



Transboundary Water Conflicts in the Middle East Exploring Multilateral Environmental Cooperation between Israel and Its Neighbors

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The need to overcome the current stalemate on the governmental level in the disarmament and nonproliferation area in the Middle East/Gulf makes it imperative to look for new ideas and to rekindle old ones. After the failed Review Conference of the Nuclear Non-Proliferation Treaty in New York in May 2015, an atmosphere of disappointment and lethargy is dominating the entire policy field. The fact that the envisaged Helsinki Conference has not taken place has contributed to that stalemate; the goal of the international gathering in the Finnish capital was to discuss the establishment of a Zone Free From Weapons of Mass Destruction – nuclear, biological, and chemical warheads – as well as their delivery systems such as missiles. In an attempt to revive the negotiations on military cooperation, other fields of regional cooperation should be explored and tested. This POLICY BRIEF therefore poses the following question: Can cooperative initiatives from other policy fields be transferred to the disarmament and nonproliferation area which is the central theme of the entire series of POLICY BRIEFS?

The process of answering this question is based on three assumptions:

- A comprehensive notion of security includes ecological and human security in addition to military security
- Policy fields are different but not encapsulated so that a positive spill-over is in principle possible
- A change of perspective could bring new possible actors with pragmatic interest-based views (for instance also in the economic/financial realm) into the security arena.

This POLICY BRIEF explores the question under what conditions the water crisis in the Israel/Palestine/Jordan area can be transformed into a tool for cooperation, and why cooperation is in

fact in most (certainly not all) cases the best option. This issue further investigates whether cooperative initiatives in the ecological security realm can lead to an upsurge in the disarmament and nonproliferation area, and how the water sector can itself benefit from linkages with other policy fields.

Water in the Middle East

Borders play an important role in the Middle East; they are disputed, negotiated, and defended. Yet what happens if those borders are disregarded entirely by nature? Rivers, coasts, and lakes ignore political borders and create dependencies among riparians. Under certain conditions transboundary water systems can form incentives for cooperation. In others, it can be a catalyst for conflict. Environmental cooperation is increasingly regarded as an important facet of peacebuilding and has been given greater attention in light of progressing global climate change and human-engineered water stress. In water-stressed regions, transboundary water management can be a practical tool to develop environmental sustainability, share costs of technological innovation, and improve international relations and negotiation skills.

Yet successful joint water management requires confidence/trust, equally distributed incentives for parties, and relatively strong conflict resolution skills. In the Middle East, often none of those conditions are fulfilled.

The list of former or ongoing water conflicts includes Egypt and its fellow riparians over the Nile River; Syria and Iraq over the Euphrates and Tigris; Lebanon and Israel over the Hasbani River; and Israel, Jordan, and the Palestinians in the West Bank over the Jordan River system and several groundwater reservoirs, called aquifers.

Abstract

Transboundary water systems ignore political borders and create inescapable dependencies among riparians. In certain settings, such interdependency can stimulate transnational cooperation. In others, it can be a catalyst for conflict. The water crisis between Israel and Palestine is a facet of the conflict that is much less visible than struggles over power and politics, but which must be integrated into the peacemaking process – not least because it is embedded within a web of political and socio-economic issues, but also because it is in danger of creating grave humanitarian and environmental problems. As the region's water resources become increasingly scarce and polluted, the situation to overcome the natural water crisis using a top-down approach remains stuck in a deadlock. For cooperation to occur on an equal, sustainable basis, certain conditions have to be met, which will be presented in this POLICY BRIEF. In an attempt to revive the negotiations on military cooperation, other fields of regional cooperation such as the water realm should be explored and tested. This POLICY BRIEF therefore investigates under what conditions cooperative initiatives from the environmental field can be transferred to the disarmament and nonproliferation area. It further argues that the water sector can both contribute from and enhance on-going efforts in the disarmament and nonproliferation sector. ■

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Hydro(geo)logical Overview



Source: Green Field Geography, 'Conflicts at the local or national scale'. Online, available at <http://greenfieldgeography.wikispaces.com/Conflicts+at+the+local+or+national+scale>.

section will provide background information on the hydro(geo)logical composition of the region. The proceeding section will present the theoretical framework within which this issue is posited by outlining the predominant arguments put forward in the water discourse. Subsequently, the reader will become familiarized with the 1994 Israel-Jordan Peace Treaty which will be compared to the parameters of the 1995 Israeli-Palestinian Peace Treaty and its implementation. In the end, this POLICY BRIEF will point to the cross-sectional linkages of the water conflict, possible spill-over effects, and alternatives to multilateral cooperation, which is followed by a conclusion and a summary of the main points.

Hydro(geo)logical Overview

The Middle East is among the most water scarce regions in the world. The Israel-Palestine area has an exceptionally diverse landscape and climate, ranging from dry desert conditions in the south to snow-covered mountains in the north. The region's water sources comprise of coastal rivers, aquifers, and the Jordan River basin, which originates on Mount Hermon, stretches along Israel's border with Jordan, and ultimately flows into the Dead Sea. The Jordan River water system has four riparians: Israel, Lebanon, Jordan, and Syria. Although its stream flows along the border of the West Bank, the Palestinians are currently denied access to its water resources.

Underneath the Israel-Palestinian area lies the Mountain Aquifer which is shared by both Israelis and Palestinians. Its recharge area lies in the West Bank, making the Palestinians the upstream riparian and Israel the downstream riparian. Israel and the Gaza Strip are further supplied by the Coastal Aquifer which stretches along the Mediterranean Sea, but whose water basins are not connected. Due to continued over-exploitation (meaning a greater extraction of water than can naturally be replenished), insufficiently treated wastewater, and groundwater pollution, the aquifers and river basin have increasingly become brackish. This makes their untreated consumption harmful to health. Overexploitation has also resulted in the Jordan River's reduction to a mere fragment of its original size, as well as a higher salt water intrusion. Untreated wastewater and/or sewage infiltrates the groundwater and pollutes the river and aquifer systems, making water resources unfit for consumption.

The water supply in the region around Israel and Palestine is becoming progressively scarce due to proceeding climatic change as well as human-engineered water pollution and irreversible resource overextraction. The Organization for Economic Co-operation and Development predicts a 25 percent reduction of water availability and an overall negative impact on freshwater sources of the region resulting from climate change.¹ In light of these developments, environmental action to sustain water systems and avoid humanitarian crises can no longer be shunt. Two main questions remain: First, how can environmental action be linked to transboundary water cooperation? Second, is cooperation always the right option, or can it actually be counterproductive?

The Structure of This POLICY BRIEF

This POLICY BRIEF seeks to answer those questions on the basis of the Israeli-Palestinian water conflict by presenting the conditions of success necessary for multilateral water cooperation. The following



Due to the naturally arid climate of the region, but also because of the steadily increasing pollution of the water sources, Israel has made significant advances in the use and reclamation of water. Five large desalination plants have been built along the Mediterranean coast, which provide the country with a large percentage of its fresh-water. Throughout the past decade, Israel has shifted from water-intensive crops to importing ‘virtual water’,² and from water-heavy agriculture to drip-irrigation, often using secondary (sometimes even tertiary) wastewater. All of these advances have given Israel the reputation of a “water superpower”.³ Since the Six-Day War in 1967, Israel manages around 80 percent of the water resources in the West Bank. Israeli settlements that continue to be built in the West Bank have also been connected to the country’s water supply network. Israel’s national water company, Mekorot, is further supplying a number of Palestinian villages with freshwater from water tanks, which otherwise have no access to the water network, or do not receive sufficient amounts of water to meet their demand. As a way to circumvent the high costs of freshwater supplied by Israel’s water tanks, Palestinians are reported to have resorted to other means of extracting water, for example by illegally syphoning pipes or drilling wells without approval from the authorities.

Very little of the West Bank’s wastewater is being treated before it flows downstream into Israeli territory. The two existing sewage treatment plants in the West Bank are unable to treat all of the wastewater, which means that large portions of the water system suffer from pollution. In addition, the Palestinian Water Authority estimates that 33 percent of water is lost due to leakages in pipelines and poor maintenance of wells.⁴

Water as Fuel to the Flame?

Since the 1970s, the concept of environmental security has been given ever-expanding attention, leading researchers to closely examine the interrelation of resource scarcity and (violent) conflicts. Several studies have indicated that environmental degradation and resource scarcity can be directly linked to a deterioration of regional peace and security. It is further argued that conflicts over resources are all the more likely in situations in which state structures are too weak to sufficiently deal with the effects of environmental stress.⁵ While water-related issues are rarely the primary cause of a conflict, they can be



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“an important part of the web of causality associated with any conflict and can, in some cases, be catalytic.”⁶ Wolf et al. (2003) discovered that, historically, the majority of water-related conflicts have been resolved cooperatively, rather than violently.⁷ Investigating more than 1,800 cases, only 37 of them have led to violent conflict – all of which occurred between Israel and its neighbors. A more recent study conducted by Gleick and Herberger (2014) has shown that conflicts over water-related issues have particularly become more frequent around the Nile and the Jordan River.⁸ The authors argue that rapid population growth (exacerbated by the influx of migration waves), an increase in water demand and consumption, as well as a reduction of water availability due to climatic change, have increased the potential for (violent) conflicts over water scarcity, quality, and distribution. In the Israeli-Arab context, four types of water-related conflicts are often presented:

- **Resource protection through military intervention.** In 1964, a summit of Arab leaders developed plans to divert the Hasbani River away from Israel with the intention of hurting the country’s economy and water availability. This incident was seen as a *casus belli* for Israel, which reacted to the plans by bombing and destroying the construction equipment, ultimately ending the project.
- **Resource acquisition through territorial expansion.** The Six-Day War in 1967 between Israel, Jordan, Egypt, and Syria drastically changed the hydro-political composition of the Middle East. Having occupied the Golan Heights, the Gaza Strip, the West Bank, and East Jerusalem, Israel effectively gained control over 80 percent of the West Bank’s water sources, thus becoming the region’s ‘hydrological hegemon’. Conceding that water was not the main reason for the Six-Day War, many researchers argue that the resource did play a significant role in the development of the war and Israel’s military strategy.⁹

- **Water infrastructure as a military target.** During the periodic military exchanges between the Israelis and the Palestinians, the water infrastructure has often become the target of military destruction. Sanitation facilities, water pipelines, and roof-top water tanks have suffered from rocket attacks.¹⁰ The 2014 Operation Protective Edge, during which Gaza’s only electricity plant was destroyed, left large portions of Gaza’s population without clean water or sanitation facilities.¹¹
- **Armed conflict spurred by insufficient water quantity or quality.** Lundqvist and Gleick (2000) stipulate that a lack of clean water necessary to lead a healthy and fulfilling life may lead to or catalyze armed conflict.¹² Following their proposition, some researchers argue that water scarcity was one of the reasons for the first intifada in 1987.¹³

Water as a Tool for Transboundary Cooperation

For as long as water has been studied as a possible catalyzer for conflict, it has equally been studied for its potential for cooperation. The United Nations promotes the idea of joint water governance as a gateway to lasting peace and cooperation. Indeed, revisiting Wolf et al.’s study, it is indisputable that water-related issues have far more often been resolved peacefully than through military conflict, let alone genuine ‘water wars’.

The 1990s saw an upsurge in cooperative initiatives between Israel and its neighbors. Starting in 1991 with the Madrid Conference and the subsequent Multilateral Working Group on Water Resources, Israel has engaged in water-related negotiations with Jordan (signing a Peace Treaty in 1994) and with the Palestinians (signing the Oslo II Interim Accord in 1995). The Israel-Jordan Peace Treaty settled the general relations of both countries, including comprehensive measures for the trade, water, and tourism sector. Since the Agreement has come into

effect, Jordan and Israel have successfully managed three water-related crises that have endangered, but not broken their arrangements. Although Jordan is currently facing severe water stress (exacerbated by the influx of refugees who are predominantly settling along the Jordan River Valley), it continues to fulfil its water responsibilities towards Israel and vice versa.

In 1995, Israel and the Palestinian Authority established water agreements as part of the Oslo II Interim Accord. The Agreement acknowledged Palestinian water rights and set up a Joint Water Committee (JWC) through which all water-related matters were to be settled. Being an interim solution, the Agreement was supposed to be replaced by a permanent peace treaty five years later. However, the second Palestinian uprising in 2000 coupled with increasing political tensions, prevented the continuation of peace negotiations and halted any progress concerning permanent status solutions. Since 2010, the Palestinians refuse to continue the Committee's work, stating that they regard its work as a form of domination and colonization, and a leverage for Israeli settlement policy.

Model or Exception? The 1994 Israel-Jordan Peace Treaty Compared to the Israeli-Palestinian Interim Accords

In 1994, Israel and Jordan signed an Agreement that put an end to 46 years of conflict. Their Peace Treaty comprises 30 articles and 5 annexes which settled land and water disputes, and lay the foundation for far-reaching cooperation in the trade and tourism sectors. As a highly water-stressed country, Jordan was particularly concerned with the regulation and protection of water sources, and the guarantee of mutual assistance during water shortages. As a governing mechanism, both sides agreed to the establishment of a Joint Water Committee composed of three members, giving each state an equal voting right.

In the years following the signing of the Treaty its implementation was put to a test as both countries experienced a period of severe drought, and Jordan suffered from a temporary water pollution crisis. Despite strong opposition and demands for an abrogation of the Agreement the Israeli and Jordanian governments managed to work together to overcome their differences. Since 1994, the Israel-Jordan Joint Water Committee continues to conduct joint

research and development projects, such as the Red-Dead Sea Canal.

Although the hydrological and political parameters appear to be comparable, the Israeli-Jordan Peace Treaty has been much more successful in its implementation than the Israeli-Palestinian Accord. The reasons for this are versatile. First, a crucial difference between both agreements is that Israel and Jordan are two sovereign political entities whose borders have been settled as part of the 1994 Peace Treaty. In contrast, the Palestinian Authority that came into effect after the Declaration of Principles in 1993 constitutes an interim self-government that has only partial control of the West Bank and thereby lacks absolute political sovereignty.

Second, the Israel-Jordan Peace Agreement adhered to reciprocal cooperation, meaning that both parties are held accountable for their water activities within their respective territories. In contrast, the Oslo II Agreement defines water supply and regulation only within the borders of the West Bank (while fragmenting it into three different areas, leaving around two thirds of the land under Israeli control). Also, all of Israel's water activities performed within the country's own borders are disregarded by the Agreement.

Third, the Israeli-Palestinian Agreement was launched on a playing field between two highly asymmetrical players. Showing far greater bargaining and coercive powers in the Joint Water Commission, Israel was able to approve and execute motions far more often and quickly than Palestinians. In addition, the 1994 Treaty between Israel and Jordan formalized a state of peace which created a certain level of trust that was still absent from the Israeli-Palestinian relations. Ultimately, this differing level of confidence determined the regulation and protection mechanisms with which each Accord was to be enforced. The Israel-Jordan Treaty included the right to arbitration in cases in which issues could not be settled among both parties, while the Oslo II Agreement leaves no room for arbitration. Consequently, motions put forward in the JWC often resulted in deadlocks, causing further frustration among diplomats and citizens.

It is All About Water – and More: Cross-sectional Linkages within the Water Conflict

The 1990s paved the way for a number of multilateral working groups between Middle Eastern countries, ranging from initiatives

for cooperation in the military sector, over economic cooperation, to ecological issues. The Multilateral Working Group on Water Resources was easily considered the most promising cooperation initiative on the multilateral track. In the mind-set of political analysts and researchers, transboundary water management was largely a technical problem that could be separated from political components. In reality, however, the failure to 'de-politicize' the issue was a major cause for the breakdown of the multilateral talks.¹⁴ The water conflict is itself embedded within the geopolitical, economic, and security spheres, making its treatment as a purely technical problem at best counterproductive.¹⁵

Water and Politics

At the bottom of the water discourse lie issues of state security and sovereignty. The Israeli-Palestinian debate on water is first and foremost a discussion about water rights vs. water needs. The Palestinians demand the acknowledgment and definition of their water rights within a future Palestinian state that guarantees their equal rights to the region's water systems as Israel, including access to the Jordan River. In contrast, Israel approaches the water crisis from a needs-based distribution angle, in which multilateral cooperation is to primarily address the parties' respective water needs according to the standards set forward in the Oslo II Accord. Thus, the question of how the water crisis should be approached is intrinsically tied to the countries' national interests and the Palestinian aspiration for a sovereign state.

This dilemma of state interest vs. water needs is best illustrated by the composition of the Joint Water Committee. Since its inception in 1996, the JWC has set the stage for bargaining games and coercive 'compromises'. As a downstream riparian of the Mountain Aquifer, Israel has great interest in the erection of wastewater treatment plants on Palestinian territory from which it receives its run-off. In contrast, the Palestinians, who have lower environmental standards in addition to having the advantage of being the upstream riparians have a relatively low incentive to build a treatment plant. Possessing far greater bargaining and coercive power, the Israelis use the equal voting right and veto setting of the JWC to coerce the Palestinian Authority into building a treatment plant in return for their approval of the erection of new wells within the West Bank. Approval for new wells and water access for the Palestinians comes at



the price of new Israeli settlements and their connection to the water infrastructure. The Palestinians regard this as an infringement of a sovereign Palestinian state and direct consent to Israel's settlement policy.

Water and Economic Development

Water is an indispensable resource for social and economic development. Throughout the past two decades Israel has shifted from an agriculturally-based to a technologically advanced economy, exporting high-tech products, and importing waterintensive food products ('virtual water'). With a strong economy (ranking 37 on the international scale), Israel was able to spend large sums on new water infrastructure, which entailed the erection of five large desalination plants and several dozen wastewater treatment facilities. This alone allowed Israel to circumvent the uncertainty of periodical droughts and water scarcity by introducing recycled and desalinated water as an alternative supply source. As a result of Israel's technological advances and consequent resources surplus, the country's national water company is selling desalinated and treated water to the Palestinians – often at high prices, which many Palestinians cannot afford but are forced to accept due to the lack of available water resources.

In contrast, the Palestinian economy is dependent on its agricultural sector which employs roughly 11.5 percent of the Palestinian labor force.¹⁶ At the same time, it is also the biggest consumer of water, with around 70 percent of water resources being used for agricultural purposes.¹⁷ The Oslo II Accord followed the 'Polluter Pays Principle' according to which the upstream riparian is to pay the costs for any damage inflicted upon the environment and the water systems through pollution. However, due to a lack of enforcement and low economic incentives, the Palestinian Authority has failed to install sufficient wastewater treatment facilities and sewage regulations. Instead, the generated wastewater is often diverted into local water systems, causing high levels of pollution to the ground and surface water, which then flows downstream into Israeli territory where it has to be treated. So far, the West Bank is operating only two wastewater treatment plants whose capacities are insufficient to treat the full scope of generated wastewater coming from the industrial, private, and agricultural sector. Additionally, the West Bank suffers from an aging water infrastructure which impedes a sustainable water

management. According to the World Health Organization, there are "widespread cases of dwindling and mismanaged water resources" within the Palestinian territories.¹⁸

In the past, economic support to refurbish the outworn water infrastructure has primarily come from donor agencies or donor countries such as Germany or the United States. However, large portions of those donations have been cut due to the failed peace negotiations following the second intifada and the 2008 Gaza War. The breakdown of the Joint Water Commission is further impeding cooperative measures to improve water sanitation methods and infrastructure in the Palestinian territories. Thanks to its economic capacity, Israel has largely been able to bypass the need to cooperate with the Palestinians while upgrading their water infrastructure. In comparison, there are many reasons for the Palestinians not to improve their water management systems: a low economic capacity, heavily impaired by the ongoing occupation and physical blockades of the West Bank (particularly cumbersome is the situation for remote villages that have no connection to the water network, or villages that are enclosed by the security barrier); low incentives to upgrade the water infrastructure due to the upstream riparian position of the Palestinians but also because of lower environmental standards; lack of enforcement and inter-village planning because of the fragmented areal control and access of the West Bank; and pressure by domestic politicians and the population not to improve the environmental situation out of fear of supporting Israel's policies in the Palestinian territories and keeping the status quo.

All of these factors make the allocation and treatment of water resources in the Palestinian territories extremely difficult. Comprehensive efforts to restructure the West Bank's water networks and renovate existing water pipes and treatment plans are of dire need. After all, an "improved water supply and sanitation and water resources management boosts countries' economic growth and contributes greatly to poverty eradication."¹⁹ Such measures, however, are expensive and precondition economic and geostrategic incentives for all parties. For the Palestinians, negotiating new water management standards must not impact their aspiration for a sovereign Palestinian state in the West Bank and the Gaza Strip. Israel's priority, in turn, is to maintain the regulations set forward in the Interim Agreement,

according to which the Palestinians receive a specified quantity of water and are to be held accountable for polluting water systems and illegal syphoning.

For an effective and sustainable water management system to be established, political and economic components will inevitably have to be integrated into any future water negotiations. So far, finding solutions to the water crisis has been dominated by a top-down approach on the political leadership level — an approach that often lacks both effectiveness and sustainability, and is moreover ignorant of local realities.²⁰ While the water levels sink, the salt intrusion rises, the Joint Water Committee ceases to meet, and the taps run dry, there is no peace agreement in sight. What are the alternatives?

Multilateral Cooperation and at times Environmental Unilateralism?

In Principle Multilateral Cooperation...

Multilateral cooperation exists on the basis of shared interests, which, in turn, are shaped by identities and situation assessment.²¹ The Israeli-Palestinian water conflict is shaped by political and economic developments, in addition to the "geographical, climatic, hydro(geo)logical and demographic realities of its region."²² While the Israelis perceive water resources in the region as naturally scarce, the Palestinians believe that the resource itself is sufficiently available, but that water scarcity is a politically induced phenomenon.²³ In light of the failed peace negotiations that ought to have replaced the Oslo Interim Agreement, as well as the fallout of the JWC, several regional and international non-governmental organizations have arisen on the civil society horizon. Those organizations have established a multilateral setting in which to find cooperative solutions to the water crisis by creating venues for open dialogue, knowledge transfer, and confidence-building measures.

EcoPeace Middle East²⁴ is a non-governmental organization that unites Israelis, Palestinians, and Jordanians in an effort to find a sustainable and equitable solution to the region's water problems while simultaneously enhancing the relationships among the three parties through knowledge transfer and trust building. Its most successful projects include the "Good Water Neighbours", which is directed at crossborder communities whose interdependence is utilized for cooperation on sustainable water management; and

the “Green Economy Initiative”, which centers around transboundary ecological and economic cooperation. Throughout the past two decades, EcoPeace has gained considerable attention, both from the national governments and from international donor agencies and mediators. The organization has published several proposals outlining a fair and sustainable water-sharing agreement between Israelis, Palestinians, and Jordanians.

The importance of civil society organizations such as EcoPeace stems from their determination to involve long-standing adversaries in open dialogue and conflict resolution programs. By opening up new lines of communication, Track II-initiatives allow all parties to take a step back from official talks in an effort to gather new, creative ideas for the solution of protracted conflicts. This way, participants have the chance to discuss and test ideas which might not be feasible for current Track I-negotiations, but have the potential to be included at a later stage.²⁵

In addition, Track II-initiatives can weave a web of linkages with other policy fields, which can be used to leverage negotiation positions or expand the range of options available for cooperation. A strong web of linkages can create interdependencies with which parties are less likely to break, and allows for a holistic approach to the problem. For instance, economic cooperation plays a vital part in the development of a sustainable water infrastructure and a concerted management system. By reducing trade barriers or sharing costs for construction and infrastructure, this type of positive linkage creates additional guarantee for environmental cooperation.

Furthermore, in the Israeli-Palestinian context where transboundary water management efforts and the water infrastructure are frequently disrupted by armed conflict, advances in regional nonproliferation and arms control/zonal disarmament can have a positive impact on the sustainability of cooperative water engagement. So far, there has been little empirical work done on exploring the benefits of linking water and environmental policy with issues of security and arms. This field, however, should be further explored in future studies since advances in the water cooperation sector can act as a catalyst for the momentarily rather dormant regional arms control efforts. Simultaneously, the whole initiative of finding a solution to the water crisis can benefit from

nonproliferation agreements and regional arms control/zonal disarmament since

arms competition and armed conflict create major obstacles to sustainable development. They make huge claims on scarce material resources. They pre-empt human resources and wealth that could be used to combat the collapse of environmental support systems, the poverty, and the underdevelopment that in combination contribute so much to contemporary political insecurity. They may stimulate an ethos that is antagonistic toward cooperation among nations whose ecological and economic interdependence requires them to overcome national or ideological antipathies.²⁶

When researching into a possible connection between the water sector and the security and military realm, researchers should be aware of possible negative consequences that can impede existing initiatives for transboundary cooperation. As studies indicate, issues of water appropriation and quality have been connected to matters of national security and territorial protection in the past (as in the Israeli-Arab case, see above). Particularly in settings in which the players' relations are characterized by a high level of tension and a low level of trust this form of linkage can complicate and slow down negotiations, allow parties to hold specific issues hostage, or even induce a negative spill-over effect onto other policy areas.

... and at times Environmental Unilateralism

A number of circumstances greatly impede the success rate and sustainability of multilateral water cooperation. First of all, sustainable and effective transboundary cooperation is impaired if the parties involved exhibit stark asymmetries in power, institutional or economic capacity, or riparian positions along the water system. In cases in which agreements are based on coercion, and benefits of joint management are primarily available only to one player, the subordinate party might decide to end joint efforts altogether.

Second, water agreements which specify and rely on fixed quantities of water distribution are prone to contention in times of droughts, general population growth, or other unexpected circumstances. If the relationship between each riparian is already marked by a high level of distrust and a low ability to resolve conflicts, the parties' will to cooperate might easily be overturned, and agreements may be abrogated. To ensure long-term feasibility that accounts for population growth

and increasing water demand water agreements should include adjustable quantities in order to avoid cumbersome negotiations and possible disputes in the future.

Third, high numbers of stakeholders further complicate transboundary water management. Differing environmental standards and varying degrees of environmental concern make the enforcement of transboundary water regulations challenging. In cases in which drastic environmental crises require rapid decisions and changes, reaching a consensus with multiple parties may prove too difficult or time-consuming.

Finally, while civil society organizations such as EcoPeace fulfill an important function for peacebuilding (especially in terms of conflict resolution, knowledge transfer, and communication), their role as service providers can also have negative side effects. By achieving punctual ecological cooperation, local organizations inadvertently provide national governments with excuses to carry on with the status quo, and let civil society actors devise appropriate solutions to prevent a humanitarian and ecological crisis.²⁷

In certain cases of transboundary water conflicts in which one or more of these conditions occur, environmental unilateralism might actually be preferable to multilateral transboundary water management. From an ecological standpoint, environmental unilateralism can be a better tool to yield efficient and effective results.²⁸ For the past years, urged by the steady degradation of water quality and supply, Israel has increasingly pursued a policy of environmental unilateralism. The Israeli government has coerced the Palestinians into a cost-sharing approach by conditioning an increased water supply with additional costs for sewage treatment and desalinated freshwater. In doing so, Israel was able to develop new water sources and take action against a rising degree of pollution.

Those unilateral actions, however, come at a high price. Approaching the water crisis with coercion and punishment damages trust and the willingness to cooperate in the future. In light of the recent political upheaval unraveling between Israel and the Palestinians, such solo attempts might actually exacerbate political and social tensions, or worse, promote retaliation. Furthermore, long-term unilateralism establishes separate water infrastructures, which might ultimately result in redundancy, cause additional environmental harm, and complicate future cooperation.



Conclusion

The water crisis is an aspect of the Israeli-Palestinian conflict that is much less visible than the continued military outbreaks and torrents of hatred that have determined the Israeli-Palestinian conflict for the past six decades. So far, the majority of peacemaking efforts have been tied to military security and disarmament. However, in order to pursue sustainable peacemaking efforts, a comprehensive notion of security necessitates an inclusion of environmental and human

security in addition to military security. In establishing such notion of security, peacemakers should install cross-sectional links among the political, economic, security, and ecological fields. While all of those fields focus on distinct areas, they are not encapsulated within their respective subject matters. A holistic approach to the water conflict is crucial to finding a lasting solution. Furthermore, spill-over effects can enhance already existing initiatives of regional cooperation while simultaneously introducing new actors with pragmatic interest-based views into the arena.

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The Israeli-Palestinian conflict is a part of the Israeli-Arab dispute that is not only straining the relationship between Israelis and its neighbors, but is also detrimental to the environment and the one resource indispensable for human life. The top-down approach to solving the water crisis has failed, as has any attempt to treat the subject as a purely technical matter. Instead, regional organizations have proven to be the most successful drivers of transboundary water management, and can at least point to punctual alleviations of the water crisis. In this sense, although not perfect, non-governmental organizations on a Track II basis are an important contributor to the Middle East Peace Process since they enable conflicting parties to engage in open dialogue and confidence-building measures. Environmental unilateralism may at times seem like the easier and quicker solution, but it can put obstacles in the way of sustainable transboundary water management whilst creating environmental redundancies and increasing political and social tensions.

Trust/confidence between Israelis and Palestinians built on the basis of environmental protection can stimulate advances in other fields of multilateral cooperation, such as economic development, security measures, and arms control. Being the primary sphere of interest for the ACADEMIC PEACE ORCHESTRA MIDDLE EAST, the control and reduction of weapons is an integral part of effective cooperative efforts for the region's peace and stability (see POLICY BRIEF No. 46 by Akiva Eldar, Aviv Melamud, and Christian Weidlich). As an additional

basket of regional Track II-diplomacy, trans-boundary water cooperation can help sustain the lifeline of communication between Israelis and Palestinians, even in times of great political stress. Simultaneously, the environmental sector relies on regional peace and disarmament for it can never succeed in establishing a sustainable infrastructure as long as violence and destruction persists. In the past, regional players such as EcoPeace have sought to establish cross-sectional ties by cooperating with organizations focusing on regional peace and stability, conflict resolution, trust building, sustainable economic development and prosperity. Those organizations include the EastWest Institute/Regional Security Initiative, which focuses on conflict resolution trust-building measures and Track II-diplomacy to tackle political, economic, and security issues; the Peace NGO Forum, which enhances cooperation and interaction between Palestinian and Israeli NGOs; the Peres Center for Peace, that embraces a wide range of subjects including peace education, economic development, and the environment; and the U.S. Agency for International Development, which provides humanitarian assistance directed at a myriad of different development projects.

A conflict as complex and protracted as the Israeli-Arab dispute rarely has a single cause. It then follows that its resolution can (and must) be approached from various angles. Cross-sectional Track II-initiatives for cooperation in the ecological, economic, and military sector are key to a holistic approach to peace in the Middle East. ■

About the ACADEMIC PEACE ORCHESTRA MIDDLE EAST (APOME)

The ORCHESTRA is the follow-up project of the "Multilateral Study Group on the Establishment of a Missile Free Zone in the Middle East". The ACADEMIC PEACE ORCHESTRA MIDDLE EAST is a classical Track II initiative: it consists of some 150 experts – mainly from the Middle East/Gulf, one of the most conflict-ridden areas of the world. The ORCHESTRA is meeting regularly in working groups (CHAMBER ORCHESTRA UNITS) on specific topics in the context of a workshop cycle from 2011-2016. The main goal of this initiative was to shape the prospective Middle East Conference on the establishment of a zone free of weapons of mass destruction and their delivery vehicles agreed upon by the international community in May 2010. For this reason, these experts have developed ideas, concepts, and background information in a series of POLICY BRIEFS which are the results of intense discussions within the CHAMBER ORCHESTRA UNITS. In this framework, the broader normative Cooperative Security Concept will be further developed, embedded, and institutionalized in the region. At the same time, the ORCHESTRA meetings serve as venues for confidence building among the experts. The networking activities of PRIF's Project Group are documented by the ATLAS on Track II-research activities in or about the Middle East/Gulf region.

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