



CLIMATE CHANGE, ENVIRONMENTAL DEGRADATION, CONFLICT, AND DISPLACEMENT IN THE ARAB STATES REGION



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EXECUTIVE SUMMARY

Time is increasingly of the essence for decisive action to be taken to respond to the planetary crisis. The evidence is becoming irrefutable that climate change-induced environmental change, degradation, and biodiversity loss are no longer future threats but are instead already upon us, driven by humankind's polluting production processes and unsustainable consumption. Development progress is already being checked, eroding social cohesion, and precipitating the conditions for further inequality, threats to public health, and even pathways to unrest and conflict. As we enter unknown climatic territory, the impacts of these changes are emerging as direct and indirect causes of conflict and displacement within and between countries: 31 million people globally were internally displaced by natural hazards in 2020 alone, and many others pushed across borders.¹

This brief, largely based on documentary review and experts' consultations, looks at the Arab States region and aims to examine the nexus between environmental change and security to strengthen the understanding of the challenges posed to human security in the region by environmental degradation, climate change, and resource scarcity. This is done to highlight sound approaches in response to competition, conflict, and displacement. Indeed, approaches taken so far to the multifarious environmental, social, economic, and governance and security challenges faced by the diverse countries in the Arab States region seldom tackle the intersecting components of environmental change and conflict in an interconnected manner.

The paper is divided into four sections. The first section provides a snapshot of the nexus of climate change-induced environmental impacts, resource stress and security in the Arab States, a region that is home to 13 of the world's most water stressed countries and consumes natural resources twice that of its biocapacity. The region is also home to several countries considered fragile or in conflict, including Yemen, Somalia, Syria, and Libya. More than 10 percent of displaced people globally are in the region, despite it being home to only 5.5 percent of the world's population. The circular interaction between climate change, subsequent environmental impacts, and insecurity – often in the form of conflict and displacement – is therefore, the ultimate risk multiplier. It threatens to cause destabilising challenges to the countries in the region, and in some cases their relationships with countries in neighbouring regions, resulting in dramatic roadblocks on their development progress, which could reverse decades of hard-won gains towards improving the lives of their citizens and achieving the Sustainable Development Goals (SDGs).

The following section focuses on competition and conflict over natural resources, and displacement and migration streams. It does so by zooming in on five sub-regions facing interconnected challenges: the Maghreb; the Levant; the Nile; the Arabian Peninsula; and the Horn of Africa. Access to water and the security of its supply is a common and recurring theme, and is a symptom directly linked to deep and enduring inequalities, injustices, and exclusion, which in turn are fundamental to the state of social cohesion, political interaction, and security in the region.

Section three on risks and resilience highlights how a multitude of international, as well as regional and national non-governmental organisations in the Arab States region have stepped up their efforts to address climate and environmental risks and build resilience. It offers, as examples to build on, the three main categories of engagements currently underway by the UN: conflict prevention and mitigation, conflict response, management and vulnerability reduction, and recovery and peacebuilding.

The final section presents some takeaways and suggests approaches to enhancing climate and environmental security. Greater integrated efforts across policy, programming, and future research are needed to maximise the potential of interventions across both conflict and environmental degradation, in a context where this nexus is emerging as a pitfall for sustainable development and commitments to leave no one behind.

¹ [Internal Displacement Monitoring Centre database](#), cited in UNDP (2022) ['New threats to human security in the Anthropocene: Demanding greater solidarity'](#), *UNDP Special Report*.



Photo credit : Claire Thomas, UNDP Iraq

Environmental Degradation, Resource Stress and the Security Nexus

Today, climate change and the consequences it has on the environment are occurring at an unprecedented rate, straining societies' and governments' ability to cope and adapt.² "Climatic and environmental changes increasingly disrupt the systems that are the very basis of the livelihoods of billions of people around the world. The resulting food, water and energy insecurity can contribute to political instability, aggravate political tensions and, in the worst cases, overwhelm governments".³ This combination can, in turn, push people towards damaging alternative livelihoods and create pathways to violent conflict, especially in areas that already have experience of it, or where certain groups are excluded from access to, and management of, natural resources.⁴

In the Arab region, with its history of fragility and conflict, there is strong potential for environmental degradation and insecurity to reinforce each other, with severe ramifications for its hard-won development gains, and the lives of its citizens. The region is reportedly warming twice as fast as the rest of the world⁵, and the pressures of rising populations and limited resources are checking development progress and precipitating the conditions for further inequality, loss of livelihoods, potentially higher rates of crime and violence⁶, eroded societal trust and cohesion, and conflict. The region's current use of natural resources is roughly twice that of its biocapacity, and the gap is widening; 13 of the world's 20 most water stressed countries are located in the region⁷; 85 percent of the total available freshwater is used on agriculture⁸; and 45 percent of the total agricultural area is exposed to salinity, soil nutrient depletion, and wind-water erosion⁹; while rapidly increasing youth, migrant worker, and displaced populations will mean many more millions of people relying on ever-scarcer resources.¹⁰ The region's ongoing violent conflicts themselves also contribute directly to environmental destruction and degradation. In short, the Arab States region faces the need for a new paradigm to meet human development goals without jeopardising the ecological foundation of life.¹¹

Climate change and environmental degradation each occur in parallel, as well as the relationship between them becoming a vicious cycle, with climate change inducing environmental degradation and biodiversity loss, which then further exacerbates climate change. Together, they form critical links in the pathway from climate change to environmental degradation, to insecurity¹², combining to exacerbate the latter as the "ultimate 'threat' [or 'risk'] multiplier".¹³ Environmental security, therefore, "views ecological processes and natural resources as sources or catalysts of conflict, barriers or limits to human well-being, or conversely, as the means to mitigate or resolve insecurity".¹⁴ It speaks to the effect environmental scarcity, degradation, and uncertainty can have on human security more broadly.¹⁵ The picture is further compounded when the differentiated impacts on different nations, regions, genders, and societal and occupational groups are considered¹⁶, including the knock-on effects of the competition over natural resources. Millions of people in the Arab States region rely directly on the land or water for their livelihoods, yet many states are unlikely to be able to adequately meet the needs of those affected without the rapid development of the capacities of government, legislators, security actors, among others, as well as the strengthening of the legal and policy frameworks within which they address environmental

² Khoday, K. (2016). The nexus of climate change and conflict in the Arab Region.

³ Adelphi & WWF International (2022) ['The Nature of Conflict and Peace: the links between the environment, security and peace and their importance for the United Nations'](#).

⁴ Ibid.

⁵ Hergersberg, P (2016) ['Hot Air in the Orient'](#), *Max Planck Research*, (Issue 4).

⁶ Studies have shown potential links between higher annual temperatures and interpersonal violence, highlighting how the strong relationship between climate and environmental change and the rule of law could exert pressure on human rights and justice systems across the region and globally, cited in UNDP (2022) ['New threats to human security in the Anthropocene: Demanding greater solidarity'](#), *UNDP Special Report*.

⁷ Gaub, F & Lienard C (2021, October) ['Arab Climate Futures: Of risk and readiness'](#), *EUSS Chaillot Paper 170*. Accessed 6th October 2021.

⁸ International Institute for Sustainable Development (2017) ['UN Projects Tackle Desertification in the Mid-East, Asia and Africa'](#), Accessed 23rd September 2021.

⁹ Ibid

¹⁰ Brodie, C (2018, May 3rd) ['The world's fastest-growing populations are in the Middle East and Africa. Here's why'](#), *World Economic Forum*, Accessed 29th November 2021.

¹¹ El-Zein, A., Jabbour, S., Tekce, B., Zurayk, H., Nuwayhid, I., Khawaja, M., . . . Hogan, D. (2014). Health and ecological sustainability in the Arab world: a matter of survival. *Lancet* (London, England), 383(9915), 458-476. doi:10.1016/S0140-6736(13)62338-7.

¹² Adelphi & WWF International (2022) ['The Nature of Conflict and Peace: the links between the environment, security and peace and their importance for the United Nations'](#).

¹³ UNEP, UN Women, UNDP, UNDDPA/PBSO (2020) ['Gender, Climate & Security: Sustaining inclusive peace on the frontlines of climate change'](#).

¹⁴ Scott, C & Thapa, B. (2015) ['Environmental Security'](#), *Environmental Science*. doi:10.1093/obo/9780199363445-0012.

¹⁵ UNEP. (2012). Toolkit and Guidance for Preventing and Managing Land and Natural Resources Conflict - Renewable Resources and Conflict.

¹⁶ Occupational groups are (formalised or unformalised) bodies or groups of people doing the same types of work.

challenges and prevent conflict. In turn, if governments are unable to deliver fair and equitable access to basic needs strained by climate-induced environmental challenges, exacerbated by exclusionary power imbalances and inequalities, then the resultant deterioration in livelihoods can aggravate grievances horizontally (intercommunal) and vertically (citizens-government/authorities), in turn acting as a potential driver for civil unrest and even violent extremism.¹⁷

In February 2022, another risk emerged with the outbreak of war in Ukraine. At the time of writing, the full ramifications of war on the country, and sanctions imposed on Russia, continue to develop, but it is likely that both will have a significant knock-on impact on the economies in the Arab States region. The situation has disrupted or limited the supply of essential resources, such as oil, gas, and agrifoods, prompting dramatic price rises. The effects will not be spread evenly. Oil and gas producing countries, such as the Gulf Cooperation Countries, are benefitting in the short-term from increased demand from large markets, and the ensuing increased relevance and leverage on the global stage. Other countries in the region, such as in the Horn of Africa, have been exposed to fluctuating supply and prices, particularly of agrifood products that risk compounding the effects of a prolonged drought. According to an UNCTAD rapid assessment, five countries rely on Ukraine for over 50 percent of their wheat imports, with two of those over 70 percent. This is a cause for concern as “agrifood commodity cycles have coincided with major political events”, including the unrest, instability, and revolutions of the Arab Spring in 2011.²² Rising prices will put severe pressure on households and on the public budgets – already strained by Covid-19 – that provide politically sensitive subsidies on food staples. Furthermore, with respect to the issue of the climate and environment, the expected “increase in oil and gas prices may shift investment back into extractive industries and fossil-fuel based energy generation”, just at a crucial time when several ecological ‘tipping points’ are being reached to prompt a concerted move away from these fuel sources.²³

While this report will focus on environmental degradation and scarcity, mainly of water resources, abundance of resources and inequality in access to them, may also lead to tension, divisions in society, and conflict. The presence of resources can also bring with it other challenges, such as financial mismanagement, corruption, and rentierism, as well as potentially attracting armed non-state actors for leverage and financing of their activities.²⁴ For instance, in 2014 during fighting for Mosul, Islamic State targeted the Ajil, Allas, and Qayyarah oil fields, with total production earning the group an estimated \$1.5m daily.²⁵ Likewise, as early as the 1960s, provision of access to water has been used to build political power and wield control. In the

Box 1

Climate change, climate security, and a just transition

There has been overall progress in the region on climate commitments since the Rio Declaration on Environment and Development in 1992, and the ensuing multilateral environmental agreements (MEAs).¹⁸ Advances have also been made since the 2015 Paris Agreement. However, the majority of the measures reported in countries’ Nationally Determined Contributions (NDCs) remain unrealised.¹⁹

The second part of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) underlines how “climate impacts and risks exacerbate vulnerability and social and economic inequities and consequently increase persistent and acute development challenges”, which undermine the attainment of sustainable development, particular for those most vulnerable communities.²⁰ This includes ensuring that the necessary green transition is fair and equitable, “greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind”.²¹ If a just transition is not achieved, through countries’ NDCs and the subsequent concrete measures they promise, then existing inequalities and injustices will instead be deepened, creating further tensions and potential for civil disaffection, unrest, or worse.

¹⁷ UNDP. (2020d). UNDP Policy Brief: the climate security nexus and the prevention of violent extremism: Working at the intersection of major development challenges Retrieved from: Mobjork, M., Krampe, F., & Tarif, K. (2020). Pathways of climate insecurity: guidance for policy makers.

¹⁸ Djoundourian, S (2021) ‘[Response of the Arab world to climate change challenges and the Paris agreement](#)’, International Environmental Agreements: Politics, Law and Economics, Issue 21, pp469-491.

¹⁹ IPCC (2022) ‘[Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change](#)’, Cambridge University Press. In Press.

²⁰ ILO (2022) ‘[Frequently asked questions on just transition](#)’.

²¹ ILO (2022) ‘[Climate change and financing a just transition](#)’.

²² UNCTAD (2022, 16th March) ‘The Impact on Trade and Development of the War in Ukraine: UNCTAD Rapid Assessment’.

²³ Ibid.

²⁴ Kohli, A., Steinemann, M., Denisov, N., & Droz, S. (2018). Fragility and Conflict.

²⁵ Solomon, E., Chazan, G., & Jones, S. (2015). Isis Inc: how oil fuels the jihadi terrorists. *Financial Times*.

example of Syria, this allowed the state “to weaponize agricultural resources and land policy as a tool of political and demographic domination, with a particular impact on the Syrian Kurds”.²⁶ These strategies later enabled Islamic State to then tread a similar path on water control, to dominate the areas it held and create legitimacy.²⁷

Accordingly, efforts are ongoing to continue mainstreaming climate and environmental security into governance and peacebuilding programming, acknowledging the “dual burden posed by climate change and conflict”²⁸ and the potential for issues of environmental degradation and natural resources to function as incentives for cooperation and peace rather than conflict.²⁹ These mainstreaming efforts, including towards the empowerment and protection of human rights, are underscored by the recent landmark recognition by the UN General Assembly on 28th July 2022 that a clean, healthy, and sustainable environment is a universal human right.³⁰ The decision carries historic importance, making a clean environment a matter of justice, and obliging governments to promote, protect, and fulfil this right, as well as drawing sharp focus to the critical yet dangerous role of environmental human rights defenders.³¹

It is the potential – both the negative potential for livelihoods and security to deteriorate, and the positive potential that collaboration towards a healthy environment and natural resources may offer towards peace – that encouraged us as UNDP to concentrate on related conflict and tensions, and build on global-level UNDP initiatives on climate security, environmental governance, environmental justice³², and the integration of climate action with conflict prevention and peacebuilding³³, with a regional focus. The aim of this brief, therefore, is to examine the climate-environmental security nexus in the Arab States region to strengthen understanding of the challenges posed to human security by environmental degradation, climate change, and resource scarcity, and to highlight sound approaches in response to competition, conflict, and displacement. The piece will first cover conflict over natural resources and migration and displacement in subregions – the Maghreb, the Levant, the Nile, the Arabian Peninsula, and the Horn of Africa³⁴ – which have been identified given the similar patterns and nature of concerns, before looking at how to manage risks and build resilience, and then offering some key takeaways.

²⁶ Daoudy, M (2020) “Water weaponization in the Syrian conflict: strategies of domination and cooperation”, *International Affairs*, 96:5.

²⁷ Ibid.

²⁸ UNDP (2020) ‘[The climate security nexus and the prevention of violent extremism](#)’, *UNDP Policy Brief*.

²⁹ Dresse, A., Fischhendler, I., Nielsen, J. Ø., & Zikos, D. (2018). Environmental peacebuilding: Towards a theoretical framework. *Cooperation and Conflict*, 54(1), 99-119. doi:10.1177/0010836718808331.

³⁰ UN Digital Library (2022) ‘[The human right to a clean, healthy and sustainable environment, A/RES/76/300](#)’.

³¹ Thompson, K & Kurukulasuriya, P (2022, July 28th) ‘[Historic UN resolution recognizes healthy environment is a human right](#)’, *UNDP*.

³² UNDP (2022) ‘[Environmental Justice: Security our right to a clean, healthy and sustainable environment](#)’ (Technical Paper).

³³ UNDP supports 120 countries (of which 47 are conflict affected and fragile states) through its [Climate Promise](#), including support to just transitions climate finance, and green jobs. It partners with the UN Department of Political and Peacebuilding Affairs to deploy 110 Peace and Development Advisors to build local capacities on conflict prevention and peacebuilding.

³⁴ The Arab World encompasses 22 countries across two continents, Africa and Asia. This policy brief will consider only those that UNDP RBAS works or has a presence in, divided geographically into five main groups: the Maghreb (Algeria, Libya, Morocco, and Tunisia); the Levant or Mashreq (Iraq, Jordan, Lebanon, Syria, and Palestine); the Nile countries (Egypt and Sudan); the Arabian Peninsula (Bahrain, Kuwait, Saudi Arabia, and Yemen), and the Horn of Africa countries (Djibouti and Somalia) (see Figure 1).

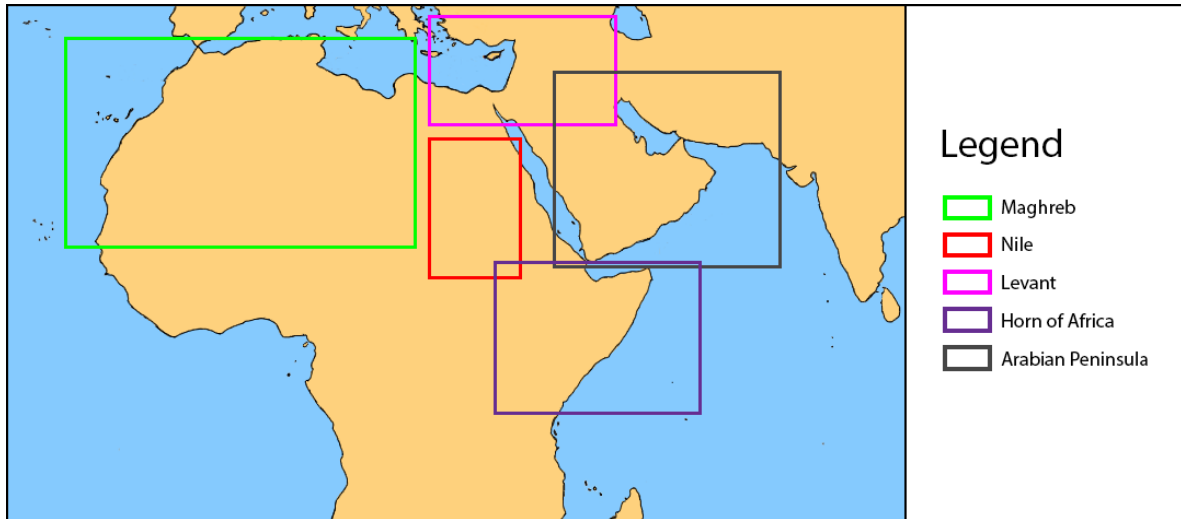


Figure 1. Geographical contextualization of Arab States (adapted from QuickGS (2017))

Figure 1. From an economic perspective and diversification, the Arab States can be categorised as mixed oil economies (Algeria and Libya); oil economies (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates); diversified economies (Egypt, Jordan, Lebanon, Morocco, Syria, and Tunisia); and primary export economies (Djibouti, Sudan and Yemen). In this brief, geographic categorisation will be used since the countries in each group have similar environmental and cultural characteristics.



The SDGs and partnerships for the Goals

The achievement of the SDGs in the Arab States region is critical for improving the quality of life and environment for its citizens, in turn reducing potential sources of tension, frustration, and conflict. However, implementation of the 17 goals is markedly uneven, and is more challenging in some countries than others depending on the economic and political stability of the country as well as the social, cultural, and natural conditions.³⁵

Challenges such as the water-energy-food nexus are of high importance in the Arab States region, but are aggravated by the lack of public participation in decision making, especially of women, and inadequate institutional and policymaking capacities.³⁶ UNDP considers SDG16 – ‘peace, justice, and strong institutions’ – as central to directly tackling and indirectly offering an enabling environment for tackling, all of these developmental challenges. SDG16 acts as an enabler for the entire SDG framework and for the 2030 Agenda. For instance, corruption is rampant in the Arab World and hinders the transformation to sustainable development. The ability to devise policies that account for the various social, economic, and environmental components of development strategies is weakened in the absence of transparency. It also makes it difficult to mobilise the required resources to achieve the SDGs. Therefore, fulfilling the promise of SDG16 and all the SDGs necessitates a paradigm shift in the approach to support nations and regions seeking to disrupt and ultimately end the cycles of conflict and instability. This will need greater understanding, collaborations, integrated solutions, and the leadership of countries and member states to reshape the institutional and social landscape, laying the groundwork for fundamental reforms that will help establish long-term peace.³⁷

³⁵ Goll, E., Uhl, A., & Zwiers, J. (2019). *Sustainable development in the MENA region*.

³⁶ Ibid.

³⁷ Okai, A. (2019). *Opinion: SDG 16 is an accelerator for the entire 2030 Agenda*.



Photo credit : UNDP Lebanon

Conflict Over Natural Resources & Displacement and Migration Streams

Resources such as oil, minerals, water, forests, and land can become major sources of conflict when they are managed, distributed, or regulated in an unjust or unequal way³⁸, or even weaponised against local communities.³⁹ Additionally, other types of violent or armed conflict, which might not even be natural resources related, can also have deleterious effects on nature, the environment, and climate change, further exacerbating fragile conditions and creating a negative feedback loop affecting drivers of conflict. Combined, this can trigger a multitude of socio-environmental conflict escalation factors including individual psycho-social impacts, effects on social cohesion and fabric, distribution inequalities, political impacts such as threatened interests, and economic impacts concerning production of goods, demand, and reduced resilience and coping strategies. These factors are exacerbated by the fact that the effects of climate change, and of conflict, do not affect everyone equally, with those who are most vulnerable in society – such as women, minority groups, and persons with disability – exposed most to disrupted services or a breakdown of social norms and checks on harassing, repressive, or violent behaviour, especially against women and girls.

Where there is conflict, displacement and migration often follow. Historical data shows an increasing trend in global displacement and forced migration of populations within their countries as well as across national borders. Over the past decade, at least 100 million people were displaced or forced to migrate, causing the global population of forcibly displaced to rise to 1 percent of the global population in 2022.⁴⁰ Most of the contributing factors can be attributed to worsening weather-related events: in 2020 alone they triggered 30.7 million new internal displacements globally, which is the highest figure in a decade, and three times as much as the 9.8 million displacements triggered by violence and conflict that year. Moreover, 95 percent of all those conflict displacements occurred in countries most vulnerable to climate change.⁴¹ This is particularly pertinent for the Arab States region, as it accounts for the hosting of more than 10 percent of that globally displaced population, or 17.5 million people, despite being home to only 5.5 percent of the world's population.⁴² Drought and other climatic threats have already affected more than 40 percent of the population in the Arab world⁴³, with forced relocation due to sea level rise also a looming threat in coastal areas. The situation is exacerbated for refugees, displaced persons, and migrants, who frequently live in harsh conditions⁴⁴, making access to water and proper sanitation facilities difficult, and results in numerous knock-on effects.

The rest of this section will examine some of the climate and environment related security risks – often concerning water scarcity – and displacement, throughout the Arab States region in each of the five subregions, which have been identified given the similar patterns and nature of concerns: the Maghreb, the Levant, the Nile, the Arabian Peninsula, and the Horn of Africa.

³⁸ UNDP, & UNEP. (2015a). Natural resources and conflict - A guide for mediation practitioners.

³⁹ According to UNEP, [at least 40 percent of all intrastate conflicts in the last 60 years have a link to natural resources, and that this link doubles the risk of a conflict relapse in the first five years.](#)

⁴⁰ UNHCR (2022, 23rd May) "[UNHCR: Ukraine, other conflicts push forcibly displaced total over 100 million for first time](#)".

⁴¹ UNCHR (2021) [Global Trends: Forced Displacement in 2020](#).

⁴² Calculated for countries classified by UNDP as Arab States using World Bank (2022) ['Population, total'](#).

⁴³ UNDP, & GEF. (2018). Climate change adaptation in the Arab States.

⁴⁴ The situation is not only worse for these groups, but also prolonged. Calculations by the World Bank based on 2018 data highlighted that half of the world's refugees have spent five years or more in exile, with average duration decreasing, typically showing a degradation of the global situation as more people are displaced. Cited from Devictor, X (2019, December 9th) "2019 update: [How long do refugees stay in exile? To find out, beware of averages](#)", *World Bank*.



Photo credit : UNDP Somalia

Gender, security, and the environment

Countries with high levels of gender inequality have a higher tendency to instability and conflict, as well as higher climate vulnerabilities.⁴⁵ For women and girls, the risks posed by security challenges and climate and environmental change are differentiated to those faced by men and boys and often disproportionate, especially for those living in rural areas or belonging to a minority. They are key providers of water and food, especially in rural areas – women and girls globally have been estimated to collectively spend 200 million hours a day collecting water⁴⁶ – but are less equipped to adapt to changing conditions and uncertainty, often due to prevailing social, economic, and political inequalities. In fact, in 123 countries (roughly in two thirds of all the States in the world), traditional, religious, and customary laws and practices limit women’s freedom to claim their rights to a healthy environment.⁴⁷ Gender, security, and the environment all combine to create a ‘triple nexus’ of compounded vulnerability.

In some places, exposure to these physical hazards is already changing the nature of the communities most affected and the position of women. In the North Kordofan region of Sudan, for instance, the men in pastoralist communities are being forced to change their migratory patterns to find more fertile lands, leaving behind ‘feminised’ communities. By travelling greater distances to different areas, the risk of conflict between pastoralists, farmers, and other occupational groups increases. This can expose the men in the communities to physical violence, leave them struggling to find other economic opportunities to support their families, and in some cases vulnerable to recruitment by armed groups. Any of these instances leaves women to take greater responsibility in supporting their families economically, and to assume traditional male roles of decision making.⁴⁸ This is prompting a transformation of gender norms, opening up opportunities for new inclusive processes, but also presents possible challenges for the women in these new roles, who are less likely to have had the chance to develop the requisite skills, especially if they themselves have also been displaced.

The leading role of women in providing water, energy, and food gives them detailed knowledge and experience of the environment and natural resources to contribute to building effective adaptation strategies, and in turn this can help them derive legitimacy in their communities to be part of the solution in conflict mediation settings.⁴⁹ The climate-gender-conflict nexus is critical to both peacebuilding efforts and developing strong communities resilient to climate change impacts.”⁵⁰ Therefore, there needs to be a greater focus on encouraging women and girls’ meaningful participation, as agents of change, in action addressing climate-related security risks⁵¹, underpinned by an enabling and gender sensitive legal framework, alongside institutional capacity building to support its delivery. In a promising development, in January 2022, the League of Arab States endorsed the Arab Declaration on ‘Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes’.⁵²

⁴⁵ De Jonge Oudraat & Brown (2022), ‘[Gender, Climate Change, and Security: Making the Connections](#)’.

⁴⁶ UNICEF (2016, August 29th) ‘[Press release: Collecting water is often a colossal waste of time for women and girls](#)’.

⁴⁷ De Andrade Correa, F (2022, March 22nd) ‘[Gender equality: A cornerstone for environmental and climate justice](#)’, UNDP.

⁴⁸ UNEP, UN Women, UNDP, UNDDPA/PBSO (2020) ‘[Gender, Climate & Security: Sustaining inclusive peace on the frontlines of climate change](#)’.

⁴⁹ Ibid.

⁵⁰ Smith et al (2021) ‘[The Climate-Gender-Conflict Nexus: Amplifying women’s contributions at the grassroots](#)’, Georgetown Institute for Women, Peace and Security.

⁵¹ Seymour Smith, E (2020, June) ‘[Climate Change in Women, Peace and Security National Action Plans](#)’, SIPRI Insights on Peace and Security, No. 2020/7.

⁵² UN Women (2022, February 9th) ‘[Arab States agree on common position ahead of global meeting on gender equality and climate change](#)’.

The Maghreb

Hydrological and meteorological droughts have been witnessed in Maghreb countries, and projections suggest that the region could see annual drops in precipitation by 4-27 percent, which could lead to increased competition and tensions.⁵³ In Tunisia, dam water reserves have decreased, depleting rural drinking water sources, and increasing salinity in water retentions. In 2015-2016, this led to a lower grain and forage output, reducing cereal production by 43 percent. Previous droughts, such as in 1999-2001, deepened poverty, caused major agricultural trade imbalances, and increased urban migration.⁵⁴ In Algeria, along with heightened volatility in weather patterns and extremes, a drop in the rainy season is predicted in conjunction with temperature rises of roughly 1-1.5°C, which could have fatal consequences for 30 percent of animal species. Higher temperatures at day and night also significantly impact land and sea flora, further hurting biodiversity and environmental health.⁵⁵

With concern in these trends on the rise, fuelled by the criticality of water-intensive industries to the economies of the Maghreb and the livelihoods of its inhabitants, protests and social unrest about low water quality and scarcity have already erupted in every Maghreb country in recent years. Two themes emerge from these water protests. First, they highlight the divide between coastal communities, who have readier access to clean water, and those people inland who face water availability and quality shortages. For example, in Tunisia, around 53 percent of land is considered vulnerable to 'very high degree of desertification'.⁵⁶ Second, the protests show the widening gap within and between communities and between ordinary citizens and elites, the latter who have been accused by protestors of combining political and economic activity to the detriment of others.⁵⁷

Unrest from climate change and subsequent environmental impacts such as water shortages, rising temperatures, erosion, and extreme weather events put additional strain on already fragile natural resources, governments, and social contracts, and are pushing some to resort to illicit activities, with transboundary ramifications that are themselves difficult to contain without capacities of enforcement and legal frameworks (see Box 2). Algeria has previously experienced flash floods and mudslides⁵⁹, and in 2021 suffered the most devastating forest fires in years, which could increase in frequency and severity if weather becomes more volatile, the effects of which may be compounded by the government's difficulty to satisfy the needs of its people.⁶⁰ In Morocco, around 23,000 people were displaced between 2008 and 2014 because of disasters, with flooding in 2014 killing 32 people and forcing the evacuation of thousands in the provinces of Agadir-Ida-Ou Tanane and Guelmim.⁶¹

Box 2

Transboundary effects of climate change from a small Tunisian town

In Kelibia, a port town on Tunisia's north-eastern coast, its 50,000 inhabitants depend on fisheries. However, as globally, environmental changes and overfishing are depleting fish stocks. The depletion of marine health and fish stocks are by nature transboundary issues, that demand partnership and collaboration. In Kelibia and similar places, this takes on an added layer of complexity, due to the proximity of Mediterranean islands in the neighbouring European Union. Lampedusa, Sicily, Malta, and others have become the focus of migration routes, and people smuggling networks, some of which stretch deep into the Sahel. As a result of the plummeting fishing industry, local fishermen are having to resort to second jobs or, some of them, to illegal activities such as smuggling to survive, including the smuggling of migrants.⁵⁸

⁵³ Oualkacha, L., Stour, L., Agoumi, A., & Kettab, A. (2017). Climate change impacts in the Maghreb region: status and prospects of the water resources: Springer.

⁵⁴ Bazza, M., Kay, M., & Knutson, C. (2018). Drought characteristics and management in North Africa and the Near East. *FAO Water Reports* (45).

⁵⁵ Caritas International. (2011). Climate change in Algeria.

⁵⁶ Verner, D., Treguer, D., Redwood, J., Christensen, J., McDonnell, R., Elbert, C., & Konishi, Y. (2018). CLIMATE VARIABILITY, DROUGHT, AND DROUGHT MANAGEMENT IN TUNISIA'S AGRICULTURAL SECTOR.

⁵⁷ Malka, H. (2018). Water, Protest, and State Legitimacy in the Maghreb.

⁵⁸ Bathke, B. (2019). 'Burning up our future': how the climate crisis is triggering increasing displacement. *InfoMigrants*.

⁵⁹ In 2001, Algeria suffered flash floods and mudslides, killing hundreds and displacing thousands internally (Werz & Conley, 2012).

⁶⁰ UNOHCHR (2021, March 5th) ['Press briefing notes on Algeria'](#).

⁶¹ IOM. (2016). Assessing the evidence: Migration, Environment and Climate Change in Morocco.

The Levant

Levantine countries face multiple risks related to natural resources, and have already experienced a series of droughts along with changes in precipitation patterns which have affected river flows and the recharge of groundwater.⁶² This has led to many countries pumping more groundwater, lowering the water table and increasing the risk of saltwater intrusion.⁶³ This is critical as agriculture constitutes an important sector in countries like Lebanon, Syria, and Iraq, which in turn supply countries like Jordan and the Gulf countries with produce. For instance, in Lebanon at least 20 percent of the population has some activity in agriculture on a full or part time basis⁶⁴, and in Syria, agriculture is the second largest contributor to the economy (estimates range between 26 and 36 percent of GDP)⁶⁵.

Increasing water shortages and the more frequent occurrence of droughts can lead to domestic unrest and insecurity over land fertility and agricultural production, as well as increased reliance on food imports, a security issue in itself and also politically contentious, especially in light of the war in Ukraine and the subsequent uncertainty over supply and prices of staples such as wheat. It can also cause tensions between the neighbouring Levant countries, who, through geography, share water sources and valuable fertile lands. There is already historical precedent for resource-fuelled conflicts in the Levant during the 1950s and 1960s⁶⁶, and with water sources expected to shrink by 80 percent by the end of the century, there could be huge potential for damaging competition and spill over into inter-state conflict without determined efforts at collaboration.⁶⁷ In late 2021, there were signs of such efforts, and optimism for its success. Jordan and Israel signed a landmark energy and water agreement, essentially involving the exchange of solar generated electricity in the Jordanian desert for desalinated water from the Mediterranean Sea.⁶⁸ While the arrangement appears to make sense from a climate change adaptation perspective, especially contributing to Jordan's severely stressed water supply, the deal has been unpopular with the large portion of the country's population with Palestinian heritage due to the technical apolitical presentation of the deal that arguably fails to address the injustices experienced by, and deep-rooted grievances of, the Palestinian and diaspora population. The episode is a prime example of the importance of acknowledging, addressing, and managing the political and social contexts surrounding measures taken to respond to environmental and climate issues.

To the northeast, the rivers Euphrates and Tigris are shared between Turkey, Syria, and Iraq; a fraught relationship that has ebbed and flowed since the 1960s. Large-scale unilateral and uncoordinated development projects have impacted the flow of the rivers, to the detriment of the relations between the three countries, occasionally pushing them to the verge of war, as efforts to meet increasing water demand evolved into hydropower generation in the case of Turkey, thus reducing its reliance on its neighbours' crucial oil exports.⁶⁹

Climate-induced environmental change and conflict are likely to continue to adversely affect agricultural livelihoods across the region, and bring about ever more migratory challenges. Before the war in Syria, up to 300,000 people moved to urban centres between 2006 and 2011, corresponding to a prolonged period of drought.⁷⁰ Since 2011, due to the civil war, enormous numbers of Syrians have fled their country, including more than 650,000 that have arrived in Jordan. This has put additional strain on the country's severely limited water supply, weak water infrastructure, and large subsidies on water prices. Jordan's hosting of this new population has sparked localised tensions on water consumption and "cost[s] the water sector over \$600m per year while Jordan received a fraction of this amount from the international

⁶² Bar, I., & Stang, G. (2016). Water and insecurity in the Levant.

⁶³ Brown, O., & Crawford, A. (2009). Rising Temperatures, Rising Tensions.

⁶⁴ FAO. (2021a). Lebanon at a glance.

⁶⁵ FAO. (2017). Counting the cost - Agriculture in Syria after six years of crisis; [World Bank](#) 'Agriculture, forestry, and fishing, value added (% of GDP) – Syrian Arab Republic'

⁶⁶ In 1951, after Jordan started its water development plans on the Yarmouk River to irrigate the Jordan Valley, tensions rose between the riparian countries which necessitated the intervention of the US. The problem was partially resolved by an unratified agreement, the Johnston Plan, between all four countries. In another conflict over shared water resources during 1957-1967, while Syria was developing projects to divert the Jordan River, Israel initiated projects to divert the water of Lake Tiberias. The latter led to several attacks between the two countries and ended up being one of the main reasons for the 1967 war (Climate-Diplomacy, 2015a; FAO, 2009).

⁶⁷ Luomi, M. (2019). Environmental Security: Addressing Water and Climate Change Risks in the UAE.

⁶⁸ Riedel, B & Sachs, N (2021, November 23rd) '[Israel, Jordan, and the UAE's energy deal is good news](#)', *Brookings*.

⁶⁹ Climate-Diplomacy. (2015b). Turkey, Syria and Iraq: Conflict over the Euphrates-Tigris.

⁷⁰ UNDP, & GEF. (2018). Climate change adaptation in the Arab States.

community”, according to the secretary-general of Jordan's Water Authority, Bashar Batayneh.⁷¹ On top of this, aforementioned weak infrastructure has struggled to cope with the influx of newcomers, leading to a large amount of human waste that risks polluting groundwater sources.⁷² Iraq has similarly fought water crises, including after the war in 2003, aggravated by extreme weather conditions. In 2007 severe drought forced 20,000 people to leave their rural homes in search of clean drinking water⁷³, and in early 2019, 5,347 families were displaced by water shortages in southern Iraq.⁷⁴ In 2021 a call to action by 13 aid groups working in the region suggested up to 12 million people in Iraq and Syria are at risk of water scarcity and drought.⁷⁵

The Nile

The Nile River constitutes the main source of water for Sudan and Egypt⁷⁶, in addition to other minor sources such as wells and wadis⁷⁷. This makes both countries highly vulnerable to changes to the river’s flow, both climatic – through precipitation changes – and human driven, and indeed their per capita water resources are already below the minimum threshold.⁷⁸ Such dependence is a recipe for insecurity and subsequent disputes over scarcity domestically and beyond. The potential for igniting conflicts is multiplied when the causes of reduced water supply derive from the growing populations and economies of countries in the Nile Basin, and even more so the building of infrastructure such as irrigation systems and dams along the river’s path⁷⁹; actions which countries downstream can view as a direct threat to their security. A water sharing agreement was signed in 1959 between Egypt and Sudan that reinforced an earlier provision from 1929 and increased water allocations to both countries. However, pressures on the water supply are increasing and other riparian countries are excluded from the agreement, resulting in the higher possibility for unilateral actions and escalation. Some countries have questioned the legitimacy of the existing provisions, arguing that because they were not party to them – in most instances due to a lack of sovereign independence during that period – they are not bound by them.⁸⁰ In 2011, Ethiopia announced the construction of a 6,000 MW hydroelectric dam on the Blue Nile – the Grand Ethiopian Renaissance Dam – causing transboundary geopolitical tensions with downstream neighbours Sudan and Egypt over the perceived threat to their security. In 2020 for example, tensions escalated due to the alleged filling of the dam prior to the reaching of any agreement between the countries, despite a tentatively developed agreement between Ethiopia and Egypt in 2015, when construction was already 40 percent complete.⁸¹

Water shortages exacerbated by drought and human activity would lead to hotly disputed claims to the river, and could cause damage to the livelihoods of the millions of people dependent on its lifegiving waters. This could, in turn prompt large-scale displacement domestically, and considering the existing inter-state tensions, contentious cross-border migration. In the Darfur region of Sudan, drought in the north has previously forced farmers to migrate south in the ethnically riven region, where they clashed with other farmers and triggered disputes over land and water.⁸² Increases in global sea levels as a result of global heating are also expected to cause damage to, and ultimately displacement from, low-lying coastal zones of the Nile and whole region.⁸³ Rising sea levels and storm surges from more volatile weather could lead to seawater intrusion in coastal aquifers and speed up coastal erosion, impacting infrastructure for industry and tourism. Egypt is thought to be particularly vulnerable to sea level rise. A 0.5 metre rise in sea level in Alexandria could cause 1.5 million

⁷¹ Pleitgen, F et al. (2021, August 22nd) [‘The Middle East is running out of water, and parts of it are becoming uninhabitable’](#), *CNN*.

⁷² MMP. (2017). Migration, displacement, and the environment.

⁷³ Fatli, T. (2018). Water Scarcity and Environmental Displacement in Southern Iraq: Perceptions and Realities.

⁷⁴ IOM. (2019). Assessing water shortage-induced displacement in Missan, Muthanna, Thi-Qar and Basra.

⁷⁵ Reliefweb (2021, August 23rd) [‘Water crisis and drought threaten more than 12 million in Syria and Iraq’](#).

⁷⁶ MoE-Egypt. (2017). State of the Environment 2017 Arab Republic of Egypt - Summary for Policymakers; UNEP. (2019). Environmental challenges in the MENA region.

⁷⁷ Deng, B. K. (2007). Cooperation between Egypt and Sudan over the Nile River Waters: The Challenges of Duality. *African Sociological Review*, 11, 38–62.

⁷⁸ MoE-Egypt. (2017). State of the Environment 2017 Arab Republic of Egypt - Summary for Policymakers.

⁷⁹ Nunzio, J. D. (2013). Conflict on the Nile: The future of transboundary water disputes over the world’s longest river.

⁸⁰ Kimenyi, M & Mukum Mbaku, J (2015, April 28th) [‘The limits of the new “Nile Agreement”’](#), *Brookings*.

⁸¹ [Climate-Diplomacy. \(2020\). Disputes over the Grand Ethiopian Renaissance Dam \(GERD\)](#).

⁸² Raouf, M. (2009). Water Issues in the Gulf: Time for Action.

⁸³ Across the region, 43 port cities in the Arab region could be affected by rising sea levels, with Egypt (and Tunisia) considered highly vulnerable (UNDP & GEF, 2018).

people to flee their homes, while looking more broadly, a 1 metre rise would directly affect 41,500 km² of land and at least 37 million people throughout the Arab States region.⁸⁴

The Arabian Peninsula

While the countries across the Arabian Peninsula are known to be poor in water and arable land⁸⁵, their wealth in oil and gas and the relative economic solidity it provides, coupled with long-term political stability, means they often have the resources to meet their water and food needs. For instance, most Gulf countries have been able to close their water deficits through alternative sources, such as desalination plants, with around 50 percent of worldwide capacity to desalinate water around the Arabian Gulf. However, this comes at a high economic and environmental cost, with the discharged brine almost twice as salty as the Gulf's water⁸⁶, meaning that in future the expense of the desalination process will increase to unviable levels as the water drawn into plants is much saltier, as well as the deleterious effects higher concentrations of salt have on marine life.⁸⁷ Countries such as the UAE and Saudi Arabia are also among the most food secure in the Arab States region⁸⁸, despite importing around 85 percent of their food⁸⁹ and relying on arrangements to lease agricultural land from neighbouring states. The arrangements give these states a vested interest in stability in the region, yet the prioritisation of leasing agricultural land with privileges to companies and foreign investors over the local population could entrench existing inequitable systems, and have implications for vertical trust and cohesion, stability, and drive migration in the leasing countries.⁹⁰ The outbreak of war in Ukraine in February 2022 threatens to disrupt food security from the perspective of imports; UAE for example imports over 50 percent of its wheat from Ukraine and Russia. Qatar, which was historically dependent on imports from Saudi Arabia for 90 percent of its food, has developed a plan to achieve food security following a diplomatic standoff with its neighbours from 2017 to 2021, with a goal to produce 70 percent of its food requirements by 2024⁹¹, yet in 2020 was around 98 percent reliant on Ukraine and Russia for its wheat.⁹²

Air pollution is one environmental challenge that the Peninsula's states continue to grapple with. The reported mean PM₁₀ concentration in Saudi Arabia in 2016, for example, was 251 mg/m³, exceeding the WHO guidelines. A combination of more volatile weather patterns raising the frequency of dust storms, and growing populations and urbanisation, that consequently increases pollution levels, could adversely impact the health and livelihoods of people, interrupting mobility and supply chains and inducing respiratory diseases.⁹³

As a consequence, and despite the risks of water scarcity, temperature rises to unliveable levels, and air quality issues, climate and environmentally induced displacements have not been reported in the majority of countries in the Arabian Peninsula.

The unfortunate exception to all the above is war-ravaged Yemen. In the past, water conflicts were reported between local communities and tribes⁹⁴ and studies indicate that freshwater availability was only 14 percent of the per capita average in the region. Even before the crisis, "several major towns were essentially running out of water".⁹⁵ The country lacked resources and appropriate policies to control water consumption; for example, 37 percent of the water that irrigated crops was used for the growing of the narcotic qat, itself responsible for a number of social problems. Additionally, illegal drilling of deep wells is leading to the depletion of underground water faster than ever. In recent decades, Yemen experienced considerable rural immigration into urban areas.⁹⁶ Since the outbreak of war in 2014, "widespread humanitarian

⁸⁴ UNDP, & GEF. (2018). Climate change adaptation in the Arab States.

⁸⁵ Raouf, M. (2009). Water Issues in the Gulf: Time for Action.

⁸⁶ Ibrahim, H & Eitahir, E (2019) "Impact of Brine Discharge from Seawater Desalination Plants on Persian/Arabian Gulf Salinity", *Journal of Environmental Engineering*, 145:12.

⁸⁷ Leahy, S & Purvis, K (2016, September 29th) "Peak salt: is the desalination dream over for the Gulf states?", *The Guardian*.

⁸⁸ Economist Impact (2021) "Global Food Security Index" (GFSI).

⁸⁹ According to figures cited by PwC based on the GFSI, the GCC countries import about 85 percent of their food. Ghazaly, S et al (2020, August 8th) "How GCC countries can ensure their food security", *Gulf Business*.

⁹⁰ UNDP (pending) 'Reaching a Critical Will for Conflict Prevention in the Arab States'.

⁹¹ Seagle, A. (2019). Environmental (In)Security in the Middle East.

⁹² Calculation of figures using [UN Comtrade Database](#), accessed 4th April 2022.

⁹³ UNEP. (2019). Environmental challenges in the MENA region.

⁹⁴ Douglas, C. (2016). A Storm Without Rain: Yemen, Water, Climate Change, and Conflict.

⁹⁵ [World Bank Yemen Dynamic Needs Assessment 2020](#).

⁹⁶ WB DNA p119.

and development crises have resulted in significant damage to the economy, physical infrastructure, service provision, health and education systems, as well [the] social fabric”.⁹⁷ Hundreds of thousands of people have been killed, with more deaths from starvation and disease than combat, and development set back over two decades.⁹⁸ Water security has worsened, with 40 percent of WASH assets damaged, and the prevalence of ‘severe food insecurity’ at 53 percent of the population.⁹⁹ As of 2017, there were almost 280,000 people internally displaced¹⁰⁰, 130,000 migrants residing in Yemen had returned home, and over 60,000 Yemenis fled to neighbouring countries.¹⁰¹ Over 50,000 people travelled in the opposite direction, from the Horn of Africa to Yemen, most on their way to the other Gulf countries.¹⁰² More recent estimates from 2021 put the figure of internally displaced in Yemen at 4.3 million.¹⁰³ Relocating is complicated, however, with the political situation and geographic barriers restricting opportunities.¹⁰⁴ The human and environmental toll of the conflict is vast, and has set back development progress at least two decades.¹⁰⁵

The Horn of Africa

The countries in the Horn of Africa are among the most vulnerable to climate change impacts and face acute natural resource challenges, in particular water and adequate arable land for food production, of significance due to the importance of agriculture to their economies. Historically, the region has faced water scarcity leading to tensions between neighbouring countries.¹⁰⁶ During the height of Somalia’s civil war and instability, Ethiopia planned major construction projects in the Juba-Shabelle Basin, which are expected to reduce the river flow by 80 percent, pushing Somali farmers to rely on rain-fed farming at a time when climate change is altering rainfall patterns.¹⁰⁷

Climate instability in the region has already proved an added layer to security flashpoints and driver of poverty and displacement. In 2004-2006, a three-year drought ignited violent clashes over water wells and pastoral land, killing at least 250 people and injuring many more.¹⁰⁸ Another prolonged drought from 2006-2011 displaced four million people¹⁰⁹, and floods in October 2019 displaced another 250,000 people¹¹⁰. At the time of writing, three consecutively failed rainy seasons in the region have caused a severe drought, that have destroyed crops and livestock, and threaten 18.4 million people with hunger across Somalia, as well as Ethiopia and Kenya.¹¹¹ In Djibouti, climate instability with a resurgence of natural hazards has increased human mobility across the borders and intensified pressures on natural resources for local communities and their livestock, generating mounting tensions between communities. Climate-related impacts have also made the work of the UN Assistance Mission (UNSAM) and the African Union peacekeeping mission (AMISOM)¹¹² harder by increasing tensions and conflicts between pastoralists and farmers.¹¹³ This in turn has exacerbated the wider security situation in the country, as these affected areas, IDP camps, and temporary settlements became fruitful recruitment grounds for the Al-Shabaab militant group, who enticed unemployed men and young children to engage in armed conflicts.¹¹⁴ Additionally, as with anywhere hosting large influxes of displaced people, there has been a significant strain placed on already weak and sparse infrastructure, including on water supplies, sewage collection and treatment, and energy provision, leading to further accelerated environmental damage to land and groundwater.

⁹⁷ Hanna T, Bohl D.K. & Moyer J.D (2021), [‘Assessing the Impact of War in Yemen: Pathways for Recovery’](#), UNDP.

⁹⁸ Ibid.

⁹⁹ [Food Security Phased Classification \(IPC\) analysis \(2019\) FAO](#).

¹⁰⁰ UNHCR (2017, May 19th), [‘As Yemen conditions deteriorate, Somali refugees look to return home’](#).

¹⁰¹ UNDP, [‘Assessing the Impact of War on Development in Yemen’](#) (2019) p21-22.

¹⁰² IOM, [Mixed Migration in the Horn of Africa and the Arab Peninsula \(January - June 2018\)](#).

¹⁰³ [‘This is the sum of IDPs who remained displaced as of late 2020 and the number of IDPs who were displaced for the first time in 2021. Internal Displacement Monitoring Centre, ‘Figures Analysis 2021 - Yemen’](#).

¹⁰⁴ UNDP, [‘Assessing the Impact of the War in Yemen on Achieving the SDGs’](#) (2019) p14.

¹⁰⁵ Ibid.

¹⁰⁶ Arcanjo, M. (2020). Water Security in the Horn of Africa: Climate Change in Somalia, Ethiopia, Eritrea and Djibouti.

¹⁰⁷ Krampe, F., Goor, L. V. D., Barnhoorn, A., Smith, E., & Smith, D. (2020). Water security and governance in the Horn of Africa.

¹⁰⁸ Raouf, M. (2009). Water Issues in the Gulf: Time for Action.

¹⁰⁹ Lott, F. C., Christidis, N., & Stott, P. A. (2013). Can the 2011 East African drought be attributed to human-induced climate change? *Geophysical Research Letters*, 40(6), 1177-1181.

¹¹⁰ Krampe, F., Goor, L. V. D., Barnhoorn, A., Smith, E., & Smith, D. (2020). Water security and governance in the Horn of Africa.

¹¹¹ OCHA (2022, June), [‘Horn of Africa Drought: Humanitarian Update’](#).

¹¹² In April 2022 AMISOM was succeeded by the African Union Transition Mission in Somalia (ATMIS).

¹¹³ Krampe, F., Goor, L. V. D., Barnhoorn, A., Smith, E., & Smith, D. (2020). Water security and governance in the Horn of Africa.

¹¹⁴ Eklow, K., & Krampe, F. (2019). Climate-related security risks and peacebuilding in Somalia.



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Managing Risks and Building Resilience

The UN's environmental security action in the Arab region

In the face of increasing economic, social, governance, environmental, and health challenges, a multitude of international, as well as regional and national non-governmental organisations (NGOs) in the Arab States region have stepped up their efforts to address climate and environmental risks and build resilience.¹¹⁵ As discussed, environmental degradation and dwindling natural resources can be one of many contributing factors to cause conflict in fragile contexts acting as a threat or risk multiplier. Consequently, factoring in the environmental protection lens into conflict prevention and peacebuilding efforts can help prevent or mitigate conflict, reframing issues such as resource competition as an opportunity for dialogue and future collaboration towards recovery and strengthened community ties.

Against this background, while there is a lot of intersection, the projects implemented by UN agencies, including UNDP at the forefront of governance and peacebuilding engagements, can be roughly classified into three main categories: (1) conflict prevention and mitigation; (2) conflict response and management; and (3) recovery and peacebuilding. While doing so highlights the breadth of interventions, it also shows the importance of accelerating integrated approaches to climate action and security risks.

Regarding the first, efforts by UN agencies to prevent and mitigate conflict from an environmental perspective have predominantly focused on improving food and water security, and included broader dialogue and livelihoods components as key tools in line with the SDGs. This was often done by mapping and monitoring natural resources and optimising agricultural productivity. The underlying rationale is the following: increasing environmental degradation affects food and water security, which may further be linked to civil unrest and conflict¹¹⁶, therefore, working on managing and sustaining natural resources makes sense in helping to prevent and mitigate conflicts. This means improving people's opportunities to build sustainable livelihoods, and assessing the weaknesses of local authorities and grievances of locals over issues such as governance, food insecurity, and land. It also means addressing these challenges through instituting legal frameworks, building the capacity of authorities to implement those frameworks and deliver basic services, offering inclusive spaces to participate in inter- and intra-community dialogues, and offering people access information and justice, that can all contribute to a more effective and efficient preventative response.

Second, in the strand of conflict response and management, UN projects support conflict-affected areas by helping them develop restoration strategies for conflict-affected ecosystems, or apply conflict management strategies and enhance mediation efforts, to name but a few. Projects grouped under this category largely concentrate on supporting areas immediately after conflict, which includes addressing environmental damage and social problems, but there is significant overlap with the recovery and rehabilitation phase. As discussed earlier, conflict can exacerbate environmental conditions, while the latter can be a potential driver of instability (e.g. increasing internal displacement), making it all the more important to also focus on environmental issues in conflict-affected regions.

Third, in terms of recovery from conflict and peacebuilding, UN approaches predominantly aim to rehabilitate infrastructure and the social fabric, build stakeholders' capacity, and support endogenous conflict resolution efforts. Stabilisation and resilience projects in this category target regions previously affected by conflict and address environmental, social, infrastructural, and capacity issues. It is important that these initiatives maximise the opportunity to employ environmental solutions for peace within these activities, mainstreaming environmental peacebuilding and green recovery, so that it become parts of these efforts as a core route to creating a more positive and sustainable peace.

¹¹⁵ Abdelaziz, M. (2017). The hard reality of civil society in the Arab World.

¹¹⁶ UNEP (2012). Toolkit and Guidance for Preventing and Managing Land and Natural Resources Conflict - Renewable Resources and Conflict.



Source: UNDP

Table 1 Non-exhaustive collection of examples of UN-led environmental security projects in the Arab region

(1) Prevention	(2) Response	(3) Recovery
<p><u>SDG-Climate Facility</u></p> <p>UN agency: UNDP, WFP, UNDRR, UNEP-FI, UN-Habitat Year: 2019-2023 Main activities: advancing climate action in a way that brings co-benefits across priority SDGs on poverty and peace, including local resilience grants in fragile countries to align climate action with crisis policies and plans Link</p>	<p><u>Energy for Crisis Response and Recovery in Lebanon CEDRO Programme</u></p> <p>UN agency: UNDP Year: 2016-2026 Main activities: decentralised sustainable energy solutions to expand energy access for basic needs of crisis affected communities, stabilisation and restoration of MSMEs, expanded access to power by schools and clinics</p>	<p><u>Fostering capacities in the Arab States for Sustaining Peace and Preventing Conflict</u></p> <p>UN agency: UNDP Year: 2019-2022 Main activities: building and maintenance of peace and stability to achieve prosperity in Arab countries and accelerate the achievement of the SDGs in conflict or post-conflict settings Link</p>
<p><u>Climate Adaptation in the Nile Delta of Egypt</u></p> <p>UN agency: UNDP Year: 2018-2025 Main activities: expanding early warning systems and coastal infrastructure to reduce the risk of impacts from climate change and sea level rise for future climate displacement in coastal rural communities</p>	<p><u>Stabilisation Facility for Libya (SFL)</u></p> <p>UN agency: UNDP Year: 2016-2022 Main activities: aiming to achieve light infrastructure rehabilitation, capacity surge, local peace structures and conflict management capacity (conflict analysis, monitoring, local mediation) Link</p>	<p><u>Solar solutions for IDPs in Yemen ERRY Programme</u></p> <p>UN agency: UNDP Year: 2018-2025 Main activities: decentralised solar solutions to expand energy access for basic needs, irrigation, MSMEs, schools and clinics</p>
<p><u>Water for Peace in Yemen</u></p> <p>UN agency: FAO & IOM Year: 2018-2020 Main activities: addressing the gender-climate-security triple nexus by strengthening women's involvement in conflict resolution mechanisms at community level, increase self-reliance/livelihood opportunities, and in turn social cohesion Link</p>	<p><u>Sustainable Flood Management and Risk Reduction Action</u></p> <p>UN agency: FAO Year: 2021-2022 Main activities: improving the response to flooding in Somalia (e.g. to combat displacement) Link</p>	<p><u>Supporting Enhanced Waste Management in Jordan</u></p> <p>UN agency: UNDP Year: 2018-2023 Main activities: supporting improvement of landfills and waste reduction and recycling initiatives in Jordan including in Syria refugee host communities with co-benefits for local livelihoods and social cohesion</p>

<p><u>Climate security initiatives for food and water security in Jordan, Somalia, Sudan and Syria</u></p> <p>UN agency: UNDP Year: 2021-2028 Main activities: series of large scale initiatives supported by GCF and LDCF to advance climate resilience in agriculture sector and water systems to address converging drivers of climate and social vulnerability</p>	<p><u>Iraq Crisis Response and Resilience</u></p> <p>UN agency: UNDP Year: 2014-2016 Main activities: supporting in disaster and conflict response and assisting in building resilience activities (e.g. by integrated recovery support, IDP support) Link</p>	<p><u>Peacebuilding and Durable Solutions in Sudan – CERF</u></p> <p>UN agency: UNDP Year: 2020-2021 Main activities: using early recovery and nexus intervention to build peace and durable solutions Link</p>
<p><u>Sustainable Land Management in the Qaraoun Catchment, Lebanon</u></p> <p>UN agency: UNDP Year: 2015-2021 Main activities: enhanced management of arable land and rangelands and protection of forest areas, for resilience of Syrian refugees' host communities Link</p>	<p><u>Funding Facility for Stabilisation in Iraq</u></p> <p>UN agency: UNDP Year: 2015-2023 Main activities: aiming to respond promptly to the needs of regions controlled by ISIS and to enable the return of IDP Link</p>	<p><u>Darfur Community Peace and Stability Fund</u></p> <p>UN agency: UNDP Year: 2007- Main activities: promoting peacebuilding and reconciliation in Darfur through the implementation of community-based recovery and development activities, including key initiatives on solar solutions for livelihoods recovery of returnees of conflict Link</p>
<p><u>Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR)</u></p> <p>UN agency: ESCWA Year: 2009-2023 Main activities: aims to provide a common knowledge base to project the impact of climate change and water vulnerability Link</p>	<p><u>Solar Solutions in Palestine</u></p> <p>UN agency: UNDP Year: 2021-2025 Main activities: scaling up solar solutions for expanding energy access for critical public services like schools and clinics in Palestine, including policy innovation to de-risk scaled up investments by the private sector</p>	<p><u>Agricultural policy options for a sustainable control of Qat production in Yemen</u></p> <p>UN agency: FAO Main activities: gradual elimination of Qat production and its replacement with appropriate cash/food production. Link</p>
<p><u>Advancing water and food security in the context of climate change</u></p> <p>UN agency: ESCWA Year: 2018- Main activities: improving public policy coherence at multiple governance levels, building a localised knowledge base to strengthen resource management, and increasing public engagement Link</p>		



Takeaways and Approaches to Enhancing Environmental Security

The evidence is becoming incontrovertible that climate-induced environmental change and degradation are no longer future threats to be guarded against but are instead already upon us. These changes are already checking development progress, undermining rights, eroding social cohesion, and precipitating the conditions for further inequality, and even unrest and conflict.

A variety of takeaways and approaches should thus be considered by governments and their development partners seeking to contribute to the strength, efficiency, and effectiveness of the response by the countries of the Arab States region:

Policy

- At the UN and country levels, use the Common Country Analysis (CCA) horizon scanning function to employ and review relevant indicators and metrics to forecast the nature and severity of environmental changes in the near future. It is essential to employ a multidisciplinary approach to understand the links between climate change, the environment, conflict, and displacement to help identify trends and effects, as well as to help prepare for challenges such as future migration scenarios, as well as to inform NDCs, National Action Plans (NAPs), and Gender and Climate Change Action Plans.
- Promote systems thinking for the transformational change called for in the 2030 Agenda. Capturing the links between risks, such as those highlighted in the UN CCA, allows for a more holistic analysis, and makes it possible to understand better the relationship between climate and environmental impacts and conflict, and the interplay between risks. This requires integrated responses and an interdisciplinary approach.¹¹⁷
 - Incorporating strategic foresight to uncover the emerging drivers of change related to environmental degradation, and modelling what the resultant effects could be.
- Incorporate issues related to climate, environment, and management of natural resources into meaningful participatory efforts towards renewing social contracts and where relevant, achieving sustainable peace. This includes advocating for sustainable land-use planning, leveraging nature-based solutions, and eco-system-based approaches.
- Ensure the strong integration of climate- and environment-related security risk planning into the women, peace, and security agenda.¹¹⁸
 - This includes a greater focus on encouraging women and girls' meaningful participation in vertical and horizontal dialogues, and ensuring the gender sensitivity of legal frameworks and implementing institutions.
- Strengthen data disaggregation and include it in UNSDCF annual reports to raise understanding with stakeholders. In particular:
 - A focus on women and gender differentiated impacts of environmental change and degradation, to better address vulnerabilities and equip policymakers with fresh evidence on inclusive policies.
 - A focus on geographic differentiation to capture local and subregional dependence on agriculture and water supply vulnerability, including in transboundary areas and population density, using a multiplicative modelling strategy.¹¹⁹
 - A focus on investigating and predicting droughts, and iterative droughts, vulnerability to drought, and capacity to overcome them broken down by geographic area, and other related factors.¹²⁰

¹¹⁷ Segneri, G (2020) 'Climate-related security risks and sustaining peace: An analytical lens – Strategic advantages for the Common Country Analysis', *UNDP-FBA PDA Fellowship Issue Brief*, Issue no.16/2020.

¹¹⁸ UNEP, UN Women, UNDP, UN DPPA/PBSO (2020) 'Gender, Climate & Security: Sustaining inclusive peace on the frontlines of climate change'.

¹¹⁹ ESCWA (2021), 'Understanding the potential linkages between climate change and conflict in the Arab region'.

¹²⁰ Ibid.

Programming

- Assess the relationship between climate change, environmental degradation, conflict, and migration across analysis and programming, at the HDP nexus at the local (including through area-based programming), national, and regional levels – with a crucial focus on the transboundary and subregional – to orient tools towards flexible planning and holistic solutions.
- Develop national and local capacities on the economy, governance, conflict prevention, peacebuilding, rule of law, and the environment. This includes policymakers and practitioners across the environmental security space, such as government, legislators, national security actors, oversight bodies, and civil society. These actors need the ability to identify risks, take decisions to prevent and mitigate conflicts, and protect fundamental rights, and highlight the necessity for a multidisciplinary, integrated response.
 - Support the development of resilience strategies linking together governmental departments and sectors, based on political economy, context, and gender analyses, as well as enhancing the adaptive capacity of local level authorities.
- Mainstream climate and environmental considerations, as well as solutions for peace, into conflict sensitivity, stabilisation, resilience, and longer-term development intervention areas.
 - Employ an integrated portfolio approach, using social cohesion and human security as a central theme to offer entry points for governance, peacebuilding, rule of law, justice, human rights, prevention of violence extremism, inclusive growth, gender, and others.
- Invest in early warning systems that capture and are responsive to both adaptive measures to help communities prepare for environmental degradation related effects, and tension and conflict monitoring at the local and regional levels.
- Greater outreach, systemic collaboration, and transparent reporting¹²¹ between all actors seeking to prevent, mitigate, or respond to environmental security issues and their economic, political, and social effects, including governments, humanitarian organisations, development partners, and civil society.
 - This includes acceptance of the same uncertainty faced by populations vulnerable to climate change and environmental degradation, such as higher chances of project failure (the need for ‘trial and error’), alternative result indicators, and potentially reduced effectiveness.¹²²
 - Enhance financing flexibility and instruments with partners operating across this nexus to respond to the uncertainty of challenges faced and effectiveness of solutions.

Further research

- Opportunities and entry points for:
 - The enhanced contribution of women, youth, minority groups, and persons with disabilities to conflict prevention and peacebuilding dialogue processes related to climate/environmental issues and natural resource use.
 - The potential for climate/environmental issues and resource scarcity to incentivise collaboration between conflicting communities or occupational groups.
 - The importance of incorporating the lens of justice and inequalities (particularly horizontally between groups) to address climate and environmental security issues and prevent violent conflict, including the distribution of natural resources, access to land, service provision, and employment.
- Development of the understanding of what works, lessons learnt, and good practices regarding environmental peacebuilding and security, with the aim of replicating and

¹²¹ Von Lossow, T et al (2021) '[Towards a better understanding of climate security practices](#)', *Clingendael*.

¹²² *Ibid.*

scaling up, encouraging South-South cooperation, and cross-learning among policymakers and practitioners.

- The mechanism underlying the suggested connection between excessively high temperatures during the agricultural growing season and conflict, and its potential effect in the near-term future on vulnerable subregions across the Arab States.¹²³
- Efficient water resource management¹²⁴, including a watershed management approach, pollution, consumer usage, and the effect of government subsidies, including their withdrawal, on water usage and social parameters.
- Food supply import patterns and overdependencies at the national and subregional level, to support the prediction of vulnerabilities to supply and price shocks, and knock on pressure on government and household budgets as a way of forecasting potential social unrest and supporting states to diversify their supply.

¹²³ ESCWA (2021), [‘Understanding the potential linkages between climate change and conflict in the Arab region’](#).

¹²⁴ Ibid.



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