



# Migration and climate change in the Arab region



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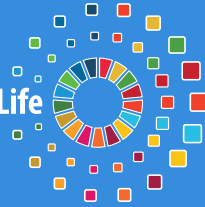


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# Key messages

- Environmental pressure, aggravated by the effects of climate events, such as drought, sea level rise, flash floods and desertification, often acts as a threat multiplier that exacerbates other drivers of migration.



- Migrant remittances facilitate access to land, resources and farm inputs, and act as an income gap filler when farm production fails due to climate change.



- Migration and labour mobility can become a meaningful climate resilience and adaptation strategy for both origin and host communities by allowing people to diversify their income, gain skills and invest in their home communities.



- The accelerated warming of the Arab region, compounded by political conflicts and reliance on fossil fuels, has driven rural-to-urban migration and conflict-induced displacement, placing enormous stress on urban infrastructure, services and housing markets.



- Pervasive gender inequalities cause disproportionate climate impacts on women relative to men.



- It is vital to raise awareness and advance research on the migration-climate change nexus, and to adopt a gender-sensitive, age-sensitive and disability-sensitive perspective in migration and climate policies.



- Children moving in the context of climate change may be exposed to a variety of risks, such as abuse, exploitation or trafficking, and may lose access to education and be forced into labour.



- Protecting migrant workers and food security, and ensuring the systematic mainstreaming of climate change issues in migration governance are necessary steps for moving forward.





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# Introduction

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The Issue Based Coalition on Migration (IBC/M) in the Arab region, co-convened by the United Nations Economic and Social Commission for Western Asia (ESCWA), the International Organization for Migration (IOM), the International Labour Organization (ILO) and the League of Arab States (LAS), together with members of the IBC/M and with support from the Regional United Nations Network on Migration in the Arab region, organized an online regional dialogue on the climate change and migration nexus in the Arab region on 24 and 25 October 2022.<sup>1</sup>

The present paper builds on the rich discussion that took place during the dialogue, and on the momentum around the interlinkages between climate change and human mobility acknowledged during the 27th Conference of the Parties (COP 27) to the United Nations Framework Convention on Climate Change (UNFCCC),<sup>2</sup> held in Sharm El Sheikh, Egypt from 7 to 18 November 2022 and ahead of COP 28, which was held in Dubai, United Arab Emirates from 30 November till 12 December 2023.



# 1. Climate-induced human mobility dynamics and trends in the Arab region

The Arab region witnesses complex patterns and trends of human mobility, affecting the lives of millions of people in the region. These include internal migration, namely rural-urban migration, as well as international migration, and displacement owing to conflict and disaster. In 2020, Arab countries hosted almost 15 per cent of migrants and refugees worldwide,<sup>3</sup> while 32.8 million people were displaced or migrated from different Arab countries, 44 per cent of whom remained within the region. In the same year, there were around 2 million newly internally displaced persons due to natural disasters, and around 1.7 million internally displaced persons due to conflict.<sup>4</sup> The movement of people from rural to urban areas has contributed to the proliferation of megacities in the region, with more than half of the Arab population now living in cities and informal settlements.<sup>5</sup>

Climate change threatens every country in the region to varying degrees. Among the natural disasters triggering displacement in the MENA region, flooding contributed to 58 per cent of the total share of persons displaced by disasters between 2010 and 2019.<sup>6</sup> While floods form a part of the climatic variability observed in the region, warming temperatures triggered by climate change contribute to heavier rainfall, increasing the potential for and severity of flooding.<sup>7</sup> Additionally, climate change has the potential to exacerbate the frequency and intensity of storms, such as cyclones and snowstorms, which have resulted in displacement in some countries in the region such as Lebanon, the Syrian Arab Republic and Yemen.<sup>8</sup> Drought is another extreme weather event that widely affects countries in the region.<sup>9</sup> There are also other slow-onset events that are aggravated by climate change. Gulf Cooperation Council (GCC) countries, for example, face challenges related to freshwater resources. Meanwhile, in Iraq, average temperatures are soaring at a rate that is considerably faster than the global average,<sup>10</sup> and food and water production systems in countries across the Mashreq subregion are being overstretched.

Environmental pressure aggravated by the effects of climate events, such as drought, sea level rise, flash

floods and desertification, often acts as a threat multiplier that exacerbates other drivers of migration. It can have implications on agricultural production and livelihoods of rural populations due to shifting and unpredictable rainfall patterns and temperatures. It can also threaten peace and stability in the region, protracting the existing displacement in fragile and conflict-affected countries. Urban expansion, land degradation and competition over increasingly scarce natural resources may also exacerbate conflicts and tensions, leading, in turn, to more displacement and forced migration.

The impacts of climate change adversely affect a wide range of human rights, including the right to life, self-determination, development, health, food, water and sanitation, adequate housing and a range of cultural rights.<sup>11</sup> The negative impact of climate change is disproportionately felt by persons and communities who are already in a disadvantageous situation. Given this challenging context, it is crucial to recognize that migration occurring in a safe, regular and orderly manner can be an effective adaptation strategy to climate change and can help avoid harmful implications for human rights. This highlights the need to support just transitions towards environmentally sustainable



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economies and societies for all, including those who decide to stay in their place of origin and those who decide to move.<sup>12</sup> States should take meaningful, adequate and sufficient steps

as well as various adaptation and mitigation measures to address the human rights impact of climate change, while taking into account the process of migration.

### Box 1. Disaster displacement: Iraq

Iraq is largely at risk of climate-induced human mobility owing to its high vulnerability to climate change and its weakened adaptive capacity as a result of conflict.<sup>a</sup> Iraq is categorized as a very high-risk country for humanitarian crises and disasters, with high exposure to natural and human hazards and a lack of institutional and infrastructure coping capacity.<sup>b</sup> Many climate-related factors induce human mobility in Iraq, including persistent drought and water scarcity, sand and dust storms, and water and soil salinity.<sup>c</sup>

The majority of climate migrants in Iraq move to urban centres within the country,<sup>d</sup> which are in many cases already struggling to provide basic services to residents and lack the resources needed to improve municipal services and infrastructure to meet the demand of newly displaced persons and internal migrants.<sup>e</sup> In response to the continuing strains that climate change places on agriculture, livestock herding and fishing and to its underlying impact on displacement, data collection instruments and systems on emergency displacement have been key to track disaster-induced displacement across the central and southern regions of Iraq since June 2018. Operating data collection systems responsible for tracking disaster displacement provide comprehensive data on the number and location of vulnerable families forced to displace due to climatic and environmental factors.<sup>f</sup>

<sup>a</sup> International Organization for Migration (IOM), 2022a.

<sup>b</sup> European Commission, DRMKC-INFORM, [Country risk profile: Iraq](#), 2023.

<sup>c</sup> Ibid.

<sup>d</sup> International Organization for Migration (IOM), 2022a.

<sup>e</sup> Social Inquiry and IOM Iraq, 2022.

<sup>f</sup> IOM Displacement Tracking Matrix emergency tracking operations on climate-induced displacement- Southern Iraq, June 2023. Available at [https://iraqdtm.iom.int/files/Climate/20237105016440\\_2023-07-10\\_ET\\_Clim\\_June\\_2023.pdf](https://iraqdtm.iom.int/files/Climate/20237105016440_2023-07-10_ET_Clim_June_2023.pdf).

### Box 2. Contribution of the diaspora to climate adaptation: Morocco

Agricultural production in Morocco is highly vulnerable to climate change, mainly because of extreme weather events, long periods of drought, and varying precipitation rates, which have significant consequences on the country's water resources for agricultural activities, as well as underlying socio-economic effects on the livelihoods of the rural population.<sup>a</sup> In the rural areas of Morocco, more than 40 per cent of the population depends on agriculture to make a living.<sup>b</sup> On the backdrop of climate change, 1.9 million people in Morocco are projected to internally migrate by 2050.<sup>c</sup>

Acknowledging the pivotal role of the Moroccan diaspora in terms of climate adaptation and the economic resilience of the country is key to establishing an agricultural sector that generates income, provides jobs and respects the environment.<sup>d</sup> In 2019, the role of the diaspora was strengthened in Morocco in efforts to promote sustainable rural development in home countries through economic development, transfer of remittances and knowledge, and skills development and mobilization.<sup>e</sup>

<sup>a</sup> Food and Agriculture Organization of the United Nations (FAO), 2022b.

<sup>b</sup> Ghanem, 2015. Agriculture and rural development for inclusive growth and food security in Morocco <https://www.brookings.edu/articles/agriculture-and-rural-development-for-inclusive-growth-and-food-security-in-morocco/>.

<sup>c</sup> World Bank, 2021.

<sup>d</sup> IOM, 2022b.

<sup>e</sup> IOM project on "Migration and Agroecology in Morocco and Senegal", 2021. Available at <https://www.youtube.com/watch?v=2M0fQDD2Fys>.

## 2. Priorities

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### A. Migration and labour mobility as an adaptation strategy to climate change

Climate change has a devastating impact on people, their communities, and their jobs and livelihoods. However, migration and labour mobility can become a meaningful climate resilience and adaptation strategy for both origin and host communities by allowing people to diversify their income, gain skills and invest in their home communities. Ensuring this positive outcome requires migration to be based on choice, and to be planned through a consultative, rights-based and equitable process that adheres to international standards, including the international labour standards that ensure decent work for migrant workers. It is crucial to support regular migration pathways in accordance with objective 5 of the Global Compact for Safe, Orderly and Regular Migration (GCM), and include migrants in initiatives to promote a just transition.

#### 1. Including migrant workers in efforts to support a just transition towards environmentally sustainable economies and societies for all

Since 2013, the topic of just transition has gained significantly in prominence and become part of international law under the Paris Agreement on climate change, emphasizing the need for a renewed commitment for action on environmental and climate change, fully taking into consideration the imperatives of a just transition, decent work and social justice.<sup>13</sup> A just transition involves promoting inclusive environmentally sustainable economies by creating decent work opportunities, reducing inequality and leaving no one behind. Next to technological change, demographic shifts, persisting high levels of informality, displacement and migration compound the complexity of a just transition.

A just transition needs to include all migrant workers, regardless of their status or type of employment, or of whether they could contribute towards building a low-carbon economy. It can ensure that migrant workers have access

to decent jobs and contribute to greening the economy by producing environmentally friendly products. In the short term, including labour mobility as part of regional mobility schemes, for example, could ensure migrants' ability to meet their essential needs and live in dignity while contributing to the economic productivity of destination countries. In the long term, policy outcomes should ensure migrant workers' rights, including to social protection, and contribute to sustainable development and climate resilience in the communities in which they live.<sup>14</sup>

#### Box 3. Resource for guidance: human mobility

Human mobility and labour migration related to climate change in a just transition towards environmentally sustainable economies and societies for all is a policy brief that provides recommendations to government, workers' and employers' organizations to protect people who live in climate-affected areas, facilitate planned movements, and protect and create new opportunities for those who are moving.

Source: ILO, 2022.

#### Developing skills to increase food security with private sector partners

The Paris Agreement legally binds Governments to limit global temperature rise to 1.5 degrees Celsius, which requires a "green transition" to a low carbon emissions economy. The scale, pace and global simultaneity of a green transition present both considerable opportunities and immense challenges, including skills bottlenecks. Few governmental plans for attaining net zero carbon emissions incorporate skills in sufficient depth, and even fewer have begun to consider the potential of, or need for, green-skilled labour mobility.

Among the priorities set by the European Union in its New Pact on Migration and Asylum,<sup>15</sup> the recruitment of talents from third countries – namely North African countries – in sustainable agriculture is a cogent matter, especially in

the light of the objectives set by the European Green Deal.<sup>16</sup> Migration flows of skilled workers from the region to the European Union are deemed to be pivotal for the achievement of such goals. Yet, those outflows may constitute a detrimental phenomenon of “brain drain”, jeopardising the endeavours of countries of origin to develop climate and water smart agriculture and be able to adapt to climate change and achieve climate resilience and ultimately, food security. Skills mobility partnerships could become a tool that allows the European Union to attract skilled talents in the agricultural sector, without hindering the ability of Arab countries to achieve their green transition. Private sector partners, such as horticulture companies, can play an instrumental role in these skills mobility partnerships, as investors, as partners in developing relevant competency-based training curricula in controlled environment agriculture, and as agritech and trade partners.

## 2. Protecting migrant workers in the face of rising temperatures

Increasing global temperatures have affected workers in many parts of the world, elevating the risk of occupational heat-related illnesses and injuries, and making heat stress more common in duration, frequency and intensity. In the Arab region and in many parts of the world, workers are exposed to hot and humid conditions and to intense solar radiation. This mix of factors can cause significant heat strain – a term used to describe the physiological effect on the body caused by environmental and occupational heat stress.

Against this background, it is crucial to assess the impact of heat stress on workers, and to tackle challenges and seize opportunities for the design and implementation of heat stress mitigation approaches. The implementation of an integrated protection framework to address occupational heat stress and its enforcement through labour inspectorates has proven impactful to protect workers, including migrant workers, in Qatar.



Outlier Artifacts/via adobe stock

### Box 4. Protecting migrant workers from occupational heat stress: Qatar

A decision of the Minister of Administrative Development, Labour and Social Affairs (ADLSA) in Qatar, which was announced in May 2021,<sup>a</sup> amended the legal framework in the country to better protect workers from heat stress. The new legislation was based on the findings and recommendations of the world’s largest study on heat stress.<sup>b</sup>

The revised legal framework extended the dates and times of the prohibition of any outdoor work in the country. The new dates extended from 1 June to 15 September (previously 15 June to 31 August), while the new hours were set between 10:00 am and 3:30 pm (previously: 11:30 am until 3:00 pm). The revised framework also introduced several other measures.

In the summer of 2022, a targeted inspection campaign, focusing on construction worksites, agriculture, delivery companies and the industrial sector, led to 463 worksites (almost all in construction) being shut down for non-compliance with the legislation.

In an effort to inform employers and workers of the new legislation and raise awareness on the dangers of heat stress and the protective legal provisions, a number of materials<sup>c</sup> were widely disseminated through different social media outlets and used in presentations to key stakeholders in Qatar. Moreover, an International Conference on Occupational Heat Stress was organized in Doha in May 2023,<sup>d</sup> bringing together stakeholders to discuss and share expertise on heat stress research, and the design of mitigation strategies, policies and legislation.

<sup>a</sup> Decision of the Minister of Administrative Development, Labour and Social Affairs No. (17) for the year 2021 specifying measures to protect workers from heat stress. Available at [https://www.ilo.org/beirut/countries/qatar/labinsp-osh/WCMS\\_794551/lang--en/index.htm](https://www.ilo.org/beirut/countries/qatar/labinsp-osh/WCMS_794551/lang--en/index.htm).

<sup>b</sup> ILO, 2019.

<sup>c</sup> These materials include a comprehensive [guide for employers](#) and a shorter [FAQ document](#) (in English and Arabic); a short video on how employers can develop a mitigation plan to protect workers from heat stress; an [FAQ document](#) for workers, translated in 9 languages from the major origin countries; and [short video](#) to raise workers’ awareness (with speech and subtitles in all languages).

<sup>d</sup> Implementation of practices, sharing of experiences. The conclusions/recommendations of the conference and all the presentations made are available at [https://www.ilo.org/beirut/countries/qatar/WCMS\\_874714/lang--en/index.htm](https://www.ilo.org/beirut/countries/qatar/WCMS_874714/lang--en/index.htm).

## B. The effect of climate-induced migration and displacement on women and children

### 1. Women<sup>17</sup>

In the Arab region, women contribute less to greenhouse gas (GHG) emissions than men in their socially prescribed traditional roles as small-scale subsistence farmers, landless workers, small livestock raisers, natural resource managers, unpaid care givers, and consumers of less emissions-intensive goods and services. Yet, pervasive gender inequalities, women's location at the lower ends of agricultural and other value chains, and their deprivation from material and non-material assets and benefits<sup>18</sup> cause disproportionate climate impacts on women relative to men.

The economic impacts of climate change disproportionately affect women with the smallest asset bases. For example, preliminary assessments of the 2020 floods in the Sudan showed that about 252,000 (42 per cent) female-headed farming/pastoral households were badly hit.<sup>19</sup> Women lost cereal and horticultural crops, livestock, seeds, farm inputs, equipment, water and livestock infrastructure, fishing tools and aquaculture farms. Their small and micro enterprises were badly affected. Women's loss of smaller assets and incomes, their poor access to recovery finance, rising prices and waterlogging caused indebtedness and delayed their recovery more than men.

Women's heavier unpaid care work increases in the worsened context of climate crises in order to cope and recover. The workload and stress of women increase as they care for ailing family members.<sup>20</sup>

Women's greater water insecurity typically manifests in poorer access to irrigated agriculture compared to men, or in damage to irrigation systems or other forms of water infrastructure. In rural Jordan, women lack access to water that is provided by tankers once in two weeks. Poor female-headed households are often unable to afford water or storage tanks.

The water, energy and food insecurity nexus has disproportionate impacts on women, including income loss, compromised personal hygiene and privacy, disrupted schooling, elevated safety concerns as they traverse

distances to collect food, fuel and water, and increased risks to general, sexual and reproductive health.

Women and girls tend to be marginalized from education and decision-making, and are more at risk of violence in climate crises.<sup>21</sup>

Women's migratory patterns, driven by long and sudden onset climate events and related development deficits, depend on several factors that include the nature of hazards; the ability to survive and recover; social and legal restrictions on mobility; concerns in moving with children; risks en route or in host sites; care responsibilities; need to protect surviving assets; cultural ties with kin and village, land and livestock; age, ill-health, and disability, among others.<sup>22</sup> Per initial surveys on the 2020 floods in the Sudan, about 1.1 million households were temporarily relocated, had moved, or were planning to move permanently.<sup>23</sup> Women had more limited settlement options; more financial concerns due to loss of small asset bases and jobs and the inability to find jobs and sustain families in new sites; and low levels of privacy, safety and security due to gender-insensitive infrastructure in relocation sites and poor access to services due to damaged facilities and networks. Stay-behind women hold up rural/household economies with workload and stress increases and are in precarious situations if remittances are not regular or if they are re-hit by climate crises.

Women are not just victims. Their agency in crises rises to the fore as they bring their local knowledge, skills, leadership styles and networks to bear in coping, recovery and development. Immediate coping includes positive and negative strategies, such as sharing extended family and community resources, using remittances and/or accessing disaster relief, selling assets and personal items, and borrowing. Women also undertake adaptive actions, such as roof planting, prevention of overgrazing, greywater re-use for agriculture, green poultry-rearing, and planting climate-sensitive and value-added vegetation which preserves the ecosystem and helps reduce carbon emissions, among other benefits.



**Box 5. Women's role in climate mitigation: Tunisia**

In the arid and semi-arid mountainous region of Béni Khédache in Zammour Tunis, Tunisia, which is vulnerable to drought in the summer and heavy rains in the winter, women's conventional knowledge and practices on land-use and natural resource management has improved adaptive practices to climate change and reduced risks of desertification, drought, water stress and landslides.<sup>a</sup> Women have been involved in projects that increased vegetation planting, thus enhancing food availability, reducing carbon emissions, and contributing to climate mitigation; as well as rainwater collection and water conservation through stone-pocket planting<sup>b</sup> and the construction of small dams on valley slopes and underground brick storage tanks that reduced water stress; and restoration and planting of local species of fruit trees, preventing soil erosion and landslides and preserving the biodiversity of the mountain ecosystem.

<sup>a</sup> United Nations, 2008.

<sup>b</sup> This a traditional method of water conservation in which planting is done in stone pockets. Studies show that this reduces the evaporation of the plantation's irrigation water.

## 2. Children

One billion children – nearly half of the world's 2.2 billion children – live in 33 countries classified as being at extremely high risk to the impacts of climate change.<sup>24</sup> Children in several Arab countries, such as Somalia and the Sudan, face high exposure and vulnerability to climate and environmental risk factors, placing those countries among some of the riskiest on the Children's Climate Risk Index.<sup>25</sup> While many children and their families move in the context of climate change, it is difficult to estimate the exact number of children on the move due to data gaps, including a lack of age-disaggregated data, on climate-related migration. As of 2020, 36 million children were international migrants, including around 14 million refugee and asylum-seeking children.<sup>26</sup> In 2020, nearly 10 million children were displaced due to weather-related events.<sup>27</sup> Children moving in the context of climate change may be exposed to a variety of risks, such as abuse, exploitation or trafficking, and may lose access to education and be forced into labour.

Children are at increased risk of child labour during climate extremes, in particular within households where one or both parents have migrated. Child labour is often needed to sustain farming-related activities, or to help with household chores and childcare. Children might be compelled to migrate or become displaced, and are then forced to take up (under)paid labour. In extreme cases, when climate change erodes the livelihoods and assets of families, migrant children get caught up in some of the most exploitative forms of labour, such as those associated with debt-bondage.<sup>28</sup> Migrant children, especially non-accompanied minors, are more vulnerable to hazardous work. The lack of guardianship puts this group at an elevated risk of dangerous or exploitative situations.<sup>29</sup>

**Box 6. Resource for guidance: child-related migration**

Guiding principles for children on the move in the context of climate change: Recommendations for safeguarding the rights and well-being of children regardless of their location or migration status. There is currently no global policy framework for addressing the needs and rights of children moving in the context of climate change. Where child-related migration policies do exist, they do not consider climate and environmental factors, and where climate change policies exist, they usually overlook children's needs. The guiding principles are intended to be used by local and national Governments, international organizations and civil society groups working with children on the move in the context of climate change. They are based on existing international law as well as operational guidelines or frameworks which have been developed by a variety of stakeholders. The principles are derived from the Convention on the Rights of the Child and do not create new international legal obligations.

Source: UNICEF and others, 2022.

## C. Climate change, food insecurity and migration

Worsening heat, drought and aridity conditions in the Arab region risk undermining the viability of farming, with severe implications for food production. In fact, agriculture is responsible for 85 per cent of water consumption in the region. With eight Arab countries listed among the top ten



countries that are globally suffering from a very high level of water stress, water scarcity is an acute challenge for countries undergoing food insecurity.<sup>30</sup> About 70 per cent of the region's agriculture is rainfed, while 30 per cent is irrigated, leaving Arab countries severely affected by both variable rainfalls and the depletion of limited water resources.<sup>31</sup> Rainfed farming systems in the Arab region have already demonstrated a sensitivity to climate change, which will also reduce the availability of water for irrigated agriculture. Inefficient irrigation techniques are accelerating the degradation of farmlands through salinization and desertification, contributing to reduced productivity and declining crop yields. Climate change is expected to reduce crop productivity and alter the growth cycle, with repercussions on crop quality and quantity.<sup>32</sup>

The impact of climate change on agriculture is shaping food security in the Arab region, with rates of food insecurity and malnutrition rising. The number of undernourished people in 2021 reached 54.3 million, while 53.9 million people were classified as severely food insecure in the same year.<sup>33</sup> Due to the challenges posed by climate change and resource scarcity, food production is not sufficient to feed the population, and over 50 per cent of the food is imported.<sup>34</sup> While imports can relieve pressure on water and land resources, they leave the region vulnerable to climate change impacts elsewhere and to international market fluctuations.<sup>35</sup>

Rural populations, especially small-scale farmers who directly depend on climate-sensitive natural resources for their

income and subsistence, are disproportionately affected by the impacts of climate change. Data shows that 43 per cent of the region's population lives in rural areas and nearly 85 per cent of agricultural land is farmed by small-scale farmers.<sup>36</sup> Small-scale farming is the main source of food production in the Arab region; hence, climate change will have implications for wider food security, including in the region's rapidly growing cities.<sup>37</sup>

Structural drivers of vulnerability, such as poverty, inequality and marginality, compromise the adaptive capacity of the region's small farmers. Small-scale dryland and highland farmers and small herders in pastoral systems are grappling with poor access to infrastructure, markets, financial services, extension advice, subsidies and credit facilities, leaving them in a weaker position to adapt to changing climate and environmental conditions.<sup>38</sup> While seasonal and circular migration in response to seasonal variation has a long tradition in the region, climate change has disrupted established migration patterns and mutual interdependencies between pastoral and sedentary farming systems.<sup>39</sup> For example, seasonal migration formed part of the Hawaweer nomadic groups' livelihood strategy for decades. They migrated to the Nile area as well as further afield to work as hired labourers. More recently, however, they have struggled to find work due to prolonged and more intense droughts. While they were previously essential sources of labour, they are no longer welcome by host communities in the Nile region nowadays.<sup>40</sup>





However, well managed, safe and regular migration has the potential to support climate change adaptation in the Arab region. It provides an opportunity to diversify incomes, reduce vulnerability and increase resilience among rural households. Migrant remittances – the social, material and in-kind transfers between migrants and their families – facilitate access to land, resources and farm inputs, and act as an income gap filler when farm production fails due to climate change.<sup>41</sup> For example, migrant-sending households in Morocco and Egypt have improved access to farm technology such as tractors or pumps.<sup>42</sup>

### Box 7. Maintaining rural livelihoods in the context of climate change, conflict and displacement: The Sudan

Rising temperatures in recent years have put agricultural production to the test in the Sudan, where high exposure to droughts is coupled with high dependence on rainfed agriculture.<sup>a</sup> Climate-induced environmental changes have compounded inappropriate policies and culminated in conflict in the Darfur region. The policies included development policies that exacerbated existing vulnerability and marginality, and colonial and post-colonial policies that have led to the displacement and dispossession of landowners.<sup>b</sup> When conflict broke out in 2003, it caused around 200,000 fatalities<sup>c</sup> and displaced millions, many of whom were still living in protracted displacement nearly two decades after the war.<sup>d</sup>

Internally displaced groups, who found refuge in towns and cities, struggled to maintain rural farms and faced challenges during attempts to return. The Zayadia tribe could no longer cultivate their land or tend to their livestock. Their efforts to return to their farms or retain their rural assets led to their men being attacked and beaten. When women collected grass, firewood and wild fruits in the nearby forests, they also faced harassment and assault. Thus, despite their concerted efforts to maintain their agricultural livelihoods, displaced rural populations remained dependent on food aid for meeting their subsistence needs.<sup>e</sup>

<sup>a</sup> Dutta Gupta and others, 2021.

<sup>b</sup> Ibid.

<sup>c</sup> Cohen, 2007.

<sup>d</sup> IDMC Sudan.

<sup>e</sup> Osman-Elasha and others, 2006; Young and Jacobsen, 2013.

## D. The urban dimension of migration and climate change

The convergence of environmental crises with political conflicts and the reliance on fossil fuels in the Arab region compounds the complexity of the situation, exacerbating migration patterns.<sup>43</sup>

One significant aspect of this challenge is the rural-to-urban migration that has been on the rise due to climate factors. The United Nations Secretary-General's High-Level Panel of Internal Displacement recognized that forcibly displaced persons ultimately look for permanent solutions in cities.<sup>44</sup>

The Arab region has experienced a decline in its rural population, with countries like Jordan seeing the rural population proportion drop from 48 per cent to less than 8 per cent between 1960 and 2022.<sup>45</sup> This rural-to-urban migration has been driven by factors like water scarcity, drought, desertification and the lack of rural economic opportunities such as adequate jobs.<sup>46</sup>

Rural-to-urban migration is further fueled by conflicts, as exemplified by the 100 million internally displaced people in the world due to conflict in 2022 alone.<sup>47</sup> This significant increase in migrant population, combined with inadequate urban planning, governance and infrastructure, has led to the rapid horizontal expansion of urban areas, often resulting in peri-urban settlements that lack access to essential services and proper regulation.<sup>48</sup>



Riccardo Niels Mayer/via adobe stock

Disasters have significantly impacted internal displacement rates. In 2022, disaster-related displacements were 41 per cent higher than the annual average of the past decade.<sup>49</sup> Internal displacement is heavily concentrated in ten countries, including several Arab countries such as the Sudan, the Syrian Arab Republic and Yemen. These countries experience the convergence of disasters and conflicts, prolonging the displacement of people and sometimes resulting in a second or third displacement.<sup>50</sup>

The increase in the migrant population poses significant challenges for urbanization, particularly in big cities. First and foremost, the demand for social services such as health care and education, as well as basic utilities like water and energy, increases, adding strain on existing infrastructure, which might already be struggling to cope with the needs of the population. According to data from the publication “Displaced to Cities: Conflict, Climate Change, and Rural-to-Urban Migration”, service providers in urban areas often find it difficult to cater to both the established population and the incoming migrants, leading to potential gaps in accessing essential services.<sup>51</sup>

The impact of this migration also extends to housing markets. As climate migrants arrive in cities, they prioritize finding shelter and a place to start rebuilding their lives. However, increased demand from migrants, coupled with the existing challenges of housing availability and affordability, can exacerbate stress on housing markets. When communities are unprepared for these effects, it can lead to housing shortages, increased prices and reduced housing quality.<sup>52</sup>

The phenomenon of informal settlements, common in peri-urban areas, is on the rise due to the lack of dedicated affordable housing in most cities. These settlements often lack proper infrastructure, sanitation and secure tenure, exposing residents to health and environmental hazards. The trend of informal settlements expanding into climate-sensitive areas like floodplains increases the vulnerability of these communities to environmental risks.<sup>53</sup>

The accelerated warming of the region, compounded by political conflicts and reliance on fossil fuels, has driven rural-to-urban migration and conflict-induced displacement, placing enormous stress on urban infrastructure, services and housing markets. Informal settlements and pollution exacerbate the challenges, which require comprehensive strategies that advocate for a human settlements approach to tackle the climate migration issue, raise the urban resilience of cities, and

integrate climate adaptation, urban planning, infrastructure development, and social services to ensure the well-being of both migrants and existing residents.

#### **Box 8. Situational case-study: flash floods in the Sudan**

The Sudan has experienced significant flood damages over the past three decades. The damages caused by floods in 1988, 1999, 2007 and recently in 2019, 2020 and 2022 were particularly severe and required humanitarian emergency assistance and durable solutions to respond to recurrent flood prone areas.

According to the mapping exercise of floods severity (measured by the number of affected people) and intensity (number of houses totally/partially damaged by floods) and recurrency of flood/trends per states, Khartoum, Kassala and White Nile were ranked highest in recurrence scale. The year 2020 recorded the highest rate of housing damages, and four states were ranked Red (highest intensity/number of damaged houses), namely Khartoum, West Darfur, Blue Nile and Sennar. Most of these states were marked by high displacement and informality, as migrants and displaced populations tend to settle in less-preferred areas by the local population for various safety reasons. Hence, addressing housing, land and property (HLP) issues is a key component in preparedness, prevention and response to natural disasters and climate change-induced displacement.

Source: UN-Habitat, 2022.



## 3. Policy recommendations

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### A. Advocacy and mainstreaming

1. Raise awareness of policymakers on climate change and its relationship to human mobility.
  2. Support States to integrate human mobility considerations into nationally determined contributions, national adaptation plans, and just transition strategies in the region.
  3. Improve rural-urban migration management by linking it to urban planning, and rural development planning, among other relevant national policies and planning.
  4. Invite and engage the Ministry of Public Works and Urban Planning in migration dialogues and national consultations.
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### B. Data and research

1. Invest and strengthen the collection, analysis and dissemination of disaster-induced population movement data, on both migration and displacement.
  2. Support the scientific community to advance research on the migration-climate change nexus.
  3. Develop research on the link between slow-onset climate change processes and migration.
  4. Expand the network of scholars specialized in climate change and encourage their collaboration with migration scholars, and assess the climate change-mobility nexus in the region.
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### C. Migrant workers

1. Set out obligations of employers to prevent migrant workers' rights violations, including occupational heat stress, and mitigate the risk of abuse.
2. Create and strengthen labour mobility pathways that give access to green, alternative and sustainable decent work opportunities for populations affected by the impact of climate change.
3. Step up efforts, on the basis of inclusive social dialogue, to support a just transition towards environmentally sustainable economies and societies for all, by promoting skills development and promoting green job creation.
4. Assist Governments, private sector actors and workers' organizations in the region to discuss, design and implement skills mobility partnerships, so as to build a skilled workforce for a just transition to greener economies.
5. Explore the linkages between climate change, a just transition and labour mobility, through engagement with Government, United Nations agencies and relevant national stakeholders, including social partners, civil society organizations and academia.



## D. A gender-sensitive, age-sensitive and disability-sensitive perspective

1. Support States to integrate the climate vulnerability of migrants into national development planning, including migration governance policies.
  2. Include child protection, gender equity, and the needs of persons with disabilities in resilience and adaptation plans.
  3. Conduct gender-responsive and age-sensitive impact reviews of climate crises, post-disaster needs assessments, response and recovery packages, and migration and development policies and programmes, taking account of intersecting inequalities.
  4. Develop gender-responsive budgeting for target groups of women affected by climate risk.
  5. Conduct training on gender-responsive budgeting for climate change and human mobility related programmes.
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## E. Protecting food security

1. Develop comprehensive solutions to build climate resilience in resource-based rural livelihoods, while addressing the adverse drivers of migration and displacement.
  2. Strengthen the links between rural and urban food systems, recognizing that these are interlinked, thus strengthening food security for both rural and urban households, including migrants and their families.
  3. Ensure that food security is maintained during crises by guaranteeing coverage by and access to social protection schemes, regardless of migration status.
  4. Address all dimensions of food insecurity, including availability, access, stability and utilization, in vulnerable migrant populations, especially for children.
  5. Promote farm-to-fork strategies<sup>54</sup> for sustainable production and consumption in national and local development plans.
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## F. Institutional development

1. Integrate climate change adaptation measures in public policies, strategies and planning, particularly those affecting migrants.
2. Incorporate climate change issues in migration governance frameworks, employment policies and sectoral policies.
3. Ensure that policies related to climate change and migration comply with human and labour rights obligations.
4. Invest in disaster risk reduction measures and local adaptation to manage environmental risks and land use.
5. Invite local authorities to participate in formulating public policies, strategies and planning relevant to migration and climate change.

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Climate change has devastating impacts on people, their communities, and their jobs and livelihoods. Recognizing and addressing the disproportionate effect of climate-induced migration and displacement on women and children, as well as the various implications of climate change for food production in the Arab region is of utmost importance. Significant challenges have emerged, particularly in relation to urbanization, owing to the rise in rural-to-urban migration in the region.

Migration and labour mobility can be a climate resilience and adaptation strategy for origin and host communities, but they need to be managed effectively. As such, evidence-based policymaking is critical. The present paper offers a series of recommendations for building a robust and holistic approach to managing the migration-climate change nexus.

