



**Proclaiming the Levant: Exiting from a Region Marred
with Bilateral Cooperation to Regional Dialogue**
Water Shortage, Turning Crisis into Opportunity



West Asia-North Africa Institute, April 2020



The West Asia – North Africa Institute undertook research into the shared water aquifers in the Levant region which have long been considered vital conduits to different parts of the world. Treaties to manage transboundary water were signed, but coordinated management is still rare. The analytical paper, thus provides recommendations for achieving a Levant union in shared water management which may require the need to build a new paradigm that echoes a human dignity approach.

The WANA Institute envisions that the research could lead to governance and policymaking recommendations on the national level for Jordan as well as on the regional and international levels.

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Published by: The WANA Institute, Royal Scientific Society, PO Box 1438 Amman 11941 – Jordan

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Printed in Amman, Jordan

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Manufactured in Jordan

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1 Overview: Water Status in the Levant

The global demand on water resources will continue to grow at a rate of 1% per year.¹ This growth is associated with the increase in population, acceleration in economic development as the world shifts consumption patterns, and climate change associated with drought and flood events. Poor states with limited resources, narrowed carrying capacity, and marginalised populations are the most affected by the water crisis and climate change. New management and governance are crucial as it is predicted that by 2030, the world will face 40% global water deficit if “business-as-usual” persists.²

The Water Research Institute revealed that during 2019, 17 states worldwide faced extremely high-water stress.³ 12 of the 17 states are located in the West Asia and North Africa region, five of which are in the Levant region.⁴

The Levant is well-known for its aridity. The challenges associated with this aridity have been exacerbated by the dramatic increase in population and the growing impact of climate change. In the last 30 years, the populations of Syria, Lebanon, Palestine, and Israel have more than doubled and that of Jordan almost tripled. Since the 1980s, the region faced a series of multi-year droughts that have led to increased dependence on groundwater resources to fill the gap.⁵ The agriculture sector has been the most affected, as it is the biggest consumer of available water in the Levant, by a total average of 62.2%; 62% in Lebanon,⁶ 56% in Jordan,⁷ 62% in Palestine,⁸ 58% in Israel,⁹ and 73% in Turkey.¹⁰ Small farmers - especially the marginalised - are the most distressed. During the drought period in Syria between 2006 and 2011, peasants in eastern Syria were affected by agriculture failure and more than 800,000 lost their livelihood and basic food supports; yields of wheat and barley dropped by 47% and 67% respectively. As a result, over one million people were forced to relocate their entire families to urban centres across the country to seek new job opportunities to meet their economic requirements.¹¹ The situation does not differ much in Jordan,

¹ “World Water Development Report 2019: UN-Water.” UN, March 18, 1970. <https://www.unwater.org/publications/world-water-development-report-2019/>.

² Connor, Richard. *The United Nations world water development report 2015: water for a sustainable world*. Vol. 1. UNESCO publishing, 2015.

³ Hofste, Rutger Willem, Paul Reig, and Leah Schleifer. “17 Countries, Home to One-Quarter of the World's Population, Face Extremely High-Water Stress.” *World Resources Institute*, August 6, 2019. <https://www.wri.org/blog/2019/08/17-countries-home-one-quarter-world-population-face-extremely-high-water-stress>.

⁴ Ibid

⁵ Bar, Ido, and Gerald Stang. “Water and Insecurity in the Levant.” *European Union Institute for Security Studies (EUISS)*: Paris, France (2016).

⁶ “Water Use in Lebanon.” *Fanack Water*. Accessed April 16, 2020. <https://water.fanack.com/lebanon/water-use/>.

⁷ “Annual report”. *Ministry of Water and Irrigation*, 2018.

⁸ “Agricultural Water Use in Palestine.” *Fanack Water*. Accessed April 16, 2020.

<https://water.fanack.com/palestine/water-use/agricultural-water-use-in-the-west-bank-and-gaza/>.

⁹ “Water Use in Israel.” *Fanack Water*. Accessed April 16, 2020. <https://water.fanack.com/israel/water-use/>.

¹⁰ “Availability and Use of Water Resources in Turkey.” *Fanack Water*. Accessed April 16, 2020.

<https://water.fanack.com/turkey/turkey-availability-and-use-of-water-resources/>.

¹¹ Gleick, Peter H. “Water, drought, climate change, and conflict in Syria.” *Weather, Climate, and Society* 6, no. 3 (2014): 331-340.

where farms became more saline at Al Karameh, and small farmers in Azraq had to abandon their lands due to drought and salinity, consequently moving to Amman.¹² In Lebanon, on the other hand, rainfed cultivations have been shifted into irrigated ones to meet crop water requirements that can maintain production and revenue.¹³ Additionally, farmers who mainly depend on irrigated agriculture at the Beqqa Valley have faced disastrous economic consequences due to water limitations and they have had to buy water from tankers to cope with and limit the damage.¹⁴

The accessibility of drinking water in the Levant varies based on water availability, demand pressure, infrastructure design, network efficiency, and political conditions. In Jordan, 96.9% of the population has access to adequate sources of drinking water,¹⁵ yet the government is trying to decrease the growing gap between demand and supply due to refugee influx and modest network efficiency. In Palestine, the average accessibility is only 53%; 95% in the West Bank¹⁶ and 11% in Gaza Strip¹⁷, where water is highly polluted and saline. In comparison, 100% of Israelis have access to fresh drinking water.¹⁸ Turkey shares the same percentage as Israel.¹⁹ 99% of the population in Lebanon has access,²⁰ but with poor service quality, as more than 20% of the people are not connected to the public water network.²¹ As for Syria - based on 2015 data - 92.3% of the population had access to drinking water.²² But this percentage has decreased drastically since then, leaving many without regular access to drinking water because of water cuts and the destruction of basic infrastructure during the civil war.²³

To confront the water availability challenge, different collective and single management approaches have been adopted at the state level as supply management, demand management, regulatory tools, and community based and co-management approaches. Supply management consists of but is not limited to developing small/ large scale infrastructure at rivers, dams, wastewater treatment and desalination centres, and aquifer recharge and water transfer centres.

¹² Al Naber, Majd, and Francois Molle. "Controlling groundwater over abstraction: state policies vs local practices in the Jordan highlands." *Water policy* 19, no. 4 (2017): 692-708.

¹³ "Lebanon Faces Water Crisis after Record Winter Drought." *Middle East Eye édition française*. Accessed April 16, 2020. <https://www.middleeasteye.net/fr/node/821>.

¹⁴ "MENAdrought: Tackling Drought in Jordan, Lebanon and Morocco - Jordan." *ReliefWeb*. Accessed April 16, 2020. <https://reliefweb.int/report/jordan/menadrought-tackling-drought-jordan-lebanon-and-morocco>.

¹⁵ Central Intelligence Agency. Central Intelligence Agency, February 1, 2018. <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/jo.html>

¹⁶ <https://reliefweb.int/sites/reliefweb.int/files/resources/3274.pdf>

¹⁷ Efron, Shira, Jordan R. Fischbach, Ilana Blum, Rouslan I. Karimov, and Melinda Moore. *The Public Health Impacts of Gazas Water Crisis: Analysis and Policy Options*. Santa Monica, CA: RAND Corporation, 2018.

¹⁸ "The World Factbook: Israel." Central Intelligence Agency. Central Intelligence Agency, February 1, 2018. <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/is.html>.

¹⁹ Central Intelligence Agency. Central Intelligence Agency, February 1, 2018.

<https://www.cia.gov/library/publications/resources/the-world-factbook/>.

²⁰ "The World Factbook: Lebanon." Central Intelligence Agency. Central Intelligence Agency, February 1, 2018. <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/le.html>.

²¹ Khamis, Reem, Annahar, Annahar Date, and World Bank. "Lebanon Needs a Proper Water Management Plan - Reem Khamis." *An*, January 21, 2019. <https://en.annahar.com/article/927290-water-management-in-lebanon>.

²² Yates, T., J. Allen, Joseph, D. Lantagne, Krejcie, and D. Morgan. "Water, Sanitation, and Hygiene Access in Southern Syria: Analysis of Survey Data and Recommendations for Response." *Conflict and Health*. BioMed Central, January 1, 1970. <https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-018-0151-3>.

²³ "Goal 6: Clean Water and Sanitation: UNDP in Syria." UNDP. Accessed April 16, 2020.

<https://www.sy.undp.org/content/syria/en/home/sustainable-development-goals/goal-6-clean-water-and-sanitation.html>.

These options depend on the state's financial and technical capacity. Demand management and regulatory tools conventionally depend on strong legislation and enforcement.²⁴ Compared to neighbouring states in the Levant, Jordan has strong legislation that governs, manages, and monitors water resources. But enforcements of laws and bylaws have not always been carried out 100% due to the state's demographic and social structure.²⁵ In Syria, water resource management is frequently met with poor planning and policy errors.²⁶ In Lebanon, water policy requires consolidation and enforcement to provide stronger protection.²⁷

In a region where the community is largely affected by the foreseeable water crisis, water security is better fulfilled if communities are allowed the right to participate fully in the governance of water resources.

2 Transboundary aquifers

Shared water aquifers in the Levant region have long been considered vital conduits to different parts of the world; 60% of global freshwater flows are transboundary;²⁸ 57% in Africa, 35% in North and South America, 40% in Asia and 48% in Europe.²⁹ More than 3,000 treaties to manage transboundary water were signed, but coordinated management of international river basins is still rare.³⁰ 158 out of 263 world transboundary basins work unilaterally; 105 transboundary watercourses have joint water committees; approximately 70% have three or more riparian states with 20% of them sharing multilateral agreements.³¹ Thus building effective cross national dialogue is a priority in order to acknowledge that shared water management can be improved through mechanisms that depend on the interaction of all riparian states.

The geo-political transboundary scene has been an evolving experiment in the Jordan Rift Valley. Over the years, the Jordan river basin assembled key salient issues that evidently adhered with stoic positions in the different demographic, political, and environmental changes. The antagonistic relationship of the different states has resulted in only unilateral agreements that included cooperation of only co-riparian states, starting with the Johnston Plan in 1950s, the 1994 peace treaty between Jordan and Israel, agreements of 1953 and 1987 between Syria and Jordan, regarding the utilisation of the waters of the Yarmouk River, agreement of 1994 between Syria and Lebanon regarding the Orontes (Al-Asi) River and several others. These agreements were driven by the need for joint cooperation to facilitate states' utilisation of the shared waters. Nonetheless,

²⁴ Naber, Majd Al, J. Wallinga, F. Molle, and J. J. Stoorvogel. *Groundwater-Based Agriculture in Arid Land: the Case of Azraq Basin, Jordan*. Wageningen: Wageningen University, 2018.

²⁵ Al Naber, Majd, and Francois Molle. "Controlling groundwater over abstraction: state policies vs local practices in the Jordan highlands." *Water policy* 19, no. 4 (2017): 692-708

²⁶ Gleick, Peter H. "Water, Drought, Climate Change, and Conflict in Syria." *Weather, Climate, and Society* 6, no. 3 (2014): 331-40. Accessed April 15, 2020. www.jstor.org/stable/24907379.

²⁷ El-Fadel, M., M. Zeinati, and D. Jamali. "Water resources management in Lebanon: institutional capacity and policy options." *Water Policy* 3, no. 5 (2001): 425-448.

²⁸ "Progress on Transboundary Water Cooperation." UNESCO, March 16, 2020. <https://en.unesco.org/news/progress-transboundary-water-cooperation>.

²⁹ Elhance, A P. "Hydropolitics in the Third World: Conflict and Cooperation in International River Basins. ." US Institute of Peace Press., 1999.

³⁰ Ibid

³¹ Connor, Richard. *The United Nations world water development report 2015: water for a sustainable world*. Vol. 1. UNESCO publishing, 2015.

the political agenda of each state has dictated the kind of cooperation mechanisms that were adopted. No multilateral agreements to date have been signed by all riparian states of the Jordan river basin.

The Orontes river basin contains the hydro-physical meta systems of Syria, Turkey, and Lebanon, of which the hydro-political environment has strongly affected each state's water policy. 1994 witnessed the first unilateral water allocation agreement between two of the neighbouring states (Lebanon and Syria), when a joint water committee was also established.³² Syria's positional bargaining tactic has always played in its favour, but the current war and internal crisis pushed it to withdraw this strategy.

According to the Blue Peace Index developed by the Economist Intelligence Unit that measures the management of shared watercourses across five domains (policy and legal frameworks, institutional arrangements and participation, water management instruments, infrastructure and financing, and cooperation), the Tigris-Euphrates river basin scored 25 out of 100. Political and environmental hegemony have both played key roles in the absence of clear mechanisms for a regional basin cooperation.³³ Historical treaties and consensual understandings over the Mesopotamian region resulted in bilateral treaties between Turkey and Syria (1987 and 1990), MoUs (2009), and a joint technical committee between the riparian states Turkey, Iraq, and Syria. Nonetheless, the basin faces constant power play over resource capture between water competitors that are often not resolved by previously signed treaties.³⁴

States' geographical positions have long dictated their roles as upstream and downstream tributaries of the basin, adding to the uncertainties and complexities of each state. As such, treaties may be destined as ink on paper, whereas the actual setting may require shifting the mindset for a collective management approach.

3 Water, trigger for peace; how to transfer challenges into opportunity

During crisis, states have two options: either cooperate for mutual interest or dispute for legal authority. Several experts are predicting the looming of new war for water, as this precious resource could become the leading impetus for conflict. A movement known as "blue peace" has been gathering momentum in the West Asia and North Africa region since 2011 in order to prevent this kind of war by introducing initiatives to boost collective collaboration through enhancing regional water management and stronger cooperation for a sustainable management of water bodies. Through using the tools of political, diplomatic, financial, and technical dialogue, the ethos guiding this movement is water usage for peace building between states rather than establishing a state of war and conflict. The Orange river basin in Southern Africa is a successful hydro-diplomacy

³² Ronald Jaubert, The Orontes River Basin, Addressing water management complexity and uncertainties, www.water-security.org

³³"Economist Intelligence Unit." Blue Peace Index. Accessed April 16, 2020. <https://bluepeaceindex.eiu.com/#/tigris-euphrates>.

³⁴ "Transboundary Water Governance in the Euphrates Tigris River Basin." Accessed April 16, 2020. <https://www.e-ir.info/2015/07/22/transboundary-water-governance-in-the-euphrates-tigris-river-basin/>.

example of how improved regional water cooperation can resonate beyond the water sector, where other key social and economic sectors were significantly altered, resulting in reduced upstream-downstream conflicts.

Successful cooperation of efficient long-term water management requires a mature forum of mutual, well-defined priorities between all parties. Accordingly, developing different dialogue platforms among potential partner states is essential to set and agree on the main priorities and pave the road to achieve them collectively. Trust, confidence building, and transparency might be the most challenging elements to a collective management approach. To ensure good management, policy measures should be built based on evidence and reliable sources of data, thus improving data availability, accessibility, and reliability.

Regional cooperation will not be successful without arranging each state's inner house. This can be achieved by adopting a good governance approach that includes all actors in the management process. Good governance requires several kinds of partnerships between; a) state and community; b) state and market; c) market and community. Community involvement will facilitate the social acceptance of future calls or policy measures and tools, while involvement of the private sector will strengthen the state's resilience and carrying capacity.

In conclusion, achieving a Levant union in shared water management may require the need to build a new paradigm that echoes a human dignity approach. Hence, reaching a win-win situation for all riparian states can redefine the water situation, where eventually it can increase the carrying capacity of each state. The distinct physiographies of each state may require tailor-made solutions to answer the great diversity of each river basin, but a common goal may lessen the asymmetries of power. A cooperative mindset based on a multi-stakeholder platform on which the management and development must be carried out is crucial to any integrated approach.



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