

## ***WATER AND MIGRATION: HOW FAR WOULD YOU GO FOR WATER?***

A Caritas in Veritate Foundation Report by

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Migration due to water scarcity and prolonged drought accompanied humans throughout history, impacting diverse parts of the world

Migrant farmworkers cluster near their tent in California in February 1936.

Photograph by Dorothea Lange

The interaction between environmental change and migration has been a universal phenomenon since the beginning of humankind. On the one hand, environmental impacts have long been a factor in driving migration as people naturally moved out of harm's way and towards favourable conditions seeking greener pastures. On the other hand, the influence of migration on the environment has been a universal phenomenon, with agriculture, industrialization and urbanization shaping our natural world.

The link between migration, environment and climate change has been progressively researched since the 1990s with a primary focus on the dynamic relationship between environmental change and migration. Against the backdrop of this research and contemporary migration flows, a need emerged for a more focused examination to provide evidence and guidance for integrating migration in specific environmental policies, and, vice versa, environment in migration policy.

### **1. Why is it important to consider the linkages between migration and fresh water availability?**

In our current world, almost 15% of the global population is on the move, with more than 244 million international migrants and 763 million internal migrants counted by UN statistics.<sup>2</sup> The management of such flows has become an international, regional and national governance concern.

As the risk of non-reversible change in precipitation patterns increases with climate change, so does the vulnerability of populations relying traditionally on the natural water cycle. Hence, it is important to examine the potential of migration considering contemporary water crisis, which has been identified for the fifth consecutive year in a row among the top five global risks in terms of impacts.<sup>3</sup>

This paper examines the nexus between these two determining global issues of the twenty-first century: migration and fresh water availability. It aims to explore the existing and potential linkages between migration and water availability on the one hand and the impact of migration on water resources on the other.

Knowledge about the relation between climate change and respective variance in water availability has greatly advanced since the first International Panel on Climate Change (IPCC) report was released in 1990, while issues related to environmental migration linked to water availability have been increasingly deliberated. Nevertheless, there is little empirical research conducted on the linkages between water availability and human mobility. Existing research until now mainly focused on indirect linkages related to migration and water availability including, inter alia: migration-agriculture<sup>4</sup> and migration-natural resource scarcity-conflict.<sup>5</sup>

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This paper looks at available evidence on the nexus between migration and fresh water availability (what do we know), the impacts of climate change (what is expected to come) and available policy options to manage such new realities (what can we do about it).

## 2. What are the linkages between migration and water security?

**W**ater security has been defined by UN Water “as the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability”.<sup>6</sup> The definition underlines the key features of water security (access to enough quality water in a sustainable, timely manner) and the critical importance of water in livelihoods, physiological functioning, development, health, peace and stability.

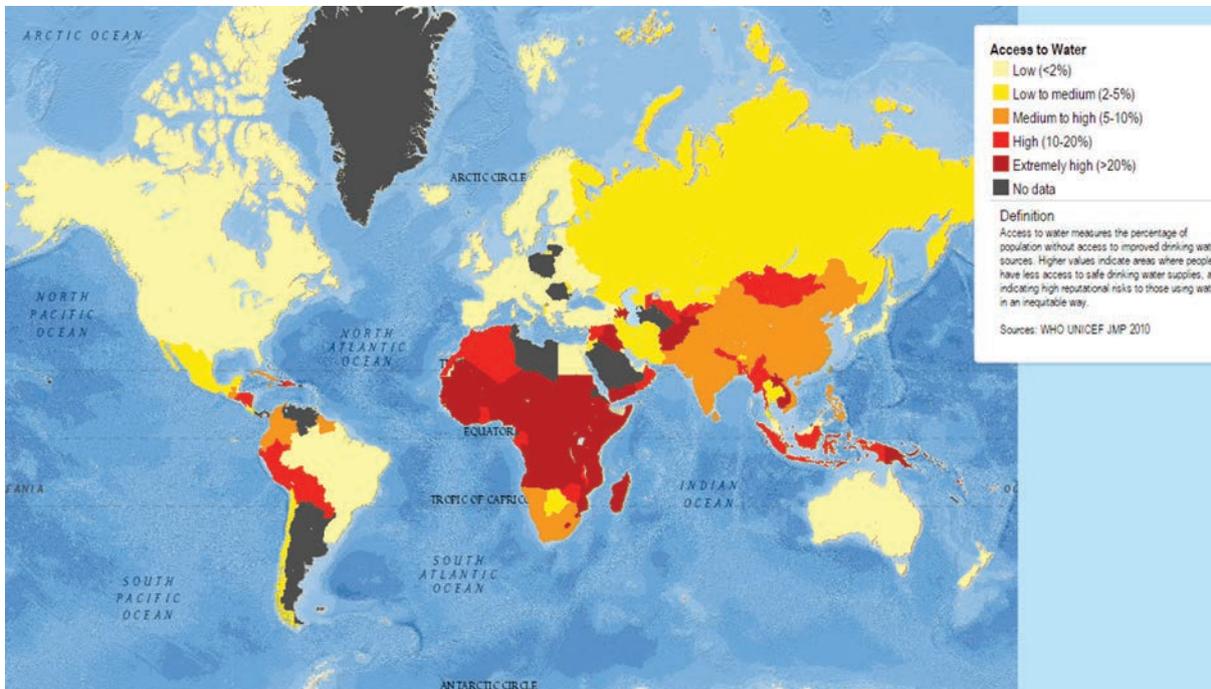
The Global Water Institute estimated that around 700 million people in 43 countries suffer from physical water scarcity<sup>7</sup>, where demand for water regularly exceeds available supply.<sup>8</sup> At the same time, two-thirds of

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Map 1: AQUEDUCT Water Risk Atlas<sup>10</sup>



Access to water measures the percentage of population without access to improved drinking water sources. Higher values indicate areas where people have less access to safe drinking water supplies.

the global population live in areas that experience water scarcity for at least one month a year.<sup>9</sup>

Available data on access to water suggests that the largest populations without access to water live in North Africa, the Middle East, Sub-Saharan Africa, Central Asia, Southeast Asia, Central America and Western regions of Latin America (Map 1).

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Lack of water security has long been identified as one of the push factors of migration as it undermines the lives and livelihoods of people. Yet, it has been a taxing effort to establish an explicit link between migration and water insecurity, as water can rarely be separated from the other social, political, economic and demographic drivers of migration.

Like other environmental factors of migration, water scarcity can lead to temporary and permanent movements depending on the duration and severity of water stress as well as the coping capacity of populations. Most people moving because of water insecurity try to reach water resources closest to home, traveling the shortest distance possible. Migration related to water tends to be internal or regional as those who do not have the means to access water locally will seldom have the means to move beyond their region.

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Above all, poor people are the most vulnerable in the face of water scarcity as they are unable to substitute water used for maintaining their well-being and subsistence farming activities. Although vulnerability to rainfall is a major national concern of countries where large part of the population still relies on sustainable farming or pastoralism, it also affects more developed regions where financial coping capacities of lower-income classes are exhausted by prolonged water scarcity.

In less developed countries, migration is often used to cope with issues associated with adverse climatic conditions and resource scarcity. Often the decision to migrate in the context of water scarcity is the result of environmental factors (e.g. rainfall variability, drought, desertification, salinization), combined with human factors (e.g. unsustainable land and water management), or even the simple matter of survival.

Historically, communities around the world adapted to seasonal availability of water by moving temporarily, which has allowed less fertile regions to support human existence. Nomadic pastoralists have long sustained their livelihoods in marginal environments by making seasonal migration their way of life.

The most severe outcome of water scarcity is drought. Drought impacts lives and livelihoods through many different dimensions, including through food insecurity and land degradation. In the case of prolonged drought coupled with degraded agricultural land, people might move to nearby fertile rural areas or to urban areas to access basic services, including water supplies.<sup>11</sup>

Drought related migration has been a hidden category of migration due to the challenges of data collection.<sup>12</sup> Although no global estimates are available on the number of people moving solely because of water scarcity and/or drought, context-specific data is becoming available in a diverse range of countries (e.g. Angola, China, Iran, Uganda) with water insecurity being identified as the key push factor to migrate.<sup>13</sup>

Lately, quantitative data on drought-related displacement, as a form of forced migration, is made available through the IOM Displacement Tracking Matrix (DTM). For example, the most recent data from the Horn of Africa shows that at least 305,885 people were displaced due to drought in Ethiopia between January and February 2017<sup>14</sup> and 75,366 in Somalia in April 2017.<sup>15</sup>

### 3. How can the impact of climate change on fresh water availability reshape migration patterns?

**A**dverse effects of climate change have been recognized as a driver of migration, which was also underlined by the decision to include migration in the Paris Agreement. Global climate change will be primarily revealed through local changes in the water cycle with uneven impacts across the globe. As climate change reshapes fresh water supply, it will have a cascading effect on well-being and food production. It will affect communities whose income is highly sensitive to local rainfall patterns.<sup>16</sup>

Migration connected to water has been in the spotlight with climate change predictions indicating that people might need to move because of the changes in the hydrological cycle and increasing global temperatures (IPCC, 2007).<sup>17</sup> In many parts of the world, climate change is expected to significantly influence local water availability leading to the intensification of water stress and associated disasters like drought. Being a risk multiplier, climate change also escalates the likelihood of the environment becoming the main push factor of migration.

Future estimates of people exposed to critical water stress, or who are forced to migrate due to water stress, vary between 24 million and 1.8 billion. The United Nations World Water Assessment Programme (WWAP) estimates that, by 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity, while two-thirds of the global population could be experiencing water stress.<sup>18</sup> The *2009 World Water Development Report: Water in a Changing World* approximated that water scarcity in some arid and semi-arid places would displace between 24 million and 700 million people.<sup>19</sup>

As the risk of hydrological and agricultural drought increases as temperatures rise, so does the vulnerability of populations relying traditionally on rainfall for water. Some communities are and will be more impacted than others. The vast majority of the 767 million people living

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of less than US\$1.90 a day lives in rural areas where agriculture represents their main source of livelihood.<sup>20</sup> These smallholder farmers depending on rain fed agriculture are among the most vulnerable in the face of a changing climate as water signifies a key ingredient for ensuring their well-being and livelihoods.

The worst affected regions are in Africa. The IPCC Fourth Assessment Report (AR4) projected that between 75 and 250 million people in Africa will be exposed to increased water stress by 2020 due to climate change.<sup>21</sup> Drought already poses a recurring challenge to the lives and livelihoods of many people across the Horn of Africa although people often don't identify drought as a primary cause of their move.<sup>22</sup>

Climate change and related drought also increasingly force nomadic pastoralist communities to alter their routes to travel further and for longer periods. Slow environmental degradation and prolonged drought can also lead to permanent migration of pastoralists to places where water and grazing land is available.<sup>23</sup>

#### 4. How might migration impact water resources?

In recent years, migration became “essentially an urban affair” with 3 million people around the world moving to cities every week.<sup>24</sup> Nearly 54 per cent of the global population lived in urban areas in 2015<sup>25</sup>, a number that is expected to increase to 66 per cent by 2050.<sup>26</sup> As migration is driving much of the increase in urbanization, it is key to consider migration in the planning and management of urban water resources.

When local coping capacities are exceeded, water scarcity or drought can lead to migration from rural areas to cities, where people hope to find access to basic services, including water. Cities have long symbolized the land of opportunity, with more advanced infrastructure, established markets and access to resources. However, research shows that most of the migrants who have been forced to move for environmental reasons end up in peripheral, slum areas with limited access to resources.

According to the World Water Development Report: Water for a Sustainable World, migration and urbanization, along with population growth and increases in production and consumption “have generated ever-increasing demands for freshwater resources”.<sup>27</sup> Rural-to-urban migration has been posing a continuous challenge to the provision of drinking water services, especially in deprived peri-urban and slum areas.

Understanding the potential linkages between migration and fresh water availability is also key in the context of peace-building and conflict resolution. The Symposium on Climate Change, Water Stress, Conflict and Migration noted that it is highly likely that “climate change, water stress, conflict and migration have causal linkages, but the exact nature and

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direction of these linkages are likely to be context-dependent and difficult to assess” (2012).

The risk of conflict between host communities and migrant or displaced populations increases when fresh water is scarce. Intra-communal conflicts for water might become more frequent, especially between agricultural and pastoralist communities who are often ethnically and culturally different.<sup>28</sup> Regular routes of nomadic communities are also threatened by conflict situations, which can lead to restricted or no access to water and to the destruction of water points along nomadic routes.

Without proper management of local water resources increasing competition could lead to verbal or even more severe conflict.

### **5. How can the migration-water nexus be addressed through the Sustainable Development Goals (SDGs)?**

**T**he SDGs provide several entry points to address environmental migration due to water scarcity, including:<sup>29</sup>

- Ending poverty by building resilience of vulnerable populations to extreme events under Goal 1.
- Achieving food security and promoting sustainable agriculture and strengthening capacity for adaptation to environmental changes under Goal 2.
- Reducing the number of people suffering from water scarcity under Goal 6.
- Promoting the implementation of planned and well-managed migration policies under Goal 10.
- Reducing the number of deaths and people affected by disasters through effective disaster risk reduction (DRR) practices and strengthening development planning for resilient cities and settlements under Goal 11.
- Building adaptive capacity in the face of climate change and integrating climate change measures in policies under Goal 13.

Promoting an environmentally sustainable approach to migration management allows for durable solutions, in line with SDG 6 to ensure availability and sustainable management of water and sanitation for all; SDG 7 to ensure access to affordable, reliable, sustainable and modern energy for all; and SDG 13 to combat climate change.

## 6. What are the options for policy?

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**With timely and well-designed migration policy responses, migration can have positive effects by removing pressures from local environmental coping capacities and by deploying migration as an adaptation strategy, as well as through channelling migrant remittances into infrastructure.**

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The International Organization for Migration (IOM) – UN Migration Agency - believes that well-managed, proactive migration governance benefits all and it can contribute significantly to development and environmental restoration. With timely and well-designed migration policy responses, migration can have positive effects by removing pressures from local environmental coping capacities and by deploying migration as an adaptation strategy, as well as through channelling migrant remittances into infrastructure.

Based on IOM's experience at the policy and operational levels and its work with States, migrants and migrant communities, the Organization proposes the following policy recommendations as a proactive approach to consider human mobility concerns in water governance and water security in migration governance. These recommendations are based on IOM's contribution to the Global High-Level Panel on Water and Peace (2017):

- *Consider* the full spectrum of human mobility in the context of water governance and establish policy responses accordingly to address different migration dynamics.
- *Carry out* policy interventions across the whole migration cycle to help people to stay, help people to move and help people on the move.
- *Consider* the two main directions in the interrelationship between migration and water: how environmental migration might be driven by water insecurity, and how pressure on water resources might be intensifying due to migration inflow.
- *Integrate* migration in water governance frameworks and reciprocally water management issues in migration governance framework.
- *Prevent* forced forms of migration by identifying water and security hotspots, by proactively enacting community stabilization programmes in the targeted areas, or by establishing seasonal migration frameworks to reduce pressures on water resources.
- *Apply* the human rights framework for water governance and operationalize migration management to ensure water security for all.
- *Adopt* community-based and participatory approaches and promote the co-development of migrant and host communities.
- *Strengthen* coordination within the WASH cluster and ensure performance monitoring and competence based approach.
- *Prioritize* funding for directly implementing agencies who are better equipped to respond, and for the creation of regional hubs for preposition of WASH emergency materials.

To ensure water security for all, global water governance needs to consider the two mega trends of this century: migration and climate change. It needs to recognize the benefits of migration for development and its live-saving purpose. Although migration itself cannot solve water availability issues, it can be part of the solution. Taking concrete steps today in policy will result in being better prepared for the future.

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## NOTES

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