



# Improving climate policy in Jordan



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# **About this Evidence Paper**

This evidence paper presents a comprehensive assessment of Jordan's climate change adaptation and disaster risk reduction landscape. It reviews CCA and DRR policies, identifies gaps and challenges, and provides recommendations for enhancing implementation of these policies. The evidence paper pays particular attention to policies and practices relating to flash floods and heatwaves. These are currently under-represented in Jordan's National Climate Change Policy and National Adaptation Plan, though it is important to note that flash floods have received relatively more attention in terms of policy development and response mechanisms compared to heatwaves.

The evidence paper has been written as a foundational guide for Mercy Corps Jordan's work as it embarks on a new 12-year Zurich Climate Resilience Alliance program to support vulnerable communities in the country to increase resilience and adapt to climate change. The program aims to engage national and local stakeholders and will apply a three-pronged approach to maximizing climate resilience, enhancing the adaptive capacity of Jordanian communities; localizing and enforcing national CCA and DRR policies; and fostering a culture that supports increased investments in climate resilience initiatives.

The evidence paper will also help to inform policy and programmatic decisions taken by the Government of Jordan, United Nations agencies, donors, and international non-government organizations, as well as by Zurich Climate Resilience Alliance partners.

## About the authors

The evidence paper has been developed by Mercy Corps and the London School of Economics through their work as part of the Zurich Climate Resilience Alliance. The report's lead authors are Hala Murad (an independent consultant working on behalf of Mercy Corps), Anna Beswick (London School of Economics) and Nour Darwazeh (Mercy Corps). Debbie Hillier (Mercy Corps) co-authored content on adaptation finance.

In partnership with:





















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## The Zurich Climate Resilience Alliance



The Alliance is a multi-sectoral partnership, powered by the Z Zurich Foundation. The Alliance includes partners from the humanitarian, NGO, research, and private sectors, including Concern Worldwide, the International Federation of the Red Cross and Red Crescent Societies (IFRC), Mercy Corps, Plan International, and Practical Action, as well as research partners: the International Institute for Applied Systems and Analysis (IIASA); the London School of Economics and Political Science; and the Institute for Social and Environmental Transition-International (ISET). The Alliance is focused on enhancing resilience to climate hazards in both rural and urban communities. Formerly named the Zurich Flood Resilience Alliance, it has over a decade of experience in generating evidence on communities' current levels of climate resilience and identifying appropriate solutions. The Alliance aims to achieve its overarching vision by implementing solutions, promoting good practice, influencing policy, and facilitating systemic change.

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# List of abbreviations

CCA	Climate change adaptation
CDD	Civil Defense Directorate
СОР	Conference of the Parties
DRR	Disaster risk reduction
EPL	Environmental Protection Law
EWS	Early warning system
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
GIS	Geographic information system
KII	Key informant interview
MCJ	Mercy Corps Jordan
MoEnv	Ministry of Environment
МоН	Ministry of Health
MRL	Monitoring, review, and learning

NAP	National Adaptation Plan [for climate change]	
MoLA	Ministry of Local Administration	
MoPIC	Ministry of Planning and International Cooperation	
MoWI	Ministry of Water and Irrigation	
NCCC	National Climate Change Committee	
NCCP	National Climate Change Policy	
NCSCM	National Center for Security and Crisis Management	
NDCs	Nationally Determined Contributions	
NFMP	National Flood Mapping Program	
NGO/iNGO	Non-governmental organization/international non-governmental organization	
NSDRR	National Strategy for Disaster Risk Reduction	
PSD	Public Security Directorate	
SDC	Swiss Agency for Development and Cooperation	
TNC	Third National Communication	



# **Executive summary**

Jordan is one of the most water-scarce nations in the world and faces escalating climate change impacts, which will exacerbate drought risk while simultaneously increasing vulnerability to flooding and heatwaves. These impacts pose significant threats to the country's achievement of its development objectives and will have far-reaching implications for Jordan's water resources, agriculture, and overall economic stability. The twin objectives of building resilience to these risks and tackling underlying vulnerabilities unites climate change adaptation (CCA) and disaster risk reduction (DRR) efforts.

In this evidence paper we analyze CCA and DRR policy in Jordan across five action areas: policy; knowledge; organization; stakeholders; and finance. Our analysis shows that the Government of Jordan, alongside national and international stakeholders, have taken important first steps in developing a strong and integrated approach to CCA and DRR, but that significant gaps remain. In response to these findings, we make six overarching recommendations, containing 23 suggested actions that can accelerate progress of CCA and DRR in Jordan.

## Recommendations



#### Increase the focus on floods and heatwaves

Jordan's CCA and DRR policy currently does not adequately address floods and heatwaves. While some measures exist to address flooding, they lack a **comprehensive approach** that matches the scale of the risk. Heatwaves are even less prioritized. Both flash floods and heatwaves have already resulted in serious impacts across Jordan, and they are viewed as a severe concern by the people of Jordan. Urgent action is needed to respond to the risk of flash floods and heatwaves.

#### Suggested actions:

- Strengthen adaptation plans for floods and heatwaves within critical sectors like agriculture, water, and health.
- Ensure that flash floods and heatwaves are prioritized and addressed as part of wider efforts to strengthen national and local CCA and DRR in Jordan. This includes ensuring that they are addressed as part of implementing this evidence paper's recommendations (set out below).



#### Translate national policy into local action

There is a significant gap between national policy and strategy on CCA and DRR and implementation at the local level. Top-down and bottom-up approaches are needed to strengthen local action.

#### Suggested actions:

• Mandate the development of local, integrated CCA and DRR plans. This could be achieved through strengthening the mandate provided by Article 6 of Local Administration Law 22/2021, which already requires municipalities and executive councils to develop preventive and procedural emergency plans. These do not currently integrate CCA and DRR but they could do in the future if the mandate is strengthened. In addition, implementation of the National Adaptation Plan (NAP) and National Climate Change Policy (NCCP) should also prioritize the rapid development of, support to, implementation of, and resourcing of local, integrated CCA and DRR plans and actions.

- Develop new evidence to identify locations, sectors, and communities that are most vulnerable to climate and disaster risks. This evidence should be combined with local plans to identify more detailed policies and actions that target the most vulnerable.
- Improve early warning systems (EWSs) to support CCA and DRR. These should include advanced forecasting for flash floods and extreme temperatures. The design of improved EWSs should consider the last mile first, by involving vulnerable groups from the outset and prioritizing their needs in the initial design and development of the systems. EWSs should be designed to inform both immediate disaster response and long-term adaptation planning, while also generating data-driven insights to support policy decisions and risk-informed development.
- Provide municipalities and governorate councils, local stakeholders, and civil society
  organizations with training on CCA and DRR management and planning. Flood-prone and heatsensitive regions should be prioritized. Training should build on and complement National
  Center for Security and Crisis Management (NCSCM) simulation exercises and training and should
  include training and support on developing CCA and DRR funding proposals.



### Strengthen governance and coordination

Jordan has laid a solid foundation for CCA and DRR, with the Ministry of Environment (MoEnv) and NCSCM making significant progress, as evidenced by good NAP and National Strategy for Disaster Risk Reduction (NSDRR) documents. Implementing these at scale and across sectors represents the next major challenge and will require much stronger collaboration across government agencies and with relevant stakeholders. This is recognized in the NSDRR 2023-2030, which highlights the urgent need to synchronize DRR and climate change policies.

Stronger governance and coordination is needed to support implementation of an integrated approach to CCA and DRR at the national and local levels. Social inclusion should be addressed in the design of these mechanisms.

- Strengthen the integration of CCA and DRR across ministries by enhancing existing coordination mechanisms, including cross-representation of key institutions. A NCSCM representative should be included in the National Climate Change Committee (NCCC) and a MoEnv representative should be included as a member of the NCSCM Board of Directors.
- Activate and operationalize the mandated CCA Technical Advisory Body, as outlined in Article 6 of Climate Change Bylaw 79/2019 and the NAP, with the aim of enhancing collaboration among government agencies, civil society organizations, and international partners to drive progress in CCA and DRR.
- Establish a dedicated national committee to manage floods (similar to the existing Drought Committee). This committee should support work to create a national strategic plan for managing floods and driving implementation. The committee should include representation of experts in CCA and DRR as part of a wider set of technical and strategic expertise. Currently, the National Flood Mapping Project (NFMP) is addressing aspects of this gap; however, its efforts remain project-based and are not yet institutionalized within a formal, permanent national body.
- Leverage existing community organizations and local councils to foster active local
  engagement in shaping and implementing CCA and DRR strategies, including targeted
  capacity building and support to ensure social inclusion factors are fully considered and
  addressed into local planning and decision making. It should also ensure that local knowledge
  and expertise is included in risk assessments and planning processes.





#### Strengthen policy and legislation

Existing legislation does not address CCA and DRR comprehensively. Future opportunities to enhance and update legislation should comprehensively address CCA and DRR and should set out a mandate that enables community-led CCA and DRR initiatives that fully consider social inclusion. Introducing requirements for integrated CCA and DRR risk assessment processes, joint governance structures, and unified financial mechanisms should also be considered.

In addition, CCA and DRR legislative drivers could also be strengthened **by updating existing laws**, as follows:

- Housing and Urban Development Corporation Law 28/1992 establishes a Fund for Insurance against Risks and Damages. The legislation should be updated to confirm that damage caused by floods is covered by the fund.
- Agriculture Law 13/2015 addresses risks and disasters impacting the agricultural sector. It should be updated to include heatwaves.
- Farmers Compensation Bylaw 57/2023 aims to provide compensation in response to a range of climate emergencies. It should be updated to ensure that heatwaves are also covered.
- Local Administration Law 22/2021 Article 6-16 requires municipalities to develop emergency
  plans to manage natural disasters. In practice, these plans focus on winter preparedness. This
  law should be strengthened to require emergency plans to address all aspects of DRR and to
  integrate CCA.



## **Optimize finance**

Optimizing opportunities to access finance and use existing resources effectively will be crucial for enhancing CCA and DRR in Jordan.

- Push for stronger international climate finance commitments on providing emerging markets and developing economies with increased quantity and quality of climate finance.
- Include a clear breakdown of adaptation costs in the updated Nationally Determined Contribution (NDCs), specifying the level of the budget needed to develop and implement local CCA and DRR plans.
- Engage with international donors to advocate for long-term, sustainable CCA and DRR
  initiatives over short-term, and responsive emergency aid. This should include advocating for
  flexible funding mechanisms.
- Consider setting up a country platform for climate finance. Country platforms are recommended by climate finance experts and are being promoted through the G20.<sup>1</sup> The aim is to accelerate and scale up climate finance through providing a proactive forum for government, development finance institutes, the private sector, and donors to identity priorities, harmonize actions, and scale up response. Scoping work could be informed by reviewing platforms already set up in Egypt, Indonesia, Senegal, South Africa, and Vietnam.

<sup>&</sup>lt;sup>1</sup> See for example, the Independent High-Level Expert Group on Climate Finance's report (Bhattacharya et a., 2024) and work in the G20 and Finance in Common summit ('Big plans for a new generation of country platforms', ODI: Think change).



- Share learning from the process of securing international climate finance and use this to inform investment planning for implementing a wider portfolio of projects that address national, sectoral, and local CCA and DRR priorities.
- Use a shared digital platform to record past, present, and future investments in CCA and DRR projects. This would support improved collaboration between international, national, and local partners and could form part of wider monitoring, evaluation, and learning processes.
- Ensure social inclusion is a core criterion in CCA and DRR investments to ensure that the needs and contributions of women, youth, and marginalized groups are prioritized.



#### Develop monitoring, evaluation, and learning systems

Implementing monitoring and evaluation systems will enable Jordan to track progress and support ongoing improvements to CCA and DRR policies and wider integration.

- Develop a comprehensive monitoring and evaluation approach for CCA and DRR. Use the Economic Modernization Vision<sup>9</sup> as an example of best practice and include online indicators, with specific time limits, detailed projects, and sectoral work plans.
- Identify the resources required to implement a monitoring and evaluation system. This includes identifying the staff and skills required at national and local levels. Options for resourcing should be explored, including the potential for collaborations with government agencies, and international and academic partners. The monitoring, review, and learning (MRL) framework currently being developed by the MoEnv is designed to track national priorities outlined in the NAP. It includes indicators for coordinated monitoring provides a strong foundation for adaptation monitoring and evaluation. Integrating DRR within this framework will enhance coordination, tracking, and evidence-based decision-making for resilience-building.



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# 1. Introduction

This evidence paper serves as a comprehensive foundation for guiding CCA and DRR efforts in Jordan. A wide range of CCA and DRR policies and legislation were analyzed, from national strategies to localized implementation. In this paper, particular emphasis is placed on analyzing the implications for managing flash floods and heatwaves, given their increasing severity and impact on communities across the Kingdom.



Section 2

provides a summary of Jordan's changing climate.



Section 3

presents the findings of an in-depth analysis of current policies and their alignment with climate resilience goals.



Section 4

sets out conclusions and recommendations aimed at strengthening CCA and DRR in Jordan.

# 2. Jordan's changing climate

Jordan is one of the most water-scarce nations in the world (UNICEF Jordan and Economist Impact, 2022; Wojnarowsk, 2024) and faces escalating climate change, which will exacerbate drought risks (Al-Addous et al., 2023) while simultaneously increasing vulnerability to flash floods and heatwaves (Red Cross Red Crescent Climate Centre, 2024.). Significant efforts have been made to reduce drought risks, but flash floods and heatwaves have received less attention and now require urgent action.



Wadi Musa, Maan Governorate

Mercy Corps

While some measures exist to address flooding, they lack a comprehensive approach that matches the scale of the risk, often focusing on short-term responses rather than long-term resilience strategies. Recognizing this gap, the Government of Jordan, through the Ministry of Water and Irrigation (MoWI), initiated national efforts in flash flood mitigation in 2018, with funding from SDC, in close collaboration with the NCSCM and relevant ministries under the NFMP. The program aims to establish a national framework for flood risk analysis and mapping within Government of Jordan structures, enhancing the understanding of flood risks, building the capacity of government entities and staff, and producing various flood hazard, risk, and vulnerability maps.

Heatwaves remain even less prioritized, with limited policies and adaptation measures in place, despite their growing impact on public health, infrastructure, and livelihoods. These risks are not well understood and, together with ongoing drought risk, mean that Jordan has a significant gap between the level of action needed to adapt to climate change and current policy and investment. Mercy Corps Jordan (MCJ) is committed to closing this gap by partnering with key stakeholders to

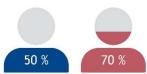


advance strategic understanding, foster innovation, and drive actionable solutions in these underprioritized areas.

The urgency of this work is highlighted by devastating flash floods over the years, which have resulted in fatalities, displacement, and financial losses. Flash floods have severe impacts on local communities, including loss of life, destruction of agricultural land, and significant damage to infrastructure. Additionally, landslides and debris flows, often triggered by prolonged drought followed by intense rainfall and flash flooding, have caused widespread damage in mountainous regions and wadis throughout Jordan.

Over the past decade, heatwaves have also become a significant hazard. On September 4, 2020, Jordan recorded temperatures exceeding 50 degrees Celsius for the first time since climate records began (The Hashemite Kingdom of Jordan, 2023). While high temperatures are common in Jordan, heatwaves are happening more frequently and are more intense, with projections indicating further increases in the coming years. Jordan's vulnerability to heatwaves is exacerbated by weak and exposed infrastructure, unplanned urban expansion, and the proliferation of informal housing. Heatwaves, often referred to as a "silent killer", disproportionately affect the most disadvantaged members of society, including children, the elderly, and individuals with pre-existing health conditions. Women are particularly vulnerable during heatwaves, with studies showing that heat-related mortality rates are higher among women than men. Pregnant women face even greater risks, as prolonged exposure to high temperatures can lead to pregnancy complications, dehydration, and increased maternal health risks. Moreover, heatwaves place significant strain on critical infrastructure, such as water and power systems, increasing the likelihood of power outages and intensifying pressure on already scarce water resources.

An MCJ national survey of over 1,000 community members and leaders conducted as part of the assessment of CCA and DRR policies in Jordan revealed public concern about both flash floods and heatwaves. Nearly 50% of respondents viewed flood risk as severe or very severe, and over 70%



viewed heatwaves as severe or very severe. Higher levels of concern about the risk of heatwaves may be due to the broader geographic impact of heatwaves, which affect people across Jordan, whereas flash floods pose a more localized but highly destructive risk in specific areas.

Climate risks are interconnected with other complex challenges, including conflict, epidemics, and inflation. The impacts of climate change and disasters pose significant threats to Jordan's achievement of its development objectives, and have far-reaching implications for the country's water resources, agriculture, and overall economic stability (Haddad, 2023). Building resilience to these risks and tackling underlying vulnerabilities is a central objective that unites CCA and DRR efforts. Achieving the Sustainable Development Goals in Jordan will depend on embedding resilience-building strategies into development planning and budgeting processes, ensuring that communities and systems are equipped to withstand and adapt to evolving risks, while safeguarding progress toward sustainable development.

# 3. Findings

The findings set out in this section draw on detailed CCA and DRR policy research carried out by MCJ during 2024, with a specific focus on flash floods and heatwaves. This research included desk-based research, interviews with key stakeholders responsible for CCA and DRR policy, focus groups with partners from across government, donors, international non-government organizations (iNGOs) and civil society organizations, and a survey which collected over 1,000 responses from community members and leaders.

In the subsections that follow, the status of CCA and DRR policy in Jordan is summarized across five categories that are aligned with established global best practices for integrating CCA and DRR into policy and planning, they cover: 1) policy; 2) knowledge; 3) organization; 4) stakeholders; 5) finance.

The categories used are loosely based on the framework outlined in Risk-Informed Development: A Strategy Tool for Integrating Disaster Risk Reduction and Climate Change Adaptation into Development (United Nations Development Programme 2020). This structured yet flexible framework ensures that risk-informed development is not treated as an add-on but is instead embedded into governance, decision-making, and investment strategies. By analyzing how climate and disaster risks interact with economic and social systems, it helps identify vulnerabilities, gaps, and opportunities for integration at both national and local levels. It also assesses institutional capacity, financial mechanisms, and stakeholder coordination to ensure that policies, regulations, and funding structures actively support resilience-building. The framework approach is used by governments, development practitioners, and policymakers to enhance institutional resilience, promote policy coherence, and foster cross-sectoral collaboration.



# 3.1 Policy

Effective leadership, combined with strong legislation and policy, is needed to provide a solid foundation for CCA and DRR in Jordan. This section of the evidence paper provides an overview of CCA and DRR leadership at the national and local levels (3.1.1 and 3.1.2) and summarizes the legal, policy, and planning framework (3.1.3).

## 3.1.1 National leadership

Jordan is taking a proactive role in advancing climate action in the Arab region by implementing policies and initiatives that strengthen its climate resilience and adaptation efforts. Its commitment to the Paris Agreement aligns with global climate efforts. Jordan's leadership on this subject is reflected in its proactive translation of international commitments into domestic action. This includes the development of a NCCP and a NAP, which integrate climate considerations into national development strategies, ensuring a structured and strategic approach to mitigation and adaptation.

Support for action to reduce disaster risks is also in place: in 2015 Jordan committed to implementing the Sendai Framework for Disaster Risk Reduction, a voluntary, non-binding 15-year strategy adopted by United Nations member states. Jordan's National Strategy for Disaster Risk Reduction (NSDRR) 2023-2030 is a good example of the progress the country has made toward implementing the Sendai Framework.

The NCCC, composed of 16 secretaries-general and chaired by the Minister of Environment, is responsible for implementing climate change commitments, including in relation to CCA. This includes



responsibility for developing and implementing key climate change strategies, including the NDCs and the NAP. Established under Climate Change Bylaw 79/2019, the NCCC provides a platform for policy and implementation coordination across various sectors. In addition to its strategic planning roles, the NCCC is tasked with approving both for-profit and non-profit projects and activities related to climate change adaptation and mitigation.

Jordan's NCSCM has a dual function, as an executive and advisory body. During non-crisis periods, NCSCM operates primarily as an advisory body and focuses on coordination, sharing knowledge, and generating recommendations. In times of crisis, its mandate shifts to an executive role, overseeing and coordinating the national response. The NCSCM is not considered a first responder but serves as a central body that works to streamline and guide state actions during both peace and crisis periods.

The MoEnv and the NCSCM operate independently in their efforts to develop legislation and policies on CCA and DRR, respectively, with gaps in coordination between the two entities. For instance, the NCSCM Board of Directors does not include a representative from the MoEnv. The NCCC currently lacks representation from the NCSCM, though initiatives are currently underway to address this gap.

There are positive examples of collaboration between Government Ministries working together to deliver CCA and DRR integration aligned with the NAP. For example, the MoEnv, the Ministry of Planning and International Cooperation (MoPIC), and the Ministry of Finance are working together to facilitate a joined-up approach to accessing climate finance.

The Ministry of Agriculture (MoA), the MoWI, and the Ministry of Health (MoH), are engaged through participating in the NCCC, however, the NAP does not explicitly outline their roles in facilitating sector-specific implementation, despite their critical contributions to addressing climate-related risks. Strengthening coordination mechanisms to enhance these ministries' involvement in both policy formulation and execution remains essential for applying a more integrated approach.

The NSDRR assigns leadership for all of the activities included in the 2023-2025 Action Plan to either the NCSCM or the Civil Defense Directorate (CDD), while other government agencies are listed as supporting entities. In some cases, key government agencies are not listed: for example, the MoEnv is not included in the identification of risks and setting priorities at the national and governorate levels. The role of non-government stakeholders in implementing actions is also not defined. This lack of clarity limits the potential for a holistic, multi-sectoral approach to the integration of CCA and DRR. It is worth mentioning that the NSDRR includes an annex which describes the key risks addressed by the activities included in the strategy, and national response plans are developed to address each risk.

## 3.1.2 Local leadership

There is no one-size-fits-all approach to CCA and DRR. While strong national legislation and policy can provide a crucial framework, it is important to recognize that there are big variations in the way that disaster and climate risks affect different communities. Local leadership and actions are needed to identify CCA and DRR responses that take account of the wide variety of challenges that affect different communities.

The NCSCM is responsible for developing national response plans for various hazards, including climate-related risks such as droughts, locust infestations, wildfires, and extreme weather events. These plans are created in coordination with relevant stakeholders based on the nature and severity

of the risk. All relevant entities are expected to develop their own executive plans, outlining their roles and capacities across the preparedness, response, and recovery phases.

There are currently 104 municipalities in Jordan, governed by the Ministry of Local Administration (MoLA). MoLA has a crucial role to play in advancing CCA and DRR at the local level and plays an active role in the NCCC. In a significant step toward strengthening DRR, MoLA has recently designated a focal point within the ministry to spearhead the establishment of dedicated disaster risk management departments across municipalities. This initiative, planned for rollout over the coming year, highlights MoLA's contribution to the national DRR agenda and reinforces the importance of integrating DRR into municipal governance frameworks.

Municipal emergency plans are a key component of DRR at the local level and are already required under national policy. However, analysis indicates that while municipal emergency plans are currently being developed, they focus primarily on winter-related hazards, such as heavy rain and cold weather, rather than addressing broader DRR priorities. These plans also remain largely informal and do not incorporate CCA or other major risks, limiting their effectiveness in building local resilience. Municipal emergency plans should be aligned with the risks identified in the NSDRR and be coordinated with national and executive plans to ensure a unified approach.

The establishment of new disaster risk management departments across all municipalities provides an important opportunity to strengthen DRR planning at the local level and to introduce standard document templates and a shared registry for local plans, to limit duplication of effort and support coordination efforts. To maximize their impact, municipalities should prioritize localized risk assessments, incorporating real-time data on flood-prone and heat-sensitive areas. These assessments should align with national climate goals and inform the development of structured, proactive DRR strategies.

The NCSCM is currently developing risk registers for some risks, in collaboration with MoLA. This is an initial step toward establishing an evidence base for local DRR plans. The pilot risk registers are currently being tested in different locations to evaluate their capacity to generate real-time risk data, marking a significant step toward adopting a consistent and systematic approach to risk assessment which can inform local DRR plans.

Currently, work to support action on CCA and DRR at the local level is primarily driven by NGOs/iNGOs, working in collaboration with communities, municipalities, and other local stakeholders. Feedback from key informant interviews (KIIs) and focus group discussions conducted as part of MCJ's CCA and DRR assessment highlight the value of supporting local leadership and fostering community involvement. This approach can enable a more integrated and holistic response that links CCA, DRR, and broader development goals, resulting in a greater impact at the local level. This perspective is further supported by research and evidence demonstrating the benefits of locally led adaptation efforts, which are often more sustainable, contextually relevant, and capable of addressing the unique vulnerabilities of communities.

"For initiatives to be effective and sustainable, they must be grounded in local contexts and realities, with leadership coming from local actors and institutions" (Soanes et al., 2021)



# 3.1.3 Legal, policy, and planning framework

#### National CCA and DRR legislation

Table 1 below summarizes national climate change (including CCA) and DRR legislation and comments on opportunities to strengthen the current approach

Law	Description	Opportunities to strengthen
Public Security Law 38/1965	The law provides a foundation for action to prepare for disasters, including those triggered by climate risks.  In Jordan, the Public Security Directorate (PSD) serves as the primary law enforcement body responsible for maintaining national security, public order, and emergency response coordination. Historically, security and civil defense functions operated under separate entities, but in 2020, the CDD was formally merged under the PSD as part of a broader government restructuring effort aimed at improving efficiency and resource management.	In practice, civil defense activities in Jordan, led by the CDD, focus on air raid and disaster warnings and emergency medical services. While these are critical components of disaster response, there is a need to expand their scope to encompass broader aspects of CCA and DRR.
Article 4, Environmental Protection Law (EPL) 6/2017	Includes several climate change responsibilities: coordinating national efforts to predict climate change impacts; limiting and mitigating greenhouse gas emissions; securing funding; transferring technology; and preparing emergency plans for environmental disasters.	This could be strengthened by providing more detail on actions required to adapt to climate change. For example, requiring integration with DRR and development, involvement of local communities and monitoring and evaluation.  The Act includes a requirement to prepare and plan for managing environmental disasters, this intersects with the mandate of the NCSCM. A more detailed and explicit listing of the roles and responsibilities of the MoEnv and the NCSCM is necessary to enhance coordination.  This could be strengthened by providing more specific actions required to adapt to climate change, such as integrating CCA with DRR and development, ensuring the involvement of local communities, and incorporating comprehensive monitoring and evaluation mechanisms to track progress and effectiveness.
Climate Change Bylaw 79/2019	Includes a statutory requirement for the development and implementation of the NAP, ensuring that climate change adaptation is formally integrated into national policies and development plans. The bylaw mandates that the government, in coordination with relevant stakeholders, must create a comprehensive framework to address climate vulnerabilities, build resilience, and guide adaptation actions across various sectors, while aligning with global climate commitments.	This could be strengthened by also incorporating the requirement to integrate DRR and development within CCA plans and actions. Additionally, it could support localized efforts on CCA and DRR by mandating the development of action plans at the local level.

#### **Cross-sector legislation**

Aspects of CCA and DRR are addressed through a range of wider legislative drivers, including the Agriculture Law 13/2015, Farmers Compensation Bylaw 57/2023, Housing and Urban Development Corporation Law 28/1992 and Land Use Planning Bylaw 6/2007.

For instance, the Land Use Planning Bylaw addresses construction in areas near valley streams designated as flood zones. The Agriculture Law No. 13 covers risks and disasters impacting the agriculture sector but does not explicitly address flash floods or heatwaves. Similarly, the Housing and Urban Development Corporation Law No. 28 establishes a fund for insurance against risks and damages; however, it lacks specific mention of flash floods, leaving the scope ambiguous.

While flood risk is partially considered in some of these legislative frameworks, heatwaves remain unaddressed. To create a more comprehensive legal foundation for CCA and DRR, any updates to these laws should explicitly incorporate a wider range of climate risks. This includes heatwaves and various forms of flash flooding that are likely to emerge or intensify in the future due to the impacts of climate change.

#### National policies and strategies: strengths and opportunities

#### NAP 2022

The NAP is required under Bylaw 79/2019 on Climate Change and is a key part of Jordan's commitment under the Paris Agreement 2015. The NAP addresses the importance of integrating DRR into climate adaptation strategies to enhance the resilience of communities and reduce vulnerabilities to climate-related hazards. It highlights the need for coordinated efforts to address risks such as floods, droughts, and other extreme weather events, which are becoming more frequent and severe due to climate change. The plan also outlines specific measures to improve EWSs, enhance infrastructure resilience, and promote sustainable land and water management practices to mitigate disaster risks. While the plan focuses on CCA across key sectors—including agriculture, water, health, urban development, biodiversity, ecosystems, coastal areas, cultural and natural heritage, and social and economic sectors—it does not explicitly frame DRR as a central component.

The NAP prioritizes addressing drought and, to a lesser extent, flood risk. References to heatwaves in the NAP are primarily confined to discussions on the health sector's role in addressing heat-related health impacts. This indicates that there is a strategic underestimation of heatwaves as a significant long-term risk factor. This may be linked to the NAP's development timeline. Since the NAP was designed for the 2017-2021 period, its focus was shaped by the Third National Communication (TNC), which identified drought as a more recurrent climate risk at the time. However, climate threats have evolved since then, with heatwaves now posing a growing and more immediate challenge. The Fourth National Communication reflected this shift by placing greater emphasis on heat, incorporating predictions and assessments for extreme temperatures and heatwaves as part of its climate analysis.

#### • The NSDRR 2023-2030

The NSDRR recognizes risks related to climate change, such as flash floods, landslides, drought, and heat, and emphasizes the urgent need to synchronize CCA and DRR policies.

The strategy identifies several actions to strengthen DRR policy:

- Strengthen the legal and institutional framework for DRR
- Increase awareness and knowledge of DRR methods through information sharing, strategic partnerships, education, and training



- Promote and support scientific research on disaster and crisis risk reduction, including assessment and prediction, and reinforce connections between science, policy, and management
- Maintain and improve coordination and collaboration among stakeholders, including women, youth, and vulnerable groups, to sustain DRR efforts
- Integrate DRR and crisis management concepts with relevant national strategies, policies, and priorities, including those related to climate change, water, agriculture, and sustainable development plans and programs.

The NSDRR acknowledges the institutional and financial obstacles to integrating CCA and DRR and states that successful integration will require coordinated institutional frameworks, and detailed budget allocations. The NSDRR also clearly outlines roles and responsibilities that a wide cross-section of government agencies and institutions must play in implementing the strategy.

Most of the activities included in the NSDRR were due to be completed by the end of 2023 and all were due to be completed by October 2024. To date, there is no live or up-to-date tracking available on the status of these activities or the extent to which supporting agencies have been involved in developing and implementing the actions.

The NSDRR does not provide a mechanism for localizing DRR policy through, for example, requiring and identifying resources for local CCA and DRR plans and actions or setting out monitoring and evaluation requirements.

#### NCCP 2023-2050

The NCCP includes a section on climate adaptation which replicates the policies and action included in the NAP. In addition, it sets out timeframes (short-, medium-, and long-term) for these policies and actions, which provide an indication of priorities.

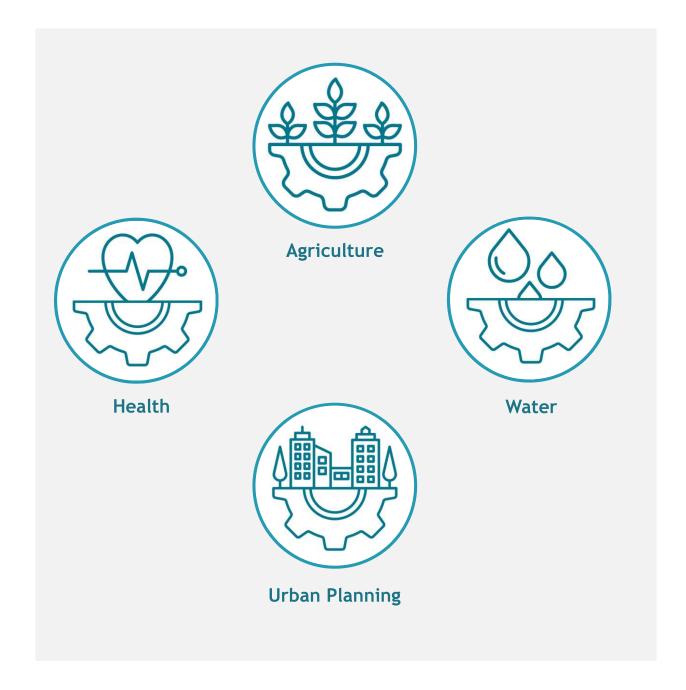
The NCCP specifies that updates are required to the Climate Change Bylaw 97/1999 and the EPL 6/2017 to enhance Jordan's capacity to address climate-related challenges. According to the NCCP, these updates should aim to strengthen governance and institutional mechanisms in two keyways: (1) the establishment of a Technical Advisory Body to support the NCCC; and (2) updating the EPL and all sectoral policies so that they mandate the carrying out of climate change vulnerability assessments. Climate risk and vulnerability assessments across the NAP and NCCP are limited. The NAP considers how climate impacts affect different sectors but does not consider vulnerability. The NAP and NCCP focus mainly on the challenges posed by water scarcity. Flash floods and heatwaves are not covered comprehensively.

These gaps can be attributed to the fact that the Fourth National Communication, developed as part of the same project that produced the NCCP, served as the primary document addressing vulnerability assessments. The purpose and thematic focus of these documents vary, with vulnerability assessments being formally incorporated under the National Communication reports, rather than the NAP and NCCP. However, while the NAP and NCCP referenced the most recent vulnerability assessments available at the time of their development, a more systematic approach to integrating vulnerability considerations into adaptation planning would enhance their effectiveness—particularly in addressing the increasing risks posed by flash floods and heatwaves.

The NAP and NCCP outline a comprehensive and relevant set of high-level adaptation actions, but the MoEnv is currently the sole entity responsible for their implementation and oversight.

#### **Cross-sector policies**

The NAP identifies seven key sectors that are particularly vulnerable to climate change: agriculture, water, urban areas, biodiversity, coastal areas, social and economic development, and health. The natural and cultural heritage sector was subsequently added to this list. The analysis below summarizes the current state of integration of CCA and DRR across the agriculture, water, health, and urban planning sectors, which are particularly relevant to the work of MCJ.







#### **Agriculture**

Jordan's agricultural sector is particularly vulnerable to the impacts of climate change, with immediate and severe consequences for rural populations who depend heavily on this sector for their livelihoods. Much of the design and development of the agricultural content in the NAP was led by the MoEnv, working in collaboration with United Nations agencies, with the MoA only being consulted at a later stage. The position of the MoA within the government has undergone several shifts in recent years. Initially positioned under the MoEnv, the ministry was subsequently moved to other structures before being returned to its previous placement. These changes have created uncertainty regarding the MoA's roles and responsibilities, leading to a lack of clarity about its mandate in shaping agricultural priorities and programs included in the NSDRR and the NAP. The MoA is not listed as a responsible entity for implementing DRR measures in the NSDRR; responsibilities are primarily assigned to the NCSCM and the PSD. This highlights the need for a more clearly defined and explicitly articulated role for the MoA in advancing CCA and DRR, to ensure its contributions are both strategic and impactful.

Jordan has accessed international climate finance for several major climate adaptation programs that focus on addressing drought risk. The MoPIC is the lead government department involved in financing arrangements for these projects, which are overseen by the United Nations Food and Agriculture Organization (FAO) and other United Nations agencies. The role of the MoA in developing and implementing these projects is unclear and this may lead to inefficiencies and duplication of effort, delaying implementation progress.

<u>Table 2</u> summarizes examples of progress on CCA and DRR in the agriculture sector, and opportunities to strengthen this.

#### **Examples of progress**

#### The NSDRR and NAP both identify a range of risks affecting agriculture, including drought, flooding, rising temperatures, soil erosion, and landslides.

- The NAP includes seven targeted programs, most of which address drought risk.
- MoPIC has played a key role in securing international climate finance for several major projects focused on addressing drought risk.
- The MoA has taken initial steps to begin addressing increased climate risks. These include the introduction of Compensation Bylaw for Farmers Affected by Agricultural Risks 57/2023. This covers a range of climaterelated risks—including heavy rains, floods, torrents, snow, hail, drought, frost, storms, and agricultural pests—but does not include heatwaves.
- MoA is collaborating with the Royal Scientific Society on a mobile application that issues warning messages to farmers. This represents a step toward an EWS but is limited by the absence of an information management system, which has also been identified by the NSDRR as a critical issue hindering progress in CCA and DRR.

# Opportunities to strengthen CCA and DRR in agriculture

- The NSDRR does not include actions to manage risks to agriculture. This should be addressed in future strategies.
- Comprehensive, integrated CCA and DRR policies, plans, projects, and investments are needed to increase the climate resilience of the agriculture sector. Drought risks are addressed in part by the NAP, but action is also needed to address risks related to flash floods, heatwaves, landslides, and severe storms, and interactions with non-climate risk factors.
- The MoA has primary responsibility for agricultural policy but is not currently involved in CCA and DRR decision-making processes. For example, the MoA is not assigned responsibilities for implementing DRR measures in the NSDRR. The role of the MoA in developing CCA and DRR policy and large-scale projects should be clarified and strengthened.
- Heatwaves should be added to the list of risks covered by the Compensation Bylaw for Farmers Affected by Agricultural Risks 57/2023.
- A comprehensive information management system is needed to inform DRR and CCA efforts, including development of an EWS.



#### Water

Sustainable freshwater management is one of Jordan's most pressing challenges, due to the country's limited water resources. This challenge is further intensified by the impacts of climate change, shifts in land use patterns, and reliance on transboundary river flows, which introduce additional layers of complexity to water resource management. Adapting to the increased risk of drought is a well-latest National Water Strategy (2023-2040). The approach to mainstreaming CCA within the water sector is a helpful example for other sectors to follow.

Flood risk is a growing and significant climate risk, which has received inadequate attention and now requires urgent action. The impacts of heatwaves on the water sector, including interactions with evapotranspiration and drought risk, are also underexplored.

<u>Table 3</u> summarizes examples of progress on CCA and DRR in the water sector, and opportunities to strengthen this.

#### **Examples of progress**

# Opportunities to strengthen CCA and DRR in the water sector

- The NSDRR 2023-2030 identifies flood risk as the top priority risk in its overview of risks and vulnerabilities in Jordan.
- Aligned with this, the NAP identifies water as a priority sector and includes seven programs targeting water; four of these primarily address drought risk, two address flood risk, and one addresses overall governance and integration of CCA and DRR within water sector policy and institutional reform.
- The National Water Strategy 2023-2040 emphasizes the need to adapt to climate change by updating and maintaining drought and flood management systems.
- The strategy includes commitments to enhancing adaptive capacities in wastewater treatment plants, desalination units, and water distribution systems. It also commits to creating a national flood vulnerability map for urban and rural areas. These maps will inform the placement of new water facilities, and identify high-risk zones requiring continuous monitoring, enhanced infrastructure, and EWSs for rainfall. The strategy also aims to adopt technological solutions to minimize evaporation from key surface water bodies.
- The National Water Strategy 2023-2040 emphasizes the need for tools to guide communities in balancing water supply and demand sustainably, integrating the principles of risk differentiation, water security, and supply assurance.
- Aligned with the NAP, the strategy stresses that climate risks should be integrated into policy and institutional reforms.
- A variety of organizations—including FAO, UNDP, and UN-Habitat—manage CCA projects that have a strong emphasis on water resources and drought management.

- Most funding for climate adaptation projects focuses on addressing drought risk, specifically water harvesting. There is no clear evidence that projects effectively integrate DRR, and there are limited examples of projects addressing wider climate risks.
- Current policies and actions do not prioritize leveraging flood management as an opportunity to mitigate disaster effects and to optimize the use of water resources.
- While the National Water Strategy 2023-2040 notes that technological solutions will be adopted to address evapotranspiration, it does not currently address the effects of heatwaves on water resources and evaporation processes.
- Ongoing discussions led by the MoWI on new legislation to protect water sources present a critical opportunity to address previous regulatory gaps and improve water resource management, particularly in protecting surface and groundwater sources.
- The dedicated committee responsible for monitoring drought conditions could serve as a model for establishing an equivalent committee to manage flood risk.





#### Health

Disasters and climate change are impacting public health in Jordan. The MoH has established a new department focused on climate change and health; this is included in both the NSDRR and NAP.

<u>Table 4</u> summarizes examples of progress on CCA and DRR in the health sector, and opportunities to strengthen this.

#### **Examples of progress**

# Opportunities to strengthen CCA and DRR in health

- The NSDRR recognizes public health as being directly impacted by climate change and disasters and highlights the importance of investing in the health sector.
- The NAP addresses health concerns related to temperature fluctuations and changes in rainfall patterns. The plan identifies seven health issues that are sensitive to climate change: respiratory diseases, airborne and waterborne diseases, food contamination, disease vectors, nutrition, heatwaves, and occupational health.
- The NAP establishes a clear adaptation goal for the health sector: to enhance capacity to manage the health impacts of climate change and emerging infectious diseases. To achieve this, the plan includes two action programs: improving understanding of potential health risks posed by climate change; and strengthening the sector's adaptive capacity.
- The key adaptation measures highlighted are the establishment of an EWS and rapid public health interventions when specific thresholds are exceeded, with an emphasis on capacity building and public awareness.
- A Health Sector Climate Change Adaptation Strategy is being developed. It will identify flash floods and heatwaves as priorities.

- Interactions between climate change and health are acknowledged in both the NSDRR and NAP; however, health is not listed in the NSDRR as a climate adaptation sector priority. An integrated CCA and DRR policy response has not yet been developed, and examples of implementation are limited.
- The MoH is not included in any of the NSDRR implementation projects.
- Most health and climate references focus on drought and heatwaves, with little or no attention given to flash floods and associated health impacts.
- More evidence is needed on the health impacts of heatwaves and flash floods, particularly for vulnerable populations, to inform targeted adaptation measures and emergency response planning.
- Educational institutions can play a key role in raising awareness about climate-related health risks, integrating climate resilience into health education, and promoting community-based adaptation initiatives.



#### Urban planning

Jordan's urban areas, characterized by high population density and existing infrastructure, are particularly vulnerable to climate-related and disaster risk. There are a few examples of CCA implementation in Zarqa, focusing on simple infrastructure projects, such as the expansion of city center culverts.

<u>Table 5</u> summarizes examples of progress on CCA and DRR in urban planning, and opportunities to strengthen this.

#### Examples of progress

#### The NSDRR acknowledges the heightened exposure and vulnerability of urban areas to disaster risks and emphasizes the need for urban areas to align strategies with DRR efforts.

- The NAP sets a strategic goal for CCA in urban areas: to enhance the adaptive capacity of urban structures to withstand climate impacts and support sustainable urban growth. To achieve this goal, the plan outlines four key areas for action: improving disaster risk preparedness; developing green infrastructure; building resilience to rising temperatures; and increasing community participation in urban planning processes.
- There is recognition in the NSDRR and NAP that land use changes and choices have a significant influence on climate and disaster risk.

# Opportunities to strengthen CCA and DRR in urban planning

- A cohesive planning framework is needed to support integration across sectors and administrative levels, supported by effective urban planning strategies.
- There are limited opportunities for empowering and involving urban communities in CCA and DRR.
- More evidence is needed to increase understanding of how different land use options interact with disaster and climate risks, and how land use practices may be contributing to increasing exposure to these risks. Overall, there is a need for a stronger focus on aligning land use policies with urban development, and CCA and DRR efforts.



# 3.2 Knowledge

Building capacity to address CCA and DRR should start with valuing and developing existing capabilities, including the local knowledge and lived experience of communities. It should include a focus on developing technical capability and creating the enabling conditions needed for people to set and pursue their own agendas in response to the challenges of CCA and DRR.

"Capacity is not the ability to implement someone else's agenda but the ability to set and pursue your own agenda." United Nations Environment Programme, 2024

## 3.2.1 Technical skills and capacity

National policy consistently highlights the need for an improved evidence base to support CCA and DRR in Jordan. Government ministries highlight key technical needs, including requirements for the following:

- Comprehensive and standardized flood risk maps which are regularly updated.
- Heatwave maps. These are currently in place and are updated on an ongoing basis, but they
  are not publicly available and accessible.



- Information management systems to support the expansion of EWSs. The NCSCM is in the
  initial stages of establishing a risk register, with a focus on flood risks. While this initiative
  represents a positive step forward, it relies on existing, basic EWSs and unsystematized
  approaches.
- Comprehensive spatial data to support the integration of CCA and DRR into urban planning and development.

The current NAP does not include a detailed climate risk or vulnerability assessment that examines how climate risks affect different locations, sectors, and populations. Such evidence is crucial for identifying targeted priorities for CCA and DRR at various scales. However, it is important to recognize that the TNC served as the primary reference document for climate risks and vulnerabilities at the time of the NAP's development. National Communications, including the TNC, are the official sources for climate risk and vulnerability assessments, informing adaptation planning and policy decisions. While the NAP is structured as an implementation plan based on existing evidence, its reliance on the TNC means that it may not fully reflect emerging risks that have evolved since its publication.

Bureaucratic barriers often hinder data sharing across government ministries. When data is accessible, it is frequently presented in extensive datasets that are challenging to manage and interpret without advanced data processing tools. In addition, while technically skilled staff are available, their expertise is often underutilized, limiting the ability to address data management needs effectively.

#### 3.2.2 Locally led CCA and DRR

National legislation, policy, resourcing, and action cannot achieve CCA and DRR in isolation. Their success relies on implementation at the local level, encompassing cities, rural areas, and sectors.

Current national CCA and DRR strategies and policies lack specific measures to empower community involvement. There is also huge untapped potential for people living and working across Jordan to contribute to CCA and DRR efforts. Feedback from focus group discussions and KIIs conducted to inform this analysis confirmed that fostering local involvement and educating communities on risk preparedness is essential for effective CCA and DRR.

During focus group discussions and KIIs, local stakeholders identified a range of support needs, including support for farmers to protect their crops, capacity building for construction and road workers to enable them to deliver climate resilient infrastructure, and training for local communities on EWSs. Local civil society organizations also need support to build their capacity in proposal writing and fundraising, to increase their opportunities to access financing for locally led projects.

Local stakeholders additionally stressed the importance of monitoring local flood risks and water management, highlighting the need for community involvement in developing solutions to improve rainwater capture and flood risk management. They particularly highlighted the necessity of engaging those most affected by climate change in the decision-making process.

Public awareness and engagement in locally led climate adaptation efforts could be enhanced through the active support of the NCSCM. By championing the importance of locally driven action, the NCSCM could play a key role in promoting integrated approaches to CCA and DRR planning.

Focus group participants and KIIs identified a disconnect between policy and implementation at the local level. This occurs where policies that aim to address strategic issues, such as water management, conflict with local priorities and traditions, which are often influenced by clan affiliations. There is recognition that developing integrated approaches to CCA, DRR, and development in a way that aligns with local priorities requires negotiation, conflict resolution, and

decision-making skills. There is demand for targeted training and support to help build these capabilities, especially within municipalities.

"Awareness raising about environmental issues and fostering individual responsibility is crucial." - Local focus group participant

#### 3.2.3 Monitoring, evaluation, and learning

The MoEnv is currently developing a MRL framework covering the seven sectors included in the NAP, which is still in progress and was not yet finalized at the time of this evidence paper's completion. The framework is designed to track national priorities outlined in the NAP and includes indicators for coordinated monitoring. It is being developed in collaboration with seven sectors at both national and local levels to enhance transparency and accountability in climate adaptation efforts. The MoEnv has identified several challenges to implementing the MRL framework, including data availability, institutional coordination, and the integration of qualitative adaptation outcomes. Although the framework serves as a good starting point, it is not yet integrated with the NSDRR.

There are no independent and objective evaluation tools or reports for public policies. This makes it difficult for decision-makers to update strategies to address changing conditions and emerging needs. For example, the current NSDRR 2023-2030 was preceded by the Disaster Risk Reduction Strategy 2019-2022. There is no publicly available monitoring and evaluation information available to assess the impact of the 2019-2022 strategy, or transparent process for showing how learning from this strategy has been used to develop the current strategy.

The Economic Modernization Vision is an example of a strategy that was developed through national efforts, and which includes online indicators with specific time limits, detailed projects, and sectoral work plans. This is a model of best practice that could inform the development of a similar approach for monitoring and evaluating CCA and DRR progress and the integration of CCA and DRR with development planning.

Improving Jordan's approach to monitoring and evaluation for CCA and DRR will require commitment and skilled personnel at both national and local levels. The challenge of implementing effective monitoring and evaluation systems for CCA, particularly in relation to NAPs, is not unique to Jordan, it is shared across many countries. Among the 11 developing countries that have produced NAP progress reports, nine were prepared with financial support from partner organizations, highlighting the widespread reliance on external funding for adaptation monitoring and evaluation (UNEP 2024).



# 3.3 Organization

No one organization, business, or community can reduce disaster risks or adapt to climate change in isolation. Collaboration across government departments, between national and local organizations, and among communities is key to effective CCA and DRR.

## 3.3.1 Coordination and responsibilities

There is a disconnect between the responsibilities for managing CCA and DRR assigned to the MoEnv and to the NCSCM. Feedback from the KIIs and focus group discussions indicates that cross-sector working and communication between national and local levels is very limited and that changing this existing dynamic is a major challenge. The existing institutional framework does not facilitate coherence or encourage coordination between the CCA and DRR sectors; this delays progress, leads to duplication of effort, and wastes time and resources.



Article 6 of Climate Change Bylaw 79/2019 mandates the NCCC to form technical advisory bodies with relevant expertise. The Technical Advisory Body should be activated and operationalized. Priority should be given to enhancing collaboration on CCA and DRR integration, bringing together government agencies, civil society and international organizations. It should foster stronger coordination and development of integrated CCA and DRR strategies and plans.

Roles and responsibilities for delivering actions included in the NAP currently all sit with the MoEnv. This poses a challenge due to the existing heavy burden of administrative duties falling on MoEnv staff. Building stronger coordination between wider government agencies and stakeholders could enable and empower them to play a proactive role in supporting NAP implementation.

Coordination and responsibility for local-level CCA is ad hoc and is linked to short-term project funding. While there may be improvements in coordination and action during projects this progress is not sustained when projects come to an end. There are no mechanisms in place that require and support local CCA action plans. Mandates for developing local DRR action plans are also limited and, as discussed in section 3.1.2, currently result in a focus on winter preparedness.



## 3.4 Stakeholders

CCA and DRR require an interdisciplinary, multilevel approach and must include the knowledge, skills, and resources of different stakeholders.

#### 3.4.1 Civil society

Community involvement in developing locally led, integrated CCA and DRR policies and action is currently limited. Community involvement is generally confined to project frameworks rather than embedded in comprehensive policy development, and it is often limited to consultations with civil society or international organizations. Policies often overlook affected groups, with community engagement typically restricted to discussions with municipalities and directorates, and failing to include broader community representation by those most impacted.

#### 3.4.2 Social inclusion

Analysis carried out in June 2024 identified that vulnerable groups, including women, young people, the elderly, people with disabilities, and refugees, are disproportionately affected by climate and disaster risks.

Women are already considered a vulnerable population globally due to societal conditions, and this vulnerability also extends to the effects of climate change. Their role in, and responsibility for, performing domestic housework duties and taking care of farmland at home, and being primary caregivers for children, often mean women are homebound and unable to deal with the effects of disasters and wider climate risks socially and physically.

Women are also more negatively affected by droughts and heatwaves due to their roles in society and their nutritional and physiological requirements during periods of menstruation and pregnancy. Women have been found to be more affected by temperature extremes, such as heatwaves, which puts them at a higher risk of poor maternal health, hypertension, and heat exhaustion (Desai Z and Zhang Y, 2021).



Vulnerable groups in Jordan have historically faced significant barriers to participating in decision-making processes related to CCA and DRR. Community awareness of these issues also remains low, particularly among women, youth, and people with disabilities.

Recognizing these challenges, Jordan has made strides in integrating social inclusion into its climate policies. The NCCP emphasizes the disproportionate impact of climate change on women, children, and youth, highlighting the need for socially inclusive strategies. The policy outlines actions such as enhancing the human capacity of ministries and governorates by establishing specialized focal persons for addressing the needs of women, children, and youth, and developing action plans that incorporate their perspectives.

The NAP further highlights the importance of mainstreaming social inclusivity into climate adaptation efforts. It identifies key underlying causes of vulnerability, including low socio-economic status, limited access to resources, and inadequate representation in decision-making roles. The NAP recommends concrete activities such as providing technical guidelines for integrating social inclusion into sectoral planning, developing inclusion criteria for selecting adaptation options, and ensuring data accessibility for informed decision-making.

Additionally, Jordan's updated NDCs acknowledge the different impacts of climate change on women, men, girls, and boys. The NDCs advocate for adopting inclusive solutions to enhance resilience and promote social inclusion in climate action. This includes developing a National Gender Mainstreaming in Climate Change Policy to address the root causes of inequalities and to foster collaboration. While these policy frameworks represent significant progress, their effective implementation remains crucial. Ensuring that inclusive policies translate into actionable measures requires continuous capacity building, resource allocation, and monitoring to address existing gaps and barriers.

Local governments, which are constrained by technical and financial limitations, struggle to address the unique needs of vulnerable groups. Gender stereotypes and limited community understanding of social inclusion further hinder efforts to create responsive and inclusive climate adaptation strategies. In addition, policies related to social protection, health, and climate preparedness often lack a focus on disability and typically only address accessibility during climate-related events.

#### 3.4.3 Private sector

The private sector is not comprehensively integrated into national CCA and DRR strategies and plans.

Jordan relies heavily on international aid for CCA and DRR and faces a significant gap between the amount of financing needed and the level of financing currently available. Around two-thirds of adaptation finance will need to come from public sources (United Nations Environment Programme, 2024), as adaptation actions often provide public goods that generate economic, but not necessarily financial, returns. The remaining third could come from a wide range of private and blended finance sources.

Further work is needed to identify opportunities for private sector investment in CCA and DRR in Jordan. Currently, the private sector is increasingly engaged in climate action investments covering energy efficiency, renewable energy, and water management. Work is needed to identify bankable CCA and DRR projects, with a focus on optimizing limited public financing and seeking to de-risk private sector investment.

The private sector also has the potential to directly intervene and implement CCA and DRR measures to support business continuity and as part of their corporate social responsibility commitments to local communities. Businesses' positive engagement with the tourism sector in Wadi Musa and Petra



has already shown benefits in relation to CCA and DRR, and offers an example that can be replicated across other locations and sectors.

"Hotels in the Wadi Musa and Petra areas, contribute to understanding risks, they implement measures to reduce risks and take part in training to reduce the impact of floods on the tourism sector." - Tourism sector stakeholder

## 3.4.4 International organizations

International organizations make valuable contributions to CAA and DRR efforts in Jordan, providing important expertise and resources. These organizations have a strong focus on humanitarian response and are a crucial partner. However, their funding often focuses on specific areas that may not fully align with CCA and DRR priorities, resulting in inadequate support for sectors and locations that are crucial for climate resilience. In some instances, different international organizations run overlapping projects, leading to inefficient use of resources due to a lack of coordination.

Furthermore, work to develop CCA strategies is often spearheaded by international organizations, in collaboration with government agencies. Further work is needed to ensure that this work actively builds capacity and improves local ownership within Jordan, to ensure that strategies are implemented.



## 3.5 Climate finance

Political commitments and risk-informed policies, regulations, and projects must be backed by adequate resource allocations, to enable their implementation.

## 3.5.1 Major projects, and international and national funding

Jordan's 2021 NDC (Ministry of Environment 2021) identifies 21 proposed climate adaptation investment projects, requiring combined funding of over \$329 million. However, the NDCs do not specify where this funding is expected to come from. This figure provides an indication of finance needs for a range of major adaptation projects but the NDCs do not include details of the level of funding required to address all climate risks across all sectors at the national and local levels. Jordan is required to submit its updated NDCs in 2025; this is an important opportunity to develop further detail on adaptation finance requirements and potential sources of finance, including specifying what projects can be *unconditionally* completed with current (domestic) levels of finance and what are *conditional* on international climate finance

The NAP notes that Jordan is highly dependent on external bilateral and multilateral sources of finance. Framework agreements and strategies have been developed with major donors like UNDP, the United States Agency for International Development, the European Union, GIZ, and Japan International Cooperation Agency. For example, in the water sector, from 2015 to 2020, the Government of Jordan received project funding of €129.3 million, of which 58% was loans. All the loan funding was from German investment and development bank KfW, with grant funding primarily from the European Commission (The Hashemite Kingdom of Jordan, 2022).²

Jordan's Fourth National Communication on Climate Change | United Nations Development Programme, October 2023



Over the past decade, Jordan has been successful in securing funding from international climate funds (the Adaptation Fund and the Green Climate Fund (GCF)) for at least three major projects, with a total value of \$56.2 million.<sup>3</sup> While any progress on securing international climate finance is positive, Jordan undoubtedly faces a growing gap between the level of climate adaptation finance available and the amount required to increase its resilience and adaptation. There remains an urgent need to call for increased levels of international climate finance to enable emerging markets and developing economies, such as Jordan, to implement actions to adapt to climate change and reduce greenhouse gas emissions.

Jordan is part of the Arab Group, which develops common positions for UNFCCC negotiations. As such, the Government of Jordan should work with other Parties within the Arab Group to continue to advocate for increased quantity and quality of, and access to, international climate finance. Priorities should include working with international partners to push for a clear roadmap to the \$1.3 trillion goal in the New Collective Quantified Goal, agreed in November 2024 at the 29th Conference of Parties (COP29); ensuring that this correctly captures the role that domestic and private sector finance can play; and highlighting the need for increased international public climate finance to provide grants rather than loans.

Work to secure climate adaptation finance is led by the MoPIC, which has played a central role in securing international climate finance. Jordan will need to further develop its existing approach to securing adaptation finance if it is to close the current adaptation funding gap. One recommended approach is to establish climate finance country platforms which are led and owned by countries, with the involvement of all stakeholders, including development finance institutions and the private sector (Bhattacharya, 2024; Climate Vulnerable Forum and Twenty Vulnerable Group and Bridgetown Institute, 2025). Establishing a platform for Jordan could support partnership working to optimize opportunities for public finance and further develop the role of the private sector.

The Cities and Villages Development Bank has recently been accredited by the GCF to provide funding for green development projects; it is the first national entity in the Arab region to achieve this status. This accreditation is a significant achievement and has the potential to significantly enhance national efforts to leverage the GCF and, as a development bank focused on supporting municipalities, strengthen local climate initiatives. The Bank is not currently formally represented in the NCCC or the NCSCM, and this should be addressed to optimize national and local partnership coordination.

The NCSCM's budget is primarily allocated to administrative support and internal operations, with no dedicated funding for DRR activities. Despite the need for external funding, the center lacks a dedicated fundraising unit or a specific budget for addressing particular risks, significantly limiting its ability to implement and scale DRR initiatives effectively. Similarly, the MoEnv does not have a designated budget line specifically for CCA, further limiting the resources available to address climate-related challenges in a strategic and sustained manner.

The NSDRR outlines six projects to be implemented within a three-year work plan, allocating a total budget of \$1.35 million to them:

- National and local risk register project: Identifying and prioritizing risks at both the national and governorate levels. \$150,000 - from international organizations.
- Comprehensive risk assessment project: Evaluating prioritized risks at the national level. \$700,000 from international organizations, MoPIC.

<sup>&</sup>lt;sup>3</sup> 2015 \$9.2 million (Adaptation Fund); 2021 \$14 million (Adaptation Fund); 2021 \$33 million (GCF).



- Legislation and laws review project: Analyzing existing legislation and laws related to DRR and crisis management. \$100,000 - from the NCSCM, MoPIC.
- Knowledge and awareness program: Enhancing knowledge and awareness among middle management and decision-makers. \$200,000 - from international organizations and relevant donors, MoPIC.
- Integration program: Integrating DRR and crisis management concepts with national strategies, policies, and priorities. \$100,000 from international organizations and relevant donors, MoPIC.
- Detailed resilience assessment project: Using the resilience measurement tool developed by the United Nations Office for Disaster Risk Reduction (UNDRR) \$100,000 - international organizations and relevant donors, MoPIC.

There is currently no easy access to information or tracking process in place to verify the status of these projects or their associated budget allocations.

#### 3.5.2 Local funding

Budgets at the local level are very limited and most DRR initiatives rely on funding from external partners and NGOs. Municipalities and executive councils provide some budgets for winter emergency plans. These are not specifically designed to reduce disaster risks but rather address immediate needs. At the local level, anecdotal feedback indicates that DRR budgets are not included when approving governorate budgets. Lack of funding will limit the impact of existing and new DRR departments which are currently being rolled out by the MoLA. This in turn would limit the development of local DRR plans and the NCSCM's ability to fully carry out its tasks and functions.

There are limited examples of urban infrastructure projects which contribute to both CCA and DRR, such as the expansion of city center culverts by Greater Amman Municipality. Projects are generally small scale due to limited financial resources, and focus on specific infrastructure interventions.

Jordan's recently approved agricultural compensation system provides an important safety net for farmers by providing funding when certain hazard thresholds are exceeded. The system has yet to be activated but could provide a valuable example to consider for enhancing local CCA and DRR.

Civil society organizations face significant challenges in securing funding for projects, particularly when they are competing for funds with large national institutions. This can perpetuate imbalances in power whereby local institutions are viewed as beneficiaries rather than partners. This limits broader community engagement and commitment to implementing CCA and DRR programs.

Insurance products can play a valuable role in CCA and DRR responses. There are a growing number of international examples where parametric insurance, which is triggered when defined hazard thresholds are exceeded, has provided finance to support CCA and DRR. In Jordan there is interest in exploring the potential for insurance products to provide risk transfer mechanisms for agriculture, to help manage risks related to flash floods and extended heatwaves, potentially through a collaboration with the Farmers Alliance.

# 4. Conclusions and recommendations for enhancing CCA and DRR in Jordan

The findings (section 3) show that, while important progress has been made across all action areas - policy, knowledge, organization, stakeholders, and finance - there is much more work to be done.

The recommendations and actions below draw on the findings and identify priorities and key opportunities to accelerate progress.



## Increase the focus on flood and heatwaves

Jordan's CCA and DRR policy currently does not adequately address heatwaves and flood risks. While some measures exist to address flooding, they lack a **comprehensive approach** that matches the scale of the risk. Heatwaves are even less prioritized. Both floods and heatwaves have already resulted in serious impacts across Jordan, and they are viewed as a severe concern by the people of Jordan.<sup>4</sup> Urgent action is needed to respond to the risk of flash floods and heatwaves.

#### Suggested actions:

- Strengthen adaptation plans for floods and heatwaves within critical sectors like agriculture, water, and health.
- Ensure that flash floods and heatwaves are prioritized and addressed as part of wider efforts to strengthen national and local CCA and DRR in Jordan. This includes ensuring that they are addressed as part of implementing this evidence paper's recommendations (set out below).



# Translate national policy into local action

There is a significant gap between national policy and strategy on CCA and DRR and implementation at the local level. Top-down and bottom-up approaches are needed to strengthen local action.

#### Suggested actions:

• Mandate the development of local, integrated CCA and DRR plans. This could be achieved through strengthening the mandate provided by Article 6 of the Local Administration Law 22/2021, which already requires municipalities and executive councils to develop preventive and procedural emergency plans. These do not currently integrate CCA and DRR, but they could do in the future if the mandate is strengthened. In addition, implementation of the NAP and NCCP should also prioritize the rapid development of, support to, implementation of, and resourcing of local, integrated CCA and DRR plans and actions.

<sup>&</sup>lt;sup>4</sup> The MCJ survey of over 1,000 community members and leaders conducted for the CCA and DRR assessment shows that almost 50% viewed flood risk as either severe or very severe for the people of Jordan. Over 70% viewed the risk of heatwaves as severe or very severe for the people of Jordan.



- Develop new evidence to identify locations, sectors, and communities that are most vulnerable to climate and disaster risks. This evidence should be combined with local plans to identify more detailed policies and actions that target the most vulnerable.
- Improve EWSs to support CCA and DRR. These should include advanced forecasting for flash floods and extreme temperatures. The design of improved EWSs should consider the last mile first, by involving vulnerable groups from the outset and prioritizing their needs in the initial design and development of the systems. EWSs should be designed to inform both immediate disaster response and long-term adaptation planning, while also generating data-driven insights to support policy decisions and risk-informed development.
- Provide municipalities and governorate councils, local stakeholders, and civil society
  organizations with training on CCA and DRR management and planning. Flood-prone and
  heat-sensitive regions should be prioritized. Training should build on and complement NCSCM
  simulation exercises and training, and should include training and support on developing CCA
  and DRR funding proposals.



# Strengthen governance and coordination

Jordan has laid a solid foundation for CCA and DRR, with the MoEnv and NCSCM making significant progress, as evidenced by good NAP and NSDRR documents. Implementing these at scale and across sectors represents the next major challenge and will require much stronger collaboration across government agencies and with relevant stakeholders. This is recognized in the NSDRR 2023-2030, which highlights the urgent need to synchronize DRR and climate change policies.

Stronger governance and coordination is needed to support implementation of an integrated approach to CCA and DRR at the national and local levels. Social inclusion should be addressed in the design of these mechanisms.

- Strengthen the integration of CCA and DRR across ministries by enhancing existing coordination mechanisms, including cross-representation of key institutions. A NCSCM representative should be included in the NCCC and a MoEnv representative should be included as a member of the NCSCM Board of Directors.
- Activate and operationalize the mandated CCA Technical Advisory Body, as outlined in Article 6 of Climate Change Bylaw 79/2019 and the NAP, with the aim of enhancing collaboration among government agencies, civil society organizations, and international partners to drive progress in CCA and DRR.
- Establish a dedicated national committee to manage floods (similar to the existing Drought Committee). This committee should support work to create a national strategic plan for managing floods and driving implementation. The committee should include representation of experts in CCA and DRR as part of a wider set of technical and strategic expertise. Currently, the NFMP is addressing aspects of this gap; however, its efforts remain project-based and are not yet institutionalized within a formal, permanent national body.
- Leverage existing community organizations and local councils to foster active local
  engagement in shaping and implementing CCA and DRR strategies, including targeted
  capacity building and support to ensure gender, equity, and social inclusion factors are fully
  considered and addressed into local planning and decision making. It should also ensure that
  local knowledge and expertise is included in risk assessments and planning processes.



# Strengthen policy and legislation

Existing legislation does not address CCA and DRR comprehensively. Future opportunities to enhance and update legislation should comprehensively address CCA and DRR and should set out a mandate that enables community-led CCA and DRR initiatives that include fully addressing social inclusion. Introducing requirements for integrated CCA and DRR risk assessment processes, joint governance structures, and unified financial mechanisms should also be considered.

In addition, CCA and DRR legislative drivers could also be strengthened **by updating existing laws**, as follows:

- Housing and Urban Development Corporation Law 28/1992 establishes a Fund for Insurance against Risks and Damages. The legislation should be updated to confirm that damage caused by floods is covered by the fund.
- Agriculture Law 13/2015 addresses risks and disasters impacting the agricultural sector. It should be updated to include heatwaves.
- Farmers Compensation Bylaw 57/2023 aims to provide compensation in response to a range of climate emergencies. It should be updated to ensure that heatwaves are also covered.
- Local Administration Law 22/2021 Article 6 requires municipalities to develop emergency plans to manage natural disasters. In practice, these plans focus on winter preparedness. This law should be strengthened to require emergency plans to address all aspects of DRR and to integrate CCA.



# **Optimize finance**

Optimizing opportunities to access finance and use existing resources effectively will be crucial for enhancing CCA and DRR in Jordan.

- Push for stronger international climate finance commitments on providing emerging markets and developing economies with increased quantity and quality of climate finance.
- Include a clear breakdown of adaptation costs in the updated NDCs, specifying the level of investment already secured and the amount still required. This should include consideration of the budget needed to develop and implement local CCA and DRR plans.
- Engage with international donors to advocate for long-term, sustainable CCA and DRR initiatives over short-term, and responsive emergency aid. This should include advocating for flexible funding mechanisms.
- Consider setting up a country platform for climate finance. Country platforms are recommended by climate finance experts and are being promoted through the G20.<sup>5</sup> The aim is to accelerate and scale up climate finance through providing a proactive forum for government, development finance institutes, the private sector, and donors to identity

<sup>&</sup>lt;sup>5</sup> See for example, the Independent High-Level Expert Group on Climate Finance's report (Bhattacharya et a., 2024) and work in the G20 and Finance in Common summit ('Big plans for a new generation of country platforms', ODI: Think change).



- priorities, harmonize actions, and scale up response. Scoping work could be informed by reviewing platforms already set up in Egypt, Indonesia, Senegal, South Africa, and Vietnam.
- Share learning from the process of securing international climate finance and use this to inform investment planning for implementing a wider portfolio of projects that address national, sectoral, and local CCA and DRR priorities.
- Use a shared digital platform to record past, present, and future investments in CCA and DRR projects. This would support improved collaboration between international, national, and local partners and could form part of wider monitoring, evaluation, and learning processes.
- Ensure social inclusion is included as a core criterion in CCA and DRR investments to ensure that the needs and contributions of women, youth, and marginalized groups are prioritized.



# Develop monitoring, evaluation, and learning systems

Implementing monitoring and evaluation systems will enable Jordan to track progress and support ongoing improvements to CCA and DRR policies and wider integration.

#### Suggested actions:

- Develop a comprehensive monitoring and evaluation approach for CCA and DRR. Use the Economic Modernization Vision<sup>9</sup> as an example of best practice and include online indicators, with specific time limits, detailed projects, and sectoral work plans.
- Identify the resources required to implement a monitoring and evaluation system. This includes identifying the staff and skills required at national and local levels. Options for resourcing should be explored, including the potential for collaborations with government agencies, and international and academic partners. The MRL framework currently being developed by the MoEnv is designed to track national priorities outlined in the NAP. It includes indicators for coordinated monitoring provides a strong foundation for adaptation monitoring and evaluation. Integrating DRR within this framework will enhance coordination, tracking, and evidence-based decision-making for resilience-building.

Implementing the above recommendations will require strong leadership, coordination, commitment, and innovation from all stakeholders. Mercy Corps and the wider Zurich Climate Resilience Alliance is committed to working in partnership and playing our part in meeting the challenges ahead.

In developing this evidence paper, we identified tremendous support and commitment across government agencies and among international, national, and local stakeholders to ensure that Jordan benefits from implementing a very strong approach to CCA and DRR. The honest feedback provided to inform this report demonstrates a strong commitment to reflection, learning, and continuous improvement, and can offer an example to other countries that are facing similar challenges.

Download the policy brief | Jordan's path to a climate resilient future Download Annex A: An overview of laws, policies, and legal frameworks in Jordan

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To download Annex A: Laws, policies, and legal frameworks for CCA and DRR in Jordan: https://zcralliance.org/resources/item/an-overview-of-the-laws-policies-and-legal-frameworks-in-jordan

The Zurich Climate Resilience Alliance is a multi-sectoral partnership, powered by the Z Zurich Foundation, focused on enhancing resilience to climate hazards in both rural and urban communities. By implementing solutions, promoting good practice, influencing policy and facilitating systemic change, we aim to ensure that all communities facing climate hazards are able to thrive.

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