local community members.
- Absence of effective communication systems within the ministry or with external parties.
- The lack of effective legislation regarding emergency management units.
- The multiplicity of bodies overseeing municipal operations, which sometimes disrupts work.
- Weak coordination between government agencies located in the geographical areas under municipal jurisdiction.
- Occasional overlap of powers between government institutions.
- Ineffective communication with administrative governors, and sometimes misunderstandings (for example, the administrative governor is sometimes tasked with certain tasks, while the municipality pays the costs from its own budget).
- Weak and sometimes absent shelter facilities.
- Climate change and its impact on the creation of new hotspots have not yet been studied.
- Mayors and leaders sometimes control some organizational units. Therefore, it is suggested that the supervisory body for disaster and crisis risk reduction units be located within the ministry's headquarters.
- The incompatibility of the qualifications of elected members sometimes affects the quality of decisions made by municipalities.
- The election of a mayor sometimes weakens the strength of municipal decisions, detracting from objectivity and accuracy.
- Resistance to change among municipal employees.
- Weak specialized capabilities of municipal employees in the field of disaster and crisis risk reduction.
- Lack of personnel capable of preparing project proposals in municipalities. It is proposed that a consultant be contracted to prepare (10) project proposals over the course of one year, provided that the proposals are collaborative (each proposal includes a project proposal involving several municipalities).

Strategic justifications for the existence of an organizational unit for disaster risk reduction and crisis management within municipalities, according to participants' suggestions:

- Raising the level of professional services provided in the field of disaster and crisis risk assessment.
- Strengthening municipal capacities in disaster and crisis management.
- Providing qualified human resources in the field of disaster risk reduction and crisis management.

- Protecting lives and property and reducing losses.
- Improving coordination, partnership, and accountability among government agencies for disaster risk reduction and crisis management.
- Engaging the local community in systematic and sustainable ways.
- Utilizing technology and information management systems to identify and classify risks and create risk registers.
- Developing comprehensive and sustainable emergency plans that enhance municipalities' capacity to address disaster and crisis risks.
- Reducing future risks and developing effective methods for dealing with the impacts of climate change.
- Raising the preparedness of local communities and municipalities to reduce disaster and crisis risks.
- Systematically unify efforts and reduce haphazard responses to disaster and crisis risks.

Participants' proposed goals for the Disaster Risk Reduction and Crisis Management Unit

- To achieve an advanced level of disaster management and enhance effective response capacity to reduce disaster and crisis risks.
- A smart city that ensures the safety of its citizens and assets, with sustainable services.
- A city capable of dealing with risks and crises.
- To reduce disaster risks towards a safe and sustainable municipality.
- To achieve a minimum level of lives and material losses in the community.
- A safe, secure environment free from risks.

Strategic objectives proposed by participants:

- Develop an integrated information system that contributes to the collection and analysis of all data related to crisis management.
- Train and qualify the unit's human resources to handle crises and enhance preparedness and efficiency.
- Prepare plans (preventive, executive, financial, emergency, recovery, and risk plans) to achieve the unit's objectives and optimize the use of available resources and capabilities.
- Prepare the local community to be able to confront and absorb crises in cooperation with local institutions.

- Qualify human resources and enhance the capabilities of workers in organizational and administrative matters.
- Strengthen and improve infrastructure and services within the municipality and city.
- Enhance the material, human, and financial resources of municipalities.
- Promote economic investment development.
- Raise local community awareness.
- Promote community partnership.
- Enhance the city's preparedness to deal with crises and disasters.

Initiatives proposed by participants to be implemented to achieve the strategic objectives:

- Improving the region's infrastructure.
- Securing the municipality's material and human resources.
- A threat and risk detection system.
- Promoting a culture of community risk awareness for all segments of society, such as the elderly, women, children, and people with special needs.
- Training specialized personnel in municipalities.
- Forming specialized work teams from the local community.
- Selecting partners from all government and private sectors.
- Leveraging technology to develop sustainable relationships between partners to reduce risks and transmit messages to predict risks.
- Developing relationships with government departments.
- Rehabilitating municipal infrastructure (equipment, machinery, supplies).
- Rehabilitating local community infrastructure (roads, sewage, retaining walls, buildings).
- Providing a financial resource to implement the infrastructure improvement process.
  Establish a risk register and statistical data, develop a database, and conduct a geographic survey.
- Provide qualified human resources capable of operating the system.
- Partner with the private sector to develop and support the smart system.
- Partner with the local community to develop a risk plan.
- Hold awareness and training workshops to enhance the capacity of human resources and the local community.

- Attract funding for training and awareness workshops.
- Build specialized leadership teams.
- Exchange expertise internationally with leading countries in crisis management.
- Build partnerships with local and international organizations specializing in crises and disasters.
- Facilitate communication between all sectors and relevant entities to rapidly respond to risks.
- Strengthen digital, information, and construction infrastructure.
- Implement awareness programs for partners.
- Promote innovation and technology.
- Establish a community awareness unit.
- Conduct joint mock exercises to simulate disasters and crises.
- Establish an early warning system and link it to meteorological system/ department.
- Use artificial intelligence to simulate disasters and crises.
- Create a database of volunteers and attract community influencers.
- Develop initiatives involving the local community to reduce risks, such as cleaning valleys and removing dry weeds.
- Form committees to study and identify hotspots within the local community and find appropriate solutions.
- Conduct tree-planting initiatives in areas prone to erosion and landslides.
- Purchase and develop smart technology applications specialized in documentation and data analysis.

4.1.4 Proposed Organizational Structure for the Disaster Risk Reduction and Crisis Management Unit

Based on the outcomes of the workshops, the exchange of information and ideas, the review of relevant institutional, national, and international documents, and the review of best practices outlined in the Guide for Disaster Risk Management Practice in Jordan at the Local Level - Inception Report, efforts were made to develop the organizational structure, describe the functions of the Disaster Risk Reduction and Crisis Management Unit, and specify its job titles.

- The proposed goal of the unit is: A safer, more adaptive, and more resilient society in disaster risk reduction and crisis management.

- The organizational level of the unit and the job title of its head (unit head, department head, section head) are determined in accordance with the approved instructions of the Ministry of Local Administration (unit, department, section), depending on the municipality's category and the nature and extent of the risks it faces.
- To avoid functional and structural stagnation, the Disaster Risk Reduction and Crisis Management Unit does not have any subordinate units.
- Proposed organizational structure diagram and job titles for the unit by municipality category:

Municipality Category	Organizational affiliation	Suggested job titles	
A	Executive Director of the Municipality	Unit Head	1
		Risk Analyst	3
		Communication Specialist	2
		Data Entry	2
B	The executive director of the municipality. In the absence of this position, the reporting shall be to the mayor or his representative or authorized representative.	Unit Head	1
		Risk Analyst	2
		Communication Specialist	1
		Data Entry	1
C	The executive director of the municipality. In the absence of this position, the reporting shall be to the mayor or his representative or authorized representative.	Unit Head	1
		Risk Analyst	1
		Data Entry	1

- Description of the tasks of the Disaster Risk Reduction and Crisis Management Unit

Topic	Tasks
Disaster and Crisis Risk Assessment	◆ Understanding national and international strategies and frameworks related to disaster risk reduction and crisis management. ◆ Identifying the types of disasters and crises likely to occur. ◆ Determining the frequency of disasters and crises. ◆ Classifying disasters and crises. ◆ Identifying and analyzing potential risks and/or threats. ◆ Identifying areas, communities, or groups most at risk. ◆ Identifying human, environmental, social, and economic factors that may increase the severity of the threat. ◆ Creating and regularly updating a risk register. ◆ Identifying mechanisms for engaging partner institutions in risk assessment. ◆ Identifying mechanisms for engaging the local community in risk assessment.

Information Management System	◆ Determine the information management system requirements and necessary data. ◆ Identify partners from relevant organizations that provide or develop information management systems and identify opportunities for collaboration to establish the system. ◆ Determine information requirements in terms of response, resources, and capabilities required. ◆ Develop an integrated information management model linked to the risk register. ◆ Identify the various communication methods needed to enable the process of receiving, collecting, managing, disseminating, and exchanging information.
Disaster Risk Reduction	◆ Planning for disaster and crisis risk management. ◆ Identifying disaster and crisis risk reduction initiatives. ◆ Prioritizing disaster risk reduction initiatives. ◆ Integrating disaster and crisis risk reduction initiatives and their implementation methods in harmony and integration with the roles of organizational units within the municipality's organizational structure and operations. ◆ Implementing and monitoring disaster risk reduction activities. ◆ Defining a unified mechanism for disseminating early warnings. ◆ Identifying ways to avoid or reduce potential impacts related to human losses and injuries, loss of life, property, infrastructure, the environment, and the provision of government services. ◆ Participatory definition of the roles and responsibilities of government agencies and partners in disaster and crisis risk reduction responsibilities. ◆ Coordinating with institutions from various sectors to utilize their facilities and resources to reduce disaster and crisis risks. ◆ Identifying indicators of the success of disaster and crisis risk reduction operations and mechanisms for their evaluation.
Response and Recovery	◆ Identify and implement immediate, integrated response and relief measures. Operate a hazard warning system. ◆ Respond to adverse impacts and implement recovery activities in the affected area, ensuring clear and effective routes for delivering first aid, medicine, food, and shelter. ◆ Establish equipped shelters in the event of disasters and crises. ◆ Build a support network in collaboration with government agencies, private sector organizations, and civil society organizations to reduce disaster risks and respond to emergencies. ◆ Form and train volunteer teams from local community members, defining their roles in the event of disasters or crises. ◆ Develop early warning mechanisms for the most vulnerable groups (women, children, the elderly, and persons with disabilities). ◆ Respond to adverse impacts and implement recovery activities in the most vulnerable areas and groups, especially women, children, the elderly, and persons with disabilities. ◆ Identify and implement individual rehabilitation and infrastructure reconstruction efforts. ◆ Evaluation of disaster risk reduction and crisis management activities.

Training, Awareness, and Communication	◆ Identify specialized training programs for Disaster Risk Reduction and Crisis Management Unit staff and municipality employees in the field of disaster risk reduction and crisis management. ◆ Identify potential training providers and communicate with national training providers to design specialized training and qualification programs. ◆ Identify community awareness programs, their content, and the best methods for implementing them. ◆ Build the capacity of Disaster Risk Reduction and Crisis Management Unit staff to implement training and awareness-raising activities for local community members and partner organizations. ◆ Identify and raise awareness of ways to promote a culture of risk aversion among staff, local community members, and partners. ◆ Form volunteer work teams from local community members and partner organizations and train them to contribute to disaster risk reduction and crisis management efforts. ◆ Utilize social media to disseminate awareness messages and implement awareness campaigns on disaster and crisis risk reduction.
Financing and Resource Management	◆ Initially identify the financial, material, and information resources needed to implement disaster risk reduction and crisis management operations. ◆ Communicate with government agencies to coordinate the identification of required resources and how to coordinate their provision through participatory approaches. ◆ Build partnerships with private sector institutions and civil society organizations to collaborate on resource allocation. ◆ Communicate with funders and international donor institutions, in coordination with the Ministry, to provide funding for disaster and crisis risk reduction activities. ◆ Capacity-building for unit staff in preparing funded project proposals in the field of disaster and crisis risk reduction.

Job description for the proposed job titles to work in the Disaster Risk Reduction and Crisis Management Unit

Job Title	Main Duties	Qualification
Unit Head	◆ Identify and document laws, regulations, policies, and strategies related to risk and crisis management, and ensure their integration into the municipality's plans and disaster and crisis risk reduction activities. ◆ Prepare and update the unit's objectives and design its work plans in coordination with the direct supervisor and determine the annual budget. ◆ Oversee the unit's work, monitor the performance of its employees, and develop it according to work requirements. ◆ Supervise and monitor the implementation of the unit's work plans, ensuring their consistency with previously established plans and the achievement of targets and performance indicators. ◆ Oversee the preparation and updating of databases on risks and crises, the development of the risk register, and the quality of its content.	A minimum of a bachelor's degree in engineering or management.

Unit Head	◆ Oversee the preparation and updating of databases on risks and crises, the development of the risk register, and the quality of its content. ◆ Follow up on the implementation of the risk reduction plan in coordination with the work team and stakeholders inside and outside the municipality. ◆ Evaluate the risk reduction plan, prepare related reports, and present them to the relevant authorities. ◆ Coordinate with relevant local and national authorities regarding disaster and crisis risk reduction efforts. ◆ Oversee the preparation of employee training plans and community awareness programs and activities related to disaster risk reduction and crisis management. ◆ Coordinate with organizational units within the municipality to ensure the integration of disaster and crisis risk reduction efforts and operations. ◆ Evaluate unit performance and report results to direct supervisors.	Completion of specialized training courses in disaster risk reduction and crisis management. At least 10 years of experience, including 5 years of direct experience working in disaster and crisis risk reduction.
Risk Analyst	◆ Prepare and continuously update the risk register, with the authorization of the direct supervisor and in collaboration with relevant stakeholders. ◆ Prepare and continuously update the risk reduction plan, with the authorization of the direct supervisor and in collaboration with relevant stakeholders. ◆ Develop comprehensive disaster recovery plans, establishing indicators, and methods for assessing their effectiveness. ◆ Conduct ongoing risk assessments to identify potential vulnerabilities and threats. ◆ Regularly test and update disaster recovery procedures. ◆ Coordinate with relevant units within the municipality, such as information technology, technical, and support units, to ensure coordination and consistency of recovery plans and ensure the participation of all stakeholders. ◆ Monitor compliance with and adherence to policies and standards for disaster and crisis risk reduction, response, and recovery. ◆ Analyze disasters and crises upon occurrence, document their results, and propose and develop future risk reduction measures. ◆ Participate in disaster recovery training programs, recommend continuous improvement measures, and contribute to the implementation of training and awareness activities implemented by the unit for municipal employees or members of the local community. Document and prepare reports on the unit's activities and results.	A minimum of a bachelor's degree in engineering or management sciences. Completion of specialized training courses in disaster risk reduction and crisis management. At least 7 years of experience, including 3 years of direct experience working in disaster and crisis risk reduction.
Communication Specialist	◆ Preparing an annual plan for communication with local communities, government, and private institutions. ◆ Preparing the content of community awareness campaigns. ◆ Implementing community awareness campaigns. ◆ Networking with government and private institutions and civil society organizations within the municipality's geographic area. ◆ Seeking partnerships with international institutions and funding bodies.	A minimum of a bachelor's degree in public relations, communications, or administrative sciences.

Communication Specialist	◆ Searching for potential funding opportunities. Contributing to the preparation of project proposals. ◆ Implementing the annual communication plan and periodically evaluating its activities. ◆ Preparing media bulletins on disaster and crisis risk reduction. ◆ Monitoring social media platforms, creating pages for the Disaster Risk Reduction and Crisis Management Unit, disseminating awareness messages, and ensuring engagement with local community members. ◆ Documenting success stories of the efforts and activities of the municipality, community institutions, or community members, and presenting and disseminating lessons learned on social media. ◆ Preparing performance reports and submitting them to direct supervisors.	Specialized training courses in communication, public relations, media campaigns, and writing. At least 7 years of experience, including 3 years of direct experience working in disaster and crisis risk reduction.
Administrative	◆ Carry out administrative tasks assigned by the direct supervisor. ◆ Periodically enter organizational unit data into electronic systems and ensure they are updated. ◆ Convert information from paper to electronic format using specialized software. ◆ Contribute to collecting, preparing, and organizing data and information, and developing a search system. ◆ Compile, classify, and verify information accuracy. ◆ Prepare reports as directed by the direct supervisor and complete data retrieval processes if lost. ◆ Process documents and print files. ◆ Ensure proper use of office equipment. ◆ Provide necessary support to risk analysts and communications specialists in all matters related to the organizational unit's work.	A high school diploma as a minimum. Completion of specialized training courses in computer use, management skills, and data entry. At least 5 years of experience, including 2 years of direct administrative experience.

Job description for proposed job titles for the Disaster Risk Reduction and Crisis Management Unit: "To ensure that the unit fulfils these tasks in detail, the guide suggests that the unit prepares an operational manual during the first year that includes its stated tasks and its organizational relationship with the various response agencies – for example (Civil Defense Directorate), and defines how it will deal with municipal preparedness plans. This manual may facilitate the implementation of these tasks and better understand them.

4.1.5 Objectives of the Disaster Risk Reduction and Crisis Management Unit, Proposed Initiatives, and Indicators

- The plan will be implemented over a period of (3) years.
- The proposed initiatives and indicators are indicative and may be modified or further developed by each municipality based on the characteristics of their geographical area, the level of exposure to disasters and crises, and available capabilities and resources.

Chapter 4: Institutional Coordination and Governance

- This plan is classified as strategic, and each municipality must detail it in operational plans appropriate to the nature of the area it serves, its degree of exposure to disaster and crisis risks, and its available capabilities.

First Strategic Objective		Rehabilitate the infrastructure to enhance the municipality's capacity to reduce disaster risks and manage crises.
Strategic indicators for the first strategic objective		**Outcome Indicator:** Improving the municipality's response to disasters and crises by 50% within three years. **Sub-outcome indicators that can be measured within three years:** ◆ Reducing response time to disasters and crises. ◆ Reducing the number of responses due to a reduction in the number of emergencies. ◆ Reducing the number of recurring hazards. ◆ Reducing the number of complaints from community members. ◆ Increasing community satisfaction. ◆ Reducing the number of complaints received from partner organizations or issued by the municipality to partner organizations. ◆ Reducing the number of hotspots.
Strategic Initiatives for the First Strategic Objective		Performance Indicators for Strategic Initiatives
First Initiative	Developing an information management system related to disasters and crises and preparing a risk register	1. 100% completion of the information management system within the first year of the plan. 2. 100% completion of the risk register within the first year of the plan.
Second Initiative	Rehabilitating the municipality's infrastructure	1. Improving the municipality's infrastructure in the field of equipment and machinery by 30% by the end of three years.
Third Initiative	Rehabilitating the infrastructure of the geographical area managed by the municipality	1. Improve community infrastructure (roads, retaining walls) by 15% over three years. 2. Improve infrastructure (rainwater drainage culverts, valley drains) by 30% over the three years. 3. Increase the number of forest trees in areas prone to landslides and slips by 25% over three years.

Second Strategic Objective		Developing human resources and enhancing community awareness
Strategic indicators for the second strategic objective		**Outcome Indicator:** Improving human response to disaster and crisis risks by 50% over three years. **Sub-outcome indicators that can be measured within three years:** ◆ Reducing loss of life by 50%. ◆ Reducing the number of injuries by 50%. ◆ Completion of 100% of disaster risk reduction and crisis management plan activities by assigned staff. ◆ Reducing the number of risks caused by human negligence by 25% over three years. ◆ Increasing the number of risk reports by local community members by 30%.
Strategic Initiatives for the First Strategic Objective		Performance Indicators for Strategic Initiatives
First Initiative	Training and qualifying human resources working in the unit and municipality	1. Training 100% of the Disaster Risk Reduction and Crisis Management Unit staff in relevant topics during the first year of the plan. 2. Qualifying (5) trainers from the unit's staff and partner institutions in the local community in the fields of disaster and crisis risk reduction, public administration and its foundations —particularly those related to disaster risk reduction and crisis management project management—as well as financial management during the first year of the plan. 3. Training 50% of the municipality's staff in the field of disaster and crisis risk reduction during the second and third years of the plan.
Second Initiative	Forming work teams from local community members and working to qualify them	1. Establishing work teams from local community members during the first and second years of the plan (the number will be determined based on the municipality's scope of work and the population of the area it covers). 2. Implement a specialized training program on disaster and crisis risk reduction for members of the community work teams.
Third Initiative	Promoting community awareness	1. Implement (6) awareness campaigns for local community members (two campaigns per year of the plan), with a community satisfaction rate exceeding 80% on the campaign activities.

Third Initiative	Promoting community awareness	2. Establish social media channels (Facebook and Instagram) to broadcast awareness messages at least twice a month, with subscribers exceeding 5% of the total population in the municipality area by the end of the three years of the plan. 3. Achieve a satisfaction rate exceeding 80% of community members on disaster risk reduction and crisis management activities. 4. Involve community members in planning processes for disaster risk reduction and crisis management.
Third Strategic Objective		Enhance resources, funding opportunities, and partnerships.
Strategic indicators for the second strategic objective		**Outcome Indicator:** Improving the efficiency of disaster and crisis risk reduction operations by 25% over the three years of the plan. **Sub-outcome indicators that can be measured within three years:** ◆ Increasing the municipality's financial resources by 5% over three years (excluding the increase in the municipal budget). ◆ Increasing the operational life of equipment and machinery by 10% over three years. ◆ Reducing recurrent expenditure on recurrent risks by 50% over three years. ◆ Reaching zero complaints received from or issued to organizational units within the municipality by the end of the third year of the plan.
Strategic Initiatives for the First Strategic Objective		Performance Indicators for Strategic Initiatives
First Initiative	Improving the efficiency of government communications operations	1. Complete 100% of the map of tasks, roles, and powers of government agencies in the region within the first year of the plan. 2. Reduce complaints issued by the municipality and received by members of the local community or government agencies regarding conflicting and unclear roles and resulting disruptions by 60% within the three years of the plan.
Second Initiative	Enhancing funding opportunities	1. Prepare one project proposal per year and submit it to a donor institution. 2. Obtain funding approval for one of the three proposals during the plan period.
Third Initiative	Building partnerships	1. Improve coordination with government agencies by 60% during the first and second years of the plan.

Third Initiative	Building partnerships	2. Establish one partnership each year with a private sector organization to support the municipality's disaster risk reduction and crisis management activities, or to implement a joint activity. 3. Establish three partnerships with civil society organizations (one each year and at least one joint activity). 4. Submit one joint project proposal to funders in partnership with a local community organization each year. 5. Obtain funding or support for one joint project with a civil society organization within the three years.

4.2 Proposed Policy for the Disaster Risk Reduction and Crisis Management Unit

4.2.1 Policy Objective

To ensure effective planning and implementation of the Disaster Risk Reduction and Crisis Management Unit's work, minimize potential losses, ensure immediate and appropriate assistance to disaster victims, and ensure rapid and effective recovery.

4.2.2 Policy Guiding Principles

The policy is guided by several guiding principles, namely:

- Partnership, institutional cooperation, and community cooperation.
- Shared interests and the promotion of human values.
- Objectivity, transparency, responsiveness, and priorities.
- Inclusiveness (addressing all segments of society, including people with special needs, women, the elderly, and children).

4.2.3 Scope of Policy Application

This policy governs the work of the Disaster Risk Reduction and Crisis Management Unit in the municipality. The various organizational units in the municipality are required to provide continuous and effective support to the unit to ensure its implementation and to reduce the risk of disasters and crises at the local level.

4.2.4 Roles and Responsibilities

To ensure the effective implementation of the Disaster Risk Reduction and Crisis Management Policy, the following roles and responsibilities have been identified:

Roles	Responsibilities
Ministry of Local Administration	◆ Policy approval. ◆ Supporting municipalities in implementing the policy, making the necessary decisions, and monitoring municipalities' compliance with it.
Municipal Council	◆ Review and approve the policy.
Mayor	◆ Approve the policy and support the unit responsible for implementing it. ◆ Monitor organizational units' and employees' compliance with the policy.
Legal Affairs	◆ Review the policy.
Head of the Disaster Risk Reduction and Crisis Management Unit	◆ Review and update the policy periodically. ◆ Ensure compliance with relevant national laws, regulations, and strategies. ◆ Ensure employees are informed of the policy's provisions. ◆ Prepare action plans that reflect the policy's provisions. ◆ Follow up on internal and external suggestions and complaints regarding disaster risk reduction and crisis management and their procedures. ◆ Conduct periodic audits and outline corrective and preventive actions for the unit's work. ◆ Submit recommendations and proposed solutions regarding disaster and crisis risk reduction.
Staff of the Disaster Risk Reduction and Crisis Management Unit	◆ Provide support to the direct supervisor. ◆ Implement the policy requirements governing the unit's work. ◆ Cooperate with municipal employees to implement the policy's provisions.
Organizational Units in the Municipality	◆ Implement the policy and adhere to the associated procedures and standards.

4.2.5 Disaster Risk Reduction and Crisis Management Policy Framework

Considering the National Strategy for Disaster Risk Reduction, the Sendai Framework for Disaster Risk Reduction (2015-2030), and the directives of the Ministry of Local Administration in Jordan, this policy establishes and promotes a set of measures to address the challenges of disaster risk reduction and crisis management. The policy includes three basic principles, each of which encompasses a number of practices, the three principles are:

1. Identifying Disaster and Crisis Risks

This principle stipulates the importance of integrating basic disaster and crisis risk reduction and management practices into municipal plans and activities, raising awareness of these practices, and strengthening their governance in the action plans being developed. This principle is achieved through three practices:

Improving the ability to understand disaster and crisis risks at the local and community levels

Municipalities' capacity to reduce disaster risk depends on assessing disaster and crisis risks, exposure levels, and impacts. This enhances their ability to make appropriate preventive decisions to mitigate their impacts. This can be achieved by implementing the following actions:

- Periodically identifying, classifying, analyzing, and assessing disaster and crisis risks.
- Creating, reviewing, and updating risk registers at the local level.
- Establishing a disaster and crisis information management system and completing risk registers.
- Periodically assessing basic infrastructure and ensuring its compliance with design, construction, and safety standards.
- Strengthening communication channels for data and information collection and management.
- Strengthening partnerships to enable municipalities to utilize technology and foster innovation at the local level.
- Engaging the local community in assessing and analyzing disaster and crisis risks.
- Valuing and incorporating traditional knowledge common in local communities—developed through years of accumulated experience in identifying disaster and crisis risks—into modern knowledge systems and advanced technologies.

Raising public awareness of disaster risks

Municipal efforts to reduce disaster risks and manage crises must acknowledge the vital role of society—both individuals and institutions—in mitigating these risks and minimizing their negative impacts. This can be achieved through the following actions:

- Conducting a periodic assessment of the level of community awareness of disaster and crisis risks and ways to reduce their impacts.
- Raising community awareness about disaster and crisis risks and ways to reduce their impacts.
- Developing ongoing communication channels and tools to contribute to spreading the culture of disaster risk reduction and crisis management.
- Involving civil society members, influencers, private sector institutions, the civil society, and the government sector in awareness campaigns on disaster risk reduction and crisis management.

Building municipal, local, and community capacity

Disaster risk reduction and crisis management measures include empowering actors to enhance disaster risk governance. This can be achieved through the following actions:

- Measuring knowledge and skill gaps and assessing the needs of all those working in the field of disaster risk reduction and management.
- Building and strengthening the municipality's capacity in disaster risk reduction and crisis management.
- Building and strengthening the capacity of partner institutions in disaster risk reduction and crisis management.
- Organizing training for human resources in the municipality and partner institutions in disaster risk reduction and crisis management.
- Organizing simulation exercises for specialized response teams in disaster risk reduction and crisis management.

2. Strengthening Institutional Governance for Disaster Risk Reduction and Crisis Management

This principle defines the requirements for building an effective institutional system as an enabler for implementing disaster risk reduction and crisis management measures. This principle is achieved through four practices:

Enhancing coordination and cooperation among all partners to establish common institutional frameworks.

The disaster and crisis risk reduction process involves the municipality establishing communication channels that ensure shared roles and responsibilities among partners. This can be achieved through implementing the following actions:

- Ongoing consultation to clearly define roles and responsibilities among all partners, in order to prevent overlap, duplication of efforts, and the misallocation of resources that could otherwise support disaster risk reduction and crisis management.
- Forming joint committees representing all partners to ensure access to resources across all partner institutions.
- Developing and implementing disaster risk reduction and crisis management plans in a comprehensive and participatory manner among all partners.
- Adopting clear foundations for assessing partners' roles and contributions and developing necessary improvement measures.
- Forming joint committees representing all partners to ensure access to resources across all partner institutions.
- Developing and implementing disaster risk reduction and crisis management plans in a comprehensive and participatory manner among all partners.
- Adopting clear foundations for assessing partners' roles and contributions and developing necessary improvement measures.

Enhancing coordination and cooperation among partners in disaster risk reduction and crisis management efforts

Disaster risk reduction and crisis management efforts involve multiple partners, and efficient coordination and cooperation among these partners leads to efficient risk reduction. This can be achieved by implementing the following actions:

- Facilitating information sharing at the local level.
- Developing a clear, collaborative response plan to define the interventions of all partners in disaster risk reduction and crisis management.
- Ensuring regular monitoring and flexibility in the exchange of roles among partners.
- Sharing resources to ensure their effective use in disaster and crisis risk reduction, response, and recovery.

It is worth noting that the municipal preparedness plans—developed in parallel with the preparation of this guide through collaboration between the United Nations Development Programme and the Ministry of Local Administration, in coordination with Mercy Corps—play an important role in enhancing coordination between municipalities and partner organizations.

Developing Effective Early Warning Systems

Preparing for and responding to disasters and crises relies on establishing effective early warning systems that focus on reaching individuals and community institutions, providing the necessary mechanisms to improve them, and establishing an effective communication system. This can be achieved through the following actions:

- Rehabilitating infrastructure and adopting the necessary technology for effective preparedness and response to hazards.
- Strengthening early warning systems for all types of disaster risks.
- Establishing proactive communication channels for human resources specialized in disaster risk reduction and crisis management.
- Strengthening the channels and methods for exchanging information necessary for community-based arly warning.
- Establishing joint monitoring mechanisms to collect, analyze, and exchange data and information on potential disasters and crises.
- Paying particular attention to groups at greater risk, such as people with special needs, the elderly, children, and women.

Enhancing Effective Response and Empowerment to Ensure Sustainable Recovery

Preparedness for, response to, and recovery from disasters and crises is based on developing and updating the necessary structures, tools, and capacities. This can be achieved through the implementation of the following actions:

- Continuous monitoring of risks and strengthening reporting and early warning methods.

- Periodically updating all risk reduction and response plans.
- Activating local community participation and developing community-based disaster preparedness plans.
- Improving the effectiveness of mechanisms and resource readiness for effective response and recovery.
- Continuous coordination to ensure the availability of emergency relief supplies.
- Activating disaster risk reduction databases and aligning them with disaster risk data.
- Identifying the material, social, and economic costs of the potential impact of disasters and crises.
- Strengthening partnerships with various sectors to improve environmental, social, and economic recovery processes.
- Implementing recovery processes in a sustainable manner.

3. Enhancing the resilience and responsiveness of various sectors in planning and implementation processes

This principle is based on inclusive planning across all sectors of the local community to reduce potential disaster risks and increase resilience to hazards. This is achieved by integrating disaster and crisis risk reduction processes into development, risk mitigation, and the education system, while improving financing opportunities and maximizing resources. This principle is achieved through four practices:

Integrating disaster risk reduction and management into development

The process of integrating disaster risk reduction and management into development involves sectoral planning, resource allocation, monitoring and evaluation, and all sectors planning their actions and expected performance outcomes in a disaster-risk-aware manner. This can be achieved by implementing the following actions:

- Integrating disaster risk reduction and management into policies, strategies, and plans of various sectors.
- Developing sectoral action plans that are disaster and crisis-aware and developing scenarios for rapid response and recovery.
- Partners across sectors agree to allocate material, financial, and human resources to reduce disaster and crisis risks, strengthen response and recovery capacities, and support long-term sustainability.
- Strengthening partnerships between various public, private, and civil sectors to integrate disaster risk reduction and crisis management.

Addressing the underlying factors of disaster risk

Disasters and crises sometimes involve disruptions in community functioning, resulting in human, material, economic, or environmental losses and impacts. This can be achieved through implementing the following measures:

- Monitoring the enforcement of laws and regulations that contribute to strengthening commitment by community members and institutions.
- Achieving resilience in dealing with disaster risks and continuously improving risk reduction measures.
- Identifying the investment required to enhance disaster risk prevention, mitigation, and resilience.
- Implementing proactive measures to protect community members and institutions.
- Developing and implementing community-based disaster risk reduction and crisis management initiatives.

Integrating Disaster Risk Reduction and Management into the Educational System

Disaster and crisis risk reduction requires knowledge-based communities that actively educate members, especially those enrolled in local educational institutions. This can be achieved through the following measures:

- Considering educational institutions as key partners in the local community.
- Involving educational institutions in disaster risk reduction and crisis management efforts.
- Integrating disaster risk management into school education programs by coordinating with schools, institutes, and universities within the municipality's administrative areas to include student awareness sessions on disaster risk and crisis management in their curricula and activities.
- Promoting student volunteerism and planning ongoing periodic activities in coordination with educational institutions.

Developing financing mechanisms for disaster risk reduction and management at the local level

Disaster risk reduction and crisis management efforts require an effective and comprehensive financing mechanism to raise and allocate the necessary funds. This can be achieved by implementing the following measures:

- Developing guidelines that promote the participation of various sectors in financing disaster risk reduction and crisis management.
- Establish financing tools for disaster risk reduction at the local level.
- Mobilize the efforts of actors and partners to implement disaster risk reduction and crisis management measures at the community level.
- Strengthen the role of the private sector, civil society, NGOs, and local donors in financing disaster risk reduction and crisis management measures.

5

Chapter 5: Integration of Climate Change and Sustainable Development into DRM

5. Integration of Climate Change and Sustainable Development into DRM

5.1 Introduction and Rationale

Integrating climate adaptation and sustainable development into Disaster Risk Management (DRM) at the municipal level in Jordan requires a coordinated and comprehensive approach involving policy alignment, capacity building, community engagement, and resource mobilization, and also links social, economic, and environmental dimensions.

Integrating climate adaptation into DRM at the municipal level not only mitigates risks but also strengthens local governance and community resilience, ensuring Jordan's municipalities can sustainably manage evolving climate challenges. By embedding climate adaptation into DRM, municipalities in Jordan can enhance resilience, reduce vulnerabilities, and contribute to national and global climate goals.

This chapter of the document will include a set of methodologies, specific case studies, and a presentation of some local and global experiences that can be benefited from and developed in line with the general approach of these guidelines.

5.2 Proposed Methodologies and Actions

5.2.1 Policy and Institutional Alignment

- **Review and Update Local Policies:** Municipalities should ensure local DRM plans explicitly address climate adaptation. This includes integrating climate risks into urban planning, infrastructure development, and service delivery, for example aligning with Jordan's National Climate Change Policy to set local targets for greenhouse gas reductions and adaptive capacity building.
- **Institutional Strengthening:** this can be addressed by establishing Climate Adaptation Units within municipal councils to oversee and coordinate adaptation and DRM efforts, and by promoting inter-agency collaboration between local government departments (e.g., urban planning, water management, and public health) and national institutions like the Ministry of Environment and the NCSCM.

5.2.2 Localized Climate Risk Assessments

- **Comprehensive Risk Mapping,** using Geographic Information Systems (GIS) to map flood-prone areas, drought zones, and other climate hazards, and conduct micro-level

vulnerability assessments to identify at-risk populations, such as informal settlements and communities relying on rain-fed agriculture.

- **Community-Based Risk Identification,** engaging local residents in participatory risk assessments to capture indigenous knowledge about climate patterns and vulnerabilities.

5.2.3 Build Municipal Capacity

- **Specialized training programs**, developing and conducting workshops and training courses to build capacity for executive and technical staff in municipalities on topics such as climate-resilient infrastructure, early warning systems, and water resources management. In this area, partnerships with universities and international agencies can be used to provide technical support and training.
- **Knowledge exchange,** by drawing on national and regional experiences to share successful adaptation practices.

5.2.4 Nature-Based Solutions

- **Nature-based adaptation**, for example, implementing green infrastructure projects, promoting agroforestry and terraces in rural municipalities to reduce soil erosion, enhance agricultural resilience and mitigate heat waves.
- **Resilient infrastructure**, through the rehabilitation of such structures so that they are able to reduce flooding caused by heavy rains, such as the construction of drainage channels on roadsides and within tunnels.

5.2.5 Community Engagement

- **Public awareness campaigns**, by organizing and holding campaigns to educate communities about climate risks and adaptive practices. Social media, local radio, and community events can be used to spread awareness about the importance of climate adaptation.
- **Community-led projects**, where communities can be empowered to lead adaptation projects that ensure real and effective partnership building and enhance relevance to local needs.

5.2.6 Infrastructure and Technology integration

- **Climate-resilient infrastructure,** which involves rehabilitating existing infrastructure to better withstand extreme weather events and ensure long-term resilience to climate change.
- **Installing early warning systems,** where local early warning systems for floods and landslides can be used, using SMS and radio networks to alert communities, and mobile phone applications can be developed to provide real-time updates on climate risks.
- **Smart water management,** where sensors and IoT-based systems can be used to monitor

water use and reduce waste in municipal water networks, and benefit from expanding rainwater harvesting systems, especially in rural and arid areas.

5.2.7 Financial Mobilization and Mechanisms

Allocating local budgets, where part of municipal budgets can be allocated to climate adaptation and disaster risk management activities, and supporting activities to achieve the Sustainable Development Goals. Emergency funds can be established for climate-related disasters in this regard.

External financing and building partnerships with donors, by taking advantage of international climate finance opportunities such as the Green Climate Fund and the Adaptation Fund, as well as programs supporting the Sustainable Development Goals, such as the United Nations Development Program and others. Cooperatives can also be encouraged to access small-scale financing for community-led adaptation initiatives.

Developing public-private partnerships to finance adaptive infrastructure projects such as renewable energy facilities or flood barriers.

5.2.8 Monitoring, Evaluation, and Learning

Develop indicators to measure the effectiveness of adaptation strategies, such as reduced flood impacts, improved water availability, progress on achieving the sustainable development goals at the local level or increased public awareness.

Regularly review and update adaptation plans based on monitoring data and community feedback.

Document lessons learned to refine future interventions.

5.3 Examples of Potential Projects

Urban Green Spaces: Developing public parks that also serve as flood retention basins in Amman and Zarqa.

Climate-Resilient Agriculture: Introducing drought-resistant crops and modern irrigation systems in rural municipalities like Mafraq and Irbid.

Wastewater Recycling: Expanding wastewater treatment and reuse in water-scarce areas to support agriculture and urban greenery.

5.4 Examples of implemented/under implementation projects that can be benefited from and built upon

A large number of projects have been implemented—or are still underway—that offer valuable lessons and can be built upon. However, a major challenge is that most related reports are written in English, using highly technical language and excessive detail, which makes them difficult for

municipalities to effectively benefit from. Therefore, this report recommends creating simplified summaries of such documents in accessible language, enabling municipalities to rely on them when developing appropriate policies, strategies, and implementation plans.

One of the most prominent of these projects is the "Clima-Med, Acting for Climate in the South Mediterranean" project (https://www.climamed.eu), which started in 2018, and was planned for 4 years. This project aimed to develop sustainable energy and climate action plans for ten regions in Jordan, namely Al Muwaqqar, Al Russeifa, Al Salt, Al Zarqa, Balaama, Dier Aalla, Maadaba, Serhan, Umm El Jimal, and Al Mafraq. The report covers the following areas: Municipality Description and Vision, Baseline Emission Inventory (BEI), Risk & Vulnerability Assessment, Capacity Building and Local Governance, Mitigation Actions, Adaptation Actions, and Communication (Figure-11). Also, the local climate action plans for the municipalities of Deir Aalla, Al-Ayoun, and Busaira, which were funded by GIZ and implemented by the Ministry of Local Administration and the Ministry of Environment (Figure 12).

Figure 11: Image of a sample of reports issued by the project "Clima-Med, Acting for Climate in the South Mediterranean"

Figure 12: Sample image of local action plans to address climate change for the municipalities of Dier Aalla, Al-Ayoun, and Busaira

6

Chapter 6: Financing Strategy to Support Disaster Risk Reduction Activities at the Local Level in Jordan

6. Financing Strategy to Support Disaster Risk Reduction Activities at the Local Level in Jordan

6.1 Introduction

Disaster risks and their consequences represent a persistent challenge for local communities in Jordan. To mitigate the impacts of these disasters, investing in risk reduction activities has become an urgent necessity. This requires a sustainable financing strategy and financial planning that focuses on increasing the efficient use of resources to address these risks. This strategy relies on collaboration between the government, the private sector, the community, and international organizations supporting resilience and achieving sustainable development.

Developing a financing strategy to support disaster risk reduction activities at the local level in Jordan is critical to ensuring financial sustainability, empowering local communities, enhancing preparedness and resilience, and fostering collaboration among multiple stakeholders. To develop a local financing strategy, the focus will be on diversifying funding sources, building partnerships, and ensuring alignment with local priorities and global disaster risk reduction frameworks.

This strategy specifically aims to build a financing system to support disaster risk reduction activities at the local level, improving institutional and community capacities to respond to disasters, and strengthening local, national, and international partnerships. This strategy also aims to develop a comprehensive and integrated plan for financing local disaster risk reduction activities, considering transparency, cooperation between parties, and diversity of sources.

6.2 Current Situation Analysis

The description of risks at the national level demonstrates the extent to which many areas are vulnerable to the effects of various hazards, such as earthquakes (especially in areas close to the Jordan Transform Fault) and floods (especially in areas with diverse terrain), among others. These impacts could be catastrophic if practical and effective investment is not made in proactive prevention and mitigation measures, as well as recovery measures after the hazard subsides.

Current government funding for these measures is limited and unsustainable (funding relies on government programs with limited allocations). There is limited and difficult access to the required funding at the local level (international funding exists, but it requires many procedures and technical details that municipalities cannot undertake within their current technical capabilities).Furthermore, there is a lack of effective coordination between relevant stakeholders (government, local, private, and community sectors)

Chapter 6: Financing Strategy to Support Disaster Risk Reduction Activities at the Local Level in Jordan

Most municipalities in Jordan lack a clear and practical needs assessment that is based on evaluating potential risks—whether natural, environmental, or industrial—analyzing their impacts, and identifying the material, human, and technical resources required to support prevention, mitigation, and recovery measures. Additionally, many municipalities have limited knowledge of governmental and international funding sources, how to write professional project proposals, how to engage private sector partnerships for financing, or how to tap into local community support. As a result, most of the assistance municipalities receive is limited to emergency aid, with little focus on long-term strategic planning.

6.3 Prioritization

Based on risk assessment and knowledge of the various dimensions of their causes and effects, municipalities must first identify the priorities they wish to address, within a set of different activities that serve each priority. This step is essential and crucial in determining the appropriate funding source, as some government allocations or international funding target specific activities. Therefore, municipalities must easily discuss these needs with appropriate stakeholders. The communities or areas most vulnerable and affected must also be identified. These priorities could include, for example:

- Strengthening disaster-resistant infrastructure, such as rehabilitating roads and bridges to be flood-resistant, improving sewage networks to reduce flood risks, or building earthquake-resistant schools and health facilities, etc.
- Establishing early warning systems, such as installing earthquake and flood monitoring stations, or developing digital applications to send direct warnings.
- Raising local community awareness, such as conducting awareness campaigns for schools and communities, and distributing leaflets and guides on disaster management.
- Training response teams, such as training courses by civil defense teams for volunteers, and practical exercises that simulate potential disasters.

6.4 Diversifying Funding Sources

Municipalities must first identify potential funding sources and work to target these sources to suit their needs within the available support options for various activities. These sources primarily vary between government funding (which can be self-financed from the municipal budget), the private sector, community funding, and partnerships with specialized international organizations.

- **Government funding:** A fixed percentage (for example, 3%) of local municipal revenues can be allocated to support disaster risk reduction projects, or special items can be created in the national budget to support areas most vulnerable to disasters (municipalities must provide scientific and systematic evidence of this). To do this, financial policies must first be reviewed and proposals submitted to relevant authorities. This also requires coordination with the Ministry of Planning and International Cooperation to ensure the integration of risk

reduction activities into national development plans. Municipalities can also work to enhance cooperation between relevant ministries (such as the Ministry of Environment and the Ministry of Water and Irrigation) to ensure the optimal use of resources when implementing projects at the local level.

- **Private sector funding:** Partnerships or memoranda of understanding can be established between municipalities and large companies operating within their jurisdiction to encourage the development of disaster-resilient projects and support risk reduction activities —such as early warning systems—that also benefit these companies. Municipalities can also promote corporate social responsibility (CSR) initiatives, encouraging companies to allocate a portion of their profits to support local risk reduction efforts. To further motivate private sector involvement, municipalities can offer recognition—such as awards—for companies that provide outstanding support to local communities and propose tax exemptions within their jurisdiction as an added incentive.
- **Community funding:** Citizens can be encouraged to make financial and technical contributions to certain preventive and mitigation activities to reduce disaster risks in exchange for a form of community recognition, or through service benefits that the municipality can provide within its jurisdiction and according to pre-agreed criteria. Local events (such as charity marathons) can also be organized to support specific projects. The expertise of civil society organizations can also be leveraged in raising local resources, as some organizations possess distinct technical capabilities to attract appropriate investments in various fields of work.
- **International partnerships:** Building such partnerships focuses on identifying areas of common interest for all international organizations, such as specialized United Nations agencies (UNDP, UNDRR, etc.), international development agencies (such as the Swiss Agency for Development and Cooperation, SDC, JICA, etc.), the World Bank, etc.

These partnerships can take the form of grants, loans, or partially or fully supported implementation projects. This support can be limited to a specific municipality or include more than one municipality (nationally or internationally). It is always recommended that such entities be targeted by more than one municipality (a group of municipalities with common challenges) to maximize resource utilization and demonstrate more comprehensive results on the ground. The greatest challenge for municipalities in this area lies in developing project proposals that adhere to the general guidelines required by each entity, and in presenting the positive outcomes of these projects and the value of their local impact in a manner consistent with the areas of interest of the entities targeted for support. To overcome this challenge, this guide recommends providing specialized training on writing project proposals to attract funding. The Ministry of Local Administration can support this approach by developing a list of targeted donor institutions and entities, organizing periodic meetings with international donors to discuss priorities and challenges, and assisting in providing a specialized team to prepare documents and follow up with donors.

6.5 Strengthening the Legal and Regulatory Framework

In this area, national and local legislation and policies can be reviewed to facilitate the flow of domestic and international funding, simplify procedures for applying for international funding and project approval, and enact legislation that encourages companies to support risk reduction initiatives (for example, allocating a percentage of corporate profits to support risk reduction activities and incentivizing investment in disaster-resilient infrastructure projects). These policies could also include facilitating registration procedures for local associations and institutions working in this field.

6.6 Implementation and Management

It is proposed that this strategy be implemented under the supervision of the Ministry of Local Administration, through the design of financial management mechanisms that ensure transparency and accountability. The proposed financial management mechanisms for disaster risk reduction projects could include the following elements:

- Financial planning: preparing a proactive budget, estimating costs, and identifying funding priorities.
- Financing mechanisms: government funding, private sector partnerships, international funding, reserve funds, disaster insurance, and community mobilization.
- Expenditure management: transparent accounting systems, flexible disbursement procedures, contract and procurement controls, and financial impact assessment.
- Financial oversight and auditing: continuous monitoring and evaluation, internal and external auditing, and anti-corruption systems.
- Integration with national policies: linking to development strategies and coordination among relevant stakeholders.

Based on these proposed mechanisms, the guidelines recommend establishing a dedicated fund to manage funding associated with risk reduction activities (particularly when funding targets a group of municipalities, or specific, joint activities between municipalities that are implemented according to priority).

The proposed functions of the fund include coordinating with local and international entities, receiving and managing funding from various sources, financing priority projects based on specific criteria, supporting project implementation, collecting data, and providing periodic reports to the local community and partners. The fund must be managed with a high level of transparency, with a clear system for monitoring and evaluating the use of resources. Efforts should be made to reduce bureaucracy and streamline approval processes, enabling municipalities to access donor support more easily while ensuring oversight bodies are informed in advance of planned expenditures. An oversight committee—comprising representatives from government agencies, civil society, the private sector, and donor organizations—can play a key role in monitoring and evaluating the

fund's financial performance. This committee should submit regular reports to donors and the public. This fund can be leveraged by allocating a financial reserve within the fund to deal with unexpected crises. Emergency plans should also be developed for the fund in the event of funding shortages or sudden crises. A simplified proposed action plan could include the following basic phases:

- **Phase 1:** Official approvals to establish the fund and develop necessary policies – 6 months
- **Phase 2:** Launching funding campaigns, building partnerships, and building technical capacities – 6 months
- **Phase 3:** Preparing a set of funding proposals for a package of projects (based on priority) – 6 months
- **Phase 4:** Obtaining approvals from donors and commencing implementation of the first phase of projects – 18 months
- **Evaluation, monitoring, and updating phase – on an ongoing basis:** This involves developing performance indicators to assess the effectiveness of projects and funding (for example, the number of funded and implemented projects, the percentage of funding increase, the level of local community participation and satisfaction, etc.), and using digital technologies (such as geographic information systems (GIS) to identify beneficiary areas and the significance of results on the ground. This phase should also include the publication of periodic reports covering progress, challenges, and improvement plans, as well as the publication of summaries directed at the local community to enhance trust and participation. Accordingly, the strategy and action plan are updated based on an assessment of actual impact.

6.7 Important Consideration

It is proposed that this strategy be implemented under the supervision of the Ministry of Local Administration, through the design of financial management mechanisms that ensure transparency and accountability. The proposed financial management mechanisms for disaster risk reduction projects could include the following elements:

- When submitting project proposals, it is preferable to link disaster risk management and crisis management to related topics that attract the interest of international donors. These topics include linking them to the achievement of Sustainable Development Goals (SDGs), such as Goal 13 (Climate Action), climate change adaptation, women's empowerment, increased community participation, and cooperation with the private sector, among others.
- Project proposals should be based on scientific feasibility studies that demonstrate social and economic impact, linking results to national and institutional priorities, and contributing to the achievement of development goals.

- Proposals should preferably be submitted by a group of municipalities (within a single region or within shared priorities), as this demonstrates results on the ground more clearly and effectively and encourages joint action and integrated efforts.
- The technical capacity of municipal staff in writing project proposals should be enhanced, especially for employees working in fundraising, management, and advocacy units. Training programs can be developed in this regard in partnership with international organizations such as USAID, the United Nations Development Programme (UNDP), and others.
- It is recommended to organize periodic conferences or workshops to attract donor interest and clarify the national priorities they are working on. Public-private cooperation forums can also be established to identify areas of partnership.
- To ensure the effectiveness of the adopted funding strategy, it is recommended to begin with small steps—such as implementing pilot projects in specific areas to test financing models and implementation mechanisms. This should be followed by continuous documentation of all project phases, both to serve as a reference for donors and to build trust within the local community. Once the initial phase proves successful, the scope of projects can be gradually expanded to cover additional areas.
- As part of community contributions to support municipalities, specialists and experts residing within municipal areas can be sought out and invited to contribute technical expertise and knowledge and contribute to strengthening municipal capacities, in exchange for some form of moral honor or recognition for their efforts.

6.8 Examples of some supporting entities in the field of risk and crisis management – areas of support and projects

There are many donor and development entities that contribute to supporting risk reduction and resilience-building activities at the local and municipal levels in Jordan. Below is an analysis of the most prominent of these entities and some of the projects they funded:

6.8.1 United Nations Development Programme (UNDP) in Jordan

https://www.undp.org/jordan

Overview and Areas of Support

The United Nations Development Programme (UNDP) in Jordan provides technical and financial support through knowledge and expertise transfer, as well as financial and technical assistance, to improve the lives and empower local communities and enhance livelihoods. UNDP Jordan works closely with the Jordanian government, non-governmental organizations, and the private sector to meet the needs of citizens. Through its implementation of numerous relevant projects, UNDP Jordan is a key partner in promoting sustainable development and disaster risk reduction in Jordan. The program seeks to build the capacity of local communities and improve

their preparedness to respond to crises. Over the past two decades, the program has generously provided tens of millions of dollars to implement a range of pioneering projects across Jordan. These projects focused on helping Jordan achieve its development goals and strategies in several key sectors, particularly in the areas of promoting good governance, supporting institutional and community capacity building, climate change adaptation, disaster risk reduction, and crisis management. Below are some of the notable projects the program has implemented/participated in:

Supporting National Capacity Building for Seismic Risk Reduction in Amman, Jordan (2009)

This project aimed to propose an institutional and legal framework for an effective disaster risk management system and to integrate disaster risk management into governance, business, and economic operations in the city. To this end, the project focused primarily on characterizing the natural hazards of Amman, with an emphasis on assessing earthquake risks. Based on these findings, a master plan for disaster risk reduction for Amman was developed, along with a training and awareness program to serve this framework.

Supporting National Capacity Building for Seismic Risk Reduction in the Aqaba Special Economic Zone Authority (ASEZA) in Jordan (2011)

This project was built on the success of the previous project. Its objective was to propose an institutional and legal framework for an effective disaster risk management system in the Aqaba region, institutionalize disaster risk reduction within the Aqaba Special Economic Zone Authority (ASEZA), and establish a Disaster Risk Reduction Unit in the Aqaba Special Economic Zone Authority.

Strengthening Institutional Capacity for Disaster Risk Reduction and Climate Change Integration in Jordan (2013)

This project analyzed potential risks directly related to climate change, such as flash floods, landslides, and rockfalls. It also strengthened technical capacities within the country (such as establishing an early warning system for flash flood risks and an integrated risk assessment in Wadi Musa-Petra, updating the seismic building code, and reinforcing buildings against seismic and other hazards). Voluntary activities against natural hazards were also institutionalized in the Aqaba and Wadi Musa-Petra regions.

National Strategy for Disaster Risk Reduction (2019-2023) & (2023-2030)

This strategy serves as a roadmap for achieving a shared understanding of prevailing disaster risks and assessing the current disaster risk reduction system and its ability to achieve disaster risk reduction objectives. Through this strategy, these objectives were identified by the National Center for Security and Crises Management, as the authority responsible for coordinating national efforts in this field, with the support of national consultations with all relevant national institutions and entities.

Strengthening State Resilience and Improving Disaster and Crisis Risk Management in Jordan (2023 - Ongoing)

The overall objective of the project is to contribute to strengthening the country's resilience by

updating and developing local plans directly related to municipalities and strengthening the capacities of local stakeholders. The project's fourth component focuses on local disaster risk reduction governance, with the expected outcome being empowering municipalities and local actors to assume responsibility for disaster risk management. The project is also expected to contribute to the decentralization of disaster risk reduction work in the country as a primary objective for excellence in disaster risk management practices and paving the way for a more comprehensive future vision that goes beyond the preparedness phase and will also cover the response and recovery phases.

Joint efforts between Mercy Corps and the United Nations Development Programme:

It is important to note that Mercy Corps is working with the United Nations Development Programme (UNDP) within this project to consolidate efforts to enhance disaster risk reduction in Jordan through the localization and implementation of the National Disaster Risk Reduction Strategy (2023-2030). This partnership recognizes the critical role of the National Center for Security and Crises Management and the Ministry of Local Administration in achieving these goals.

6.8.2 Mercy Corps

https://www.mercycorps.org

Overview and Areas of Support

Mercy Corps' mission is to alleviate suffering, poverty, and oppression by helping people build secure, productive, and just communities, working alongside communities to build a more resilient, inclusive future for everyone to share. To address the consequences of conflict and climate change, it brings together bold ideas and the lived experience of people who know their communities best —scaling what works to achieve lasting, transformational change.

Tabeaa Project - Strengthening Climate Resilience in Jordanian Communities (2024 - Ongoing)

Jordan, one of the most water-scarce countries in the world, is facing escalating climate-related disasters that threaten its communities, economy, and environment. Rising temperatures, declining rainfall, and more frequent extreme weather events—particularly flash floods and heatwaves—are straining the country's already limited water resources and disrupting agriculture. In response, Mercy Corps Jordan is implementing Tabeaa: Strengthening Climate Resilience in Jordanian Communities, a project co-funded by the Z Zurich Foundation and the Embassy of Switzerland in Jordan. Tabeaa is part of Mercy Corps' ongoing work under the Zurich Climate Resilience Alliance, which focuses on enhancing resilience to climate hazards globally.

Through Tabeaa, Mercy Corps Jordan is strengthening climate change adaptation (CCA) and disaster risk reduction (DRR) efforts at both national and local levels. Nationally, the project supports the localization and enforcement of climate policies and promotes climate-smart investments to build long-term resilience. At the community level, Tabeaa works in five highly vulnerable locations -Wadi Musa, Azraq, Mlaih, Dieban, and Shobak- implementing locally driven interventions to protect water resources, reduce disaster risks, and support sustainable livelihoods. By integrating national-level policy action with grassroots resilience-building, Tabeaa empowers both institutions and communities to sustainably adapt to Jordan's growing climate challenges.

Building Communities' Flood Resilience in Jordan (2021 – 2023)

The project's key activities include: measuring communities resilience using the FRMC (Flood Resilience Management for Communities) framework, implementing community led interventions to strengthen resilience from floods, building the local communities' capacity, strengthening the local government's policies and practices, and facilitating dialogue for planning early warning systems. The project targeted the Ma'en in Madaba, North Azraq in Zarqa, Wadi Musa in Ma'an, and Swaimah in Balqa.

Inclusive Security and Resilient Youth Project – Mirsah (2022 – 2024)

The project's key activities include: Mirsah adopted a positive youth development approach to psychosocial support interventions with the aim of promoting learning; increasing stability through co-existence and inclusive security; and building the psychosocial resiliency of youth and their families. The project targeted the governorates of Jerash, Zarqa, and Karak.

Livelihoods and Environmental Actions for Development Program (2022 – 2024)

The project's key activities included: the rehabilitation of the water infrastructure in Al-Zubairiyah village; support over 50 small-scale farmers to adopt best practices in water use and agriculture; and enhancement of technical skills and capabilities to facilitate access to employment opportunities, financial markets, and digital marketing services for young people, small-scale farmers, and food producers. The project targeted the areas of Al-Zubairiyah village, Shobak in Ma'an Governorate.

6.8.3 The Swiss Agency for Development and Cooperation

https://www.eda.admin.ch/countries/jordan/en/home/international-cooperation.html

Overview and Areas of Support

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

The Swiss Agency for Development and Cooperation (SDC) is the agency responsible for humanitarian aid and development cooperation within the Swiss Federal Department of Foreign Affairs. It works to promote sustainable development, build capacity, and respond to humanitarian crises in several countries, including Jordan. SDC has been active in Jordan for decades, focusing on providing humanitarian support to refugees, strengthening

local capacities, and implementing projects aimed at improving infrastructure and basic services. The SDC office in Amman also serves as a regional hub covering programs and projects in Jordan and neighboring countries. The Agency's main areas of work include water, disaster risk reduction, emergency relief and reconstruction, climate change, and basic services and livelihoods. Over the past years, SDC has implemented numerous projects in these areas, which have directly contributed to strengthening Jordan's resilience to disaster risks.

In the field of disaster management and risk reduction, the agency has contributed to improving civil defense services by providing specialized training and advanced equipment to the Jordanian Civil Defense to enhance emergency response, as well as strengthening early warning systems by supporting the development of systems to warn communities of disasters such as floods. The agency has also made an effective contribution to supporting refugees and host communities by rehabilitating schools and providing suitable job opportunities. It has also provided cash assistance to refugees to face the challenges of winter, in cooperation with the Red Cross. Currently, the Swiss Agency is supporting the Jordan Resilience Project, which began implementation in early 2023 and is expected to be completed in mid-2025.

National Flood Mapping Programme (2023 – Ongoing)

The Swiss Agency for Development and Cooperation (SDC) is currently working on the National Flood Mapping Programme in partnership with the Ministry of Water and Irrigation, the National Center for Security and Crises Management, and the Ministry of Planning and International Cooperation. The project aims to strengthen the governance framework for flood mapping within an integrated approach to flood risk management. It also aims to raise awareness among key stakeholders about flood risks and to establish a technical unit for flood mapping within the Ministry of Water and Irrigation.

6.8.4 The World Bank in Jordan

https://www.worldbank.org/country/jordan

Overview and Areas of Support

Through its work in Jordan, the World Bank aims to provide more and better opportunities for all. The World Bank program seeks to create jobs and facilitate Jordanians' access to basic services such as education and health, while also supporting the country in addressing the repercussions During the previous Country Partnership Framework (CPF) period (2017-2023), the World Bank portfolio in Jordan expanded to support Jordan's economic reform agenda, promote climate action and resilience, and strengthen its response to and recovery from the COVID-19 pandemic.

In early April 2024, the World Bank Group and the Ministry of Planning and International Cooperation launched the new Country Partnership Framework (CPF) for Jordan for the years 2024-2029. This framework represents a new phase in the close and long-standing partnership between Jordan and the World Bank Group to support green and inclusive growth and enhance job creation, particularly for youth and women. Within this framework, the Bank

will contribute to supporting Jordan in implementing the Economic Modernization Vision, its implementation program, and the public sector modernization roadmap, focusing on three main axes:

- Increasing and improving private sector employment opportunities, focusing on priority reforms that support investment and high-potential sectors.
- Improving human capital outcomes, targeting education reforms linked to future jobs, improving the health sector, and supporting the sustainability of social protection.
- Increasing the resilience and sustainability of resources, including water, energy, and urban development.

The framework also includes contributing to improving government services and procedures and digitizing citizen-oriented services.

Examples of supported activities, projects, and programs

The Swiss Agency for Development and Cooperation (SDC) is currently working on the National Flood Mapping Programme in partnership with the Ministry of Water and Irrigation, the National Center for Security and Crisis Management, and the Ministry of Planning and International Cooperation. The project aims to strengthen the governance framework for flood mapping within an integrated approach to flood risk management. It also aims to raise awareness among key stakeholders about flood risks and to establish a technical unit for flood mapping within the Ministry of Water and Irrigation.

- **Municipal Services and Social Resilience in Urban Areas Project:** This project aims to enhance municipal resilience in the face of crises by supporting the provision of basic services and improving infrastructure. The project's main activities include providing financial and technical support to municipalities to improve services and implement infrastructure projects that enhance municipalities' ability to adapt to crises. The most important results achieved have focused on increasing municipalities' capacity to respond to crises and improving the quality of services provided to citizens.
- **Municipal Services and Social Resilience Project:** This project aims to support Jordanian municipalities affected by the influx of Syrian refugees by improving service delivery and strengthening the local economy and social cohesion. The project's main activities include enhancing municipalities' capacity to provide basic services, supporting local economic development, and promoting social cohesion in host communities. The most important results achieved have focused on improving municipal services for more than 2.8 million beneficiaries, including Syrian refugees, and creating temporary job opportunities for local communities.
- **Climate-Responsive Investment Promotion Project:** This project aims to support the implementation of Jordan's vision for economic modernization by promoting climate-responsive investments and diversifying economic activity. The project's main activities include encouraging climate-sensitive public and private investments and enhancing

environmental sustainability in development projects. The most important results achieved have focused on diversifying the Jordanian economy, increasing sustainable investments, and creating new job opportunities in climate-responsive sectors.

6.8.5 United Nations Office for Disaster Risk Reduction - Regional Office for Arab States (UNDRR-ROAS)

https://www.undrr.org/ar/about-undrr/where-we-work/arab-states

Overview and Areas of Support

The United Nations Regional Office for Disaster Risk Reduction for Arab States was established in 2007 to support Arab countries and communities in building their resilience to disasters. It aims to support the development of disaster risk reduction policies and actions. The Office provides support and assistance in monitoring and tracking achievements towards the implementation of the Sendai Framework and the Arab Strategy for Disaster Risk Reduction 2030, and in developing national and local disaster risk reduction strategies.

The Regional Office for Arab States coordinates and builds partnerships for disaster risk reduction with international and regional governmental organizations, including the League of Arab States and its regional technical organizations. The Office also promotes coordination and innovative partnerships at the regional level with civil society networks, technical expert groups, the private sector, the media, UN agencies, and international organizations to build awareness and knowledge of contextual risks and build risk-informed sustainable development.

The Regional Office's efforts help improve the relevance and understanding of disaster risk reduction in the region and promote the integration of risk reduction into regional and national policies and plans, such as climate change adaptation, sustainable development, urban development, and city planning. The Regional Office organizes the Arab Platform for Disaster Risk Reduction every two years. The first edition was held in Aqaba, Jordan, in 2013, and the most recent edition was held in Kuwait (February 2025).

The Regional Office also oversees the Resilient Cities 2030 campaign. The "Resilient Cities" campaign aims to improve local resilience through advocacy, knowledge and experience sharing, establishing city-to-city learning networks, leveraging technical expertise, linking multiple levels of government, and building partnerships. It is worth noting that the Regional Office for Arab States, in collaboration with the United Nations Development Programme, has contributed to supporting the second edition of the National Strategy for Disaster Risk Reduction (2023-2030) and is also contributing to activities aimed at enhancing resilience at the local level.

6.8.6 United States Agency for International Development (USAID)

https://www.usaid.gov/ar/jordan

Overview and Areas of Support

The United States Agency for International Development (USAID) is a U.S. government agency responsible for providing foreign assistance to promote economic and social development in countries around the world. The agency supports disaster and crisis risk management efforts at the local and national levels, including in the Hashemite Kingdom of Jordan. USAID's support to Jordan in this area includes building and strengthening the capacity of Jordanian institutions specialized in crisis and disaster management, such as the National Center for Security and Crises Management, by providing the necessary training and equipment to improve their preparedness and response. USAID also actively contributes to the development and implementation of numerous national strategies related to risk reduction, in line with the Sendai Framework for Disaster Risk Reduction.

The agency also works to raise community awareness about disaster risks and ways to address them through awareness campaigns and workshops targeting various segments of society, including schools and universities. It contributes to funding projects aimed at enhancing the resilience of infrastructure to disasters, such as improving early warning systems and developing emergency plans for areas most at risk. It also collaborates with international and regional organizations, such as the United Nations Office for Disaster Risk Reduction (UNDRR), to enhance joint efforts in capacity building and disaster planning in Jordan.

Other areas of support provided by the agency include expanding infrastructure and strengthening health systems, improving water and wastewater infrastructure, promoting water conservation, enhancing water security, increasing private sector competitiveness, expanding women's economic participation, and other areas that intersect with enhancing resilience to disaster risks and crisis management.

7

Chapter 7: Global Best Practices and Models in Disaster Risk Management at the Local Level

7.Global Best Practices and Models in Disaster Risk Management at the Local Level

7.1 Global Best Practices

Global best practices in disaster risk management at the local level are based on several key pillars aimed at strengthening the capacity of local communities to prevent, mitigate, respond to, and recover from hazards. These practices include:

7.1.1 Pre-Risk Planning and Assessment

- **Conducting a comprehensive risk assessment:** Using technologies such as geographic information systems (GIS) to identify locations most vulnerable to hazards.
- **Creating hazard maps:** To identify and highlight hazard hotspots and guide local decisions.
- **Integrating hazard management into urban planning:** To ensure that risks are taken into account in infrastructure design and land use planning.

7.1.2 Integrating Climate Change and Sustainable Development into the Disaster Risk Management Process

- **Comprehensive hazard mapping:** Including areas prone to flooding, drought, and other climate hazards. This also includes conducting micro-level vulnerability assessments to identify vulnerable populations, such as informal settlements and communities dependent on rain-fed agriculture.
- **Risk identification through community knowledge:** This is achieved by engaging local residents in participatory risk assessments to gain indigenous knowledge about climate patterns and vulnerabilities.

7.1.3 Use of Technology

- **Early warning systems:** Providing local-level warning systems to warn residents of potential disaster risks.
- **Digital technologies and communication tools:** Such as smartphone applications that provide real-time information about risks.
- **Big data analysis:** To study future risk patterns and enhance decision-making.

7.1.4 Enhancing cooperation and coordination

- **Coordination among stakeholders:** To ensure a clear division of tasks and responsibilities between local government and other institutions.
- **Building partnerships and concluding agreements:** Especially with civil society organizations and international organizations to strengthen local capacities.
- **Sharing knowledge and expertise:** With other regions through joint workshops, visits, and participation in regional and international events and conferences.

7.1.5 Strengthening Local Capacities

- **Training and Education:** Providing specialized training programs for municipal employees and community members to increase knowledge of risk management.
- **Building Volunteer Networks:** Forming teams of trained volunteers who can contribute to rapid response and intervention during crises.
- **Establishing Local Preparedness and Response Centers:** Supporting national efforts and coordinating local disaster management efforts.

7.1.6 Community Engagement

- **Continuous community engagement:** Through awareness campaigns to inform residents of local risks and how to respond.
- **Promoting Participatory Action:** Involving the community in planning and implementing risk management projects.
- **Developing programs specifically for vulnerable groups:** for example, children, women, the elderly, and people with special needs.

7.1.7 Sustainable Local Financing

- **Establishing local emergency funds:** To support response and recovery efforts.
- **Encouraging public-private partnerships:** To provide financial and technical resources.
- **Leveraging international funding:** Especially for programs targeting disaster management.

7.2 Best international experiences that can be learned from:

Given the diversity of geology, geography, and climatic conditions that affect the types and nature of risks around the world, as well as the diversity of cultures and resources, there is no single global model for disaster and crisis risk management that can be adopted by all countries. This guide does not recommend adopting a global or regional model in its entirety, but some practices that may be relevant to the Jordanian context can be learned from, for example:

7.2.1 Japan's Experience in Establishing Community Training Centers and Conducting Periodic Community Drills https://www.jica.go.jp/english/activities/issues/disaster/disaster.html

Japan's experience in establishing community training centers for disasters is a world-leading experience. These centers aim to raise community awareness and improve community response to natural disasters such as earthquakes and storms. This experience involves establishing community training centers distributed throughout the country, including urban and rural areas. These centers simulate various disaster risks such as earthquakes and fires, using modern technologies such as virtual reality. These centers target all segments of society, with a focus on children. They also include evacuation drills that simulate various disaster conditions, workshops on first aid and firefighting, and the preparation of personal and family emergency plans. Participants use real equipment such as fire extinguishers and search and rescue tools and are trained on how to respond immediately to disasters and how to act in the event of infrastructure collapses, such as water or electricity outages. What distinguishes these centers is their effective use of advanced technology, including smartphone applications that provide advice and instructions during crises, and early warning systems connected to community centers for immediate alerts. This experience can be leveraged and applied in Jordan, taking into account the local context, through the following steps:

- Select strategic locations, such as municipalities and cultural centers, to serve as community training centers, and equip them with simple and effective technologies that suit local capabilities.
- Design comprehensive training programs targeting school and university students and civil society organizations. These programs include simulations of disasters that Jordan may face, such as floods and earthquakes.
- Conduct periodic exercises, including neighborhood-level evacuation drills, in cooperation with the Civil Defense and relevant agencies, and involve all community members in the exercises to enhance awareness.
- Enhance public awareness by launching awareness campaigns on media and social media and providing simplified educational materials on disaster management.
- Collaborate with local and international entities to benefit from Japan's expertise through training partnerships and experience-sharing programs and seek technical support from international organizations specializing in disaster management.
- Collaborate with research centers, universities, and schools to encourage scientific research and develop local applications that provide alerts and instructions during disasters.

To ensure the success and sustainability of this initiative, potential challenges—such as limited financial resources, low community awareness, and a shortage of expertise—must be addressed. Proposed solutions include mobilizing funding from international organizations and

aid programs, conducting awareness campaigns and school engagement activities and organizing training-of-trainers sessions in collaboration with Japanese experts. One potential partner for cooperation in this area is the Japan International Cooperation Agency (JICA).

7.2.2 Turkey's Experience in Dealing with Earthquake Risks

https://en.afad.gov.tr/

Turkey is considered a seismically active country and has faced the threat of earthquakes throughout its history. As a result, managing earthquake risks has become deeply integrated into both state policies and societal practices. Over the past decades, Turkey has made significant strides in developing a comprehensive system to address this risk. While earthquakes cannot be prevented or their intensity controlled, their negative impacts have been substantially reduced. This system emphasizes investment in earthquake-resistant infrastructure, active involvement of the private sector and scientific research, and improved preparedness at the municipal and community levels. One of Turkey's most notable achievements in this regard is the enhancement of building regulations to include earthquake-resistance standards, along with the establishment of specialized rapid response units within municipalities. Potential areas of benefit:

- Updating local building standards to ensure disaster-resistance.
- Forming trained local response teams in municipalities.
- Building the capacity of local communities through comprehensive awareness programs and ongoing practical training.

More information about Turkey's experience in managing risks, particularly earthquake risks, can be found on the website of the Disaster and Emergency Management Authority of Turkey (AFAD - Afet ve Acil Durum Yönetimi Başkanlığı).

AFAD is the governmental institution responsible for disaster and emergency management in Turkey. Established in 2009 by a decision of the Turkish government to consolidate the efforts of the various institutions responsible for disaster and emergency management in the country, the institution aims to enhance Turkey's capacity to deal with natural disasters, especially earthquakes. The institution's distinguished efforts are available in several areas that can be effectively leveraged, including:

- **Planning and Disaster Management:** By preparing national disaster and emergency management plans, developing prevention and risk reduction strategies for disasters,

including earthquakes, and providing guidelines for risk assessment and seismic analysis.

- **Preparedness and Response:** By equipping specialized teams for rapid response to disasters, including search and rescue, organizing national drills and simulations to improve the preparedness of government institutions and the community, and establishing emergency management centers and coordination with relevant authorities.
- **Seismic Risk Management:** By conducting geological and engineering studies to identify areas most vulnerable to earthquakes, promoting safe construction according to earthquake-resistant standards, and monitoring seismic activity through a network of monitoring stations.
- **Relief for those affected:** By providing humanitarian aid and relief to affected areas, coordinating temporary shelter efforts for affected populations, and providing psychosocial support to survivors.
- **Awareness and Education:** By spreading awareness about disaster preparedness among citizens and developing educational materials and training programs on safe behavior during and after earthquakes.

7.2.3 The Experience of Dubai/United Arab Emirates in Disaster and Crisis Risk Management and Resilience

The Emirate of Dubai has an advanced system for disaster and crisis risk management, based on up-to-date risk registers and advanced analysis and assessment processes based on the best international standards in this field. It also extensively designs scenarios and exercises to improve response, utilizing the best technological means—simulation, drones, artificial intelligence, and others. Dubai is considered one of the most advanced cities in developing crisis management guidelines that cover all possible scenarios.

Dubai also builds effective partnerships between the public and private sectors to finance risk reduction activities and projects and collaborates with the local community to raise awareness of its role in preparing for and responding to crises. This ensures that the ultimate benefit is reflected across the city as a whole, as a shared benefit across all sectors. Potential areas of benefit:

- Enhancing cooperation between the public and private sectors to finance disaster management projects.
- Developing comprehensive crisis management guides that cover all possible scenarios.
- Preparing a unified national guide for disaster and crisis management.

Dubai was recognized as a model city for resilience, intelligence, and sustainability in 2020 and was recognized as the world's first Resilience Center in 2021 as part of the Resilient Cities 2030 campaign, overseen by the United Nations Office for Disaster Risk Reduction.

8

Chapter 8: Capacity Building Plan

8. Capacity Building Plan

Developing a training program for municipal staff to practice risk reduction activities at the local level is considered crucial to enhance the local technical and administrative capacities of municipal staff to understand and effectively deal with the different risks facing their areas in terms of identifying appropriate preventive and mitigation measures. It also will help mainly in enhancing the understanding of how to translate national and regional policies related to risk management into practical actions on the ground and ensures consistency between national strategies and local practices.

The training program will be proposed in a way that ensures raising the level of preparedness and enhances the mechanism of cooperation and coordination by equipping municipal staff with the skills to cooperate with other actors such as civil defense, health organizations, and non-governmental organizations, and enhances their ability to coordinate between different sectors to ensure a comprehensive and coordinated response. Some training materials will be included that encourage innovation and local adaptation, and help enhance sustainability and resilience, and compliance with international standards by ensuring that local risk management practices are consistent with international standards, such as the Sendai Framework for Disaster Risk Reduction (2015-2030).

Module	Objectives	Goals	Training Hours	Methodology
Basic Concepts of Disaster Risk Management	◆ Introduce participants to the concept of disaster risk management and its importance. ◆ Understand international and national frameworks that support disaster risk reduction	◆ Identify disaster risks and their impact on sustainable development ◆ Components of disaster risk management: prevention, preparedness, response, and recovery ◆ Review of the Sendai Framework for Disaster Risk Reduction and how to apply it locally	5 Training Hours	◆ Theoretical lectures supported by real-life examples ◆ Group discussions
Risk Analysis and Assessment – National and Local Levels	◆ Enhance participants' capacities in analyzing and assessing local risks ◆ Develop participants' skills in preparing risk maps	◆ Methods of collecting and analyzing local data ◆ Risk assessment methodologies: vulnerability and impact analysis ◆ Prepare and use risk maps as a planning tool	10 Training Hours	◆ Theoretical lectures ◆ Practical sessions for risk analysis ◆ Practical exercises for creating risk maps

Local Planning for Disaster Risk Reduction	◆ Enable participants to prepare comprehensive local plans for risk reduction ◆ Enhance their understanding of how to integrate risk reduction into urban and development plans	◆ Design local plans based on risk priorities ◆ Integrate risk reduction into urban planning and land use ◆ Strengthen partnerships with civil society and the private sector	5 Training Hours	◆ Interactive exercises to develop local plans ◆ Presentations on international best practices
Examples and Lessons Learned from the Jordanian and International Context	◆ Providing practical examples to learn from successful experiences ◆ Discussing local challenges and ways to address them	◆ Case studies from Jordanian municipalities (successes and challenges) ◆ International experiences in disaster risk reduction Analyzing lessons learned and applying them locally	10 Training Hours	◆ Case study presentations Interactive discussions
The Role of Municipalities in Building Resilience	◆ Understand the pivotal role of municipalities in building more resilient communities ◆ Develop innovative solutions to improve basic services and reduce vulnerability to disasters	◆ Improve infrastructure to reduce risks (water networks, roads, energy) ◆ Strengthen early warning systems ◆ Develop emergency response plans at the local level	5 Training Hours	◆ Theoretical lectures ◆ Working groups to analyze local needs ◆ Local and international case studies
Communicati on and Community Awareness	◆ Enhance participants' capacities to design and implement effective awareness campaigns ◆ Build their skills in communicating with the local community during crises	◆ Community awareness and education strategies about risks ◆ Establish effective communication networks with local community leaders ◆ Design awareness campaigns that are appropriate to local contexts	5 Training Hours	◆ Theoretical lectures ◆ Working Groups to design awareness campaigns ◆ Practical exercises to develop communication plans
Financing and Resources for Disaster Risk Management	◆ Enable participants to identify sustainable sources of funding ◆ Enhance their understanding of the role of technology in reducing costs and increasing efficiency	◆ Develop plans for allocating human and financial resources ◆ Partnership opportunities with donors and international institutions ◆ Use technology to enhance resource management	5 Training Hours	◆ Theoretical lectures ◆ Working sessions to develop financing strategies