



Water and insecurity in the Levant

by Ido Bar and Gerald Stang

The Middle East and North Africa (MENA) is the most water-stressed area in the world. In the Levant sub-region, Jordan, Syria, West Bank/Gaza, and Israel are already water scarce while two other countries – Iraq and Lebanon – are ‘water stressed’. This water challenge is a major problem for more than simple development reasons – the domestic instability that led into the Syria conflict was partially driven by drought effects, and now the overflow of refugees is placing greater stress on dry neighbours.

For a region that is expected to become drier yet due to a changing climate, the potential for further water-driven instability is significant. Responding to this will require more than improved water supplies. It will require integrated responses that address technical, political and security challenges at local and regional levels.

The Crescent – fertile no more?

The Levant has always been arid. But the challenge of this natural aridity has been exacerbated by a dramatic increase in population and the growing impacts of climate change. In the last 30 years, the populations of Syria, Iraq and Israel have more than doubled and that of Jordan has almost tripled. Since the late 1980s, the region has been struck by

a series of multi-year droughts, leading to increased stress on groundwater reserves. A 2016 NASA study calculated that 1998-2012 was the driest period to strike the region in 900 years.

This drought has had a serious impact on regional economies, particularly in the agricultural sector: the number of people employed in agriculture has plummeted, as has the portion of population living in rural areas and the contribution of agriculture to the economy. These trends are global, but have been accelerated in the Levant, most notably in Syria, where an estimated 1.3 million people were pushed from rural to urban areas during 2006-2010 as their crops and livelihoods dried up. These shifts contributed to social and economic disruption, as large parts of the population were forced into poverty. The government’s failure to address the problems caused by the drought, among many other failings, strengthened domestic opposition and fed into the increasing domestic instability.

Rapid migrations such as in the Syrian case can overload urban capacities to manage, in terms of both infrastructure (sanitation, water and housing) and employment opportunities. Because both Syria and Iraq are more reliant on agriculture to supply jobs and contribute to GDP than their drier neighbours Jordan and Israel, the resultant social

Renewable internal freshwater resources per capita (m3)		
	1997	2013
Israel	129	93
Jordan	153	106
West Bank & Gaza	300	195
Syria	471	327
Water scarcity level	1,000	
Iraq	1,636	1,042
Lebanon	1,552	1,068

disruptions have been more pronounced. But the overspill of refugees from Syria and Iraq into Jordan and Lebanon means that these states are also becoming severely affected.

Another consequence of rising water scarcity will be the reduced capacity of these countries to ensure food security. Local food shortages and rapid spikes in food prices led to food riots and clashes with government forces in several countries in the late 1990s, and again in 2008 and 2011. Dependence on food imports is already above 50% in the Levant and will continue to rise.

Water has also been the source of distrust across borders, and has even contributed to violent conflict. The erection of the Israeli National Water Carrier pipeline in the 1950s was perceived by Syria and Jordan (both Jordan River riparian states) as an act of aggression; construction sites were attacked and several attempts to destroy the pipeline were made. In the early 1960s, the Arab League-led plan to divert the origins of the Jordan River into Syria – limiting the amounts of water crossing over to Israel – was considered to be a contributing factor to the 1967 war. Further north, Turkey's unilateral dam building changed flows in the Tigris and Euphrates rivers, straining relations with downstream Iraq and Syria. This led to the deployment of the Iraqi and Syrian armies to the Turkish border in the 1970s. While that crisis de-escalated, water relations remain tense among the three states.

Evolving water priorities

An understanding of these security challenges has not always been integrated into the policies of international actors working on water issues.

In the 1950s and 1960s, development aid was focused on meeting the demand for technical knowledge and capital for economic growth. In the water

realm, this involved investment in infrastructure and dams which could provide power, irrigation, and flood control. In the last 30 years, more aid has been focused on water sanitation and hygiene (WASH). From 2007 to 2013, the EU committed more than €2.4 billion to the water sector, mainly for WASH, with water a focal sector for EU support in 28 countries. In the MENA region, 15% of the population still lacks improved drinking water sources and 18% lack improved sanitation, but with much of this remainder concentrated in the poorest countries, much aid for the region has shifted to other focal sectors.

The money that is still spent on water issues is increasingly focused on water governance – to limit demand and pursue integrated management of water systems. Jordan, for example, has benefited from support to update its water policies and work on integrated water management. It is still an inefficient water user – the rate of groundwater pumping is still far above the replacement rate – but Jordan's agricultural sector has reduced the farming of water-intensive grains. Now, barely 2% of the grains consumed in Jordan are grown in the country.

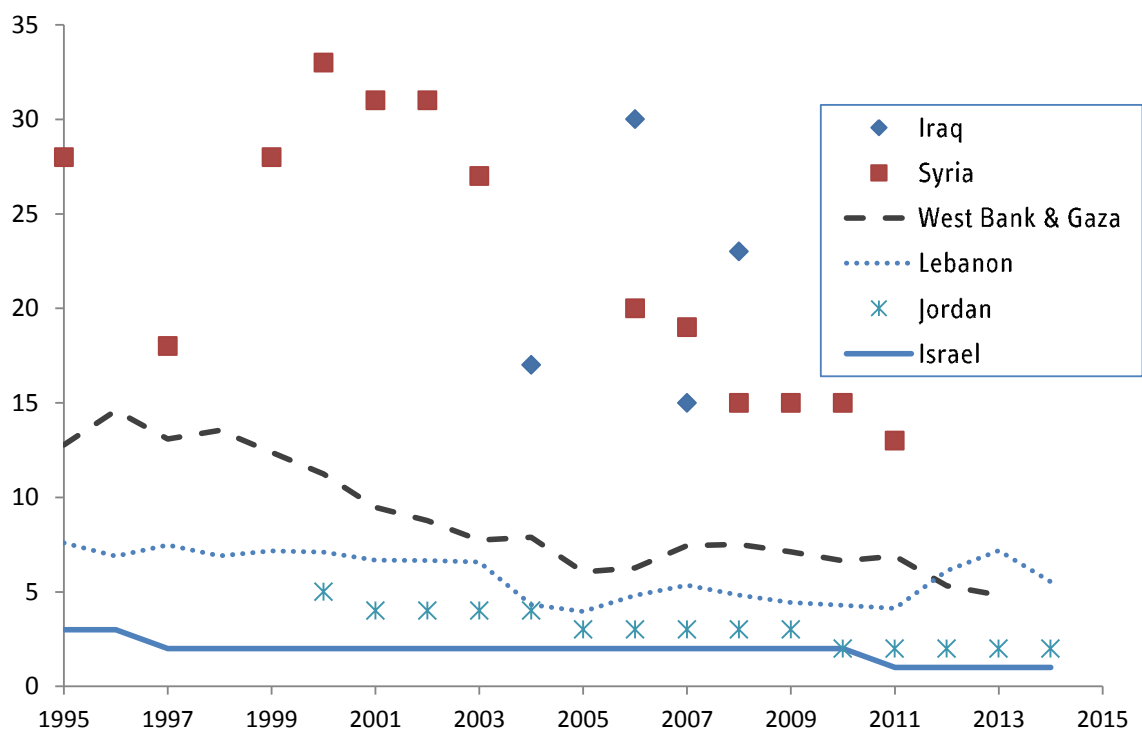
But water is so integral to lives and economies that technical support to water projects can only partially address the wider challenges caused by increasing water scarcity.

Aid, politics and crisis

Since the end of the Cold War, there have been two major evolutions in aid work. The first is a greater focus on poverty reduction, seeking to make the greatest impact on the poorest sectors. The second evolution has been an attempt to better understand and work with the political realm. Rather than attempting to stay apolitical and technocratic, politically smart development takes into account political and security realities. An important example of this is the new World Bank strategy for the MENA region, which explicitly recognises peace and stability challenges, attempting to identify how development work can address them, rather than working around them.

For the EU, both these evolutions are captured in the 2011 Agenda for Change, which has strongly informed programming for the 2014-2020 period. For middle-income countries (which include all the countries of the Levant except Israel), EU aid has thus shifted to different focal areas. In Jordan, EU aid targets the rule of law, energy, employment and the private sector, while in Lebanon, security sector reform, social cohesion, and natural resources management are focal sectors. In Iraq, the EU

Employment in agriculture (% of total employment)



Data source: The World Bank

had water and agriculture as a focal sector for the 2011-13 period, funding major projects on water, sanitation and comprehensive water management. However, oil-rich Iraq now has close to 90% access to improved WASH facilities, so support has shifted towards governance and rule of law issues.

This makes sense since in richer countries, resource challenges are less about availability than about prioritisation, management and governance. Water is both a technical and a political issue. This is why there is great value in effective application of a comprehensive approach that integrates understanding of political and security issues into development planning, and that raises the profile of water, natural resource management and development policy for diplomatic and security actors.

The impacts of water scarcity on security, and the impacts of security problems on water management, require joined-up analysis and cooperation across disciplines. This includes integrating water and natural resource issues into the policies, tools and activities that diplomats can use to avert or address crises.

The European Union has already made some progress on this integration. At the transboundary level, the European Council passed new conclusions on water diplomacy in 2013, prioritising integrated and cooperative responses to political,

security, and transboundary challenges within river basins. The EU also uses its Instrument Contributing to Stability and Peace (IcSP), which is based on the principle that 'future work on security and development should include the security and development implications of climate change, environmental and natural resource management issues, and migration'. Another valuable diplomatic tool is the Global Conflict Risk Index, produced by the Joint Research Council of the European Union, which includes water stress as a potential factor in determining conflict risk.

The EU has also increased support for *long-term* resilience-building among vulnerable populations. The EU has produced a smart Action Plan for Resilience in Conflict-Prone Countries, supports the Global Climate Change Alliance plus (GCCA+) for the most climate vulnerable countries, and runs the SHARE (Horn of Africa) and AGIR (Sahel and West Africa) initiatives to improve food security, nutrition, and livelihoods in a climate-proof way. However, most countries in the Middle East are not eligible for these projects for geographic or wealth reasons, yet are among the countries most affected by water stress, climate change, and the resulting security consequences.

Supporting water management

Building on existing efforts, there are thus several areas in which additional resources can be



dedicated to addressing the impacts of water scarcity in the Levant.

To start, reducing the impacts of water scarcity requires continued improvement in managing the water itself – matching demand with sustainable supply. This will involve emphasis on water conservation, particularly in the agricultural sector. The proportion of freshwater dedicated to agriculture ranges from 56% (Israel) to 88% (Syria) in the Levant, but MENA irrigation efficiencies remain well below 50%. This marks it as the key sector for cutting water use, while being aware of its importance for rural livelihoods and for contributing to domestic food security. Increased use of water pricing could help, but requires investment in metering and data collection, as well as political choices about subsidised water users.

On the supply side, greater diversification of water sources can help avoid over-reliance on one source. More effective treatment and re-use of wastewater and greywater, for example, can play a role in a rapidly urbanising region. Additional investment in infrastructure will also be needed, including transport and storage facilities and the development of sustainable sources. Brand new water sources, unfortunately, are hard to come by. The MENA region leads the world in desalination, for example, but with costs and energy requirements only gradually dropping, it is mostly used in the driest and richest places such as in the Gulf or in Israel.

These efforts at demand reduction or supply improvement should not occur in isolation but as part of integrated water management systems that take into account changing resource availability, climate impacts and population needs when planning infrastructure and agriculture. International donors can provide financial and technical support for these initiatives, including by facilitating data collection, research and technical cooperation. But for the hard decisions about subsidies and domestic distribution of resources, international actors can only play a limited supporting role.

Addressing security risks

International actors can play a role, however, in managing the wider impacts of water scarcity on stability and security. While there has been progress on understanding the links between water and conflict, water issues are not always sufficiently reflected in early warning tools or conflict assessments. Increased research can help identify potential local hotspots, with the understanding that scarcity impacts can be felt across countries,

regions, and transmitted via markets across the globe.

In responding to the *transboundary* waters challenge, it is noteworthy that around the world it is easier to find examples of cooperation than of conflict. Even in the Middle East, the water cooperation between Jordan and Israel is an important model. While the EU engages in water diplomacy, notably in Central Asia and on the Nile, the Levant has not been a priority. But the paucity of cooperative transboundary mechanisms in the region suggests that additional external support can be helpful, if not always readily welcomed. The eventual resolution of the Syrian conflict, for example, will create a new situation in which to engage on Turkey-Iraq-Syria water relations; in the long term, support for water management can go beyond national settings to Joint Water Committees that help allocate shared water resources at the basin level.

Insecurity risks can also be addressed through expanded support for community resilience. On the food security issue, the countries of the Levant can be helped to adapt to increasing reliance on food imports by facilitating local access to markets, reducing trade barriers, and enhancing market information so that food price fluctuations can be successfully managed. On the livelihoods issue, extra support may be welcomed by countries that are managing changes to the distribution of water and the related livelihoods. Changes to agricultural systems, water systems and land use often have the biggest impacts on rural areas. Since even positive investments in sustainable agriculture can have a negative impact on agricultural employment, extra support may be required for disrupted populations. This is especially the case during the current migrant crisis: among the biggest limiting factors in settling displaced populations within the region is water availability.

In the end, while much of the effort to address the wider consequences of water scarcity involves action in the development arena, these efforts can be most effective if they are embedded in a comprehensive, conflict-sensitive, and politically aware strategy that explicitly targets the potential security risks.

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