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Towards Regional Water Security & Public Awareness

Is the Middle East and North Africa region trapped in a vicious cycle? Seeking water security beyond COVID 19

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The Middle East and North Africa is the most water scarce region in the world, and water security is under mounting pressure from multiple directions. The region is struggling under the COVID-19 pandemic, which has created additional strain on water availability. Many are asking what lies ahead. Hassan Aboelnga from the Middle East Water Forum explains here the dire circumstances facing the Middle East and North Africa region. If the world is to meet the Sustainable Development Goal number 6 on water by 2030 then it's crucial the Middle East transforms its systems around water. Hassan discusses what needs to happen.*

What a year? The COVID-19 pandemic has given the global community reason to pause and reflect on what is meant by resilience and sustainability. What does the future hold and how will our global systems fare when the next crisis hits?

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The year 2020 also marks a decade left to achieve the ambitious Sustainable Development Goals (SDGs). To meet these agreed targets by 2030 will require an unprecedented effort in terms of ensuring safely managed water and sanitation for all (as outlined in goal 6 of the SDGs). The United Nations has warned that the world is off track in achieving the water related **SDG 6** even before the eruption of COVID-19; though it has set out a plan for how we may get back on course (via a **Global Acceleration Framework for SDG 6**).

Multiple stressors

COVID-19 has cast a deep shadow over water security in the Middle East and North Africa (MENA) region. MENA is already the most water scarce region in the world, a problem deeply affecting both its society and economy. The impact of the pandemic, part of which is an increase in water demand, brings into sharp relief the many problems faced by countries in the region. These include more interruptions to water supplies, large inequality of access to water, poor water quality and deteriorating water infrastructure.

The pandemic is making a bad situation even more complicated. It's expected that an additional **8.3 million people will fall into poverty in the Arab region** as a result of COVID-19, that's on top of 101 million people in the region already classified as poor (with 52 million estimated as undernourished). Water insecurity in particular threatens the peace and stability of the region.

There are three growing pressures threatening the water security of the MENA region. The first is population growth. The Arab population has tripled since 1970, increasing from 128 million to 436 million in 2020. This is exacerbated by an influx of displaced people from surrounding countries.

Second is climate change, bringing with it greater climate variability, and more frequent and severe droughts and floods. This multiplies the stress created by chronic water scarcity.

The third pressure relates to **conflict and fragility** in the region increasing the unreliability of water sources, further multiplying the risks from water scarcity.

All three pressures have a fundamental impact on the vulnerability of water resources, socio-economic development and the way water is managed and financed. And the potential exists for the problem of water scarcity to flower into a major water crisis. If water infrastructure becomes seriously deteriorated, or institutions are weakened to the point where water utilities are unable to deliver basic water services and or manage water-related hazards, there is the growing possibility of riots, migration, and loss of life.

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Water for life

According to **United Nations**, the MENA region is considered one of the world's poorest regions in terms of water availability and is the most likely to **suffer from water crises**. Seventeen out of the 22 Arab countries are below the **water poverty line**. Nearly 90% of the Arab region lies within countries classified as arid, semi-arid and dry sub humid areas.

Arab countries cover 10% of the world's area and are home to 6% of the world's population but receive less than 2% of the world's renewable water supply. **Two-thirds of the Arab region's water supplies** (163.2 BCM) originate from outside the region and it reaches to more than 95% of water in the case of Egypt and Iraq. Consequently, Arab nations need to import more than half of their food – they are among the greatest importers of cereal in the world.

Water in the MENA region is highly interlinked with economic growth, conflict, migration, employment, and human rights; all of which are shaped by the management and access to water resources. Indeed, 60% of the region's population live in areas of high-water stress, compared to only 35% for the global average, and 70% of its GDP is also generated in such areas, compared to a global average of 22%. Yet nowhere else in the world is water managed so unsustainably. From expensive and energy intensive practices, to poor and wasteful ones with high levels of water use that generates no revenue, the MENA region is plagued by an overall water insecurity problem with significant competition for water between economic sectors.

One consequence of the regions limited water resources is that Arab people rarely receive water continuously. Usually it is only available for some hours each day or maybe each. Adapting to this, many people store water when it is available in roof tanks, in what is called **intermittent water supply** (IWS).

In the face of freshwater scarcity, many Arab countries have also turned to non-conventional sources. These include **desalination plants**. Over 75% of worldwide desalinated water is produced in the Middle East and North Africa, 70% of which is in the GCC countries (Saudi Arabia, Kuwait, Qatar, Bahrain and the United Arab Emirates) and 6% in Libya and Algeria.

It is clear, the status quo is not improving water security in the Arab region. Further, if we just continue with business as usual, the region will suffer more.

Plans for water security need to be translated into concrete actions. Policies must align objectives with appropriate resources, set out clear roles and responsibilities, ensure sustainable funding, establish effective regulatory frameworks, work with effective multi-stakeholder platforms, and raise awareness about the importance of water security for peace, stability and sustainable development.

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Five 'C's for achieving water security for all

We define **water security as**: "The dynamic capacity of water systems and stakeholders to safeguard sustainable and equitable access to water of adequate quantity and acceptable quality that is continuously, physically and legally, available at an affordable cost for: sustaining livelihoods, human well-being, and socio-economic development, ensuring protection against waterborne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability"

I believe that a pathway for securing water security for all is possible with the right framing. Here I propose a post COVID-19 recovery plan for achieving that water security based on a framing around five 'C's:

Cross sector collaboration and policy coherence.

Solving the complex challenges of water security requires a new paradigm with cross-sector collaboration. The multi-sectoral and cross-cutting nature of water security calls for policy coherence and integration. Governments must commit to and incentivise better cross-sector collaboration, recognising that water security is an essential element in almost all sectors. Understanding the barriers for policy coherence, and what incentives exist or can be created, can encourage integrated actions to meet the challenges with innovative, sustainable, and scalable solutions. Incentives to work across sectors exist naturally for some sectors; however, since the water sector mainly measures progress by service coverage or single-issue indicators, achievement of its goals does not rely on action plans of water security. Strategies for water security should be based on the holistic nature of water with different **dimensions such as drinking water, ecosystems, climate change and water related hazards, and socio-economic aspects**.

Create more, consume less

The Arab region faces the fundamental challenge of doing with more with less, not an easy endeavour as it requires efforts to work on both supply and demand sides with a focus on the integrated water management for the whole water cycle. Development and diversification of water resources and finances are essential to bridge the gap between supply and demand but it is more important to consume less and rationalise the use of water as the region is a global hotspot for groundwater over-exploitation, a resource that is likely to rapidly depleted in the coming decades; and reducing the high levels of non-revenue water which extends to 50% of water supply.**Food loss and waste** have also reached alarming levels with huge implications on water and energy.

Climate resilience and adaptation

Adaptation to climate change is mainly about better water management. The Arab region is extremely vulnerable to the adverse effects of climate change, and the evidence is already seen with household water supplies under increased threat and extremes such as floods and droughts. Uncertainty on the impact of climate change in the future cannot be an excuse for inaction today; concrete actions must be taken immediately. New resilient water infrastructure is required as a priority for adaptation in the region.

Capacity building and citizen-led water security

If the region is to achieve water security, Institutions and communities have to support institutional and human capacity beyond traditional approaches to capacity building – and ensure adequate financing at all levels including the localised responses. Besides, holistic water reforms and game-changing technologies, this requires new skills and capacities coupled with governance and institutional structures to support their implementation.

The approach to water in the region has been largely based on siloed solutions, with a focus on one side as supply-led and access to infrastructure while a focus on demand management and citizen engagement remain in its infancy. Too often citizen engagement is seen with suspicion, scepticism or fear by policymakers in the region. The effectiveness of many water policies depends on the response of citizens and businesses. Digital transformation and citizen-led water security in a framework of holistic and integrated water management are crucial for disrupting the vicious cycle of traditional water governance and shifting towards a virtuous cycle of water security for all.

Cooperation

Cooperation among Arab countries and their neighbours, coupled with all stakeholders being engaged (eg, NGOs, private sector, local communities, etc.) are essential to achieve water security for all. Lack of water cooperation and diplomacy has hindered economic development in all countries and has the potential to undermine national and regional stability. However, water cooperation demands changes of attitude —a transformation is needed in the way we manage and finance water, the way we collaborate with each other, and the way policies are designed and implemented.

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*The Middle East Water Forum (MEWF) is a pioneer platform with a regional perspective on raising public awareness and enhancing management of water challenges in the Middle East by adopting Effectiveness, Efficiency, Integration and Sustainability through the exchange of data, expertise and innovative technologies without the need to cross borders. Its mission is to promote best practices for cooperation and exchange of knowledge among the various parties and stakeholders involved in water issues and actions through an online forum that ensures the impartial and transparent dissemination of information towards sustainable water security in the Middle East and the Arab region.
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