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Water

Between Conflict and Cooperation

Israeli-Jordanian Water Management Relations

Edmund Ratka / Michael Rimmel

One consequence of the brutal escalation in the Middle East conflict since October 2023 has been increased strain on relations between Israel and Jordan. For three decades, the two neighbouring countries have been bound by a peace treaty that also involves joint management of a key resource: water. While basic cooperation has largely held up despite all the political crises, there is still plenty of potential to expand collaboration.

The Hamas terror attack on Israel on 7 October 2023 marked the beginning of a violent escalation in the Middle East that continues to reverberate throughout the region. Sparked by the Abraham Accords in the fall of 2020, hopes for a new phase of regional cooperation – and therefore of Israeli-Arab rapprochement – seem to have been shattered for the time being. However, there is still a sense among many key players that both containing conflict hotspots and building regional cooperation structures are essential when it comes to economic development and long-term stability.

A fresh dynamic could emerge from a number of sources, such as the Middle East policy pursued by the new Trump administration, the continuation and strengthening of regional cooperation focused on the Israeli-Palestinian conflict, and the upheaval in Syria following the fall of the Assad regime. Iran's declining geopolitical strength is prompting a realignment in the Near and Middle East. In this context, it is crucial to explore which players can cooperate in ways that serve their mutual interests. A first step could be to adopt a practical, issue-focused approach to cooperation that begins with specific sectors. Ideally, this process would help build trust, and this trust could then be leveraged for deeper political links within the region.

Israeli-Jordanian water management relations are a clear example of how functional cooperation models can be established and maintained for mutual benefit, even amidst political tensions. At the same time, these models also highlight the vast potential for cooperation in the Middle East – a potential that remains untapped due largely to enduring political conflicts, such as the one between Israel and the Palestinians.

Jordan – Water as an Existential Resource

In springtime, the north of Jordan is transformed into a blossoming landscape. Some of the olive groves there date back to the time of the ancient Romans. In affluent West Amman, ornamental gardens and trees line the major transportation routes. Almost one hundred per cent of the population has access to clean water. But the impression is misleading: Jordan has a water problem. With three quarters of the country consisting of desert, geologists estimate that Jordan's natural water resources are sufficient for three million people. That was the size of the population in the 1980s, but since then, it has increased to more than eleven million. In addition to seeing relatively high birth rates, Jordan has repeatedly taken in refugees from neighbouring countries, most recently more than one million Syrians.

What is more, urbanisation and increased economic activity – especially in agriculture – have led to an ever-increasing demand for water. Accounting for just five per cent of the country's GDP and therefore economically less significant, the agricultural sector nonetheless consumes around half of the country's water supply. The situation is being exacerbated by climate change and the steadily decreasing levels of rainfall.

Jordan is already considered one of the most arid countries in the world, with 61 cubic metres of renewable fresh water per capita at present. Internationally, 500 cubic metres is considered the required minimum.[1] In scenarios that project current trends, a large portion of low-income households are predicted to suffer from water shortages by the end of the century, with unforeseeable consequences for the country's stability. In the short term, acute water scarcity will negatively impact key sectors of the Jordanian economy, including tourism.[2] Another concern is how long Jordan can continue to subsidise water prices so generously given its notoriously tight national budget, with potential ramifications for the country's social stability.

Jordan is dependent on cooperation with Israel.

Jordan is increasingly endeavouring to overcome these challenges, including with international support. German development cooperation, in particular, has been involved in this area for decades. The Kingdom of Jordan presented a new National Water Strategy in 2023. By combining more efficient water utilisation, integrated water management and the development of new water resources, particularly through the treatment of sewage water and desalination, the aim is to guarantee the country's water security in the long term. Underlying all this is a constant push for national water independence. For the time being, however, Jordan needs to import water – not least from Israel – in order to fully meet its needs. As a downstream country, Jordan is dependent on cooperation with Israel and Syria, with these countries controlling respectively the upper stretches of the Jordan and Yarmouk Rivers.

Jordan signed water agreements with Syria in 1953 and 1987, but these agreements were never able to realise their full potential due to recurring political tensions between the two countries. Jordan blames the construction of dams on the Syrian side and the drilling of illegal wells for the fact that the country has been receiving less and less water from the Yarmouk River. How Syria will develop after the fall of the Assad regime at the end of 2024 remains uncertain, and there is a fair amount of scepticism in Amman towards the new Islamist rulers in Damascus. However, there is nonetheless hope that good neighbourly relations will be possible with a regionally and internationally reintegrated Syria, including better cooperation in the water sector. At the same time, Israel's military advance in Syria following Assad's overthrow has meant that Israel now also has control over water sources in Syria that are important to Jordan.

Jordan currently consumes around one billion cubic metres (1,000 million cubic metres, MCM) of water per year, around half of which is used to meet fresh water needs. The majority of this water comes from groundwater reservoirs, but these are being overused and increasingly pumped dry. The share of rainwater collected by the country's 13 dams is around one-quarter. Treated sewage water is used for irrigation in agriculture and accounts for only 16 per cent of the water used.[3] The shortfall in fresh water is filled by water imports from Israel, which were set at 50 MCM per year in the 1994 peace treaty. An additional supply of another 50 MCM was also agreed upon, but – as is explained below – this is politically contentious and not a source on which Jordan can always count.

In order to meet its increasing demand for water and to conserve its overburdened groundwater reservoirs, Jordan has been working for several years on the ambitious National Water Carrier Project, which is also known as the Aqaba Amman Water Desalination and Conveyance Project (AAWDC). This project involves a large desalination plant being built on the Red Sea that is to supply 300 MCM per year to the densely populated north of the country, and plans are in place to expand this capacity even further in the future. Officially launched in the autumn of 2024 with the awarding of the contract to a French-led consortium, the project is

scheduled for completion by 2029. However, despite financial aid from several of Jordan's partner countries, including aid and loan commitments totalling 400 million euros from the European Development Bank and more than 100 million euros from Germany alone, the estimated costs of at least three billion US dollars are still not covered. Given that the potential of desalination inside the country itself has not been realised at all to date, the success of this project would be a quantum leap in terms of Jordan's water supply. Not only is desalination both costly and energy-intensive. It also poses an additional challenge for Jordan in geographical terms: the sea in southern Aqaba is hundreds of kilometres away, and the city lies at a lower elevation than the population centres in northern Jordan, where the demand for water is at its highest.

Water scarcity in the region has been a key issue for Israel from the very outset.

Israel – Water Supply as a Technological Achievement

Even in the Bible, Israel is described as a land flowing with milk and honey. This would hardly be possible without substantial amounts of water – a resource that has repeatedly fuelled conflict in the Middle East. However, this is not the only reason why water scarcity in the region was a key issue even before the state of Israel was founded in 1948. In an area that is naturally characterised by water scarcity, the founders of the state of Israel quickly realised that securing

A historic moment: Israel's Prime Minister Yitzhak Rabin, US President Bill Clinton and Jordan's King Hussein (from left to right) celebrating the Israeli-Jordanian peace agreement in 1994. The peace treaty also remains the basis of water cooperation between the two countries to this day. Photo: © WHA UnitedArchives, Imago.

a reliable water supply is essential to the country's survival and economic prosperity. As a result, water was a key factor in strategic considerations of the newly established state and its early development.[4]

With this early realisation in mind, Israel began to make considerable investments in the 1950s and 1960s in order to secure its water supply: the aim was not only to guarantee a supply of water to all households, which was in itself a highly ambitious goal at the time, but also to utilise water resources efficiently for agricultural production and industrial purposes. To that end, the Israeli parliament passed the Water Law in 1959, which stipulated that water is a public resource that cannot be considered private or state property in the traditional sense. This legal basis was crucial in establishing a systematic and sustainable water management system in which access to water on the one hand and its distribution and use on the other were managed through public, democratic processes.[5] Very early on, not only did Israel focus on legislative aspects, but professional administrative organisations were also set up with the involvement of the private sector in order to implement key water supply and water treatment projects in partnership with the state.

Modern technologies have made Israel a global model in the field of sustainable water management.

It is thanks to these strategies and technologies that Israel has become a world leader in the field of water treatment. However, there were always difficulties along the way. At the beginning of the 2000s, a high-profile nationwide campaign by the Israeli government under the motto "Israel is drying up" raised grave concerns among Israelis that water was still in short supply. This makes the progress made in recent decades all the more remarkable. Today, some 70 per cent of the drinking water used in Israel comes from five large desalination plants along the Mediterranean, which use state-of-the-art technology to convert seawater into drinking water, thereby relieving the pressure on the already scarce natural freshwater sources. Three further desalination plants are currently under construction and are set to further secure the country's supply of water.[6]

However, it is not only desalination that makes Israel a world leader in applied water technology. Indeed, advanced wastewater treatment systems are another key development. Today, around 85 per cent of wastewater in Israel is recycled and used for agricultural purposes, while advanced technologies are implemented to minimise water loss.

Not only have these innovations had an impact on Israel itself, but the ability to utilise water efficiently as a resource thanks to modern technologies and innovative strategies has maintained the quality of life for the population while at the same time making the country a global model in the field of sustainable water management. In a region in which water has often been seen as a strategic weapon, Israel's technological achievements have put the country in a unique position not only as a user and keeper of this precious resource, but also as a role model and partner to other countries in dealing with water scarcity.

The Israeli-Jordanian Water Cooperation

Dating back to the founding years of the two neighbouring countries, water policy relations between Israel and Jordan have developed in a complex process of conflict, competition and cooperation. As early as in the 1950s, the US attempted to mediate between its allies by proposing a regional water management programme that would also include Lebanon and Syria. Named the Johnston Plan after the US special envoy at the time, the proposal failed because it was rejected by the Arab League, which wanted to avoid implicitly recognising Israel. However, Jordan and Israel nonetheless de facto adopted some elements, which

ultimately resulted in the water-related elements of the 1994 peace treaty.

Projects have often failed due to a lack of political will.

The Israeli-Jordanian peace treaty remains the basis for water cooperation between the two countries to this day: the treaty regulates the allocation of water from the two most important rivers – the Jordan and the Yarmouk – as well as from the cross-border groundwater reservoirs. Since these sources are of crucial importance to the water supply of both countries, a joint water committee was established following the signing of the agreement. The committee organises cooperation over water management, and it functions quite well, at least at the practical and technical level. In addition, project ideas have repeatedly been developed that are focused on making more effective joint use of water resources, though these ideas have often failed due to a lack of political will.

These projects have included the Red Sea-Dead Sea Conveyance Project (RSDSC), which was agreed upon in 2015 by the governments of the two countries with the mediation of the US and the World Bank. A canal was to be built between the Jordanian harbour city of Aqaba on the Red Sea, and the Dead Sea, which is situated inland between Israel and Jordan. The aim was to supply fresh seawater to the Dead Sea, where the water level drops by one metre every year. As a project whose technical outlines were developed as early as in the 19th century and then more concretely in the 1960s, one of its remarkable aspects was the involvement of the Palestinian Authority. After years of bureaucratic delays and environmental controversies, however, Jordan withdrew in 2021, citing a lack of interest on the Israeli side.

More important for Jordan and always a politically controversial issue is the supply of 50 MCM of fresh water per year from Israel over and above the 50 MCM per year stipulated in the peace treaty. This additional amount is also laid out in the peace treaty, although the modalities are not specified in this case. Considered a necessary diplomatic compromise at the time, the provision subsequently led to repeated disagreements and delays, as in the spring of 2021, when Israeli-Jordanian relations deteriorated as one consequence of a flare-up of the Middle East conflict in East Jerusalem and the Gaza Strip. This situation changed abruptly when there was a changeover in the Israeli government from Netanyahu to Bennett/Lapid, with the latter making every effort to maintain good relations with the Hashemite Kingdom. In the autumn of the same year, the supply of fresh water from Israel to Jordan even reached a record high. "This is what good neighbours do," said then Israeli Foreign Minister Yair Lapid.[7] However, since the renewed change of government in Jerusalem and with Israeli-Jordanian relations hitting a new low against the backdrop of the recent Gaza war, the additional supply of water is once again up for discussion.

The agreement on the additional supply expired at the beginning of 2024 and was not initially extended by Israel, where anger towards Jordan had grown as a result of the events of 7 October 2023. Making its voice heard on the regional and international stage despite its limited resources, the Hashemite Kingdom has increasingly voiced its criticism of Israel's actions in this regard and on other geopolitical issues since the start of the Gaza war. The forceful rhetoric from Amman was perceived by many in Israel as excessive and inappropriate. Citing the situation in the Gaza Strip, in November 2023, Jordan also put on hold the "water-for-energy" deal – an Israeli-Jordanian-Emirati cooperation project that was designed to improve Israel's energy supply and Jordan's water supply. This in turn was seen by Israel as a sign of cooling bilateral relations.

Against this backdrop, the Netanyahu government only agreed to extend the water supplies after facing considerable pressure from the US and other Western partners and in light of

Jordan's assistance in intercepting an Iranian drone and missile attack on Israel, but the agreement was only for six months and lacked the usual years-long commitment. In Amman, the conclusion was drawn that the supply of this existential resource is dependent on domestic political majorities in Israel or on developments in the Israeli-Palestinian conflict, meaning that the resource can be used by Israel as a means of exerting political pressure. This situation is especially concerning for the Kingdom of Jordan as there has been a growing perception in recent years that Jordan's traditional allies in Israel – including the left-wing peace camp, liberal democratic forces and the military establishment – are losing influence.

As a result, voices in favour of strengthening Jordan's own national water autonomy have recently gained momentum, even though cooperative solutions with Israel would normally be technically more straightforward and therefore more efficient. What is more, Israel sells water to Jordan at preferential rates that are far below the market price in Israel itself. Moreover, in 2024, a new pipeline was completed – with US support – that is able to convey large quantities of fresh water from the Sea of Galilee to the Jordanian border.

Despite these political tensions, water cooperation remains a key component of bilateral relations. For Israel, not only is cooperation with

Domestic political headwinds: In November 2021, demonstrators took to the streets in Amman against a water-for-energy deal between Jordan, the United Arab Emirates and Israel. In Jordan, voices in favour of strengthening national water autonomy have recently gained momentum – even though cooperative solutions with Israel would generally be technologically simpler and therefore more efficient. Photo: © Mohammad Abu Ghosh, Xinhua, Imago.

Jordan in the water sector a necessity in terms of diplomacy and also security policy given the countries' long shared border, but it is also an entirely practical consideration since the two nations are heavily reliant on each other in this area. While Jordan is dependent on the water supply from Israel to meet the needs of its growing population and agricultural production, Israel likewise benefits from water supplies and also from the capacity to draw water from the Yarmouk River. It is this balance of interests that has kept the cooperation stable for decades – in spite of all the crises in the region.

Cooperation is more urgent than ever.

More than Just Water Is at Stake

The Gaza war following the Hamas attack on 7 October 2023 and subsequent developments have plunged the Middle East into a deep conflict, further destabilising the already fragile geopolitical situation. Violence has increased on several fronts not only between Israel and the Palestinians, but also between regional powers such as Israel and Iran, thereby causing tensions to spread throughout the entire Middle East. However, at the same time, this crisis has triggered or intensified a process of change: in many parts of the region, there is a growing realisation that long-term stability can only be achieved through increased regional cooperation and the containment of conflict hotspots.

It has become obvious that cooperation at various levels is more urgent than ever, be it political, economic, or in the area of security. Particularly in a context in which the effects of climate change are becoming increasingly noticeable and resources such as water are becoming scarcer, countries are being forced to accept that their future can only be secured through joint efforts. The water sector is a vital area in which cooperation is of great importance and in which there are realistic chances of progress: in the Middle East, water is not just a vital resource; indeed, it is also a pivotal geopolitical factor.

The region's extreme water shortage can be expected to be exacerbated by climate change and the rapidly growing population. This situation may give rise to conflicts, but it may also increase incentives for intergovernmental cooperation, with potentially positive spill-over into other policy areas. According to a recent paper by the Israeli Institute for National Security Studies (INSS), the Jordan-Israel Water Agreement has helped improve the difficult relationship between the two countries while at the same time maintaining a degree of trust in the region even though other aspects of bilateral relations are more difficult.[8] There are also some experts in Jordan who think that if lasting peace in the Gaza Strip can be maintained and the region settles down, novel progress could be made in terms of improving bilateral water and energy cooperation.[9]

A prime example of such progress would be the aforementioned water-for-energy deal. This ambitious project came about – again with American mediation – in the wake of the Abraham Accords, which inter alia facilitated the establishment of diplomatic relations between Israel and the United Arab Emirates. An Emirati company is to build a solar power plant in Jordan with a capacity of 600 megawatts that is to be supplied to Israel. In return, Jordan is to receive an additional 200 MCM of desalinated seawater from Israel. Although the project met with resistance in some sectors of Jordanian politics and society from the outset, memoranda of understanding were signed between the governments at the UN Climate Change Conferences in Dubai in 2021 and in Cairo in 2022, and various feasibility studies were commissioned.

Although the Jordanians have since cancelled the project in the wake of the Gaza war, the idea remains compelling. Non-governmental organisations such as EcoPeace have long argued that it would be beneficial for all sides to have Jordanian-Israeli cooperation – or perhaps even Israeli-Jordanian-Palestinian cooperation – at the nexus of water and energy supply.[10] Beyond

major projects such as the water-for-energy deal, smaller cross-border measures could also be developed to be established at the local level. Promising areas include the ecological restoration of the Jordan River as well as the sharing of experience and technology in the area of agriculture.

Water will, of course, always be a political issue. However, rather than using cooperation in the water sector to pursue other political agendas, the focus should be on highlighting the beneficial results of cooperation for people on all sides. In a world in which resources are increasingly used for political leverage, this type of pragmatic and mutually beneficial cooperation could be an important step towards closer regional cooperation in the context of sustainable détente and development. The Western allies of both countries – including Germany and the EU – could take on a more active role, for instance, by committing funds for cross-border and multilateral efforts.

Jordan and Israel have been bound to each other by a peace treaty for more than three decades. While this situation quickly turned into a "cold" peace, with public opinion divided in both countries and opposition being particularly strong in Jordan, resilient cooperation has been established in specific areas, and political crises have been overcome along the way. In addition to security cooperation and border security, this progress also includes relations in the area of water management. As such, there is at least some hope that by focusing on pressing issues of common interest in the region, the political elites – and ultimately, the societies of the Middle East – will be able to overcome power struggles and historical grievances.

– translated from German –

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