

WEATHERING RISK

Integrating
Climate Security
into Policy
Frameworks:
Jordan

Spencer McMurray
October 2023



FOCUS
Climate Security

Contents

Executive Summary	3
Acknowledgements	5
Introduction	6
Climate Impact Risks	7
Reduction in precipitation limiting groundwater recharge	7
Higher temperatures	7
More hot days	8
Higher evapotranspiration leading to more flooding, landslides and desertification	8
Climate-related Security Risks	9
1. Climate risks worsen water security and lead to increasing disputes and worsened anti-refugee sentiment	9
2. Climate change threatens food and livelihood security and leads to further land degradation, reducing Jordanians' quality of life and increasing social discontent	10
3. Climate risks threaten to exacerbate internal mobility, straining already limited resources	10
4. Climate change threatens to stretch government coffers and reduce service provision, negatively impacting the social contract	11
5. Climate change threatens critical infrastructure, with important implications for energy security	11
Institutional Framework	12
Climate Security Policy Integration	15
Degree of integration	15
Challenges to integration	15
Recommendations and Entry Points	18
Works Cited	27

Executive Summary

The climate crisis is increasing security risks in Jordan. Of the manifold risks Jordan must contend with, most pressing are those with direct implications for water resources which are already under significant strain due to both climatic and human-induced factors. Higher temperatures are leading to more evapotranspiration and reduced rainfall are especially critical, straining the groundwater and aquifer reserves that are already over exploited. Extreme weather events and their impacts, including droughts, flash floods, and landslides, further complicate matters. These risks translate into important implications for Jordanians across a variety of areas, including political, social, demographic and economic realms, especially when combined with pre-existing grievances and especially poverty. Together, these create significant challenges for food, water and livelihood security, affecting the overall health and wellbeing of Jordanians. These interactions are complex and likely to manifest in a variety of ways. However, of particular importance for policymakers are how:

- **Climate change worsens water security and leads to increasing disputes and anti-refugee sentiment, eroding social cohesion.**
- **Climate change threatens food and livelihood security and could lead to further environmental degradation, reducing Jordanians' quality of life and enhancing social discontent.**
- **Climate change threatens to exacerbate internal mobility, putting pressure on urban areas and straining already limited resources, which can lead to increased competition.**
- **Climate change threatens to stretch government coffers and reduce service provision, negatively impacting the social contract.**
- **Climate change threatens critical infrastructure with important implications for energy security.**

To manage these issues and mitigate their effects on the population, authorities must ensure that policies, especially around sectors critical to climate change, peace, and security, are climate security sensitive. However, though Jordan is a regional trailblazer in articulating these linkages, climate security currently remains inadequately integrated into policies and processes in either climate or security domains. Integration is lacking in part due to low levels of institutional awareness, both around climate change and climate security links, and general technical capacity limitations around policy development and implementation within institutions integral to managing climate (in)security. With that said, there is increasing awareness around climate change and its social and economic implications, and policies increasingly take these links into account. However, financial constraints inhibit not only their development but also potential interventions that could conceivably occur to mitigate climate security issues.

The necessity of managing and mitigating climate insecurity will only intensify, which means Jordan needs to better identify and respond to climate insecurity. The first step is making sure policies and approaches, and the institutions responsible for managing them, have both the human and financial capital to do so. The table below sets out an action agenda for national, regional and international actors across four time horizons:

Immediate	Adopt a climate security strategy at the national level and use as basis for future mainstreaming and implementation activities International partners assist in developing a national strategy and embed key priorities within country plans and strategies
Short Term	Improve climate security awareness at the institutional and community level Improve climate security capacities across all of government Enhance climate security integration within policy plans and processes Build capacity of key national actors tasked with advancing climate change agenda, including on climate security, adaptation and finance
Medium Term	Improve climate security knowledge, data and dissemination for better tailored response capacities and decision making
Long Term	Support climate change and security policy and programme implementation capacity at the national, municipal and local levels

Acknowledgements

The case study was prepared by Spencer McMurray (lead author, adelphi). Important contributions were provided by Lukas Ruttinger (adelphi), Frans Schapendonk (CGIAR Focus Climate Security), Martina Jaskolski (CGIAR Focus Climate Security) and Rana Saleh (UNDP). Editorial support was provided by Mary Elizabeth Potts (adelphi), Benjamin Pohl (adelphi), Nora Isayan (UNDP) and Omar Farook (WFP).

Special thanks to interviewees and those who attended the stakeholder consultation and validation workshop for your time and insights.

This case study is one of four that builds off of research undertaken within the framework of the year-long project jointly implemented with CGIAR as part of the ‘SDG-Climate Facility: Climate Action for Human Security’ project which is funded by the Swedish International Development Agency (Sida). The project is a multi-partner platform focusing on the impacts of climate change on human security in the Arab region, especially in the context of countries in crisis. It brings together the League of Arab States (LAS), Arab Water Council (AWC), United Nations Development Programme (UNDP), United Nations Environment Programme - Finance Initiative (UNEP FI), World Food Programme (WFP), United Nations Office for Disaster Reduction (UNDRR), and United Nations Human Settlements Programme (UN-Habitat), to deliver climate-oriented solutions that address climate challenges and bring co-benefits across the SDGs. In doing so, it aims to scale up access to and delivery of climate finance, including through innovative partnerships with the private sector.

The development of this study was enabled by [Weathering Risk](#), the multilateral initiative that offers tailored analysis and tools to understand climate-related risks to human security and build sustainable peace.

This case study was also produced with a contribution from the CGIAR Research Initiatives on Livestock and Climate, Climate and Resilience (ClimBeR) and Fragility, Conflict and Migration, which are supported by contributors to the CGIAR Trust Fund. To learn more about this Initiative, please visit the [website](#).

In collaboration with:



Supported by:



Norwegian Ministry
of Foreign Affairs



INITIATIVE ON
Climate Resilience



INITIATIVE ON
Fragility, Conflict,
and Migration

Introduction

Climate change is not a new phenomenon in Jordan. Over the last several decades, climate change, and especially extreme weather events such as drought and declining rainfall, have been a ubiquitous part of life. The latest climate data indicates that these trends will certainly continue. This has important implications for Jordanians who are already contending with the effects of climate change on key resources and sectors, namely water and agriculture. Indeed, water scarcity is already high and getting worse, and its compounding implications for livelihoods and food security risk to aggravate social issues bubbling to the surface of society, including high rates of poverty and growing anti-refugee sentiment. Tackling both climate change and their risks to instability is important if Jordan is to weather the coming storm. To meet the challenge head on, a robust institutional and legal framework needs to be in place to identify, prioritise and guide the country's response to climate change's security implications comprehensively. Jordan has done more than most in the region towards that end, however more can and should be done, especially with regards to integrating social and security elements stemming from climate change within institutions, policies and plans across all of government.

This case study is meant to support the identification of challenges in integrating climate security considerations across government plans and strategies generally, and presents a "roadmap" Jordan can embark on now towards attaining a more climate security-inclusive institutional and policy framework. It is the result of a year-long research project that featured extensive engagement of governmental and civil society stakeholders from Jordan and the Middle East. A brief introduction of the key climate impact risks and climate-related security risks is presented, followed by a summary of key institutional arrangements guiding the country's response to climate change and related security implications. Challenges to integrating the latter throughout the country's climate action approach are additionally presented. The core of the document, however, is the roadmap, which proposes time-delineated suggestions on how policymakers in Jordan and beyond can ensure the country adopts a climate security approach to climate action. Ultimately, this case study and roadmap aims to guide Jordanian policymakers and regional and international partners to better streamline climate security into policies and plans, and to highlight priorities for support to donors.

This case study and roadmap's development were guided by the Weathering Risk Initiative¹ and its corresponding methodology, funded by the German Federal Foreign Office, and included extensive desk research, targeted interviews with key national and regional actors, a stakeholder consultation and a validation workshop attended by government representatives.

¹ The Weathering Risk Initiative unites state-of-the-art climate impact data and expert conflict analysis to promote peace and resilience in a changing climate. It uses an innovative methodology that unpacks the complex relationship between climate change and insecurity and identifies entry points for action. Through its methodological framework, Weathering Risk aims to facilitate risk-informed planning, enhance capacity for action and improve operational responses that promote climate resilience and peace.

Climate Impact Risks²

According to climate impact data, Jordan will very likely experience more pronounced rates of climate change in the coming decades. This will compound already concerning trends: from the 1950s to today (2022), Jordan has suffered from an increase in recurring droughts, flash floods, and landslides. Projections indicate these events will only worsen as precipitation levels fall, temperatures rise, the number of hot days increases and evapotranspiration intensifies (Binder et al., 2022). In a country which has not only limited, but also dwindling groundwater resources, these risks are only going to worsen water scarcity going forward.

Reduction in precipitation limiting groundwater recharge

Rainfall is limited in Jordan, sitting at roughly 100mm on average. However, this differs across climatic zones, with the Jordan Rift Valley ranging between 100–300mm, the Mountain Heights Plateau ranging from 50–350mm (depending on micro-zone), and the desert at 60–100mm. Rainfall averages are expected to decrease into the future. Under RCP2.6, a decline in rainfall averages is expected until 2050, before stabilising. Under RCP6.0, declines could reach up to 20% by 2030, and as high as 28% in the southern and northeastern part of the country, and 16% in northwestern and central Jordan by 2050. As a result of decreased precipitation, river runoff (river recharge from precipitation) is expected to decrease slightly under RCP2.6, but much more under RCP6.0 at 46% in southern and 43% in northeastern Jordan up to 2050. However, under RCP8.5, the southern zone could see increases of up to 20% by 2100, illustrating the uncertainty policymakers need to contend with in planning for the future (adelphi and CGIAR, 2023).

Droughts may also increase in frequency and intensity, but there exists very high uncertainty on the issue (Schwartzstein, 2019). Some studies suggest the severity of droughts in Jordan increased from normal to extreme levels between 1970–2005, while more frequent, non-uniform drought periods were measured, occurring in an irregular, repetitive manner (Al Quinna et al., 2011). The increase in drought severity particularly affects the country's high rainfall zones (Al Bakri et al., 2017).

Higher temperatures

Nationally, the average temperature in Jordan is 19 °C. This again varies according to region, with higher average temperatures in the Eastern Desert (18.5–21.5 °C) than in the Jordan Rift Valley (17–21 °C). Under all climate change scenarios, temperatures are expected to rise throughout Jordan. The rate of this increase is more pronounced under higher emission scenarios (RCP 6.0), with a median increase of 1.8 °C by 2030, 2.4 °C by 2050, and 3.6 °C by 2080.³ Under RCP2.6, median temperature increases remain elevated at between 1.4 and 2.5 °C by 2030, 1.7 and 2.7 °C by 2050, and 1.7 and 2.9 °C by 2080. Under both scenarios, the entire country will be affected, though

² Climate risk data is captured under different emissions scenarios (called Representative Concentration Pathways, RCPs) through to 2080. Projects presented will specifically utilise RCP2.6, which represents a low emissions scenario that aims to keep global warming below 2 °C above pre-industrial temperatures and RCP6.0, which represents a medium to high emissions scenario.

³ Changes are expressed relative to year 1876 temperature levels using the multi-model median temperature change from 1876 to 2000 as a proxy for the observed historical warming over that time period.

the arid south will experience higher increases than the northeastern desert or the densely populated northwest (Binder et al., 2022).

More hot days

Up until the year 2000, the average number of hot days (categorised as over 35 °C) totaled 76 on average nationally. Given the rise in temperatures, this is expected to increase in both scenarios with a high degree of certainty across the entire country. The sharpest rise is expected to occur in the densely populated northwest. Under RCP2.6, 35 more hot days by 2080 are expected, while RCP6.0 would see 71 days added. More hot days could also increase “wet-bulb”⁴ temperature extremes and make cities close to bodies of water, such as the red sea, uninhabitable during extremely hot days by the end of the century.

Higher evapotranspiration leading to more flooding, landslides and desertification

With higher temperature and lower rainfall projected, rates of evapotranspiration are likely to increase across the country in relation to pre-2000 levels. Under RCP2.6, rates could increase by upwards of 10% by 2080, reaching 20% under RCP6.0. As a result, instances of flash floods and landslides following intense sudden rain episodes can increase as soil moisture will likely be reduced. In addition, soil may become less resilient against the desert’s encroachment, increasing desertification (Binder et al., 2022).

⁴ Wet-bulb temperatures are air temperatures under conditions of 100 % humidity

Climate-related Security Risks

Already high temperatures, limited rainfall, droughts, and flash floods will only intensify in the future, promising to pose challenges for Jordan. The confluence of these factors will affect the already critical issue of water security, with important implications for food, livelihood, and health security. However, those most affected are poor urban city dwellers and – particularly – poorer rural communities, which will only exacerbate internal mobility towards an already under-resourced capital region (UN Habitat, 2015). As a result, resources will be even further stretched, potentially leading to social disputes and worsening already bubbling anti-immigration sentiments. Given the scale of these challenges and the existence of competing policy priorities and resources, the government may be unable to respond adequately. Lacking policy responses may lead to a reduction in social and security provision around these challenges and threatens to strain the social contract, undermining the current security status quo.⁵ These risks can be clustered into five risk pathways:

- 1. Climate risks worsen water security and lead to increasing disputes and worsened anti-refugee sentiment:** Jordan is already among the most water insecure countries in the world (Binder et al., 2022). While water scarcity can be linked to the combined impact of poor resource management, illegal and over-extraction, international and regional challenges, and rapid population growth, climate risks are exacerbating the issue (Giordano and Ruttinger, 2021). Expected declines in precipitation will reduce groundwater recharge, a concerning proposition given water is already extracted twice as fast as it can be replenished (Binder et al., 2022). In Jordan, water is linked to food, livelihoods and health, so reductions here have far reaching societal and security implications. Already, water stress poses challenges to social cohesion and has led to rising anti-immigrant sentiment as notable restrictions on water usage were experienced following the influx of Syrian refugees (Giordano and Ruttinger, 2021).⁶ Faced with the prospect of decreasing water resources and, subsequently, quality of life, popular discontent could manifest, compounding already strained relations between society and the state. Furthermore, the potential for existing tensions between refugees and host communities to be further exacerbated over access to natural resources, economic opportunities, and public goods may put social cohesion and the physical well-being of both groups at risk. Given that refugee flows may increase in the future given continued instability, both political but also those induced by climate change, policy makers need to begin thinking now about improved resource management considering present but also future needs. Climate-related water scarcities may also further complicate an already complex patchwork of tribal, political, and hydrological systems, by undermining tribal agreements and water governance

⁵ Climate-related security risks presented here focus on domestically-originating climate impacts though the authors recognize that Jordan faces significant transboundary risks given the regions recent experience with fragility, conflict and climate change. The authors recognise that transboundary pressures need to be taken seriously and addressed simultaneously. However, the climate-related security risks presented here are meant to be summary only and readers are encouraged to review other sources for a more detailed analysis of climate-related security risks in Jordan, including transboundary drivers of climate insecurity.

⁶ “Syrian refugees have increased water needs by 21 percent throughout the Kingdom and 40 percent in the north. Before the Syrian crisis, water in Amman would be supplied two days every week. Subsequent to the refugee crisis and the decrease in precipitation, it was cut to 8 hours a week.” See page 18 of the Climate Fragility Risk Brief: Jordan, adelphi (2021).

arrangements, particularly in areas where livestock production occurs (Abdallat, 2019).

2. Climate change threatens food and livelihood security and leads to further land degradation, reducing Jordanians' quality of life and increasing social discontent:

Climate risks, but especially reduced rainfall and droughts, and secondary effects of increasing desertification, are interacting with poor resource management to strain a vital agricultural sector. With increased climate risk comes reduction in soil productivity, and events like drought can drastically impact yields and grazing areas for livestock, threatening food security for the whole country as agricultural productivity drops and prices rise. Jordan is already at risk of food insecurity given Jordan imports some 80% of domestic food needs, and 97% of cereals⁷. Jordanians are therefore beholden to external market forces or external climate risks impacting food production areas globally, illustrating the strong transboundary nature of climate insecurity in Jordan. Although agriculture accounted for only 4% of GDP in 2021, over 25% of the population relies on agriculture for their livelihoods (Binder et al., 2022). Most reliant on agriculture are rural farmers, urban sellers, and refugees, all of whom tend to be among the country's poorest. In an attempt to salvage their livelihoods, farmers have increasingly turned to damaging irrigation techniques or illegal usage, and horizontal – rather than vertical – attempts at productivity improvement, further straining water resources and ultimately contributing to insecurity. Agriculture already accounts for 50% of total water usage, and inefficient usage has led to farmers using 2–5 times more water than needed (International Trade Administration, 2022). By alleviating livelihood stress in the short term, farmers may add to climate stress in the future, entering into a vicious circle of reinforcing climate and livelihood insecurity. Alternative livelihoods are limited, especially in rural areas, given the reduction in public sector spending and lower levels of development (Schwartzstein, 2019). This situation leaves many without work prospects and without the ability to diversify their livelihoods. If food prices rise along with unemployment, that could fuel social discontent and undermine stability.

3. Climate risks threaten to exacerbate internal mobility, straining already limited resources:

Climate risk impacts, especially reduced rainfall and drought for water, agriculture, and livelihoods in rural areas, can trigger high levels of rural to urban mobility. This largely takes place between rural areas towards Amman. However, Amman is already resource-constrained and sudden streams of in-migration may further aggravate the situation. As people move to Amman and other urban centres in search of livelihoods, food and water, economic and social resources in host communities will be strained, increasing the risk of competition and conflict over these resources and basic services in general. At the same time, those who made the move may find themselves stuck in precarious circumstances as employment opportunities and overburdened social services, like education, do not match needs. This risks maintaining or adding to already significant levels of poverty (Karasapan, 2022). As a result of such pressures, the potential for community conflicts may increase, eroding social cohesion in the process.

⁷ Jordan imports 80% of domestic food needs, and 97% of cereals.

4. Climate change threatens to stretch government coffers and reduce service provision, negatively impacting the social contract: Climate risks will strain already limited public finances. Climate change is costly, especially sudden on-set disasters like droughts or flash floods. The costs of disaster responses and infrastructure repairs, for example, may compete with other policy priorities. In an environment where public spending is already unsustainable and reducing, that could lead to further funding cuts (Schwartzstein, 2019). This would have important implications for public service delivery, social and economic development, and the high number of people on the public payroll. As a result, communities that may already feel the state does not sufficiently support them may feel further left behind. Concerningly, public dissatisfaction with state services may cause a deterioration of state-society relations in the medium to long term.

5. Climate change threatens critical infrastructure, with important implications for energy security: Climate change will simultaneously drive demand for energy while also threatening its supply. The country already suffers from energy insecurity, importing 94% of its energy needs at a cost of 10% of the country's GDP.⁸ This leaves Jordan susceptible to international market forces, undermining its resilience and autonomy. Energy use has grown due to domestic demand, rising at a rate of 3% per year historically, and is only going to increase due to climate change (ibid). An increasing number of hot days will spur the use of energy intensive cooling and other technologies and infrastructure to manage a hotter, drier world. However, extreme weather events also damage energy infrastructure, including fuel supply and production, posing a threat to Jordan's ability to develop resilient energy systems and security.

⁸ See: <https://www.jordannews.jo/Section-36/Opinion/Jordan-s-energy-security-18609>

Institutional Framework

In recent years, Jordan has progressed significantly in articulating a policy framework aimed at managing and responding to climate change. This is illustrated through the development of a number of sector-specific strategies and policies targeted at mitigating and adapting to climate change: water, energy, agriculture and “green” economic development are key areas of interest for national authorities.⁹ Jordan also developed a National Natural Disaster Risk Reduction Strategy in 2019 which has been updated as of 2023. Sector-specific strategies have been developed alongside national development plans that are inclusive of climate change considerations, an example of which is Jordan’s 2025 National Vision and Strategy. This strategy houses over 400 policies aimed at setting a course for “holistic economic and social advancement based on equal opportunities for all” Ministry of Planning and International Cooperation, 2015). Environment and climate are incorporated here, as well as socio-economic policies, such as those aimed at poverty reduction. Another example is the country’s Government Executive Programme (GEP) (2013–16), developed by the Ministry of Planning, which integrates climate change as a major pillar of the environment sector. Besides adaptation measures, the programme emphasises the need to mainstream climate change dimensions into all projects and programmes. The programme also provides a legal framework for national climate change activities (Hashemite Kingdom of Jordan, 2015).

The country enacted a by-law (Climate Change Bylaw no. 79) in 2019 that outlines roles and responsibilities for managing climate change adaptation and mitigation across the government (Ministry of Environment, 2022). Critically, it includes the establishment of a coordinating body (discussed below) and the formalisation of a stakeholder mechanism at and below the Governorate level that aims to, among others, strengthen participation of vulnerable groups (e.g., women, youth, and people living with disabilities). Such a mechanism is a robust step towards ensuring that those most impacted by climate change and its security implications, as well as the solutions proposed for their resolution, are considered.

Further, Jordan developed the region’s first (National) Climate Change Policy (NCCP)¹⁰ in 2013, and more recently, endorsed a revised policy covering the period between 2022–2050 (CCP 2022-2050). The new policy mainstreams climate change in all sectoral policies, strategies, and action plans, and provides strategic orientations for Jordan in order to mitigate and adapt to climate change effectively. This high-level strategic document illustrates the country’s commitment to meeting the challenge of climate change (adelphi and CGIAR, 2023). Currently, the focus is on water, agriculture, energy, land use, and desertification, and in many respects is a regional trailblazer. It displays cognizance, for instance, of the vicious cycle between climate change and social inequalities and vulnerabilities by explicitly targeting disproportionately vulnerable groups, including Syrian refugees. Its whole of government approach is also novel, and a good example of the cross-ministry efforts needed to combat climate change and security. This approach is not new in Jordan, however: other strategies take a cross-sectoral and multi-ministerial approach to climate change implications too, notably the National Water Strategy 2023–2040 which factors in the role of water in

⁹ These include various policies, including the Climate Change Policy for a Resilient Water Sector 2016–2025, Master Strategy in the Energy Sector for the period 2015–2025, a National Food Security Strategy 2021–2030, and Green Growth National Action Plan 2021–2025 for example.

¹⁰ The original spanned a 7-year period from, 2013 – 2020, which has recently been updated to 2050. See MoENV 2013.

ensuring food and energy security. Moreover, Jordan has multiple committees consisting of members representing different ministries and research institutions, such as the National Drought Committee, which provide multi-ministerial and multi-disciplinary input for national climate change strategies and responses at the national level.

In addition to the NCCP, Jordan also updated its Nationally Determined Contribution (NDC) in 2021 and devised an action plan that lays out several areas important for climate security, including migration and adaptation. Jordan also outlined a National [Climate Change] Adaptation Plan (NAP) in 2021, and Jordan's Fourth National Communication on Climate Change in 2022. The latter is a comprehensive document that clearly outlines the relationship between climate change and the impacts on the country's most vulnerable people as well as geography (Ministry of the Environment, 2022). It clearly stipulates, as a result, priority areas for action to be taken up by policymakers and international partners, a useful tool to advance programming on climate security. With that said, limitations exist on identifying the explicit links between climate change and the potential for exacerbating or leading to more traditional conflict concerns.

The primary entity that possesses an institutional mandate to design and implement climate action – both in terms of adaptation and mitigation – is the Ministry of the Environment (MoENV), and the Climate Change Directorate (CCD) housed within it. The CCD effectively manages the government's mandate and commitments on climate change, such as implementing the NDC and NAP, and is the focal point for the UNFCCC, Green Climate Fund, and Adaptation Fund. The CCD is also the secretariat for the National Committee on Climate Change (NCCC), a cross-ministry body housed within, and chaired by, the MoENV, and inclusive of 16 Secretary Generals of major ministries. The NCCC is responsible for coordinating action across the government to implement the country's climate change priorities, and links with broader society through the integration of civil society organisations and private actors.

Other key ministries on issues related to climate and environment are the Ministry of Water and Irrigation (MoWI), which also has a climate change department, the Ministry of Agriculture (MoA), the Ministry of Energy and Mineral Resources (MEMR), and the Ministry of Health (MoH). Further, the Ministry of Social Affairs (MoSA) is currently being reinforced in order to function as a Green Climate Fund Nationally Designated Authority (NDA) (adelphi and CGIAR, 2023). The Ministry of Planning and International Cooperation (MoPIC) is another central actor in climate policy and action. This is due to its mandate to oversee work related to planning and budgeting around climate action, as well as its role in accessing international climate finance, being the national focal point for Green Environment Facility (GEF). These institutions may work together to design policies and plans pertinent to climate change.

The MoWI is an especially powerful institution in this context, given the centrality of water for the Jordanian economy and a variety of policy sectors. The MoWI Secretary General (SG) sits on the board of the independent Water Authority of Jordan's (WAJ) three utilities. The WAJ has "full responsibility for the public water supply [including allocating the water budget], wastewater services and related projects as well as for the overall water resources planning and monitoring, construction, operations and maintenance (Hashemite Kingdom of Jordan, 2023)." Additionally, the MoWI SG sits on the board of the independent Jordan Valley Authority, the water planning institution managing, among other things, the water allocation budget for the Jordan Valley (adelphi, 2022).

In addition to these ministries, important bodies and councils also manage response to climate change. Critical here is the National Center for Security and Crisis Management (NCSCM).¹¹ This council coordinates national crisis management efforts and capacities across government, the private sector, NGOs and humanitarian aid agencies to prepare for and manage a crisis. Of note is the function pertaining to disaster response where it supports an integrated early warning system through a national database, and is the custodian of the National DRR Strategy. In addition to the NCSCM, Jordan has a Civil Defence unit (JCD)¹² which has an operational mandate to respond to disasters, secure security facilities in the event of a disaster, and raise awareness of disasters through the Disaster Management Department. They are present in all 12 Governorates and run a network of 187 civil defence centres around the country (adelphi and CGIAR, 2023).

Further, subnational actors are also important for climate change and climate security response. Of note are Governorate Councils, which are comprised of locally elected individuals. They provide a critical participatory decision making function on budget allocation and identification of needs, key for addressing localised issues around climate change (ibid). The Greater Amman Municipality is an additional actor with climate competencies, having drafted the country's first sub-national climate strategy. The strategy primarily focuses on emissions reduction, however, with no focus on the social implications of climate change or action (Greater Amman Municipality, 2019).

Generally speaking, non-state actors are often engaged in crafting policies and strategies related to climate change. These include community-based organisations, NGOs, DOS, Meteorology Department, private sector actors and academia (adelphi and CGIAR, 2023).

From a more traditional security point of view, the state relies on robust internal and external forces for security provision (Al Ameri, 2017). Internal policing is managed through the Public Security Directorate, which is part of the Ministry of Interior to manage internal security threats. Internal policing is headed by a Director General and five regional security commanders who oversee all police activities.¹³ Internal threats within Jordan include instances of violent extremism, as well as evolving security threats, such as cybercrime, human trafficking, and people smuggling (Interpol, 2023). Jordan also has a formidable army, which is largely made up of the Bedouin community. The US is Jordan's largest bilateral donor, including in military financing and equipment. The basis of their cooperation is laid out in bilateral foreign assistance in three non-binding Memoranda of Understanding (United States Department of State, 2020). Given the cross-border implications of the Syrian Civil War in Jordan, which houses over 1 million refugees, Jordan has also developed successive "Jordan Response Plans".¹⁴ These plans identify specific humanitarian and development needs resulting from the refugee influx on infrastructure, social services, and resources (Ministry of Planning and International Cooperation, 2020).

¹¹ Established in 2015, it functions as a National Command and Control Centers when crises occur, and is headed by a "Crisis Commander". The council also comprises of a Board of Directors which are composed of security agencies personnel.

¹² The civil defense unit was established in 1959.

¹³ The five regional security commanders oversee the police activities of the Metropolitan, Northern, Southern, Central and Al-Aqaba regions in addition to the Royal Bedouin forces

¹⁴ Most recent Jordan Response Plan covers 2020 – 2022. See <http://www.jrp.gov.jo/Files/JRP%202020-2022%20web.pdf>

Climate Security Policy Integration

Degree of integration

Despite regional leadership and advancement of policies related to climate change and mitigating its effects, there remain important limitations in both conceptualising and integrating climate-related security risks within policies and approaches. Climate-related security risks are not well represented within policy plans and strategy documents, though certain sectors are beginning to better reflect this linkage. This is especially the case around water and food security. However, even in policies and plans which discuss the social and security implications of climate change, few articulate climate-related security risks as an entry point for interventions that are pro-peace in nature and may produce broader societal dividends. For example, water management strategies laid out by the MoWI focus on reducing demand and stopping water theft without discussing ways to mitigate the negative social consequences of diminished reserves going forward (adelphi, 2022). This showcases that climate and insecurity are generally understood and presented in a siloed manner, with little overlap between the two sectors.

Further, with a lack of integration of climate security within policies and strategies, there remain important limitations in the identification or differentiation between vulnerable groups and/or geographies, an important consideration in the climate security context, given that climate insecurity is often felt most acutely amongst specific and already vulnerable communities. Further, policies tend to focus on their thematic area, whether it be energy, water, or health, with limited cross-sectoral linkage or mention of different policies and plans. As well, traditional security actors and approaches remain largely devoid of climate security considerations, showcasing a lack of engagement on the issue. This reflects the reality that policy documents and strategies engage more directly with climate-related risks than conflict-related risks. A noticeable outlier here is Jordan's Response Plan (JRP) 2020–2022, which links refugee wellbeing with climate and the environment, especially around water provision in addition to socio-economic initiatives (Shapendonk et al., 2022).

Challenges to integration

Lack of awareness

There remains a continued lack of understanding and awareness of climate security concepts and the consequences they are likely to elicit. In particular, knowledge around the humanitarian, economic, social and political costs, as well as the opportunities associated with addressing climate insecurity, remain poorly articulated among decision makers, including within key ministries and policies/plans (Global Green Growth Institute, 2022). Although the government has increasingly signalled climate change as a potential disrupter, especially with the enhancement of the climate change policy and the priorities laid out in the NAP¹⁵, poverty, unemployment, and economic challenges remain important focuses of the state that are not necessarily reassessed in the context of climate change.

¹⁵ It should be noted however that the National Adaptation Plan does differentiate vulnerable groups as a target for climate adaptation.

Technical capacity constraints

In addition to a lack of awareness and prioritisation of climate change, limitations around managing information and data of climate risks also inhibit climate security action. This includes data needed for early warning systems, such as the ability to capture more granular real-time information for flood prevention. With that said, efforts are being undertaken to close that gap, and are inclusive of both technical data and social indicators. For example, the Jordanian Government has partnered in, or contributed to, several recent drought risk assessments that resulted in the production of a Combined Drought Indicator for Jordan, as well as a series of drought vulnerability maps (Goal, 2019). This work was designed to inform the country's drought policy and management plan, drought monitoring infrastructure, and early warning systems. It also feeds into Jordan's integrated "Strengthening the national water governance and drought management" project, which started in 2016. The drought vulnerability assessments are based on a number of social vulnerability indicators and consider the impact of Syrian refugees on drought vulnerability (Arab Water Council and WFP 2023).

However, some ministries continue to lack adequate equipment and technical capacity for data processing, analysis and mapping. In addition, the location and spread of the existing climate stations across Jordan does not provide the needed geographical coverage for adequate climate analysis and projections (UNICEF, 2021). This has implications for disaster management especially. Further, there is insufficient national technical capacity for hydrometeorological data management, monitoring, modelling, assessment and mapping within the MoWI, and data sharing between different ministries remains inhibited. This challenge is further exacerbated by limited data sharing across government on key climate themes.

Financial capacity constraints

In part, the capacity constraints mentioned previously result from a general lack of financial resources. Though there may be a will and drive to shift towards more coherent and intentional climate action – much of which can indirectly respond to climate insecurity and cascading climate impacts on socio-economic and political systems – competing policy priorities, including but not limited to refugee response plan and poverty alleviation, means insufficient resources are directed towards climate action. This can impede investment in adaptation, mitigation, and disaster response. It also means staffing ministries with dedicated staff to see through climate action, from technical specialisation through to implementation and evaluation, becomes challenging.

Important for rectifying financial constraints is the ability to access climate finance. While knowledge of international climate finance instruments has improved, Jordan has not been able to fully capitalise on what is available. Generally, staff in the CCD, MoENV, and other key line ministries often do not have specialised knowledge in project finance or project preparation and assessment, and this knowledge gap can be an inhibitor in accessing climate finance (CGIAR, XX). In addition to a lack of knowledge on the number and types of products available, there is little knowledge on how to blend public finance and budgeting with available climate finance mechanisms, such as loans, equity and guarantees (IBID).

Institutional challenges

As presented previously, Jordan has established an impressive policy framework and architecture to manage the country's response to climate change. However, there remain some key institutional challenges that limit its effectiveness. In particular, challenges around decision making and coordination on climate change and security can limit the Jordanian Government's ability to ensure a whole of government approach to articulating and responding to climate change and corresponding insecurity.

Of particular importance is the limited power and authority wielded by the MoENV and NCCC to push through rigorous cross-sectoral climate action.¹⁶ Though the NCCC meets with relative frequency, the committee is not yet institutionalised. The committee members do not necessarily have decision making authority within their respective ministries, in addition to having limited climate change and climate finance technical expertise (UNICEF, 2021). Additionally, the lack of veto power on legislation pertinent for climate change and climate security by the MoENV in the NCCC – which houses the CCD and is the authority on issues related to climate change – limits their influence to develop and shape policy across sectors that are important for climate change.

Furthermore, although the NCCC is meant to act as a coordinating body, there remain important limitations in the degree of cross-sectoral policy planning around climate change. According to a key informant, key ministries remain relatively siloed in their approach, even though there is an interest to find more ways to collaborate (adelphi, 2022). These silos manifest in various ways, including through capacity building and training, and programme planning and implementation. Cross-ministry collaboration remains challenging for several reasons, including different ways of working, funding streams and legal frameworks, no common language at the technical level, and a lack of agreement on prioritisation. Given the effects reduced water will have on agriculture, for example, this sort of cross-sector planning is vital to facilitate an adequate response into the future.

¹⁶ Of course, other sectors focused on particular climate related issues, such as disaster management and drought management exist.

Recommendations and Entry Points

While Jordan has made strides integrating climate change into policies and plans, and building strategies to tackle climate change, a gap in streamlining the climate-conflict nexus and developing interventions to address them remains. Therefore, work to articulate and **embed climate security implications within respective policies and ministries** should be considered. **Barriers to implementation**, including **resource constraints** and challenges to **coordination and prioritisation** on climate security should be addressed in tandem. Lastly, more information and data need to be developed and disseminated to policymakers and implementing partners for effective decision making. Above all, interventions should be owned and led by national actors to ensure sustainability in programming. The recommendations below are meant to provide a non-exhaustive list of activities to support in this work, and are focused on mainstreaming climate security and building evidence over designing programmatic interventions.

The recommendations were informed by research and analysis carried out throughout the year-long SDG Climate Facility Project “Mainstreaming Climate Security Considerations into Recovery Pathways”, a joint UNDP/BAS-WFP/RBC initiative. The consortium partners, adelphi and CGIAR, undertook extensive desk research and interviewed key informants. Two consultations with national stakeholders representing both government and international partners took place, the first in Amman in September 2022 and the second in Cairo in March 2023. Recommendations are subject to resource constraints and information availability at the time of writing. Policy-makers are advised to exercise best judgement and invoke the expertise of local communities to guide integration into policy processes and when implementing climate security programming.

Immediate

Adopt a climate security strategy at the national level and use as basis for future mainstreaming and implementation activities

This roadmap offers users an initial suggested strategy to begin addressing gaps in climate security mainstreaming and action. However, though research and consultations were undertaken in defining this roadmap, more needs to be done to ensure it is fit for purpose. This includes a wide array of steps, including refining and re-prioritising recommendations, identifying an appropriate institutional home, and establishing a specific cross-ministerial and sectoral committee with clearly defined roles and responsibilities tasked with developing, coordinating and monitoring a strategy’s implementation. Sufficient legislative backing must be provided in order to reinforce the committee’s convening and decision making power.

Suggested actions:

- **Develop a consultation process to present, discuss and refine this roadmap:** to refine this roadmap, further consultation with a more diverse set of actors is required. This includes both government, including relevant ministries and committees/bodies, and non-governmental actors, including civil society organisations, religious institutions, relevant associations (such as youth, gender, farmer), and academia. The purpose of this consultation should be on agreeing to the framework of the roadmap, with a particular focus on defining priorities and identifying needs.

- **Identify a suitable custodian to oversee the development and endorsement of this roadmap:** A suitable government entity with convening power needs to be identified who will be the custodian of this roadmap and future actions. Ensure that this is legislated within the mandate of the selected entity. Ideally, the entity is also an NDA approved entity in order to maximise funding potential.
- **Establish a cross-ministerial and sectoral body to design, coordinate and monitor implementation:** Once an entity has been identified, a cross-ministerial and sectoral committee should be established. To ensure this committee is fit for purpose, undertake training around climate security concepts, themes and needs prior to any further work. A ToR should be developed to ensure the committee's roles and responsibilities are clearly defined and articulated. The committee should define its body of work, drawing from key elements of this roadmap – including guidance and action on reviewing policy, strategies, and plans, ensuring key capacities related to climate change and security are reflected across all of government. Further, this committee should lead in defining a plan of action and monitoring framework to track activities, and work closely with the MoF to define a funding strategy, both relying on MoF budgeting and external funding sources, and communication strategy.
- **Endorse this roadmap and corresponding action plan:** Once the committee has established its work plan, the committee should follow the steps for official endorsement in order to kick start implementation. Following endorsement, it should provide opportunities for engagement with international partners in support of direct engagement during implementing or resourcing.

International partners should assist in developing a national strategy and embed key priorities within country plans and strategies

Climate security is a threat to Jordan, affecting various aspects of Jordanians' lives, and is likely to further undermine already stretched resilience capabilities. The challenges are wide-spread yet interconnected, with many different areas needing to be addressed simultaneously. A comprehensive strategy and framework to coordinate climate security action is needed at the national level. This framework must identify country needs and priorities according to countries themselves. Doing so will help guide both domestic and international policy and programming to address the complex climate-peace-development-humanitarian nexus that exemplifies climate security issues in Jordan. International partners are well positioned to support national actors in doing this. Further, their own Jordan country plans and strategies should reflect the priority areas articulated through any strategy, whether this one or an alternative, to align donor action and resources with country needs and priorities.

Suggested actions:

- **Provide support to country team offices to develop national consultation processes** in collaboration with key government stakeholders to review findings and recommendations of this roadmap towards finalisation.
- **Review country strategies and plans, as well as ongoing programming,** and embed roadmap recommendations accordingly.

Short term

Improve climate security awareness at the institutional and community level

Despite improvements, links between climate and insecurity remain poorly understood at the institutional level. This is the case in both municipal and ministerial levels, as well as among traditional security actors. A lack of awareness around climate change and its social implications can reduce urgency and impede its prioritisation. Without prioritisation, policymakers run the risk of hampering timely responses through insufficient resources, both human and financial. Without sufficient knowledge on those links, activities undertaken in the immediate or near future could aggravate climate change impacts or induced vulnerabilities, impeding the well-being of Jordan's inhabitants.

At the community level, knowledge around the implications of climate change remains poorly understood. This can have important implications for resource management and conflict dynamics. Without an understanding of the links between climate and insecurity, behavioural changes may not occur leading to worsened insecurity going forward. By communicating on climate insecurity's challenges and opportunities, communities can support their own resilience while assisting in implementing national objectives for climate action.

Suggested actions:

- **Undertake climate security awareness training for Secretary Generals and technical staff in key ministries:** Trainings should take a holistic approach and include climate change, climate security concepts, and be context-specific. They should be focused on both relevant thematic (agriculture, water, the link between climate change, social vulnerability, and social cohesion, all the way to violent extremism) and geographic specificities. Awareness trainings should incorporate multiple ministries to avoid siloed responses and facilitate synergies. Municipalities should be incorporated given the implications of climate change on city dwellers.
- **Undertake climate security awareness training for key community groups:** Awareness raising should be focused on groups most impacted by the climate crisis. This should include those with access to natural resources, including farmers, host communities and refugee populations. Trainings should reflect the reality of the situation, but do so cautiously, and must be conflict sensitive.
- **Enhance public communication on climate change and emphasise Jordan's role in confronting challenges to support community buy-in:** Design and launch awareness campaigns utilising new mediums of communication. Communication strategies must be targeted to make sure no one is left behind. Activities could include:
 - The promotion of cautious communication materials, such as short films, showcasing the reality of climate change and targeting those communities impacted most, including farmers and marginalised groups, such as women and refugees.
 - The production of posters and social media campaigns that promote green entrepreneurship activities to spur interest and activity in green innovation.
 - Collaboration with local media organisations to raise the profile of climate change and showcase activities underway or planned to address

climate issues, incorporating where possible national strategies, such as the NDC or NAP.

Improve climate security capacities across all of government

Building on awareness raising of climate security as a concept, specific climate security capacities, for example defining policies, developing and implementing programmatic interventions, and accessing external funding, need to be enforced among key institutional actors. These actors should include relevant ministries, as defined by the committee overseeing this roadmap, and bodies and entities responsible for climate action, such as climate change focal points.

Suggested actions:

- **Train pre-existing climate change focal points on climate security.** These focal points will be the lead on implementing national objectives and priorities related to climate action within their respective entities, including on climate security.
- **Identify a set of representatives from relevant ministries to be trained on themes described above.** The focus on ensuring domestic capacity also means these actors can and should support other units and entities with capacity building where feasible. If possible, they can:
 - Develop a training programme to be deployed as needed for other ministries or interested parties. The training programme should incorporate elements on preparing projections, reports and proposals, programmatic interventions, and reporting.
 - Prioritise specific training on accessing and embedding climate finance within all relevant ministries and bodies.
- ii. **Undertake a cross-ministerial and sectoral scoping study to identify capacity gaps and opportunities around climate security.**

Enhance climate security integration within policy plans and processes

As of yet, climate security is not sufficiently integrated into Jordan's climate policy framework and plans. In order to ensure Jordan can respond to insecurity stemming from climate change, policies, plans and sector-specific strategies need to be sensitive to the threat climate change poses. Climate security linkages need to be clearly articulated and an action plans should accompany any strategy and incorporate funding from the outset. Already existing and to-be-developed policies need to have these considerations in mind. However, attention should be made to not duplicate work. Actors should elevate initiatives, policies, and plans already addressing the nexus of climate and security.

Suggested actions:

- **Undertake a scoping study to identify existing climate security policies, strategies and plans to identify where gaps exist for further development.**
- **Identify and update expired, current or future policies and strategies critical for climate security, and ensure they incorporate climate security considerations and projections within them, relying on previous analysis where possible:** This should include the Climate Change Policy (2022), National Water Strategy (2023–2040), Jordan National Vision Strategy 2025, the National Strategy for Agricultural Development (2002–2010), the Disaster Risk Reduction Strategy (2019–2022), National Adaptation Plan (2021) and Fourth National Communication, as well as national security documents or directives.

- **Review existing policies and ensure alignment with national strategies and positions on climate action and security:** Strategic documents, such as the Jordan Water Strategy, the Jordan National Vision Strategy 2025, Jordan's Economic Modernization Vision and Action Plan (2023–2025), the Green Growth National Action Plan, and NDCs and NAPs, require alignment to ensure coherence in approach and more adequately advance climate action and climate security objectives. Explicit synergies with other strategies should be sought.
- **Work across ministries to review whether key strategic or policy documents are cross sectoral, reflecting the interlinkages between different facets of climate and conflict.**
- **Identify pre-existing multi-ministerial platforms that are already in place and integrate climate security where appropriate.**

Build capacity of key national actors tasked with advancing the climate policy agenda, including on climate security, adaptation and finance

The Climate Change Directorate (CCD), the National Committee on Climate Change (NCCC) and the MoPIC are vital for the advancement of Jordan's climate change agenda. Together, they set the agenda on issues around climate change and security, and are the main links between international policy and finance architecture and national level implementation. The Climate Change Directorate is the Nationally Determined Authority for all major international climate policy and finance institutions, for example. However, these institutions are limited in their effectiveness due to technical and financial constraints, and limited influence and power to enact their agendas and enforce implementation. The priority should be to empower these institutions to the highest degree possible to ensure policies are aligned and resources are allocated efficiently and in a targeted nature.

Suggested actions:

- **Reinforce the CCD:** To implement many of the activities suggested here, the CCD needs to be empowered and resourced. It is especially critical to develop capacities to support knowledge development, guide implementation, monitor effectively and access finance. To support in this process, it is suggested to:
 - Enhance technical competence in identifying and applying for international and domestic climate finance opportunities, project development and design, and monitoring and evaluation of implemented activities. Further, consider embedding specialists within the CCD who could be accessed by relevant actors in other ministries or entities to shore up their finance possibilities.
 - Build climate action trackers with climate impact and security indicators and dashboards to better track climate action and security activities, which can also reinforce monitoring of progress on national and international commitments.
 - Devise a common position among all ministries on climate security, for example on water scarcity through the creation of a national climate security white paper, and prioritise its integration in vision and mandates of ministries.
 - Enact CCD veto and authorising powers for policies with implications on climate security, especially related to natural resources.

- **Reinforce the NCCC as a key coordinating body:** The NCCC is an integral communication and coordination entity within government, capable of reaching various levels of society to drive forward aligned action on climate change more broadly. It is also meant to act as an intermediary between national action and international obligations, endorsing reports which are sent to international finance and monitoring mechanisms. However, the entity is limited in its ability to drive a coordinated approach to climate action. It is vital that the NCCC be empowered to not only fulfil its mandate, but also to lead the charge in addressing already existing, but worsening, climate impacts. To enhance the capacity of the NCCC, several actions and activities are suggested, including:
 - Providing a more robust legal basis for the entity and its activities, and more clearly defining its role through the development of a ToR.
 - Developing a clear code of conduct for participating institutions and organisations to formalise participation and align objectives and targets.
 - Prioritising the inclusion of community groups and local actors to avoid top-down barriers and ensure policy development addresses the needs on the ground, in line with the Climate Change Policy (2022–2050).
 - Establishing a climate security focal point to lead in coordinating climate security integration and advancement on important issues, such as water management and urbanisation, within the participating entities.

Medium term

Improve climate security knowledge, data and dissemination for improved response capacities and decision making

Ensuring policies and approaches are capable of responding to climate change and security requires key data around climate security. This data ranges from the technical, including climate impact or real-time early warning data in support of disaster risk management, to conceptual climate security linkages and vulnerabilities to inform better policies, to programme management, including financing and implementation to ensure strategies are not underutilised.

Suggested actions:

- **Conduct thorough climate security assessments at various levels and within various sectors to devise climate security risk-informed policymaking:** Ministries, municipalities and sectors that have important implications for climate security should be prioritised, and should undertake assessments to identify climate security linkages to inform policy approaches and strategies. Such assessments should integrate dynamics at the local level whenever possible, and be focused around identifying those most vulnerable to climate change and potential social implications for action. Traditional security sectors, such as the police, army and the MoI, and non-traditional security actors, such as NGOs and conflict resolution practitioners, should also develop similar conceptual understandings of climate security. The inclusion of vulnerable groups, based on sex, age, geography, etc., in designing and undertaking assessments is vital. In addition, linking with local communities as much as possible will ensure granular, local level identification of climate security issues, as well as provide insight into what communities may already be doing to mitigate climate insecurity. Given the high cost in time and money, policymakers are recommended to enlist the financial and technical support of the UN and

INGOs to ensure that technical capacities to undertake these activities remain inhouse.

- **Invest in better technical equipment and human capacities to better monitor and respond to climate impacts, such as climate-induced flooding.** This can be done in a multitude of ways, including:
 - Working with regional fora and initiatives, like the Arab Water Council and the upcoming Arab Geographic Information Room (AGIR), to link with and build on pre-existing tools. To do so, ensure that data is utilised and shared across ministries for policy use.
 - Working with partners, such as the private sector or regional/international actors and institutions, to prioritise investment in better equipment to provide more reliable data around climate impacts and real-time information to be used by MoENV and the National Center for Security and Crises Management (NCSCM).
 - Bringing in expertise to support staff capacities at the NCSCM to enhance pre-existing early warning systems, focusing on data collection, storage and management processes, and train on designing anticipatory action and collaboration with humanitarian actors.
- **Establish a regional committee to engage with regional and international partners.** Peer to peer exchange, with a focus on south-south engagement, can be useful in articulating climate security challenges and identifying responses that could be adapted and adopted domestically. Knowledge sharing, technology transfer, best practices and lessons learned can spur domestic actions. Further, given the transboundary nature of many climate security issues, both environmental/climatic and social, such as refugee flows, these engagements can be used as a basis for transboundary cooperation, including joint research initiatives or climate and security programming as applicable.
- **Develop a dashboard to monitor suspected drivers of vulnerability/fragility for decision makers.** A dashboard could be developed to help decision makers direct their priorities. To ensure a whole of government focus, relevant ministries should upload and share data relevant to climate change and security directly on the platform. Such a dashboard should be hosted in entities which have significant competing power and resources, such as the NCSCM. Ensure the dashboard can be accessed by other entities and interested parties, however, including non-governmental actors.
- **Build and incorporate a complete set of social vulnerability and security indicators to be used when undertaking other assessments, such as climate risk or technical needs assessments.**

Long term

Support climate change and security policy and programme implementation capacity at the national, municipal and local levels

Jordan's policy architecture has correctly identified climate change as an important issue, and several policies, strategies and action plans have been developed to signal intent. However, key impediments to implementation inhibit turning these policies into coherent action. These impediments include misaligned planning processes and methodologies, and a lack of resources and/or implementation plans. Further, there remains a lack of planning and programming on climate security specifically at various levels. For Jordan to ensure that climate impacts do not aggravate pre-existing tensions – for example between refugees and host communities – or lead to new ones, these impediments need to be addressed.

Suggested actions:

- **Harmonise planning processes and funding streams among ministries:** Ministries generally utilise different planning methodologies when devising sectoral plans and processes. They often have different time horizons that do not complement each other or work according to a common strategy, such as UNFCCC timelines. Ensuring plans are interlinked and build on each other becomes difficult, and competing timelines disrupt complementarity and consistency, setting back climate action and climate security mainstreaming. To address this, policymakers in the CCD are encouraged to work with other ministries to review ministry planning templates and processes. Gradually, common planning methodologies and templates with an eye to climate action and climate security can be developed. These policies should also coalesce around key timelines, oriented around the Climate Change Policy, the NAP or NDCs, as deemed most relevant.
- **Support climate security implementation within key ministries and sub-national level entities, such as municipalities:** To support implementation of policies and plans related to climate change action, whether sectoral strategies or national objectives, policymakers are suggested to:
 - Develop climate security sector-specific implementation plans, ensuring alignment with the new CCP Implementation plans. These should be mindful of community level dynamics and incorporate actors to ensure needs are reflected in policies and processes. Plans should be based on local level data and inputs.
 - Ensure full functioning of pre-existing initiatives that support climate security objectives, such as the Sustainable Energy Access and Climate Action Plan, providing support to see initiatives through. For example, a technical support mechanism could be established to provide technical guidance on implementation, for instance project design and fundraising.
 - Build a database of past or current projects and programmes that address climate security challenges which have already been undertaken and can be accessed in order to scale up or replicate in other zones/contexts.
 - Utilise pre-existing funding mechanisms or devise new innovative sources that ministries and entities can access to support implementation, but ensure criteria are inclusive of climate security considerations and concerns, and that activities align with objectives laid out in key strategies or policies, such as the Climate Change Policy.

- **Develop climate security capacities at the local level:** Given the bridge between policymaking and implementation, action should ensure that local communities are not forgotten in the mainstreaming process and are enabled to participate. Capacity-building at this level should be targeted towards the needs of communities, for example, managing water resources in a conflict-sensitive way.
- **Develop climate security conflict prevention programming:** Programming should target areas most susceptible to conflict, for example water (in)security, and be based on previously undertaken assessments that identify vulnerability to climate (in)security. Learning from these programmes should be institutionalised into policies moving forward. Ensure as well that a diverse set of partners and actors are engaged, including non-conventional peacebuilding actors. Where possible, building the resilience of communities to respond to both climate and insecurity should be prioritised. Programmes could reinforce dialogue between affected communities and provide climate security and peace responsive training to support more equitable and conflict-sensitive resource management as a first step.

Works Cited

- adelphi (2022). Interview with Confidential Key Informant 1. Virtual.
- adelphi (2022). Interview with Confidential Key Informant 2. Virtual.
- adelphi and CGIAR (2023). National Stakeholder Workshop. In person
- Abdallat, G. (2019): Security of water infrastructure against sabotage and damage in Jordan. Economic and Social Council Jordan. Available online at https://www.researchgate.net/profile/Ghaida-Abdallat/publication/336148694_Security_of_Water_Infrastructures_against_Sabotage_and_Damage_in_Jordan/links/5d92ff20458515202b778211/Security-of-Water-Infrastructures-against-Sabotage-and-Damage-in-Jordan.pdf
- Al Ameri, Mamdoh Sulaiman (2017): Jordan's National Security Strategy. UNIPATH. Available online at <https://unipath-magazine.com/jordans-national-security-strategy/>, checked on 2/16/2023.
- Al-Alayani, Hamzeh S. (2022): Jordan's energy security. Amman. Jordan News. Available online at <https://www.jordannews.jo/Section-36/Opinion/Jordan-s-energy-security-18609>.
- Al-Bakri J.T., Al-Khreisat A., Shawash S., Qaryouti E. and Saba, M. (2017). Assessment of Remote Sensing Indices for Drought Monitoring in Jordan. *Asian Journal of Geoinformatics*, 17(3): 1-13
- Al-Qinna, M. I., Hammouri, N. A., Obeidat, M. M. and Ahmad, F. Y. (2011). Drought analysis in Jordan under current and future climates. *Climatic Change*, 106:421–440
- Arab Water Council and WFP (2023): Climate Change and Social Vulnerability – Part I: Using Multi-Sectoral Indicators to Assess Compound Drought Risk and Social Vulnerability in Jordan.
- Athamneh, Abdel Baset (2016): Jordanian Refugee Policy. In Bundeszentrale für politische Bildung, 2016 (Country Profile Jordan). Available online at <https://www.bpb.de/themen/migration-integration/laenderprofile/english-version-country-profiles/234510/jordanian-refugee-policy/#footnote-target-17>, checked on 2/16/2023.
- Binder, Lisa, Barbora Šedová, Lukas Rüttinger, Julia Tomalka, Stephanie Gleixner (2022): Climate Risk Profile. Jordan. Jordan. With assistance of Ylva Hauf, Stefan Lange, Alina Viehoff, Johanna Dieffenbacher. Potsdam Institute for Climate Impact Research, adelphi. Berlin (Weathering Risk). Available online at https://www.weatheringrisk.org/sites/default/files/document/Climate_Risk_Profile_Jordan.pdf, checked on 2/9/2023.
- Clima-Med (2021): Recommendations for Climate Action Coordination Strategy. Jordan CAS: From Planning to Action, Mainstreaming Climate Change. Clima-Med. Available online at <https://www.climamed.eu/wp-content/uploads/files/Final-JORDAN-CAS-Document-23April-2021.pdf>, checked on 2/16/2023.
- Combaz, Emilie (2019): Jordan's environmental policies and engagement on climate change. K4D helpdesk service. UK Department for International Development. n.a. Available online at https://assets.publishing.service.gov.uk/media/5d30a131ed915d2ff003b781/619__Jordan_Environment_Policies_and_Engagemt.pdf, checked on 2/16/2023.
- International Trade Administration (2022): Environment and Water Sector. Jordan. Department of Commerce, United States of America. Washington DC. Available online at <https://www.trade.gov/country-commercial-guides/jordan-environment-and-water-sector>, updated on 9/26/2023, checked on 9/26/2023.
- FAO (2021): Building resilience to cope with climate change in Jordan through improving water use efficiency in the agriculture sector. With assistance of Hashemite Kingdom of Jordan. Green Climate Fund (Funding Proposal). Available online at <https://www.greenclimate.fund/sites/default/files/document/funding-proposal-fp155.pdf>, checked on 2/10/2023.
- Giordano, Giulia (Dr.), Lukas Rüttinger (2021): Climate-Fragility Risk Brief. Jordan, Palestine and Israel. adelphi. Berlin (Climate Fragility Risk Brief). Available online at https://climate-security-expert-network.org/sites/climate-security-expert-network.org/files/documents/csen_risk_brief_jordan_palestine_israel.pdf, checked on 2/10/2023.
- GIZ, 2023: Water-Energy-Food Nexus Training Material Module II: Institutions, Processes, and Tools for Institutionalizing the WEF Nexus. Nexus Regional Dialogues Programme // Water-Energy-Food (WEF) Nexus Training Material | Nexus - The Water, Energy & Food Security Resource Platform
- Global Green Growth Institute (2022): Support NDA's Enagagement with Stakeholders, Accreditation of National Entity, and Enhancement of Concept Notes in Jordan. With assistance of Hashemite Kingdom of Jordan. Green Climate Fund. Seoul. Available online at <https://www.greenclimate.fund/sites/default/files/document/20221125-jor-rs-005-ap-cover.pdf>, checked on 2/10/2023.
- GoAL WaSH and UNDP (2019): Mainstreaming Rio Convention Provisions into National Sectoral Policies: CDI Validation Summary Report and Drought Vulnerability Maps. Amman.
- Hashemite Kingdom of Jordan (2023): Ministry of Water and Irrigation. Information page. Hashemite Kingdom of Jordan. Amman. Available online at https://portal.jordan.gov.jo/wps/portal/Home/GovernmentEntities/Ministries/Ministry/Ministry%20of%20Water%20and%20Irrigation/!ut/p/z0/04_Sj9CPykyssy0xPLMnMz0vMAfIjo8ziHU1cQ0wN3B09A42CTAwcfcyXd19grwCg4z0g1Pz9

L30o_ArAppiVOTr7JuuH1WQWJKhm5mXlq8f4ZuZl1lcUlSpkJ-mEJ5YklqkkJiXouBZVAS1Xr8g2z0cAN1L1bw!/, updated on 2/16/2023, checked on 2/16/2023.

Interpol (2023): Jordan Country Page. INTERPOL. Available online at <https://www.interpol.int/en/Who-we-are/Member-countries/Asia-South-Pacific/JORDAN>, updated on 2/16/2023, checked on 2/16/2023.

Karasapan, Omer (2022): Syrian refugees in Jordan: A decade and counting. In Future Development. Available online at <https://www.brookings.edu/blog/future-development/2022/01/27/syrian-refugees-in-jordan-a-decade-and-counting/>, checked on 2/10/2023.

Ministry of Environment, Hashemite Kingdom of Jordan (2013): The National Climate Change Policy of the Hashemite Kingdom of Jordan 2013-2020. Ministry of Environment, Hashemite Kingdom of Jordan. Amman.

Ministry of Environment, Hashemite Kingdom of Jordan (2022): Hashemite Kingdom of Jordan 4th National Communication. With assistance of United Nations Development Programme, Global Environment Facility, United Nations Climate Change. Hashemite Kingdom of Jordan. Available online at <https://unfccc.int/sites/default/files/resource/Hashemite%20Kingdom%20of%20Jordan%204th%20National%20Communication.pdf>, checked on 9/20/2023.

Ministry of Environment, Hashemite Kingdom of Jordan; United Nations Development Programme (2022): National Climate Change Policy of the Hashemite Kingdom of Jordan 2022-2050. With assistance of Global Environment Facility. Kingdom of Jordan. Available online at <https://www.undp.org/sites/g/files/zskgke326/files/2023-03/National%20Climate%20Change%20Policy%20of%20the%20Hashemite%20Kingdom%20of%20Jordan%2022-2050.pdf>, checked on 9/20/2023.

Ministry of Planning and International Cooperation (2014): Jordan 2025: A National Vision and Strategy. Hashemite Kingdom of Jordan. Amman. Available online at <https://andp.unescwa.org/sites/default/files/2020-09/Jordan%202025%20A%20National%20Vision%20and%20Strategy.pdf>, checked on 2/16/2023.

Ministry of Planning and International Cooperation (2020): Jordan Response Plan. For the Syria Crisis 2020-2022. Hashemite Kingdom of Jordan. Available online at <http://www.jrp.gov.jo/Files/JRP%202020-2022%20web.pdf>, checked on 9/26/2023.

National Center for Security and Crisis Management (2019): National Natural Disaster Risk Reduction Strategy (2019-2022). Hashemite Kingdom of Jordan; UNDP. Amman.

National Climate Change Directorate (2021): The National Climate Change Adaptation Plan of Jordan. Ministry of Environment, Hashemite Kingdom of Jordan. Amman. Available online at http://www.moenv.gov.jo/ebv4.0/root_storage/ar/eb_list_page/final_draft_nap-2021.pdf, checked on 2/10/2023.

Response in Water Sector. UNDP, Amman

Schapendonk, Frans, et al. (2022): To what extent do policies from across 5 countries in the Middle East and North Africa region integrate climate-related security concerns and risks? CGIAR.

Schwartzstein, Peter (2019): How Jordan's Climate and Water Crisis Threatens its Fragile Peace. The Center for Climate & Security; Council on Strategic Risks. Washington. Available online at <https://climateandsecurity.org/2019/09/climate-water-security-and-jordans-fragile-peace/>, updated on 9/9/2019, checked on 2/9/2023.

The Hashemite Kingdom of Jordan (2014): Jordan's Third National Communication on Climate Change. <https://unfccc.int/resource/docs/natc/jornc3.pdf>

UN Habitat (2015): Urban Issues. Jordan. UN Habitat. Amman. Available online at <https://unhabitat.org/jordan-urban-issues>, updated on 2/10/2023.

UNDP (2019a): Drought Vulnerability & Impact Assessment Report and Maps for Amman-Zarqa, Yarmouk, Azraq & Mujib Basins. Amman.

UNDP (2019b): Guidelines for Drought Impact Assessment & Mitigation

UNICEF (2021): Building capacity of NDA and key stakeholder to identify climate change related risks in the water sector in Jordan. With assistance of Hashemite Kingdom of Jordan. UNICEF. Seoul (Readiness Proposal). Available online at <https://www.greenclimate.fund/sites/default/files/document/jordan-unicef-2021.pdf>, checked on 2/10/2023.

United States Department of State (2020): U.S. Security Cooperation With Jordan - United States Department of State. n.a. Available online at <https://2017-2021.state.gov/u-s-security-cooperation-with-jordan/index.html>, checked on 2/16/2023.

The Greater Amman Municipality (2019): The Amman Climate Plan. With assistance of The Ministry of Environment, The Hashemite Kingdom of Jordan. The Hashemite Kingdom of Jordan. Amman, Jordan. Available online at https://www.amman.jo/site_doc/climate.pdf, checked on 9/20/2023.

Imprint

Published by

adelphi research gemeinnützige GmbH
Alt-Moabit 91, 10559 Berlin
+49 (030) 8900068-0
office@adelphi.de
<https://www.adelphi.de/en>

Cover Image

© Inga Israel

License

For the texts in this publication, the publishers grant a license under the terms of Creative Commons Attribution-NoDerivatives 4.0 International. You may reproduce and share the licensed material if you name adelphi as follows: '© adelphi CC-BY ND 4.0'. Photographs and graphics are not covered by this license. In case of doubt please contact adelphi prior to reusing the material.

© adelphi, 2023

Authors

Spencer McMurray

Layout

Alexandra Steinkraus

Please see page 5 for additional acknowledgements

Contact

Spencer McMurray
mcmurray@adelphi.de

Date

October 2023

