

# Running DRY

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## *The impact of water scarcity on children in the Middle East and North Africa*

**W**ater challenges in the Middle East and North Africa existed for thousands of years. However, the scale and impact of the crisis today is unprecedented. The very survival of children is at stake, with around 41 million people in the region lacking access to safely managed drinking water services and 66 million people lacking basic sanitation services leading to more disease and fragility.

Water scarcity hits agriculture, causing food insecurity as well as driving conflict, displacement and migration across the region. Rising food demand, urbanisation, poor water management as well as climate change have combined to threaten children, the poor and the marginalised.

The world is witnessing serious downturns caused by the COVID-19 pandemic in advanced economies. The impact in low-income and conflict-hit countries is however much higher. COVID-19 and other pathogens can proliferate in inadequate water and sanitation systems. Safe and reliable water is urgently needed.

# What is causing water scarcity?

Deepening challenges to water supply have exacerbated a complex set of existing drivers that influence water scarcity.



## AGRICULTURAL DEMANDS:

Water scarcity in MENA is largely driven by agricultural intensification and the expansion of irrigated land where aquifers have been used for crop production. Globally, agriculture accounts for an average of 70 per cent of water use, however, it is more than 80 per cent in MENA.



## POPULATION GROWTH:

The region has some of the highest rates of population growth in the world, with Lebanon and Jordan reported to be in the world's top five growing populations (impacted by the refugee influx). Much of the growth is concentrated in cities. In regions surrounding urbanised areas, heavy pumping is reducing water levels in aquifers and dams that supply cities.



## INCREASE EMERGENCY WATER TRUCKING:

This is mostly undertaken by the local and unregulated private sector. The high level of emergency programming during drought or conflict has normalised water trucking in camps and host communities where stakeholders, utility companies and aid agencies step in to provide a water supply service.



## DEPLETED WATER RESOURCES:

All countries in the region share at least one aquifer with a neighbouring country. Many countries, most notably Egypt, Syria and Iraq, depend upon relatively large quantities of surface water that originate from outside their boundaries. For example, the Israelis, Palestinians, Jordanians, Lebanese and Syrians all share the Jordan River, which has been severely depleted by over-use and pollution.



## WEAK GOVERNANCE:

Increased aquifer depletion has been exacerbated by inadequate governance arrangements, including weak water resource management policies and regulation. The region also contends with reduced human and institutional capacity to manage, plan and invest in infrastructure, partly due to migration of skilled staff from various conflicts.



## CLIMATE CHANGE:

This will likely result in an increase in water demand for irrigation due to reduced rainfall, shorter rain-fed growing seasons and higher temperatures. MENA has the greatest expected economic losses from climate-related water scarcity, estimated at 6 to 14 per cent of GDP.



## VALUE OF WATER:

Despite the scarcity challenges in the region, water continues to be undervalued. Limited political appetite for reform, economic challenges, and poor regulatory frameworks have led to an artificially low cost of water. Where water is undervalued, water conservation is inhibited and water is wasted.

# What does water scarcity mean for children?

**NEARLY NINE OUT OF TEN CHILDREN** in the Middle East and North Africa live in areas of high or extremely high water stress and suffer the subsequent effects on health, nutrition and future economic development.



**CHILDREN UNDER FIVE YEARS OLD ARE MORE THAN 20 TIMES MORE LIKELY TO DIE FROM DIARRHOEAL DISEASE LINKED TO UNSAFE WATER THAN VIOLENCE DURING PROTRACTED CONFLICTS:**

Families who experience water shortages are more likely to resort to unsafe sources, including ditches, and open wells. These sources are often contaminated with harmful bacteria and viruses. Regular bouts of diarrhoea in young children inhibit their absorption of key minerals and nutrients. Lack of access to safe water contributed to the widespread 2016 cholera epidemic in Yemen, which affected more than 1 million people, becoming one of the worst outbreaks in recent history.



**IMPACT OF WATER SCARCITY ON THE NUTRITION OF CHILDREN:**

Limited access to safe water in Yemen was a key driver for malnutrition, making children even more vulnerable to disease. In parts of Yemen, acute malnutrition rates among children under the age of five were the highest ever recorded in late 2020. Sudan continued to have the highest number of malnourished children in the region.

Severe drought is linked to children growing up to be physically shorter (stunted) because of the lack of nutritious food and access to safe water. Arid, low-income countries with poor governance and political instability, have been identified as areas where drought could have the largest impact on child stunting.



**FRAGILITY AND CONFLICT OFTEN HAVE THEIR ROOTS IN WATER SCARCITY:**

In Syria, a multi-year drought has been identified as one of the contributing factors that led to deteriorating social structures and unrest, which then expanded into a regional conflict. Water scarcity could replace conflict to become the primary driver forcing the displacement of people.



**RISE OF DISPLACEMENT AND MIGRATION:**

Water scarcity may become the primary driver forcing the displacement of people. In Iraq alone, it is expected that four million people will be displaced over the next eight years due to water scarcity, exceeding the number of people displaced due to security concerns.



**IMPACT ON DEVELOPMENT:**

Instead of spending time on productive activities, women and children must devote increased time and effort to meet household water needs. They may have to search for water from irrigation boreholes often far away and unsafe, or they are forced to borrow and barter small amounts of water throughout the day.



**ACCESS TO EDUCATION:**

When water scarcity leads to the drying up of traditional water sources, water must be collected from alternative sources at longer distances. The burden of water collection often falls on children, especially girls. This reduces the opportunities for children to attend school. Across the region, 14 million children are out of school.

# THE WAY FORWARD

**Water scarcity is a critical threat across the Middle East and North Africa region. It must be addressed alongside other regional issues including conflict, inequality and governance.**

UNICEF can and will continue to support governments, the civil society and private sector to address the vulnerability of water resources.

Key recommendations to address the crisis include:

1. Preserve the individual's human right to access water and sanitation services, without it being compromised by other water uses or threatened by targeting of water infrastructure in conflict settings.
2. Create a robust enabling environment with strong national policy and regulatory systems that address scarcity, including over-extraction of groundwater, water accounting and data monitoring and analysis.
3. Work with civil society, especially youth as agents of change, on the value of water and water conservation.
4. Initiate climate change response plans, incorporate water scarcity as a priority component and allocate sufficient national budget to address water scarcity.
5. Create coordination groups between key ministries (e.g. water, agriculture, energy and finance) and sectoral actors to support policy revisions and increased technical capacity.
6. Support capacity building of key water sector actors, including regulatory bodies, private sector operators, and national water utilities to upgrade ageing infrastructure, develop sustainable operation plans, and reduce water wastage.

## For more information:

**Juliette Touma** | Regional Chief of Communications  
Tel: +962-79-867-4628 | Email: jtouma@unicef.org

**Hasan Nabulsi** | Communication Officer  
Tel: +962-79-1368405 | Email: hnabulsi@unicef.org

**Salim Oweis** | Communication Officer  
Tel: +962-79-936-5212 | Email: soweis@unicef.org

**United Nations Children's Fund (UNICEF)**  
Regional Office for the Middle East and North Africa  
15 Abdel Qader Al-Abed Street | P. O. Box 1551 | Amman 11821 Jordan  
Tel: +962-550-2400 | [www.unicef.org/mena](http://www.unicef.org/mena) | [menaro\\_info@unicef.org](mailto:menaro_info@unicef.org)



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