The Water Crisis in Syria: Should Israel Intervene?

Eden Kaduri and Inbar Noy-Freifeld

Institute for National Security Studies (INSS) – Tel Aviv University

The water crisis in Syria, caused by the Euphrates River drying up, drought, and the civil war's impact on water infrastructure, is part of the unprecedented humanitarian crisis in the country. In the short term, the humanitarian crisis, including the water crisis, offers Iran fertile ground for penetrating the Syrian state and consolidating its regional influence. In the long term, a worsening water crisis increases the likelihood of security escalation, which will spur millions of climate migrants to knock on Israel's door. This article proposes viewing the water crisis in Syria in the context of Israel's civilian involvement in the region and a means for increasing its regional influence. Aid toward resolving the Syrian water crisis, be it with assistance from Israeli companies, direct water provision, or funding for water, will earn Israel points in the eyes of its new partners in the Middle East and international organizations, and create Israeli influence that may serve at least as a partial counterweight to Iranian influence in Syria. This would improve Israel's regional status and help it build a foundation for possible future improved Israel-Syria relations.

Keywords: climate and national security, Syria, water crisis, climate diplomacy, humanitarian aid

Introduction

The water crisis in Syria was one of the factors that led to the outbreak of local protests in 2011, and today it exacerbates the already severe humanitarian crisis in the country. It was caused by the drying up of the Euphrates River, by drought, and by the effects of the civil war, which led to the destruction of some 50 percent of the country's water infrastructure. If these elements are not addressed effectively, the severe water shortage in the country portends future ills for Syria, including worsening famine, disease, and a severe energy shortage. These would likely lead to the entrenchment in Syria of parties hostile to Israel, led by Iran. In the future, they may also lead to renewed fighting and to a wave of climate migration from Syria.

Israeli interests in Syria are led by security interests: preventing conditions in which a war could erupt in the north and the "radical axis" would enjoy a strategic advantage. This involves distancing Iran from Israel's northern border, damaging the strength of axis members, and disrupting Syrian-assisted arms buildup. Political interests include enhancing Israel's value for regional and global actors. Today Israeli policy for fulfilling these interests is reflected in the Campaign Between Wars (CBW),

but there are limits to what this campaign in its current format can achieve, and in fact it sometimes harms Israeli interests. The INSS *Strategic Analysis for Israel 2023* recommends increasing Israeli civilian involvement in Syria and expanding local and regional collaboration as a complementary effort to CBW. This paper proposes viewing the water crisis in Syria as a potential component of Israel's civilian involvement and a means for enhancing its regional influence. It focuses on the effects of the water crisis on Syria while examining potential implications for Israel, and analyzes Israel's options regarding possible aid to Syria.

The Water Crisis in Syria

The Middle East is among the regions in the world most vulnerable to the climate crisis, which will dry up many local water sources and have a dramatic effect on food production capabilities. Water shortages are already a serious problem in the area, and in 2021, 11 Middle East states were among the top 17 states with the most severe water shortages in the world. Alongside other states such as Jordan, Syria is one of the states most vulnerable to water shortages. The ongoing water crisis without a solution on the horizon is likely to have serious implications for the region's national security.

Syria is far from reconstruction. Economic and humanitarian indicators for the country continue to decline, and the state does not have the economic or operational ability to rebuild its infrastructure, including its water infrastructure.

Drought and improper water resource management were among the causes of the protests that led to the outbreak of the civil war in Syria in 2011. Climate change trends, along with other fundamental problems, caused a dramatic reduction in national wheat production and an ongoing water crisis, which led to a steep rise in food prices in the years prior to the war. The civil war has mostly abated, but its destructive impact on Syria's society and economy continues to be felt, compounded by climate trends and natural disasters, including the February 2023 earthquake, that have worsened the humanitarian crisis. After more than 12 years of war, there is an unprecedented humanitarian emergency in Syria, characterized by millions of displaced persons and refugees, extensive destruction of civilian infrastructure, poverty, food insecurity, and water shortage.

Syria is far from reconstruction. Economic and humanitarian indicators for the country continue to decline, and the state does not have the economic or operational ability to rebuild its infrastructure, including its water infrastructure. Only 50 percent of water drainage infrastructure and sanitation systems function properly across the country, due to attacks, power shortages, or bombings. As a result, there has been a 40 percent reduction in potable water over the last decade. Another cause of the severe water crisis is drought, which has caused the drying up of the Euphrates River, where the water level has reached a low point not seen since the 1950s. Temperatures in northern Syria are an average 1˚C higher than in the 20th century, and average rainfall has decreased by 18 mm per month. According to the Iraqi Ministry of Water Resources, if these trends continue the Euphrates is in danger of drying up completely by the year 2040. Turkey's use of water from the Euphrates as a weapon against Syria exacerbates the distress. Over the last few decades, Turkey, which controls some 90 percent of the Euphrates' water flow, built dams that allow it to control water flow and dry out northern Syria as a source of political leverage. These dams reduced the water flow in the Euphrates by half.

The Euphrates is the primary water source for agriculture, personal consumption, and energy production in northern and eastern Syria, and thus its drying up has dramatic consequences for the local population. The three dams in the Syrian portion of the

Euphrates supply some 70 percent of the energy consumed in Syria. At present only four out of eight turbines produce electricity at the Tabqa Dam, the largest dam in Syria, because of the river drying up. Consequently, electricity production capacity has declined significantly, and most parts of the country have power only a few hours a day.

The water crisis has also caused dramatic damage to agriculture and the food sector. Wheat production in Syria has decreased every year due to the water shortage, with production of one million tons in 2021, down from 2.8 million tons in 2020, which represented about one-quarter of wheat production prior to the war. Syria thus became dependent on wheat imports, and this in turn increased the level of hunger in the country. Some 12.4 million people, 60 percent of the total population of Syria, suffer severe food insecurity, despite increased humanitarian aid. Food insecurity also led to renewed protests in various regions of Syria in January 2023, with the message: "When nations are hungry they demand accounts from their rulers."

The water crisis has forced the population to pursue unsafe alternatives, such as illegal wells, development of a private water sale industry, and water from polluted rivers. This has created fertile ground for the outbreak of diseases, especially cholera, which developed due to pollution in the Euphrates. This pollution is becoming more concentrated as the river dries out. Cholera is almost unknown in modern countries with proper sanitation and a functioning water system, but that is not the case for many Middle East countries. Indeed, the cholera outbreak in the north is part of a wider epidemic across the Middle East. It began in Afghanistan in June 2023, spread to Pakistan, Iran, and Iraq, and moved from there to Syria and Lebanon. One cause of the massive contamination between countries is the Euphrates River, as its outflow connects them: as the river dries out, the proportion of bacteria rises. The epidemic was first identified in northern Syria in the Aleppo region, which is still one of the major epicenters of the outbreak. In August 2022 some 80,000 suspected cases of cholera were identified, and some 100 deaths were attributed to it—a fatality rate of 0.13 percent. Around half of the deaths were of children and infants.

The water crisis in Syria is exploited by Iran to increase its influence on Israel's northern border. In 2019 a Memorandum of Understanding between Syria and Iran was signed, in which Iran committed to renovate Syria's water and sewage infrastructure. In 2022 Iran established water desalination facilities in the al-Hasaka province in northern Syria, in order to overcome water stoppages caused by Turkish dams. The Iranian Minister of Energy repeated recently that Iran is committed to assist Syria with the reconstruction of its water and electricity infrastructure. Published reports state that Iran will use Iranian companies to assist in building water canals, irrigation, and drainage systems to reconstruct Syrian infrastructure. This assistance is another layer in Iran's civil entrenchment in Syria, which includes deep Iranian intervention in the Syrian state via penetration of civilian fields such as culture, education, and the construction of national infrastructure. This civil entrenchment is intended to further military consolidation. In this case, Iranian water diplomacy serves as a means of influence on Damascus, with Tehran exploiting the crisis to foster Syria's long-term dependence on Iran.

Syria is ranked 25 among 33 states that will almost certainly experience an extreme water shortage in the year 2040. Without an appropriate water policy and without development of a water infrastructure that will allow it to address current trends, especially the drying up of the Euphrates River, drought, and the war's impact on infrastructure, an extreme water shortage will have serious consequences for the Syrian state, including worsening famine, the spread of infectious disease, and a severe energy shortage.

Implications for Israel

Last year Israel had its first experience of a health "threat" resulting from the Syrian water crisis, when cholera bacteria in the Euphrates reached Israel via streams that cross between the two countries and in November 2022 were detected in the Yarmouk River. Israel's Ministry of Health stated that this was not a threat to Israel, thanks to the country's advanced sanitation systems. But it appears that the cholera epidemic in Syria is not close to eradication, and its leaking into Israel in the river water is an important reminder of the geographic dimension of the Arab-Israeli conflict. If so, how will the water crisis in Syria affect Israel, if at all, and what will be the implication of "ignoring" the severe distress on Israel's northern border?

From a national security perspective, instability in Syria over the past 12 years has led to various threats to Israel: enhanced Iranian influence in Syria due to its economic dependence on Iran, and the rise of terrorist organizations in Syria, especially ISIS. These joined the fear of a major wave of refugees from Syria, which did not occur, and arms that spilled over into Israel's north.

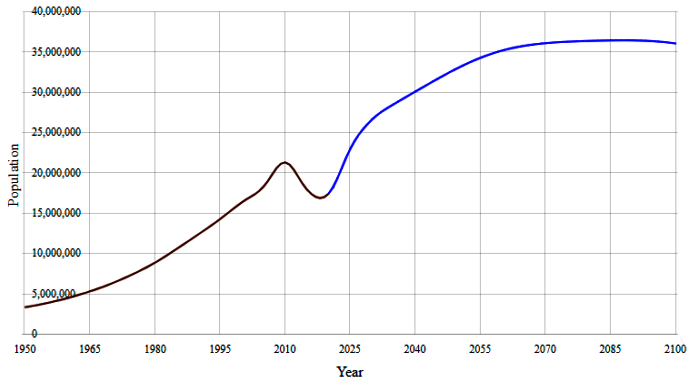

Figure 1. Demographic trends in Syria
Source: Statistics Times

A shortage of potable water in most of the big cities and urban settlements in Syria is likely to lead to major riots, alongside mass migration from rural settlements, especially those in the periphery, to the big cities.

The Syrian civil war has been decided, but a report by the Israel Climate Change Information Center predicts additional future security escalation in Syria, which may be broader in scope and have a more significant impact on Israel that what was experienced over the past decade, as a result of an aggravated water crisis and demographic trends. Syria's population is expected to grow by 60 percent by 2050, numbering a projected 33 million people (Figure 1).

A shortage of potable water in most of the big cities and urban settlements in Syria is likely to lead to major riots, alongside mass migration from rural settlements, especially those in the periphery, to the big cities. Millions will likely seek to emigrate to Turkey and Lebanon, and there stand to be serious, widespread attempts to enter Israel. This scenario joins the regional spread of diseases such as cholera. Israel managed to restrain the wave of Syrian refugees and prevent their entry into Israel so far, by diverting them toward Jordan and reinforcing troops on the northern border, but the future geopolitical situation, as described in the Climate Change report, may be worse, due to worsening climate trends, and may make it difficult for Israel to defend its borders. Furthermore, the intensifying crisis may lead to a resource war in the Middle East, and given that Israel is stable in terms of its water resources, it is likely to be one of the most attractive targets for climate refugees, including from other countries, especially Jordan.

Israeli Water Diplomacy

According to OECD statistics, Israel invests in international development in the fields of agriculture, water, and health, primarily in Jordan, the West Bank and Gaza, India, and Ukraine. This investment is principally via bilateral channels in the form of grants funded by Israel. Likewise, Israel has direct cooperation in the water field with a number of Middle East states, whereby the parties agreed to transfer water in various ways. In addition,

in the framework of the peace agreement with Jordan signed in 1994, Israel agreed to supply Jordan with an annual 50 million cubic meters of water, primarily from the Sea of Galilee. Over the years the quantity of water Israel provides to Jordan has increased, most recently reaching 100 million cubic meters, and further increases based on desalinated water are being considered. Relations based on cooperation on water are one of the primary motivations for the Israel-Jordan peace agreement, and they contributed over the years to the creation of diplomatic ties between the countries (although this has not trickled down to a warm peace between the populations). Cooperation programs between Israel and Jordan were enhanced by a Memorandum of Understanding signed in late 2022, also known as the Green Blue Deal (water for energy). Under this agreement, Israel, Jordan, and the United Arab Emirates agreed to advance projects with Emirati funding and mediation to establish solar fields in Jordan that will provide solar energy to Israel, which will in turn supply Jordan with water from new desalination plants that it will construct. Although it is not currently clear whether the project will materialize, it is still an important development in Israeli water diplomacy.

There is also cooperation around water with the Palestinians based on the Oslo Accords, which stipulate that Israel is responsible for supplying water and managing the Palestinian Authority's water sources. An Israeli-Palestinian committee was established to authorize water drilling, manage sewage infrastructure, and set water prices. Israel undertook to reserve water from its sources to sell to the PA based on need, in part from Israeli desalination plants. This cooperation with the PA has been criticized extensively over the years, with the primary charge that Israel exploits the water shortage in the West Bank as a means of control. This matter sharpens the importance of creating equal, mutual partnerships to leverage these projects as water diplomacy that will influence the relations between Israel and the PA. Currently, however, cooperation on water issues with both Jordan and the PA contributes to regional stability, because it improves the water situation of Israel's neighbors and creates common interests that allow cooperation.

Another way to fulfill the potential of Israeli water diplomacy is through technology exports. At the UN Water Conference in March 2023 the Arab League states declared their commitment to find sustainable solutions to the regional water shortage. As part of that effort, they seek technological solutions to the crisis, and are willing to invest resources in such solutions. This is an opportunity for Israel, which is known worldwide as a leader in water tech, with an ecosystem of no fewer than 180 Israeli companies in the field. Today Israel has business ties in water tech with several regional states, including Arab states, thanks to opportunities created by the Abraham Accords. Thus, for example, Israel cooperates with Morocco, which faces a severe water shortage, while promoting projects and joint knowledge development for technological solutions to the crisis. The UAE is an important state with which Israel aspires to advance its commercial cooperation in general, and its cooperation on water in particular. For its part, the UAE sees Israeli technology as an important layer in coping with the water crisis in the Middle East, and has business ties with companies in this field. One of the outstanding examples of the potential in Israel-UAE cooperation and its possible mediating role is the Green Blue Deal.

Possible Aid to Syria

Israel and Syria have thus far discussed the water issue only in the context of Syrian territorial claims in the Sea of Galilee region, in the context of peace talks in 2008. According to reports, Israel's unwillingness to grant Syria access to the Sea of Galilee was one of the reasons the talks blew up. There has thus not been a direct channel between Israel and Syria in the context of the water crisis, except for

private humanitarian initiatives such as the venture by the Israeli firm Watergen, which installed technology that allows the production of water from humid air in the city of a-Raqqa in northern Syria. This technology provides clean water for some 500 Syrians living in displaced persons camps as humanitarian aid, without any involvement by the State of Israel. The company's CEO declared that the aim was "to build peace and a common future around Israeli technology."

The day is still far off when Israel and Syria will hold direct talks that could enable cooperation, as evidenced by the Syrian refusal to accept humanitarian aid from Israel after the earthquake there in February 2023. However, Syria's recent readmission into the Arab League constitutes an opportunity for Israel. Israel's ties with Arab states, and the Assad regime's return to the embrace of the Arab world, can serve as a medium for transmitting indirect aid, or alternatively, Israel could use its new allies as go-betweens, while leveraging its geopolitical interests and enhancing its political status.

The UAE, as the country leading the normalization process with the Assad regime, emphasizes the importance of Syria's reconstruction and is willing, according to assessments, to invest significant resources toward this end. In that context, Syria's participation in the COP28 Summit in Dubai in November 2023, in which the issue of international and regional aid for coping with the water crisis in Syria was likely discussed, is an opportunity to promote an initial dialogue regarding Israeli involvement via the UAE.

In the context of wide-ranging and long-term solutions, the 2008 peace talks formulated a proposal for a pipeline that would carry water from the Sea of Galilee to southern Syria. Desalination plants on Syria's Mediterranean coastline based on Israel technology could also be built, potentially with external funding and mediation, similar to the Green Blue Deal. Israeli involvement in direct water transmission, as with the cooperation mechanisms Israel has with the PA and Jordan, could be implemented with Syria's assent. A regional framework could be sketched out, led by the UAE, that includes additional issues, and therefore would widen the political achievement beyond the specific project—the regional framework could include transferring water to Syria via Jordan and expanding the Green Blue Deal, by bringing Syria into the agreement framework. Incorporating Israeli technologies in solutions for Syria opens a broader spectrum of simple solutions, including those that only involve knowledge transmission. In that vein, Israel's involvement that remains covert would presumably reduce Syrian resistance.

One way or another, Israel could perhaps demand return for its assistance, such as distancing the Iranians from Syria or ceasing Syrian assistance in arming Hezbollah. This would resemble moves made vis-à-vis the Syrian regime recently: reported demands from Assad to reduce the presence of Iranian troops and restrain them, in exchange for his return to the Arab League. Israel can raise such demands via Arab states who have diplomatic relations with Syria, while formulating a framework of unofficial understandings between the parties. Perhaps such a framework of understandings would build the foundation on which Israel-Syria ties could gradually develop further in the future.

There are also potential economic gains from exports of Israeli technologies with proven capabilities, which may lead to greater international interest in such technologies. As for the US sanctions that may influence companies' ability to work in the region, the decision to remove sanctions from northern Syria—the area held by the Kurds, in order to allow foreign investments in agriculture, communications and health, and education services—constitutes a precedent of US willingness to make exemptions from sanctions for aid relating to the water crisis.

Furthermore, Israel can increase its involvement in humanitarian aid to Syria in

general and in solutions to the water crisis in particular via international organizations, with an emphasis on the United Nations. In September 2021, the UN presented a plan for responding to the impact of the water crisis in northern Syria (Critical Response and Funding Requirements—Response to the Water Crisis in Syria) at a cost of $200 million, in order to assist some 3.4 million citizens. In spite of the importance that the OECD attributes to aid to developing countries, Israel is among the OECD countries that invest the lowest proportion of their GDP in international development—0.08 percent of GDP in 2021, in contrast with the OECD average of 0.33 percent. Increased Israeli involvement in international development programs in Syria, whether via aid funding or via sharing of Israeli technology and expertise, will strengthen Israel's status and its asset value in the eyes of its allies, as well as its influence over international development programs.

Thus, aid might be direct, based on cooperation in which Israel supplies water directly to Syria, or translate into assistance in establishing desalination plants in western Syria, or other technological assistance. This could occur in a regional framework that also includes Jordan. Indirect aid could include Israeli technologies, or even the relevant technological expertise, without the appearance of direct involvement, or funding via international organizations. All this can be done with the leading role and the funding of Arab states, especially the UAE.

Should Israel Assist Syria?

In 2023 Israel perceives Syria as a secondary threat. Its political status in the region is improving, but it still has limited influence. It thus appears that for the issue of Israeli water diplomacy, the urgency and value of assisting other states is greater than the urgency of aid to Syria. There is also the question of how effective water diplomacy is likely to be in solidifying relations between countries, particularly in a complex case such as that of Israel and Syria.

Aid to Syria is no more essential to Israeli national interests than aid to other countries in the region, but the possibility of water diplomacy with a hostile state incurs positive potential, in light of momentum that may be relevant for such a move. Attempts to reach a political agreement with Syria failed in the past, in part given disagreements over water resources. Today, after the resolution of the civil war and during the current regional detente, which also enabled the return of the Assad regime to the embrace of the Arab world, the door to cooperation may reopen.

The water issue may enable cooperation on a vital interest of the Assad regime, which is imperative for the country's reconstruction and relates to a civilian issue that is not perceived as political in the narrow meaning of the term. Regarding the implications of such cooperation between the countries, emphasizing Israel's asset value for Syria and creating a certain degree of dependence on Israel may in the future lead to additional forms of cooperation and open the door to political discourse. The US will oppose moves that recognize the legitimacy of the Assad regime, but its consent (behind the scenes and in response to demands) to the regime rejoining the Arab League, as well as its exemption of northern Syria from sanctions for humanitarian reasons, strengthen the assessment that it will agree to moves that improve both the humanitarian situation in Syria and its strategic situation in the region, given the creation of a configuration that would allow demands to be made of the Assad regime in exchange for aid.

Conclusion

Israel's Campaign Between Wars in Syria has limited effectiveness in dealing with Israel's complex long-term challenges, as they are not only military or security-related in their essence. In Syria an unprecedented humanitarian crisis is underway, and the water crisis is a major element. In the short and medium terms, this and additional factors provide fertile ground

for Iran to penetrate the Syrian state, in order to further consolidate its regional influence. In the long term, the deterioration of the water crisis will increase the risk of a security escalation in the form of a resource war, and potentially lead to millions of climate refugees knocking on Israel's door.

The water crisis presents an especially complex challenge for Syria and those that seek its reconstruction, especially the UAE and Jordan, with whom Israel has diplomatic ties. Syria's return to the embrace of the Arab world offers Israel an opportunity to aid in solving the water crisis there, whether directly or indirectly. Assistance in solving the water crisis in Syria via Israeli companies, direct water supply, or funding will earn Israel points in the eyes of its new allies in the Middle East and in the eyes of international organizations, and create Israeli influence that may constitute something of a counterweight to Iranian influence in Syria. This would also help create infrastructure that could one day develop into improved relations between Israel and Syria.

Eden Kaduri is a former research assistant to the Managing Director of INSS and the Northern Arena Program Coordinator. She holds a B.A. cum laude in Political Science and International Relations, and is an M.A. student in Security and Diplomacy Studies at Tel Aviv University. Eden is also a graduate of the LEAD organization that develops young leadership and is active in the EcoPeace organization, which promotes environmental peace in the Middle East. She worked as a research assistant at Pnima—Israeli Solutions, a movement that aims to advance cohesion in Israeli society. edenk@inss.org.il

Inbar Noy-Freifeld is a Neubauer researcher associate in the geopolitical power research program at INSS, and focuses on technology and foreign policy. Her doctoral dissertation, in progress at the Department of International Relations at the Hebrew University, examines the social construction of peace and the representation of peace in political discourse and texts. She is a fellow in the Telem graduate program at the Leonard Davis Institute. She holds a B.A. and an M.A. from the Hebrew University. inbarn@inss.org.il