



Addressing Climate-Related Security Risks in the Middle East and North Africa

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The views expressed in this report are those of the author and do not necessarily reflect the views of the United Nations Department of Political and Peacebuilding Affairs (DPPA), the Department of Peace Operations (DPO), the United Nations Environment Programme (UNEP) or any other United Nations entity.

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Executive Summary

As projections of climate change impacts in the Middle East and North Africa (MENA)¹ region are becoming increasingly dire, the stability of societies – as well as their ability to build and sustain peace - will partially depend on their capacity to prevent and manage climate-related security risks and protect vulnerable populations. Of special concern are politically tense contexts with weak governance structures, a history of conflict and a pronounced vulnerability to the impacts of climate change.

To increase understanding of the impact of climate change on conflict prevention and sustaining peace in the MENA region, the Department of Political and Peacebuilding Affairs and Peace Operations (DPPA-DPO) commissioned a study to explore potential climate-related crises and identify entry points for the UN Peace and Security pillar, working in an integrated manner with the rest of the UN system, to prevent conflict and unrest in a region already grappling with significant challenges.

Chapter 1 explores the impact of climate change on the MENA region, ranging from a significant decline in precipitation and rising sea levels to an increase in extreme weather events, including floods and storms. Modelling future climate change impacts in the MENA shows that the region will be exposed to higher temperatures and longer, more severe, and frequent droughts than the global average, which will have direct effects on ecosystems, water access, and agriculture. In a region struggling to meet rapidly growing demand for food and water, the repercussions of climate change – combined with water scarcity, unsustainable water management practices, lack of transboundary agreements and potential disruptions to the global food trade – could entail serious implications on the region’s food and water security. Added to these vulnerabilities are complex and intersecting armed conflicts and instability in several MENA countries, which significantly impacts countries’ ability to address climate change and disaster risk. The COVID-19 pandemic, unfolding since the beginning of 2020, adds further complexity to this confluence of crises.

It is against this background that the preparedness of the MENA region to address the impact of climate change and protect vulnerable populations must be viewed. In addition to the forcibly displaced, those most vulnerable to climate change impacts include poor rural families, those without access to social safety nets, and in many cases women, especially those who are highly dependent on local natural resources to maintain their livelihoods.

Chapter 2 looks at the impact of climate change on regional peace and security. It argues that while there are no direct links between climate change and the risk of conflict, climate impacts can accelerate the breaking point of a society already under strain, especially when combined with serious socio-economic grievances, an inadequate response to the latter and the repressive policies of a state. While climate-related security risks can emanate from local, regional and global causes, ultimately, they all tend to translate into highly localized and contextually determined consequences for households that may already be under severe stress. In turn, this can lead to cascading and destabilizing effects at a national or even regional level. This chapter also reviews the adaptive capacity of MENA States, an important determinant of a society’s vulnerability encompassing its level of climate awareness, access to technology, financial resources, infrastructure, social and economic equality and the quality of governance, which is low in many MENA States.

Chapter 3 provides an overview of the UN regional landscape and its work on climate-related risks. While several UN entities in the region possess roles and competencies relevant to climate change impacts, as a

collective, however, they are not configured for that purpose, nor do they share a common understanding around the implications of climate change. Security Council-mandated Special Political Missions (SPMs) and Peace Operations (POs) most often have narrow mandates that do not include climate risks, with the United Nations Assistance Mission for Iraq (UNAMI) being an exception wherein the Mission is enabled to support the Iraqi government in facilitating cooperation on water.

Lastly, the study presents a set of recommendations that reflect the consultant's analysis, as informed by the reality of UN field staff on the ground and observations from Regional Divisions at DPPA and members of the UN Climate Security Mechanism.²

Recommendations

i) Analysis of political mandates

DPPA should review the mandates of MENA Special Political Missions (SPMs) in view of identifying the extent to which current and future climate risks can be addressed through preventive action within the context of existing mandates.

ii) Peace agreements and climate-induced risks

DPPA should ensure that peace processes are informed, as relevant, by the contexts' history of disputes around water, land, and other natural resources, and what exacerbating impact climate change is likely to have. This is fundamental to prevent conflicts from reigniting both after reaching a settlement and the return of the displaced, but also to leverage its capacity for dialogue and mediation support in such contexts.

iii) A UN transboundary strategy

DPPA, supported by the United Nations Economic and Social Commission for Western Asia (ESCWA) and the Economic Commission for Africa (ECA), should initiate a regional inventory of ongoing and planned UN transboundary water initiatives, to be used as the foundation for a joined-up and long-term UN strategy to support States in developing bilateral and basin-wide agreements on shared water resources.

iv) Shared understanding and shared responsibility

A shared understanding of political and other implications of climate change in a country context is necessary for the UN to shoulder its responsibility in reducing the risk of climate-induced conflict. This should be developed through annual UN system-wide seminars, informed by regional and global political analyses and climate models, and embedded in the Common Country Analysis (CAA) work process for the purpose of developing country plans. Any analysis of climate vulnerability should include a gender lens.

v) A UN regional network

Tapping into existing resources and structures, a functional and active informal regional UN network should be created involving all relevant country and regional entities including DPPA. The aim of this network would be to support MENA States and regional organizations in addressing shared challenges and transboundary problems.

vi) Typology of climate action

On the basis of a shared UN understanding of climate risks, interventions should be organized with a view to 1) strengthen the resilience and adaptive capacity of governments, communities and households; 2) enhance local conflict resolution mechanisms; 3) promote transboundary agreements to identify gaps, opportunities, and complementarities, including from a transboundary perspective that requires collaboration with teams from neighboring countries.

vii) Sensitizing the public and governments

UN entities in the region should build and communicate a climate change narrative that connects immediately urgent climate disasters, like extreme weather events, with projected mid- and long-term climate risks.

viii) Language and concepts

Care should be taken by UN entities to frame analyses and proposals on climate and security risks that evoke human security and Sustainable Development Goals (SDGs) objectives rather than hard security and military means.

ix) Research program

The UN should identify a set of research areas relevant to the MENA region where critical knowledge is limited and that could be selected, promoted, and funded by national and international research institutions and funders. Potential topics include the complexity of migration patterns and their relationship to climate change, mechanisms behind local tension and conflict, and the state of local conflict resolution mechanisms.

Introduction

Climate change already affects millions of people around the globe. Extreme weather events, rising sea levels and a loss of biodiversity have led to more volatile food prices, increasing competition for dwindling natural resources and the loss of livelihoods. When interacting with extant drivers of conflict, climate change impacts may exacerbate fragility and cause tension. As the impacts of climate change intensify, their influence on conflict will become increasingly tangible. If ignored in political analysis and response, these effects could undermine conflict prevention and peacebuilding efforts.

Recent analyses point to a decreasing likelihood that current greenhouse gas (GHG) reduction commitments will limit temperature increases to 1.5 C above pre-industrial levels, the global ambition agreed to at the climate conference in Paris in 2015. The use of renewable energy is growing, but a real transformation away from fossil fuels is not yet in sight. Predicted phenomena such as melting icecaps, sea-level rise and ecological change are happening at a more rapid pace than anticipated. Extreme weather events, fires, storms and floods occur more frequently, and their increasing intensity is causing the cost of their physical damage to grow year by year.



Source: UNHCR

The world is at the early stages of experiencing the impacts of anthropogenic climate change, which cannot be treated as a static risk. Carbon dioxide molecules will remain in the atmosphere long after emissions have stabilized and started to decline, adding cumulative effects to systems influenced by the changing climate.

Climate change-triggered biophysical change impacts social, economic and political systems. As the natural resource foundations of societies are altered through impacts on agriculture, forestry and fisheries, as well as their exposure to extreme weather events, impacts will be transferred to households and livelihoods.

This is where they encounter socially and politically determined stratification and reinforce gender and wealth inequalities.

Ultimately, the stability of societies will depend on their capacity to manage fundamental change and protect vulnerable populations. Of special concern are countries and regions where tensions are high and governance strained, that have a history of recent or ongoing conflicts, and a pronounced vulnerability to the impacts of climate change.

The implications of climate change on peace and security have been addressed by the UN General Assembly and the Human Rights Council but were first recognized by the Security Council in its resolution 2349 (2017) on the crisis in the Lake Chad Basin. Since then, the Council has recognized the adverse effects of climate change on stability in the context of seven other region or country-specific situations. In October 2018, UNDPPA, UNDP and UNEP jointly established the Climate Security Mechanism to strengthen the UN's ability to address climate-related security risks.

This study, commissioned by UN DPPA, is focused on the Middle East and North Africa region (MENA). It seeks to review and increase understanding of the potential impact of climate change on the region's political landscape, including the links between climate change and insecurity. In doing so, it will identify entry points for the Peace and Security pillar, working in an integrated manner with the rest of the UN system, to detect potential climate-related crises, with a view to prevent further unrest and conflict and help support regional collaboration.

The study argues that we should not be looking for "climate wars" in the MENA region, or elsewhere, but rather for contexts and situations where climate impacts can accelerate the breaking point for a society already under strain, especially when combined with serious socio-economic grievances, an inadequate response to the latter and the repressive policies of a state. The COVID-19 pandemic and its devastating impact on the livelihoods of millions of people further adds to the challenges facing governments in the region. The pandemic, however, also serves as a stark reminder of the importance of building resilient societies and economies that are equipped to address looming vulnerabilities, including the impact of climate change.

The report is based on a review of literature, UN documentation and meetings with UN staff in the MENA region. The author met with UN Country Teams in Lebanon, Jordan, Egypt, Tunisia and Libya, and with the Office of the UN Special Coordinator for Lebanon (UNSCOL) in Beirut, the Office of the Special Envoy to Yemen in Amman, the UN Liaison Office to the League of Arab States in Cairo, and via Skype with the RCO in Turkey. A set of conclusions and recommendations are provided, reflecting the consultant's analysis as informed by the reality of UN field staff on the ground and observations from Regional Divisions in DPPA and members of the Climate Security Mechanism.

1. Climate Change in the MENA Region

Climate change is already having tangible impacts across the region, with MENA facing significant precipitation decline and increasingly high temperatures. An already-arid region, some areas, such as the Eastern Mediterranean Maghreb have faced years of severe drought.³ Extreme weather events such as storms, floods, droughts and extensive transboundary dust storms increasingly plague the region. For example, during the winter of 2019-20, unusually heavy storms and floods affected many if not most countries in MENA. In countries like Iraq, 100 square kilometers of fertile land are lost each year to desertification.

Not only will changing weather patterns affect the MENA region, but also rising sea levels may severely impact low-lying regions in several countries, including Kuwait, Qatar and Egypt. In fact, the World Bank declared in 2016 that the MENA region is among the most vulnerable places on earth to rising sea levels. The inundation of the densely populated Nile River delta and its urban centers such as Alexandria has already begun. Given that the Nile Delta and Mediterranean coast are responsible for at least 30-40% of the country's agricultural production, these losses have the potential to be catastrophic for Egypt's food supply.



Source : IOM

A Regional Crisis of Water and Food

MENA is the most water-stressed region in the world. More water is drawn for agriculture, industrial or domestic use from surface or aquifer sources than is being replenished.⁴ In some Gulf countries, such as the United Arab Emirates and Saudi Arabia, 21 to 30 times more water is drawn from aquifers than is being replenished.⁵ In most MENA countries, pricing policies and water subsidies work contrary to water conservation. Water scarcity is instead dealt with by increasing production from drilling more and deeper wells and desalination of seawater, which create their own environmental problems.⁶

The combination of climate change, water scarcity and unsustainable water management is having an increasingly serious impact on water availability. In fact, the World Bank has estimated that by 2025, 80-100 million people in the region will be exposed to water stress. As this crisis worsens, we can expect economic losses due to water scarcity to reach approximately 6-14% of the gross domestic product (GDP) by 2050.⁷ To further complicate the management of this critical and scarce resource, all states in the MENA region share at least one aquifer with one or more of their neighbors and some 60% of rivers and lakes cross borders. Effective management of water thus requires transboundary agreements between states, which are flexible enough to allow for variable water levels given climate change impacts. Not only are such agreements scarce, but they will be tested by rising competition for dwindling water supplies.

Despite agriculture being a leading employer across much of MENA, an annual population growth of 2%, the second-highest rate in the world after sub-Saharan Africa⁸, along with water stress and low agricultural productivity, translate into a heavy and increasing dependence on food imports⁹ Agricultural productivity will continue to be undermined by the extensive land degradation and desertification witnessed across the region, phenomena that are further exacerbated by climate change.¹⁰

In 2014–16, the region imported 65% of its consumption in cereals and 25–35% of the world’s traded sheep meat, milk and wheat.¹¹ Any disruptions to the global food trade, through political unrest, market disturbances or the changing climate, will have potentially serious implications on the region’s food security, as was experienced during the global food crisis in 2008. Much of MENA’s food trade passes through a small number of geographical “chokepoints,” where disturbances would have serious consequences for world trade.

Some of the affluent Gulf Cooperation Council (GCC) countries have hedged against potential food deficits by leasing or purchasing agricultural land in other regions, particularly in Africa, where they have made one third of the 139 large-scale land acquisitions between 2009 and 2013.¹²

In short, the MENA region is already struggling to meet a rapidly growing demand for food and water. It is against this background that current and future impacts of climate change must be analyzed; the region is not adequately prepared to deal with these challenges but is already in a state of crisis.¹³

Climate Change Impacts in MENA – Assessing Vulnerability

In order to identify direct and indirect future impacts of climate change at the national and sub-national level in the MENA region, extensive and groundbreaking work has been carried out under the Regional Initiative for the Assessment of Climate Change Impacts in the Arab Region (RICCAR)¹⁴, led by UNESCWA with a number of regional and international partners. An Arab geographic domain (fig. 1) has been established by RICCAR, providing more granular detail than the Intergovernmental Panel on Climate Change’s (IPCC) regional domain, to provide an assessment of the impact of climate change on the region’s water resources. Since most of its surface water originates outside of the region, the boundaries of the domain have been drawn to include areas where waters originate, such as the Tigris and Euphrates Rivers in the north, and the Nile in the south, both beyond the geographic MENA region.

Based on the climate and hydrological models, RICCAR has carried out an integrated assessment to identify the vulnerability of several sectors: water, biodiversity and ecosystems, agriculture, infrastructure and human settlements, and people, including availability of drinking water, health, agricultural employment and overall vulnerability.

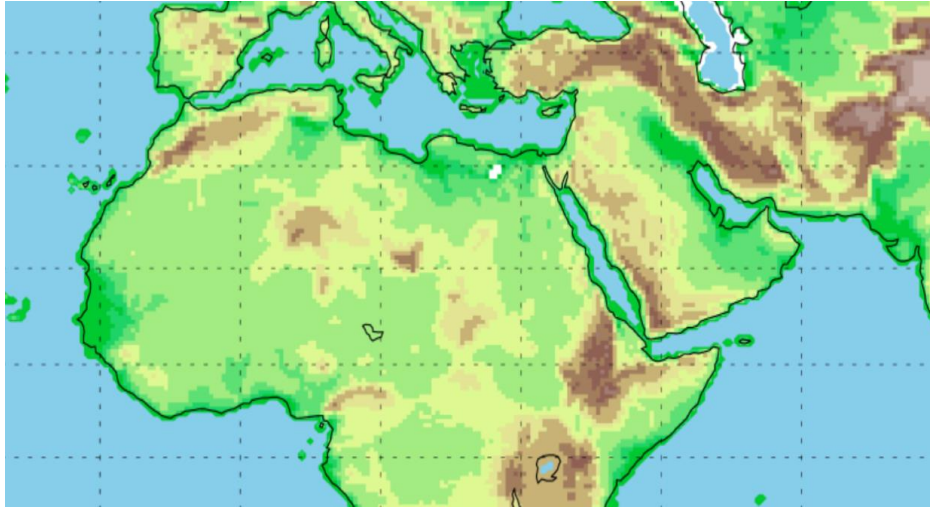


Figure 1. The Arab domain defined by the RICCAR project¹⁵

For each sector, particularly vulnerable geographic hotspots have been identified. The probability of extreme weather events has also been estimated.

$$\text{Vulnerability} = \text{Exposure} + \text{Sensitivity} + \text{Adaptive Capacity}$$

Three basic concepts, defined by IPCC, are used to determine climate change vulnerability: exposure, sensitivity and adaptive capacity.

Exposure refers to changes in climate parameters that may affect a certain locality, such as temperature, precipitation and their spatial and temporal distribution. In the already hot and dry region, scenarios are generally more serious for the MENA region compared to other regions.¹⁶ Temperatures will rise more and droughts will be longer, more severe and more frequent than the global average, with direct effects on ecosystems, where ambient temperatures and moisture levels may change beyond the comfort zones of a range of microorganisms, plant and animal species.

Heat stress could lead to severe impacts on human morbidity and mortality. Parts of the region could become uninhabitable for humans without protection during parts of the year.¹⁷

A recent International Labour Organisation (ILO) study on the effects of heat stress on labor productivity finds the largest impacts in MENA in the construction and agricultural sectors, which are expected to employ 14% and 12% respectively in 2030, the former predominantly as migrant labor in GCC States.¹⁸ In comparison to the situation in 1995, when approximately 90,000 full time jobs were lost to heat stress in Arab States, ILO estimates the number will increase to 618,000 jobs in 2030 given current climate change projections, with wide variations between countries. The impact on GDP would still be limited, according to ILO, given the relatively small number of workers employed in the agricultural sector.

Sensitivity refers to information about the exposed locality, such as topography, land use, distribution and density of the population, and built environment and proximity to the coast. In the MENA region sensitivity is primarily correlated with population density, particularly urbanized coastal areas and the lower Nile River Valley.

Adaptive Capacity

is the result of:

- (i) General education level and awareness of climate change;
- (ii) Technology;
- (iii) Infrastructure that supports adaptation;
- (iv) Institutions;
- (v) Economic resources.
- (vi) Equity factors

Of the three components, **adaptive capacity** has the strongest influence on vulnerability, referring to the ability of a system to moderate potential damages, take advantage of opportunities or to cope with the consequences of climate change. This is of fundamental importance in any analysis of potential security implications of climate change.

To determine adaptive capacity, six categories are used: (i) the general education level and awareness of climate change; (ii) technology and (iii) infrastructure that support adaptation; (iv) institutions, (v) economic resources; and (vi) equity factors, including gender, age structure and access for people with disabilities.

As a diagnostic tool for institutions, RICCAR uses the World Bank's quality of governance index, which measures voice and accountability, political stability, absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption. Many MENA countries are characterized by restrictions in freedom of expression, low government accountability, limits on the rule of law, political instability, violence and corruption, in addition to those that are also embroiled in active armed conflict.¹⁹ The result is poor delivery of services and limited preparedness to manage shocks and crises, in other words a low adaptive capacity.

While all MENA countries are signatories to the Framework Convention on Climate Change (UNFCCC) and most have submitted their climate change plans in the form of Nationally Determined Contributions (NDC), awareness of climate change among the public is limited. In a recent survey in 12 MENA countries, climate change was listed as number four among serious environmental problems by those interviewed, after water pollution, trash and air quality.²⁰ The highest awareness was reported in Lebanon, where 51% found climate change to be a very serious problem, whereas the lowest was found in Kuwait, where only 12% saw it as a very serious problem. The three MENA countries with the most ambitious climate plans, Tunisia, Morocco and Jordan, score 42, 40 and 40% respectively in terms of public awareness of climate change. Tunisia's climate policies are anchored in its 2014 constitution, whereas Morocco has established special climate change legal provisions.

Given the central role of governance quality as a constitutive element of adaptive capacity, and its low level in much of the MENA region, governance reform and institution-building are inevitable and important parts of improving adaptive capacity.²¹

When vulnerability is analyzed as a function of exposure, sensitivity and adaptive capacity, some climate "hotspots" emerge. They are found in the Sahel region, including Mauritania, the south-western Arab Peninsula, including Yemen, and in the Horn of Africa.

Human Impacts: Mobility and Migration.

A central issue not addressed by RICCAR is what can be expected in terms of climate change influence on human mobility and migration in a region displaying the most complex migration patterns in the world.

To date, empirical studies generally fail to identify a special category of environmental migrants, or strong causal links between climate change and migration.²² Although these studies emphasize the complex mix

of socio-economic, cultural and political factors leading to migration, climate change is likely to become an increasingly important determinant of primarily internal migration, as most displacement related to climate-change related extreme weather events happens within national borders.²³

There is good reason to see mobility or migration as a long-standing adaptation strategy in the face of a changing environment or socio-economic context. In such instances the most vulnerable will be those who are unable to leave and become trapped in unsustainable situations, often the poorest, women-headed households and the elderly. Rather than preventing migration, global policy should aim at reducing forced migration, where people have run out of other options and are compelled to leave, while recognizing and accommodating safe and orderly migration as one of many strategic approaches that will be increasingly needed to cope with the human consequences of climate change.

The most problematic displacement occurs when conflicts and extreme weather events intersect, particularly in countries with weak institutions, and in which insecurity renders it difficult for humanitarian organizations and other actors to provide emergency assistance or to support rehabilitation and recovery. This is where displacement tends to become long-term and chronic, reinforcing inequalities, and where people's vulnerability becomes severe as they are cut off from the physical and institutional foundations of their traditional livelihoods. The search for resources may overlap between those displaced and the local population, increasing the risk of tension and conflict in the absence of mediating institutions that can resolve such conflicts.²⁴

When looking at human mobility in the MENA region, a distinction needs to be made between internal migration, such as pastoralist movements, rural to urban migration and other forms of internal displacement, and cross-border migration. Three distinct but interrelated migration contexts can be identified: (i) people forcibly displaced by conflict, either internally or having crossed borders as refugees; (ii) people originating outside or from within the region seeking employment, as regular or irregular migrants; and (iii) people from Sub-Saharan Africa transiting through migration hubs, particularly Libya and Egypt in search of refuge and/or employment in Europe, and through Yemen on their way to Saudi Arabia and other Gulf countries.²⁵

An analysis of current and future climate change impacts on mobility and migration in MENA consequently needs to identify the effects both on *existing* patterns, where climate-related developments in migrants' countries of origin outside MENA may impact their decision to migrate and *new* internal and international migration. This is about movements to, from and within the MENA region. The analytical challenge is therefore formidable and can only be managed based on a better understanding of effects on current migration patterns, including possible interaction between climate change and conflict that causes forced displacement. It also needs to factor in the likelihood of peaceful resettlement and integration in destination areas and countries. Any analysis of climate change impacts on migrants needs to recognize that migrant vulnerability has a strong gender dimension, particularly given that women constitute a large portion of migrant workers in the Middle East.²⁶

An area of special concern in the region, with implications for mobility and migration, is the densely populated Nile Delta in Egypt and its coastal front on the Mediterranean. The Nile Delta hosts more than one third of the growing Egyptian population, which just reached 100 million. This is where the major part of Egypt's agricultural production and industrial activities take place, including petroleum, chemicals and tourism, distributed among a large number of highly populated economic centers. A 2014 study by IOM found that the Delta is seriously threatened by sea level rise, saltwater intrusion and subsiding land.²⁷ If the flow of the Nile should be reduced due to the construction of the Grand Ethiopian Renaissance Dam

in Ethiopia, climate change, or for other reasons, the risks of salinization further increases, undermining agricultural productivity and livelihoods, and possibly increasing mobility among the very young population in the absence of other employment opportunities. In the “Where the Rain Falls” project, 70% of internal migrants from the Nile Delta and the slums in Old Cairo interviewed mentioned both land degradation and water shortages as some of the drivers that shaped their decision to migrate.²⁸

Other vulnerable groups In addition to forcibly displaced people and labor migrants without protection, there are other groups with heightened vulnerability to climate change. Generally, they are poor rural families who depend on agriculture (the largest employer in many MENA countries), those living in poor housing in unplanned and marginalized urban areas exposed to flooding, and those without access to formal and informal social safety nets or other social services.²⁹ Particularly vulnerable to the health effects associated with heat stress are small children, the elderly and those who are already impaired by chronic and non-communicable diseases, which are prevalent in many MENA countries. As always, those who suffer from discrimination and inequality, such as ethnic and religious minorities, are the most exposed and least protected in periods of stress and crisis.

Climate Change and Gender

While there are few regionally specific studies dedicated to this subject matter, climate change generally carries significant gender dimensions that determine how women and men experience its impact. It is for this reason that states agreed at the Climate Change Conference in Marrakech (COP 22) in 2016 on the necessity of integrating a gender perspective into all measures and activities and subsequently adopted a Gender Action Plan to support gender-responsive climate action COP 23 in Bonn in 2017.³⁰ Across the MENA region, several countries have also sought to mainstream gender into adaptation policy.

According to a report by the UNFCCC, the differentiated impacts of climate change on women and men contribute to increased vulnerability, especially of women, due to existing gender inequalities caused by unequal power relations and structures in the public and private sectors, discriminatory laws and customs, and unequal access to and control of resources, among other factors.³¹ Additionally, women’s vulnerability to climate change is exacerbated as they represent a disproportionate number of the world’s poor and are often left out of decision-making processes that could help mitigate the impact of environmental disruptions. Women living in poor communities are also highly dependent on local natural resources for their livelihood, particularly in rural areas.³²

In the MENA region, the impact of climate change on women, particularly those who work in the agricultural sector, is likely to be substantial. In Egypt, millions of rural women working in agriculture, and who already suffer from poverty, will be impacted by climate change as their livelihoods and access to food become more precarious. Limited educational opportunities and asset ownership will further compromise the economic prospects of these women. In instances where men migrate in search of paid employment, women are likely to face the added burden of having to assume the duties of male household members. Water scarcity also impacts women negatively in a multitude of ways, ranging from malnutrition to increased workloads and time burdens. In Yemen, women and children must travel increasingly longer distances to secure dwindling water supplies. As a result, girls in rural areas have less time to dedicate for education and often end up dropping out of school, causing significant implications on their livelihood.³³

2. The Impact of Climate Change on Regional Peace and Security

There is a growing body of research seeking to establish possible causality between climate change and the risk of violent conflict. Studies have predominantly analyzed contexts in East Africa, where the impacts of extreme weather events, drought in particular, on the interaction between pastoralists and sedentary farmers have been in focus. While the emerging consensus has been that, to-date, climate change has not directly or singularly caused conflict, under certain conditions, climate impacts may exacerbate already existing drivers of conflict.³⁴ Those include a previous history of conflict, high dependence on agriculture, erosion of livelihoods with few alternative options, weak institutions, and in some cases migration, when destitution forces people to move into areas already occupied by others, and where there are no traditional mediating institutions to address upcoming tensions over access to land, water and other resources.³⁵

Recently, a group of climate researchers representing their respective fields, including political science, geography, environmental studies and economics tried to resolve their different conclusions on the strength of the causal link between climate change and conflict, through a so-called expert elicitation process.³⁶ While they concluded, “climate has already increased the risk of armed conflict, but the effect is small relative to the effects of other factors such as unexpected economic events and scarcity of natural resources such as food,” they also agreed that future climate change might heighten conflict risk beyond historical patterns.



Source: UNICEF, Delil Souleiman

In reality, the factors behind any conflict are a combination of socioeconomic, political and environmental elements that intersect in locally sensitive ways. While the aforementioned group of researchers argued that other factors such as low socioeconomic development and a recent history of violent conflict contribute more directly to the outbreak of conflict, in cases where many drivers of conflict are already present, the addition of extreme weather events and other climate change impacts could become significant additional factors contributing to the outbreak of conflict.

However, the mere presence of factors that increase the likelihood of conflict does not inevitably *lead to* conflict. Studies based on quantitative data and a search for statistical probabilities tell us little about the process and distinct pathway whereby climate-related events could lead to or exacerbate the risk of conflict in a particular case. Rather, we need contextual understanding and case studies that elucidate sequences of events and the unfolding interaction between different factors.

Acknowledging that the causal relationship between climate change and conflict to date is generally weak, the question is still whether there may be causal pathways that are specific to the region. Specific to the MENA context is its deepening water crisis, land degradation and desertification, its dependency on food imports, and the direct impact of volatile energy markets on both oil-producing countries and those that depend on fossil fuel imports.³⁷ When assessing the potential impact of climate change on conflict, one needs to differentiate between MENA countries at different levels of income, access to resources, and general adaptive capacity, including their quality of governance, institutional capacity for conflict resolution, and the related space for public discourse on societal issues.

The Impact of Climate Change on the Conflict in Syria

It is instructive to look at Syria and the debate over the consequences of the long drought in the years preceding the outbreak of violent conflict in 2011. A weather anomaly made 2-3 times more likely due to climate change, the drought led to destitution in rural areas and extensive migration of impoverished farming families to the cities, where they arrived in an atmosphere of growing and open urban discontent with the Assad regime.³⁸ Some argue that the drought and thus climate change played a major role in the developments that led to the conflict in Syria.³⁹ Others, however, convincingly highlight the combination of lost income from farming, suspended government energy subsidies, misguided agricultural policies, including neglected irrigation infrastructure and a lack of social safety nets to protect the rural population that could have allowed them to remain on their farms. .⁴⁰

The Syria case demonstrates that we should not be looking for “climate wars” in the MENA region, or elsewhere, but rather for contexts and situations where climate impacts can accelerate the breaking point for a society already under strain, especially when combined with an inadequate response and the repressive policies of a state.⁴¹ It is also an indication that societies in MENA not characterized by the kinds of pastoralist-farmer interactions typical of East Africa, which have been the focus of much research, display a set of other factors, rooted in their governance systems and geopolitical predicament that could lead climate change impacts to heighten the risk of conflict.

Different Origins of Climate Risk

A simple analytical approach helps us understand the nature of climate-related security risks: i) local and proximate causes, ii) regional and transboundary causes, and iii) systemic and global causes, all of which have their roots in the nature of governance.

i) Proximate and Local. Climate-related grievances have manifested themselves in various ways in the MENA region. There have been a number of reports of local unrest, often linked to water shortages, in the Maghreb and other parts of the region in recent years.⁴² The violent protests in Iraq’s Basra in 2018, for

example, were related to water scarcity, but also directed against a government that failed to provide basic services, generate employment and rid the country of external interference.⁴³

In Tunisia, the revolution has not been able to deliver on all of its people's aspirations. Grievances remain, and water and land-related local disputes, some violent, are a regular occurrence since 2011. In Tunisia, citizens' protests and violent events can be monitored openly and publicized on a regular basis, documenting widespread manifestations of discontent.⁴⁴

In Iraq, it has also been reported that farmers who were deprived of their income due to the drought became vulnerable to recruitment by ISIL in the absence of any public social protection programs.⁴⁵ In such cases, the absence of responsive, competent and accountable governance, provides fertile ground for active discontent and potential violence in response to events that increase the burden on communities already under severe strain. Such events can be triggered by water shortages in the hot season, exacerbated by climate change. One can also imagine other kinds of climate-related livelihood crises, such as the disappearance of fish stock in coastal areas, or attacks of new pests on fruits and other crops, with a sudden and dramatic consequence for a vulnerable population lacking protection. Under certain conditions, these crises could escalate and cascade to the national or even regional level and have broad implications for peace and security.

It is important that issues related to climate and resource-sharing be considered within mediation efforts in post-conflict planning processes. In Iraq, for example, there are around 1.9 million Internally Displaced People (IDPs) who, upon their eventual return, may be faced with having their land and property occupied by people displaced from other areas. While the conflict in Syria is ongoing, some returning refugees or IDPs may likewise face similar situations or realize that their land and property have been seized by the state.⁴⁶ In Yemen, in 2013, before the start of the current war, it was reported that 70-80% of conflicts in rural areas were water-related, and that disputes over land and water accounted for some 4,000 deaths per year.⁴⁷ If left unaddressed, these tensions could undermine future political settlements and prolong conflict and instability. Mediation efforts and political settlements must therefore consider provisions on access and management of land and water in order to reduce the potential for renewed conflict. The consideration of these issues is rare in post-conflict recovery planning and should be an element within a settlement or peace accord.⁴⁸

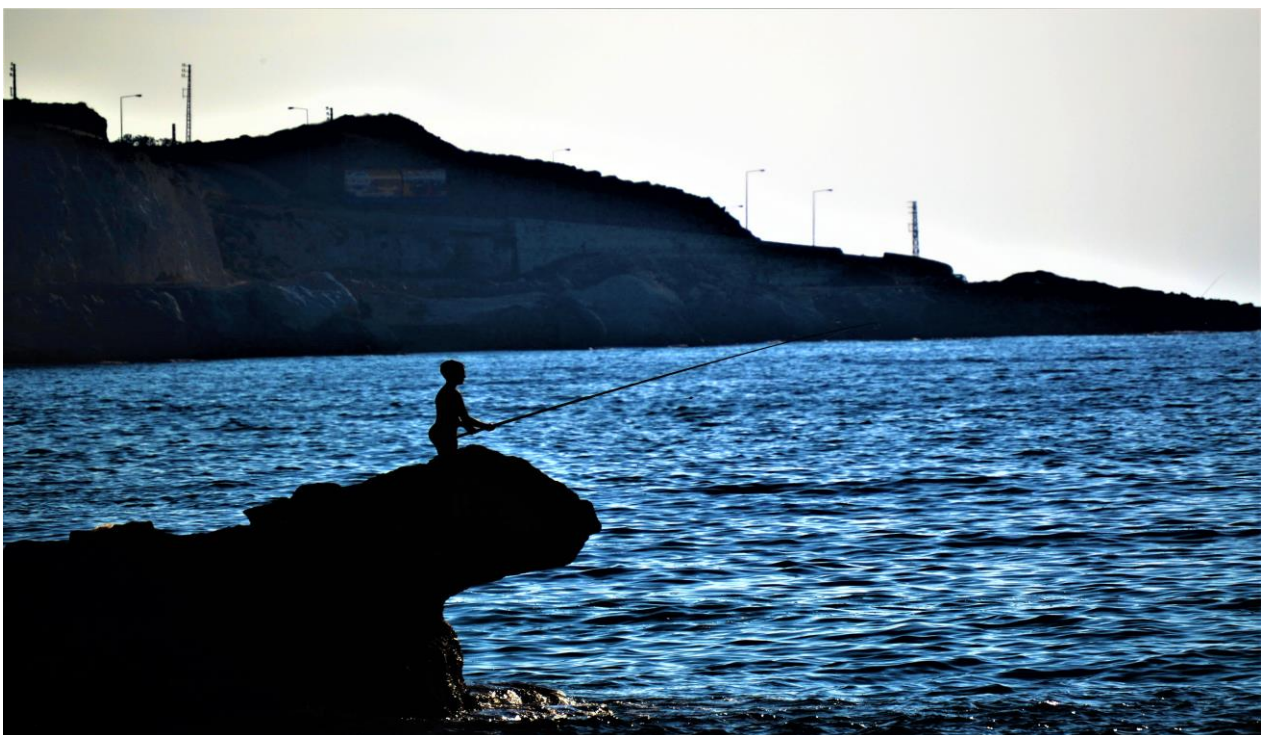
ii) Distant and Regional. Climate-related security risks may also have a more distant origin, beyond a state's borders. Water resources do not follow national boundaries. Sharing surface water, shallow groundwater and fossil aquifers means that water use by any one state will affect its neighbors. In times of abundance, this may be of limited consequence, but the MENA region is under water stress with most countries using more water than is replenished.

Whether competition over water will lead to violent conflict between states was debated some years ago, the notion of ensuing "water wars" gained much attention. However, it has gradually been realized that states tend to acknowledge the risks associated with competition over water resources, finding it in their own and neighbors' interest to agree on modalities for shared responsibilities and joint management, thus considerably reducing tension between each other.⁴⁹ It has also been suggested that agreements on shared natural resources could provide avenues for broader peacebuilding and track-II diplomacy.⁵⁰

Whether the absence of water wars is indefinite given increasing climate-related pressures is another question. Many existing agreements now need to be modified in order to accommodate more variable and less predictable stream-flows than when they were originally drafted.⁵¹

To avoid shortages and potential conflict, transboundary and regional agreements on the use and management of water resources are needed. However, such agreements are few and far between in MENA, only including some bilateral agreements on water allocation and infrastructure development.⁵² Efforts by the League of Arab States (LAS) to agree on a binding Arab Convention on the use of transboundary water, modeled on international conventions, have been unsuccessful and the draft convention remains unratified.⁵³ It should be noted that the LAS membership does not include Turkey, Israel and Iran, which all have a significant influence on the region's transboundary water resources.

If transboundary surface water is openly contested, the challenge surrounding shallow groundwater and fossil aquifers in MENA can be even more problematic, since data on available volumes and withdrawal is incomplete or in some cases absent. With a lack of data, excessive withdrawal of groundwater could be inconspicuous for a long time, but lead to a sudden and dramatic depletion and high tension between neighbors.⁵⁴ A comprehensive inventory of shared water resources by ESCWA in West Asia was published in 2013, finding that “over-exploitation of some groundwater resources and intensive irrigated agriculture have already led to the disappearance of intermittent streams, the drying up of wadis and rendered some groundwater resources too polluted or saline to use,” fueling tension along borders.⁵⁵ Yet, there is still not a single agreement on shared water basins in the West Asia region. Climate change is going to further reduce replenishment of many aquifers and further exacerbate this problem.



Source: UNSPLASH, Rashid Khreiss

Possible future transboundary water agreements in the MENA region must be informed by climate change projections. This is a challenging task everywhere, as many agreements take a long time to negotiate, having to overcome bilateral political obstacles. Exceptions do exist, however, such as the agreement on the Incomati River, which is shared between South Africa, Mozambique and Swaziland.

In other parts of the world, regional institutions embody normative principles for a rights-based order and mechanisms for cooperation that promote stability and peace. They play important roles in conflict resolution and negotiating transboundary agreements on the management of shared natural resources. This has not been the case in the MENA region.

While multilateral institutions such as ESCWA and the World Bank have been found to play a constructive role for MENA States in terms of technical support, regional organizations have not been empowered by their respective Member States, depriving them of the ability to address common problems. Yet, despite these limitations, they provide platforms for technical dialogue between states, not least on water. In the author's experience, the competence and dedication of technical government staff in the region is notable, also in states under great strain such as Palestine and Yemen. Unfortunately, technical dialogue does not necessarily lead to agreed- upon policy change.

There are, however, other regional institutions that have been found to play a constructive role for MENA States, not least those dedicated to environmental matters such as the Union for the Mediterranean, which includes non-Arab Member States and Israel, and that is addressing issues such as the problem of potable water access in the Gaza Strip.⁵⁶ There are also regional scientific and professional networks that provide venues for qualified dialogue.⁵⁷

It should be noted that the North African members of LAS are also members of the African Union, which has a strong record on regional cooperation and security, and hence possibly a venue for addressing North African transboundary affairs. The Arab Maghreb Union is a potential venue for dialogue on shared resources, now facilitated by the Global Water Partnership. . The large potential economic benefits from economic integration in the Maghreb have been pointed out repeatedly.⁵⁸

Regional civil society engagement in the environment is also weak and rarely given a seat at the regional table, except for ESCWA gatherings.⁵⁹ In many MENA countries, the space for open and public dialogue on potentially sensitive issues is highly constrained. Civil society activists, of whom many are led by and engage women, are regularly faced with repression if they question their states' course of development and handling of environmental problems, as they are perceived by states as a threat to national security.⁶⁰ The absence of a safe space for genuine dialogue with civil society on environmental and climate-related policy and action is a real challenge in many countries of the region.

Iraq and Shared Water

The most prominent and contested case of transboundary surface water in the region, possibly after the Jordan River, relates to the Euphrates and Tigris, which are of critical importance to Iraq, Turkey and Syria who have discussed and negotiated agreements for a hundred years, without reaching a conclusive and

ratified deal.⁶¹ Discussions have made progress during periods of relative regional stability, but regressed during periods of tension, such as the current period beginning in 2011.⁶²

Turkey's large investments in dams and hydropower have direct and immediate consequences for its downstream neighbors.⁶³ Without any agreement, the situation came to a head in 2018, when Turkey prepared to open its Ilisu dam, which would have directly reduced the flow of Tigris downstream and led to serious consequences in Iraq, which relies on the Tigris and Euphrates for 98% of water needed for drinking, sanitation and irrigation. Following bilateral discussions, Turkey and Iraq agreed that the operation would be halted.⁶⁴ The issue, however, remains unresolved and could re-emerge given water scarcity projections and Turkey's position regarding water rights⁶⁵; it has not signed the international watercourses convention. An informal and professional venue for dialogue between the riparian state still exists, however, through the Euphrates-Tigris Initiative for Cooperation (ITEC), established in 2005.⁶⁶ Iraq also depends on tributaries to the Tigris originating in Iran, where dam construction and the absence of transboundary management agreements have compounded Iraq's water crisis.⁶⁷ This was a likely contributing factor in the unrest in Basra in 2018 when a drastic deterioration of water supplies brought on by a heat wave triggered anti-government protests in southern Iraq. Another environmental problem between Iraq and its neighbor is the occurrence of increasingly severe dust storms particularly affecting Saudi Arabia, Iraq and Iran, likely to have their origin in extensive land areas not covered by vegetation because of drought or unsustainable land use.⁶⁸

The water crisis in Basra illustrates that the absence of a bilateral agreement on the transboundary management of a shared waterway between Iran and Iraq can exacerbate longstanding and unresolved local grievances.

iii) Systemic and Global. Unpredictable global events, increasingly climate-change related, will likely become more frequent, sometimes creating non-linear and cascading phenomena with highly localized impacts. They may be triggered by *tipping points*, defined by IPCC as an irreversible change in the climate system, leading to "large-scale discontinuities." This is when a system with certain characteristics has changed incrementally to the extent that an additional minor change forces a transformation into a new system with different characteristics. Such events could potentially add to the risk of conflict. Two areas – *food and energy* - deserve special mention in the context of the MENA region, both because they embody risks and are areas for potential regional collaboration and confidence-building.

Food The food crisis in 2008, caused by a combination of high oil prices, limited global food stocks, climate change-related harvest failure in several producer countries, an increase in land used for biofuel production rather than food, along with counterproductive export controls and possible speculation, had serious impacts in some MENA countries where governments were unable to cushion against sudden price spikes on highly subsidized grains and bread.⁶⁹ This led to food riots and fueled discontent with non-responsive governments, fracturing social contracts and contributing to conditions that led to the "Arab Spring."⁷⁰

With the growing impact of climate change on global food production, negatively affecting productivity and food security (a composite concept including food availability, access, utilization and stability of supply), the deeply import-dependent MENA region may face growing instability in its food supply, even if efforts are made by GCC countries to reduce food insecurity by leasing or procuring agricultural land in Africa, which, along with other regions will also be exposed to climate change impacts. In addition, this

system is made vulnerable by the limited number of “choke-point” trade routes, which could be compromised by political instability.⁷¹

The impacts of the food crisis in 2008 translated into highly contextualized stresses on households that had a long-lasting gendered impact.⁷² When the cost of food baskets increases to the extent that households have difficulties meeting their basic needs, and particularly if this occurs in a conflictual setting where insecurity, poor services and a lack of social protection have caused strain, the additional burden could be a tipping point that leads to unrest and violence. Recently, it has been suggested that the sudden increase of bread prices in Sudan was a triggering factor behind the uprising in 2019.⁷³

In fact, a combined transboundary and systemic climate-related crisis is unfolding at the time of writing this report. What the Food and Agriculture Organisation (FAO) names an extremely alarming Desert Locust invasion is threatening food security in large parts of the Horn of Africa, East Africa and the southern Arab Peninsula.⁷⁴ At the end of a year with extreme weather events that have created ideal breeding conditions, the Locust emergency has systemic consequences in threatening food security not only in areas of direct impact. It will also potentially affect states that rely on food imports from land where they have user’s rights through leasing or other arrangements. This is a transboundary crisis in that Locusts cross borders, requiring coordination of control operations between neighboring states. In the affected region, Somalia and Yemen are unable to engage in coordinated regional action because of the ongoing conflicts. This is yet another example of the vulnerability to climate-related impacts of countries in conflict.

Energy is the other systemic factor that needs to be closely monitored from a security perspective. In addition to the inherent volatility of fossil fuel markets, where the variability of supply for operational, technological and political reasons has been experienced a number of times during past decades, the increasingly urgent need to move away from carbon-based economies and fossil fuels to renewable energy is a threatening prospect for oil-producing countries, reflected in the spoiler role they have often played in multilateral climate negotiations.⁷⁵ Despite increasingly dramatic impacts of climate change, global consumption and production of fossil fuels continue to grow.⁷⁶ Implementation of the necessary global energy transition is so far only a marginal phenomenon, although there are indications that investors turn away from the fossil-fuel industry, and the possibility that when change comes it could come quickly.⁷⁷

A reduction in fossil fuel demand and lower oil prices has immediate knock-on effects for oil-producing economies that have been slow in their own transformation. These effects may also have implications for regional peace and security through the erosion of social contracts in oil-producing countries as well as “client states” in the region that depend on oil-producers for large financial transfers. Additionally, the resultant growing investments in civilian nuclear power for the purpose of reducing the dependency on the single export commodity of oil could have security implications.

Critically, it should be noted that non-oil producing MENA countries are highly dependent on fossil fuel imports for their own energy supply. Both groups of countries have plans for reducing their dependency on fossil fuel and grow the renewable energy sector. Among non-oil producers, Morocco stands out even in an international comparison for its ambitious plans and investments in renewable energy.

Even if we have not yet experienced a substantial decrease in the demand for fossil fuels as a result of a global transition to renewable energy, there have been events that illustrate what is likely to happen. The reduced oil price in 2014 was caused by the combined effect of economic slow-down and an increased production of shale oil in the US, resulting in substantially lower export revenue in oil producing countries. Not only did this challenge the social contract between the state and citizens in oil-producing rentier states, but it also showed the degree of financial dependency of some countries, such as Jordan and Lebanon, who saw support from Saudi Arabia and GCC drastically reduced. If social contracts upheld through benefits and subsidies cannot be maintained, which in the case of food, energy and water are the most generous globally, countries in the region could face a new wave of upheavals.⁷⁸ In an analysis of the political and social factors that led to the “Arab Spring,” it has been found that the popular frustration over eroding and broken social contracts played a much more important role than growing inequality.⁷⁹

The dramatic fall in oil prices resulting from the Covid-19 crisis in early 2020, when the sudden drop in demand was compounded as some oil-producers failed to agree on reducing production, has again led to a drastic fall in revenue, with indications of a similar or reinforced socio-economic fall-out as described above.

A notable effect of the ongoing diversification of GCC economies are efforts aimed at reducing reliance on migrant laborers in favor of boosting national workforces. In Saudi Arabia, several hundred thousand migrant workers from Yemen and the Horn of Africa have been deported in the past few years, which likely impacted the domestic economies of their countries of origin as remittances decline. These kinds of cascading effects can also result from climate change and are difficult to predict and prepare for.⁸⁰

The consequences of future food and energy crises can potentially be reduced since both areas provide opportunities for regional cooperation. It has been proposed that food security could be enhanced through regional trade (which is very limited in the MENA region), coordination of market information, shared food stocks and dedicated funds.⁸¹ An analysis of food security in Tunisia argues that it must be seen as a shared challenge between states in the sub-region.⁸² Energy security could be improved through connecting sub-regional electrical grids, while future nuclear power being planned now or under construction could be made safer and more efficient through regional arrangements.⁸³

In conclusion, security-related impacts of proximate, transboundary and systemic climate change effects all tend to translate into very local and contextually determined consequences for households that are already under severe stress. This, in turn, can lead to cascading and destabilizing effects at a national or even regional level. Some of these events may be imminent while others within the foreseeable or distant future. But the overall conclusion remains, all politics, including climate politics, are ultimately local.

The Reverse Link: How Insecurity Determines the Impact of Climate Change

While the link between climate change and violent conflict is still largely hypothetical, the reverse relationship is a certainty. Inadequate resources, weak institutions, lack of territorial control (particularly pronounced in Palestine) and a conflictual atmosphere that tends to consume human energy, policy space and shorten horizons at the cost of identifying long-term barriers to development and global problems are all factors that cripple efforts to address climate change and disaster risk.⁸⁴

Many countries currently in conflict or in a state of fragility are the most seriously exposed to climate change impacts and risks of natural disaster.⁸⁵ According to the Notre Dame Global Adaptation Initiative index,⁸⁶ which combines measures of readiness and vulnerability to climate change, Libya, Iraq, Syria, and Yemen are at the bottom of the ranking, Mauritania also finds itself towards the bottom of the list, although not in armed conflict, scoring very high in vulnerability and very low in readiness. In fact, of the twenty countries at the bottom of the index, 13 find themselves in various states of insecurity or open armed conflict.

Rank	Country	Score	Rank	Country	Score
33	UAE	58.9	101	Egypt	46.1
53	Oman	54.7	105	Algeria	45.2
56	Saudi Arabia	54.3	105	Lebanon	45.2
64	Qatar	53.0	125	Libya	40.8
72	Iran	50.8	133	Iraq	39.8
72	Morocco	50.8	139	Syria	39.0
81	Kuwait	50.3	154	Mauritania	36.0
84	Tunisia	49.7	167	Yemen	33.5
85	Jordan	49.6	176	Sudan	30.4
88	Bahrain	48.7			

Table 1. ND-GAIN Index for countries in the MENA region, combining measures of climate change readiness and vulnerability of 181 states. The lower the ranking and score, the less prepared and the more vulnerable a country is.

Climate change impacts also add to the vulnerability of people affected by conflict and makes the work of humanitarian agencies even more challenging. For instance, extreme weather events can damage health infrastructure and create fertile ground for vector-borne diseases such as malaria and dengue in areas previously unaffected. In compartmentalized international structures these countries have largely been categorized as fragile or states in conflict and addressed by dedicated actors and institutions. They are often conspicuously absent from the multilateral discourse on climate adaptation or disaster risk reduction.

Additionally, the impacts of climate change may be used strategically to the benefit of belligerents. When water is already in short supply, a situation made worse by climate change, it allows for the weaponization of water, to control people or territory, or to be used for tactical benefits in the armed struggle against adversaries. ISIS in Syria and Iraq used this strategy extensively in 2012-2015.

A climate impact assessment in Syria, carried out by IFAD in 2019, identified a range of conflict-related effects that exacerbate the sensitivity to climate change, including environmental degradation, damaged infrastructure and insecurity. For countries like Libya, Iraq, Syria and most seriously Yemen, that are highly exposed to climate change and have low or limited adaptive capacity, , efforts at conflict resolution and peace-building are critical to enable space to reduce climate vulnerability and must be a part of building adaptive capacity.

3. Preventing Conflict - The UN Regional Landscape, Observations from a Climate Security Perspective

The United Nations' presence in the MENA region is a mosaic of agencies, funds, programs (AFPs) and Security Council-mandated missions, some with a regional remit, others with a country-specific role. With our focus, their respective missions and mandates need to be reviewed against their ability to help reduce and mitigate the enhanced risk of conflict that climate change might entail.



Source: UN Photo

Missions defined in Security Council resolutions and structurally linked to **DPPA** – in **Lebanon, Iraq, Syria, Yemen** and **Libya** – have mandates with no direct reference to climate change-related issues, with the exception of **Iraq**. Some interlocutors solicited for interviews in the framework of this study initially referred the consultant to other UN entities, explaining that climate change is beyond the remit of their Missions' mandate. Others, including UNAMI, which has a broad mandate including energy, water and the environment, were quite keen to engage in discussions on the impact of climate change.⁸⁷ However, as highlighted above, Missions in the MENA region tend to operate in contexts that are sensitive to the combined triggers of climate change, socio-economic vulnerabilities, problematic governance, among other challenges.

As previously mentioned, it can be anticipated that if and when these contexts stabilize and refugees and IDPs are able to return to their home areas, they may find that others have moved in and taken over their property. In order not to sow the seeds of renewed conflict in a context that has not yet healed, it is therefore imperative that frameworks for political settlement incorporate provisions or are informed by issues such as the management of water and resolution of land disputes. When discussing this issue with the Office of the Special Envoy for Yemen, it emerged that when the National Dialogue and drafting of a new constitution took place in 2013-14, water, land and environment were part of the deliberations and

included in draft documents. These efforts could now be revisited as highly relevant inputs for a future political transition, after the current conflict has been resolved through a negotiated settlement.

From discussions with UN staff, it becomes clear that the roles and mandates of other agencies than one's own are not always well understood. This is particularly the case with regard to **ESCWA**, a regional commission of Member States under the United Nations Economic and Social Council (ECOSOC), with program modalities that sometimes deviate from the project cycle of many other UN entities, with a think tank-like and policy development role. For the purpose of this study, the comprehensive and partly groundbreaking work on climate change carried out by ESCWA in the form of the RICCAR initiative, as well as its inventory of shared water resources in West Asia, have been analytical foundations. ESCWA is currently in discussions with the World Bank about the launching of a joint project on technical cooperation on shared water resources in the Mashreq region. The ongoing work of ESCWA's Emerging and Conflict-Related Issues Division (ECRI) on a risk assessment framework for the region is of high relevance for the UN's role in relation to links between climate change and insecurity.

ESCWA has been critical at times of Member State policies in areas such as energy, water and agriculture, as found in ESCWA publications. Its analytical work further underpins some of the programming of UN entities such as UNDP. DPPA would benefit from engaging more closely with ESCWA as well. From a conflict prevention perspective, ESCWA clearly has an important role to play with its convening power, in providing mid- and long- projections of climate change impacts and its analyses of related topics, often tailored to specific country needs. It also serves as an important technical platform for government staff of Member States.

For **UNDP**, a core focus is to support country action on climate change. This includes support for the development of national climate policies, implementation of NDCs, early warning systems, water security and climate resilient livelihoods, community resilience to climate risk, and expanding access to climate finance through its role implementing grants from the Green Climate Fund, the Global Environment Facility and the Adaptation Fund. Through this role, UNDP seeks to develop the capacity of countries in the region to take action on climate change while bringing co-benefits across SDG priorities such as poverty reduction, gender equality and peace. This includes action in fragile and crisis contexts of the region.⁸⁸

At the regional level, UNDP launched in 2019 the **SDG Climate Facility: Climate Action for Human Security**,⁸⁹ an inter-agency initiative between UNDP, UN-Habitat, UN Environment Finance Initiative (UNEP-FI), UNDRR, and WFP, in partnership with LAS and the Arab Water Council (AWC), and using ESCWA-generated data. Funded by SIDA, the program focuses on the nexus between climate change and human security at regional, national and sub-national levels, building resilience and adaptive capacity, and has a key focus on conflict-affected contexts, regularly the most vulnerable to climate change. Participating countries include Yemen, Palestine, Iraq and countries affected by the Syria crisis like Lebanon and Jordan. Through the One UN platform, the prevalent conceptual divide between conflict and climate discourses and institutions is to be bridged with an important support role by UNDP Country Offices.

A significant transboundary initiative by UNDP, the FAO and UNESCO is the development of a plan of action for the sustainable management of the vast Nubian Sandstone Aquifer,⁹⁰ shared by Egypt, Sudan, Libya and Chad. The world's largest fossil aquifer, on which some 7 million people depend, is under threat from over-extraction, not least from the great Man-Made River in Libya as pointed out in the UN Joint Country Assessment for Libya,⁹¹ with the perspective of further overuse because of climate change. The Joint Authority for the Study and Development of the Aquifer, formed in 1989, is being supported by the project.

A new phase of the project supported by the Global Environment Facility (GEF) is planned for launch in 2020.

Humanitarian UN agencies such as **OCHA** and **WFP** have close relationships with implementing international and national humanitarian actors with a local field presence. They continuously monitor signs of crisis, including tensions and unrest, and thus manage information that is of potential high interest to the political UN Missions and can be used by them without compromising the humanitarian mandates of OCHA and WFP. Adaptive capacity-building projects managed by WFP protect households from the erosion of livelihoods, a potential trigger of conflict. A recently developed analytical framework helps WFP build the resilience of livelihoods in conflict contexts in ways that support local peacebuilding⁹².

In the case of OCHA, its global mandate has been narrowed to a mainly emergency response coordinating role in situations where there is likely to be an international emergency appeal, reducing its general crisis scanning ability. OCHA's regional office in Cairo used to monitor potential humanitarian crises in countries in the region where it was not present, and also convene biannual heads of agencies meetings to identify common challenges from humanitarian and development perspectives. These meetings have since been discontinued.

A sensitive food insecurity monitoring instrument managed by WFP is its Vulnerability Analysis and Mapping (VAM), which provides information about food markets and the purchasing power of those that depend on them. An expensive undertaking, however, WFP's Egypt office reports that no VAM has been carried out in the country for eight years, despite increasing poverty levels and food price spikes caused by the elimination of subsidies.

The **UN Environment Programme** has a limited field presence in the region but works with governments to support science-based environmental policy development. UNEP is working to develop regional ecosystem-based adaptation -- for example, via an initiative to strengthen participatory, climate-resilient, integrated watershed management in the Jordan Valley. UNEP also works with governments in the region to enhance environmental governance and natural resource management, and to support governments in managing the environmental consequences of conflict and displacement. UNEP also monitors the state of the environment via dedicated assessments, custodianship of environmental SDG indicators, and targeted analysis and forecasting.

In the reformed UN development system, anchored in its support to country SDG implementation,⁹³ the regional UN **Development Coordinator Offices (DCO)** and **affiliated UN Resident Coordination Offices (RCOs)** at the country level, play a key role in overseeing the broad spectrum of development challenges, potentially including factors that could lead to climate-related tension and insecurity at local, national and regional levels. From the consultant's visits to the region, it was clear that in RCOs supported by a **Peace and Development Advisor (PDA)**, work is already under way to monitor and analyze potential security implications of climate change at country level and explore how they could be addressed by country teams. Identified issues include local tension around water scarcity and poor government services, and conflicts related to land tenure.

At the regional level, the two **Regional Development Coordination Offices**, based in Amman and Addis Ababa, are still in their early stages but will have a critical role to play along with the UNDP Regional Hubs, ESCWA and ECA, to support DCOs in providing a transboundary and regional perspective on climate risks that may have consequences at the national level. In the reformed system, ESCWA already has a role in supporting the in-country analytical process linked to the preparation of CCAs.

Conclusions and Recommendations

The following conclusions and recommendations reflect the consultant's analysis as informed by the reality of UN field staff and observations from Regional Divisions at DPPA and members of the UN Climate Security Mechanism. These recommendations are primarily directed at the UN Peace and Security pillar in general and DPPA in particular, but many of them cannot be implemented without the actions of other UN entities as described in the more process-oriented conclusions and recommendations below. The gravity and complexity of the problem is such that effective action requires a UN-wide approach.

- i. **Analysis of political mandates** Security Council resolutions that establish Special Political Missions (SPMs) to address or prevent specific conflicts, or lead the Secretary-General to appoint a special envoy, usually do not refer to contextual risks related to climate change or other factors that could lead to renewed conflict after a political settlement or peace accord. Missions' political mandates are understandably narrow, while their position and contacts at different levels potentially enable them to identify such risks, in cooperation with other in-country or regional UN entities. An analysis of existing mandates against broader contextual risks could yield valuable results in terms of identifying entry-points for constructive action in-country and between countries, supported by technical UN agencies, and be used in the regular dialogue between special envoys and the Security Council. Opportunities for such action are likely to exist in relation to water and land, and possibly also related to regional cooperation around food and energy.

It is **recommended** that DPPA reviews existing mandates and instructions for missions in the region, with a view to sensitizing Security Council members on the importance of considering climate security integrated risk analysis. In line with DPPA's conflict prevention mandate, it is also recommended that both regional and country-specific analysis take into account the risk of tension and conflict linked to water, land and related issues, in view of climate change impacts, in order to identify entry points for preventive action in the context of country plans and strategies.

- ii. **Climate-induced risks and peace agreements** Many conflictual contexts have a history of disputes around access to water and land, and other natural resources. Such tension is likely to become exacerbated by the return of people displaced as refugees or IDPs as their original property may have been seized or is used by those that never left or are displaced from other areas. Climate change will add to such tension by intensifying water scarcity and land degradation, thus undermining livelihoods. As part of DPPA preparation for settlements and peace agreements it will be imperative that a full conflict analysis is conducted of historic natural resource-related disputes factors in likely future impacts of climate change, with the support of technical UN agencies, along with other social, economic and political factors. In doing so, DPPA is advised to build on the experience gained with UNEP and UNDP in enhancing their environment security capabilities, including mediation in conflicts associated with natural resources, as embodied in DPPA's Mediation Support Unit.

It is **recommended** that DPPA ensures that the analytical process and political dialogue and mediation intended to lead to conflict resolution and peace agreements is always informed by previous disputes around water, land and other natural resources, leveraging its capacity for dialogue and mediation support, and what effects climate change is likely to have on such future tensions on the return of those displaced, so that relevant elements can be integrated into settlements and agreements.

- iii. **A UN strategy for transboundary issues** A number of different UN efforts have been made or are under way to promote transboundary water agreements, or at least technical cooperation between states in the region. They include a nascent partnership between ESCWA and WB for Mashreq countries, intended to incorporate Turkey and Iran, and by UNDP, FAO and UNESCO on the Nubian Aquifer. In an initiative with Stanford University, DPPA is also planning to explore opportunities for interventions among countries sharing the Euphrates and Tigris, seeking a “possible regional strategy for UN involvement in water management and related peace and security issues.” This is an opportunity for a more consolidated, strategic and concerted effort towards such objectives, particularly given that no basin-wide agreements exist in the region. It is also an area suitable for track-II diplomacy and potential peacebuilding efforts, where DPPA’s capacity for dialogue and mediation will be highly relevant. Here, ESCWA serves as the repository and institutional memory in terms of the region’s own institutions and their efforts in this regard, such as the draft Arab Convention of Shared Water Resources. A concerted UN strategy would entail building on the achievements of, and confidence in, UN actors with a credible track record, but guided and led by a joint UN approach at a high level. A transboundary strategy does not need to be limited to shared water resources. There is also considerable potential for regional collaboration around food and energy for example. Again, to ensure success, the strategy needs to be UN-wide, long term, beyond the cycle of short-term emergency events, and include political missions as well as DCOs from different sub-regions.

It is **recommended** that a regional inventory of ongoing and planned UN transboundary water initiatives is made, initiated by DPPA, supported by ESCWA and ECA, with an active role played by UN political missions and used as the foundation for the development of a joined-up UN strategy to support states in developing bilateral and basin-wide agreements.

- iv. **Shared understanding and shared responsibility** There is no shared understanding among UN entities present in MENA of what climate change may entail in individual countries and in the region, even less when it comes to potential security implications. A shared understanding is necessary as the common platform for developing a shared responsibility in terms of what problems could and should be addressed by the UN and what contributions different UN entities can make, based on their mandates, experience and expertise. As climate change is a politically charged issue, this will allow technical action in the country context to inform political analysis, and vice versa, which in turn will support steps from the UN Security Pillar to reduce tension and prevent climate-related risks of insecurity. The platform can be built through annual UN system-wide in-country seminars, where projections of climate change

impacts at the national level -- biophysical and socioeconomic -- are presented based on ESCWA's analysis and the most recent IPCC findings, and where potential climate-related insecurity and conflict risks are identified, which could be exacerbated by local, regional or global events in the short-, mid- and long-term. Assessments of climate vulnerability should be done through a gendered lens. Seminars should include presentations of the host government's climate policies and also offer a safe space for dialogue with national civil society. It could also constitute a platform for dialogue with other key international organizations, such as the World Bank, referring to the agreed Pathways for Peace framework as the point of departure.⁹⁴

Inter-agency country seminars should include all of the UN, including non-resident and regional UN offices, as well as political field missions (SPMs and POs). They should be led by the DCO with analytical input from PDAs, with the support of the new Regional DCO and PDAs with a regional role. It is important to avoid a one-off approach on a phenomenon that evolves continuously and presents regular surprises. It would be logical to time them at the start of the CCA process, which would embed a climate risk assessment in regular analytical and planning mechanisms, laying the ground for politically informed adaptation strategies with dedicated conflict prevention elements. An important role is played by *monitoring* agencies, such as OCHA, WFP and UNEP in collaboration with national institutions that can identify early signs of relevant change. Given that different UN entities naturally operate in different timeframes, from the acute and imminent to long-term change, seminars should address strategic scenarios with a temporal dimension.

Outcomes from climate country seminars could inform a regional climate forum of UN agencies, possibly linked to the new and upcoming regional climate week, to be organized by the UNFCCC in Dubai for the first time during the 4th quarter of 2020.⁹⁵

It is **recommended** that a shared understanding of the political implications of climate change in a country context be developed through annual RCO-led UN system-wide seminars, informed by regional and global analyses, and embedded in the CCA work process.

- v. **A UN regional network** In the new UN development framework, DCOs play an important regional role, including on transboundary issues, in support of RCs in the countries under their purview. In other parts of the world, this includes supporting existing regional and sub-regional organizations in their work. In the MENA region, however, with its many tensions between states and the limited capacity of regional and sub-regional organizations, this role becomes more difficult, thus even more important. Recognizing the potentially problematic optics of seeming to make the UN replace or substitute what the region itself should manage, a **supportive and informal networking web of RCs**, coordinated by DCOs, could facilitate agenda-setting and technical and ultimately political contacts between states that would allow transboundary issues to be addressed. It should be emphasized that this does not entail creating new structures, but rather developing new ways of working between existing UN entities.

In well-integrated UN country teams, with active participation of political missions or, in their absence, PDAs, the different entities represent a broad and functional interface at different levels with the societies in which they operate, from the highest levels and different parts of governments to peripheral communities.

A regional web of RCs does not necessarily only have to follow formal UN regional delineations, although it may be logical and constructive to institute a framework that corresponds to the wider MENA region. This would also entail better integration within DPPA where the Middle East Division and the Northern Africa Division for example are housed under different ASGs. A regional DCO network could also form trans-regional, sub-regional and functional groups, e.g. enabling neighboring states to address transboundary concerns, even if there may be no formal or functioning sub-regional organization. This would apply to the Maghreb, or the Euphrates and Tigris riparian states Turkey, Iraq and Syria. Special arrangements will be needed and in particular where UN missions belong to different regions with links to different Regional DCOs, such as between the RCO in Turkey and those in neighboring states.

It is **recommended** that the DCOs and RCOs in the MENA region, in cooperation with DPPA, use the earliest opportunity to work out how a regional UN network can become functional with the aim of supporting states to address transboundary problems, and what is needed from regional and non-resident bodies, such as ESCWA, ECA, the UNDP Regional Hub, UNEP and others, to enact this function. The aim of the network is to strengthen the ability of regional organizations to address shared challenges.

- vi. **Typologies of climate action** On the basis of what we know about triggers of conflict and potential climate change/conflict pathways, a range of interventions to reduce the risk of conflict can be identified, such as 1) those that strengthen the resilience and adaptive capacity of governments, communities and households, protecting them against the loss of livelihoods caused by proximate events as well as global and systemic impacts; 2) those that restore, build or strengthen local and national conflict resolution mechanisms around the use of land and water; 3) those that allow states to agree on modalities for sharing, managing transboundary surface water and aquifers and other resources. Several examples of UN programs under 1) are being implemented, no programs under 2) were identified by the consultant, and examples of seemingly uncoordinated efforts under 3) are being considered or under way.⁹⁶

It is **recommended** that on the basis of the analysis and frameworks emerging from climate change country seminars, ongoing interventions are organized against the typology above (or other more relevant typologies that may emerge), including a monitoring function, in order to identify entry-points in the form of gaps, opportunities and complementarities, including from a transboundary perspective that requires collaboration with neighboring country teams.

- vii. **Sensitizing the public and authorities** There is limited insight and understanding by the public in most MENA countries about the seriousness of the water and impending climate crises.⁹⁷ When life is precarious and governments and families must deal with the daily urgencies of insecurity and socio-economic crisis there is limited space for addressing future problems. In order to gain attention and engagement, the narrative about climate and security-relevant action by the UN must therefore have its roots in the *here and now* -- in issues and problems that have immediate urgency and relevance. A natural starting point is the response to extreme events, be it about weather, unexpected pests and epidemics or other unforeseen events that have direct effects on the population and may be difficult for national or local authorities to manage. UN actors must then be able to point to the relationship between such events and the kind of effects that can be expected in the future, and what enhanced adaptive capacity looks like and how it can be built. Recent such events include floods in Lebanon, Jordan and Tunisia in late 2019, and the current Desert Locust emergency in the Horn of Africa and southern Arab Peninsula. In this sensitization task, the UN will be able to build on outcomes from its annual in-country and regional seminars.

It is **recommended** that the UN in the region builds and communicates a climate change narrative that connects the immediately urgent with more mid- and long-term climate change risks.

- viii. **Language and concepts** In conversations with UN staff in the region, it was pointed out that "climate security" has a sensitive connotation in many countries, leading thoughts to hard security and perceived as a threat that evoke ministries of interior, the police and armed forces to respond. There is a conspicuous absence of MENA States in the Group of Friends on Climate and Security. Any arguments claiming that climate change jeopardizes state security in this sense is bound to be counterproductive. For this reason, and if the purpose is to initiate a discussion of climate risks and their security implications in a general sense, it may be advisable to begin the conversation about how climate risk increases the burden on people and governments *already affected by conflict*, rather than as a source of new violent conflict. The UNDP Regional Hub has taken care to frame its climate programming towards SDG, human security and crisis prevention/recovery goals.

At the same time, it will be important to use technical forecasting tools and analysis to identify emerging tensions within and between states over natural resource scarcity -- particularly where agreed resource governance mechanisms (such as water-sharing agreements) are weak or missing. This will help the UN system to understand where negotiations, combined with support to promote better natural resource management, could play an important prevention role. In many cases, initial UN analytical work may be easier to accomplish if it is framed in technical, scientific terms (as opposed to political or security terms). UN leaders will need to use the range of UN capabilities and mandates, and work using the UN system's "variable

geometry,” to apply the right combination of scientific, analytical, political analysis and mediation roles to each task.

It is **recommended** that care be taken as to how analysis and proposals around climate and security risks are framed, and that language and concepts are used without unnecessarily evoking hard security and military means.

- ix. **Research program** Certain areas of great importance for the link between climate change and security in the MENA region are poorly understood and under-researched. They include i) the complex migration patterns and how they are likely to be affected by climate change impacts amid a range of other determinants; ii) the mechanisms behind local tension and conflict, including water, land and deficient services; iii) the nature and state of local conflict resolution mechanisms. These are areas where the UN could promote research, by national institutions and in collaboration with international institutions. A regional research program linked to climate change impacts could be envisaged and could also provide valuable contributions to the work of IPCC, ensuring that the MENA region is effectively covered.

It is **recommended** that the UN regionally identifies a set of research areas that could be picked up, promoted and funded by national and international research institutions and funders.

Endnotes

¹ Countries in the MENA region referred to in the report include Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, Palestine, and Yemen.

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