The Politics of Water Scarcity: An Analysis of the Israeli-Jordanian Hydropolitical Relationship

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The Politics of Water Scarcity: An Analysis of the Israeli-Jordanian Hydropolitical Relationship

By

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Abstract

This research seeks to analyze the current hydropolitical relationship between Israel and Jordan in the light of the Declaration of Intent, agreed upon in November 2021. The agreement entails a collaboration between the Hashemite Kingdom of Jordan, the State of Israel and the United Arab Emirates on water and energy issues. While the literature on hydropolitics has mainly focused on the connection between water scarcity on the one hand, and conflict or cooperation, on the other, this study moves beyond this dichotomy by applying a mixed method of environmental peacebuilding and hydro-hegemony to the case-study. Built on theoretical analysis and including historical aspects, the international, regional and domestic context as well as the concept of asymmetrical power and discursive power, the research looks beyond elite interests and traditional theories of international relations. While the analysis identifies the envisaged cooperation from the water-for-energy deal as a form of technical environmental cooperation, the findings also stress the ambiguity in Jordan's behavior and the underlying dynamics of power asymmetry, reinforced by the role of external actors and the use of dominant discourses.

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1. Introduction

When reading about the topic of water in the Middle East, encountering dramatic headlines such as "Water wars could pose a real threat for Middle East" and "The MENA region's water crisis: avoiding potential water wars" is not rare.[1] News media and policy reports, when dealing with the Middle East's water, often focus in a sensational way on water scarcity and its potential to bring instability to an already conflict-ridden region. Conversely, collaboration on water-related issues in the case of Israel and Jordan might indicate that water scarcity could lead to interstate cooperation rather than to conflict. In November 2021, Israel and Jordan signed a water-for-energy agreement under the auspices of the United Arab Emirates and the United States.[2] Before, in 1994, the two signed the Israeli-Jordanian Treaty of Peace, which dealt in a rather extensive way with cooperation on transboundary water resources.[3] However, cooperation in the field of water does not automatically imply that any form of cooperation will produce equitable outcomes for all the involved parties. The role of water in the region has been widely debated, in academic literature and beyond, and displays remarkably divergent views. While much of the early literature engaged extensively with the 'water wars hypothesis', later research increasingly focused on the potential of water scarcity to lead to peace rather than to conflict. However, critical hydropolitics, a strand of scholarship that transcends this dichotomous presentation of water scarcity and focuses instead on transboundary water interactions, is rather underdeveloped.

The aim of this research is to investigate the hydropolitical relationship between Israel and Jordan by borrowing from insights from this developing field of scholarship. I will analyze the case-study of Israel and Jordan by embedding their current hydropolitical relations in the framework of environmental peacebuilding and hydro-hegemony. I will examine their relationship in the light of the broader political context and the domestic context, and in terms

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[1] Osama Al Sharif, "Water wars could pose a real threat for Middle East ," *Gulf News,* July, 30, 2021, https://gulfnews.com/opinion/op-eds/water-wars-could-pose-a-real-threat-for-middle-east-1.81081122; Amro Selim, "The MENA Region's Water Crisis: Avoiding Potential Water Wars," Policy Analysis, *The Washington Institute for Near Eastern Policy*, July 20, 2020, https://www.washingtoninstitute.org/policy-analysis/mena-regions-water-crisis-avoiding-potential-water-wars.

[2] "Israel, Jordan to partner in water-for-energy deal," *Reuters,* November 22, 2021, https://www.reuters.com/business/energy/israel-jordan-partner-water-for-energy-deal-israeli-ministry-says-2021-11-22/.

[3] Laura Zittrain Eisenberg and Neil Caplan, "Out of the Shadows and into the Light: The Jordanian-Israeli Peace Process, 1991–1994," in *Negotiating Arab-Israeli Peace: Patterns, Problems, Possibilities*, 2nd ed., (Bloomington: Indiana University Press, 2010), 125.

of discursive power and power asymmetry, in particular. In doing this, my research attempts to provide an answer to the following research question: *To what extent is the current hydropolitical relationship between Israel and Jordan characterized by equity?* The analysis of how their historical relationship evolved from the period before and after the conclusion of the 1994 Israeli-Jordanian Peace Treaty, to the 2021 Declaration of Intent between Jordan, Israel and the United Arab Emirates, allows for the evaluation of their hydropolitical relationship in terms of continuity and change. Therefore, the subquestion that will guide my research and will help to answer the main research question is the following: *To what extent did the Israeli-Jordanian hydropolitical relationship change over time, and why?* Two hypotheses, based on the literature review, have been developed and will be empirically tested:

H1: *The hydropolitical relationship between Israel and Jordan is characterized by domination rather than cooperation, as a consequence of Israel's hegemonic power*.

H2: *The Israeli-Jordanian cooperation in water-related matters cannot be viewed as an avenue toward regional peace.*

The hydropolitical interaction between Israel and Jordan should not be considered as just a normal form of interstate cooperation, for two main reasons. First, Israeli-Jordanian hydropolitics cannot be isolated from the Israeli-Palestinian context and the broader Arab-Israeli tensions.[4] Second, Israel is identified as the hydro-hegemon of the two parties, resulting in an asymmetric hydropolitical relationship.[5] Moreover, the case of water cooperation between Israel and Jordan could be seen as exceptional in the region, since Jordan is the only one of the riparians in the Jordan basin that has cooperated with the Israeli regime in functional matters.[6] The other neighbouring countries, Lebanon and Syria, never reached a formal agreement with Israel on water-related matters.[7] For them, the Palestinian cause always preceded over the possible material gains they could win from cooperation. Israel and Jordan, on the opposite, have always been the most needy states and "expected to receive substantial material gains by

[4] David Katz and Arkadiy Shafran, "Energizing Mid–East Water Diplomacy: The Potential for Regional Water–Energy Exchanges," *Water International* 45, no. 4 (May 18, 2020), 304, https://doi.org/10.1080/02508060.2020.1758521/FORMAT/EPUB.

[5] Mark Zeitoun, Naho Mirumachi, and Jeroen Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," *International Environmental Agreements : Politics, Law and Economics* 11, no. 2 (2011), 169–172, https://doi.org/10.1007/s10784-010-9134-6.

[6] Miriam R. Lowi, *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin* (Cambridge: Cambridge University Press, 1993), 194.

[7] Lowi, 113-115.

sharing resources cooperatively".[8] A deeper insight on the impact of interstate water cooperation on peace processes could inform strategies for interstate cooperation between otherwise rival states, in general, and could deepen our understanding on the relationship between Jordan and Israel, in particular.

The thesis is structured as follows: first, the topic will be situated in the literature on hydropolitics, ranging from the early environmental security debates to alternative models on transboundary water interaction. Then, the research design and methodological framework will elaborate on the methods and methodologies used for the empirical analysis. This chapter is followed by the empirical assessment of the case-study, organized in line with the different building blocks of the environmental peacebuilding framework and qualitatively examining the relationship on asymmetry. The last section of the empirical research is dedicated to a discourse analysis. Finally, the conclusion will highlight the main findings of this research and explore potential areas for future research.

2. Literature review: The politics of water

The Middle East and North Africa (MENA) account for 11 of the 17 most water-stressed countries in the world, which makes it the most water scarce region in the world.[9] Bahrain, Iran, Jordan, Kuwait, Lebanon, Libya, Oman, Israel/The State of Palestine, Qatar, Saudi Arabia and the United Arab Emirates are labeled as the region's most water poor countries. As its lands consists for 85% of desert, experts point to the aridity of the environment as the main cause for water scarcity.[10] Population growth, climate change, socio-economic development, and inefficient water management are commonly identified as the factors that exacerbate water stress in the region, thereby increasing the potential for water-related conflicts. Even more threatening in the eyes of many observers, is the fact that more than 66% of the region's freshwater resources originate in transboundary waters, such as the Jordan, the Euphrates, Tigris, and the Nile.[11] The countries that share these waters are often described as states "with

[8] Lowi.

[9] UNICEF, *Running Dry: The impact of water scarcity on children in the Middle East and North Africa*, August 2021, 4, https://www.unicef.org/mena/media/12871/file/RunningDry-WASH-FullReport.pdf%20.pdf.

[10] Neda A. Zawahri, "The Multidimensional Aspect of Water Security in the Middle East and North Africa," in *Routledge Handbook on Middle East Security* (Routledge, 2019), 168-169, https://doi.org/10.4324/9781315180113-12.

[11] WWAP (United Nations World Water Assessment Programme), T*he United Nations World Water Development Report 2015: Water for a Sustainable World* (Paris: UNESCO, 2015), 80, https://unesdoc.unesco.org/ark:/48223/pf0000231823.

a history of animosity and conflict" in an already conflict-ridden region.[12] Although there is no consensus on the consequences of water scarcity, a popular claim is that it could erupt into violent conflict and even war between states.[13] Others reject this view and believe that water issues have rarely led to violent action and instead, as some argue, rather lead to peace and cooperation in the region.[14] Recently, the academic field has been widened by critical scholars that apply alternative and interdisciplinary perspectives to water issues, including discursive power, negotiation processes, and asymmetrical power structures.

2.1 Hydropolitics and public discourse

The way in which water scarcity in the Middle East is commonly addressed, fits in a broader pattern of defining the Middle East in terms of conflict.[15] The region is often approached as being exceptional regarding its fragility, alienness and hostility, while its wide variety is often neglected. This is demonstrated by statements such as "an inter-state water conflict in the rough-and-tumble world of the Middle East cannot be understood and addressed in the same way that a water conflict in the European Union is, nor can it be readily compared to a sub-national water conflict".[16] A popular claim in writings about the MENA region's water is the potential of water scarcity to provoke war. This assertion is often underpinned by invoking so-called 'water wars' such as the 1967 Arab-Israeli Six Day War, the Syrian and Sudanese civil wars, and a "looming threat of a water war" between Israel and Lebanon.[17] According to this view, water scarcity triggers, either direct or indirect, the outbreak of war.

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[12] Zawahri, "Water Security," 170.

[13] Hussein A Amery, "Water Wars in the Middle East: A Looming Threat," *The Geographical Journal* 168, no. 4 (2002): 313–23, https://www.jstor.org/stable/3451474; Peter H Gleick, "Water and Conflict: Fresh Water Resources and International Security," *International Security* 18, no. 1 (1993): 79–112, https://doi.org/10.2307/2539033; Thomas F. Homer-Dixon, "Environmental Scarcity," in *Environment, Scarcity, and Violence* (Princeton University Press, 1999), 47–72, https://doi.org/10.1515/9781400822997.47/HTML; Brahma Chellaney, *Water, Peace, and War*, (Lanham, MD: Rowman & Littlefield Publishers, 2013); John Bulloch and Abdel. Darwish, *Water Wars: Coming Conflicts in the Middle East* (London: Victor Gollancz, 1993), http://library.uwe.ac.uk/cgi-bin/uwe/permalink/ckey/a1052231.

[14] Aaron T. Wolf, "Shared Waters : Conflict and Cooperation," *Annual Review of Environment and Resources* 32, no. 1 (2007): 241–69, https://doi.org/10.1146/annurev.energy.32.041006.101434; Mostafa Dolatyar and Tim S. Gray, "The Politics of Water Scarcity in the Middle East," *Environmental Politics* 9, 3 (2000): 65–88, https://doi.org/10.1080/09644010008414538; Sharif S Elmusa, "The Land-Water Nexus in the Israeli-Palestinian Conflict," *Journal of Palestine Studies* 25, no. 3 (1996): 69–78, https://doi.org/10.2307/2538260; Anaïs Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," *Cooperation and Conflict* 54, no. 1 (2019): 99–119, https://doi.org/10.1177/0010836718808331.

[15] Clemens Hoffmann, "Environmental Determinism as Orientalism: The Geo-Political Ecology of Crisis in the Middle East," *Journal of Historical Sociology* 31, no. 1 (2018): 94–104, https://doi.org/10.1111/johs.12194.

[16] Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," 164.

[17] Hussein A. Amery, "Water Wars in the Middle East: A Looming Threat," *The Geographical Journal* 168, no. 4 (2002):313, https://doi.org/10.1111/j.0016-7398.2002.00058.x.; John K Cooley, "The War over Water,"

Water as a trigger of conflict is a common assumption in public discourse.[18] Since decades, international institutions, think tanks, and policymakers on national and international levels have warned for water wars. Ismail Serageldin, at that time Vice President of the World Bank, stated in 1995 that "if the wars of this century were fought over oil, the wars of the next century will be fought over water".[19] In 2008, former Secretary-General of the United Nations Ban Ki-Moon warned that "water shortages are increasingly driving conflicts", presenting it as the cause that fuels and exacerbates many conflicts in the world, and highlighting the strengthening effect of climate change on this.[20] More recently, a heightened interest for water-related conflicts is apparent from numerous publications and reports underlining the link between water crises and violent conflicts. 'Water and conflict' is listed as one of the major humanitarian trends in the UN Office for the Coordination of Humanitarian Affairs' (OCHA) 2018 report.[21] Water is increasingly considered as an amplifying variable or a "threat multiplier" of social, political, and economic tensions, directly and indirectly contributing to conflict, popular uprisings and instability.[22] In 2019, the World Economic Forum labeled water as "a growing source of global conflict" and referred to the Syrian civil war as "a tragic illustration of the central, driving role that water insecurity can play in instability and conflict".[23] Since 2012, water crises have been listed nearly every year in the top five of the World Economic Forum's Global Risks by Impact, alongside weapons of mass destruction and major natural disasters. According to Schmeier et al., the growing concern on water and conflict results from the

Foreign Policy, no. 54 (1984): 3, https://www.jstor.org/stable/1148352.; Peter H. Gleick, "Water, Drought, Climate Change, and Conflict in Syria," *Weather, Climate, and Society, 6* (3) (2014): 331, https://doi.org/10.1175/WCAS-D-13-00059.1.; John Bulloch and Abdel Darwish, *Water Wars: Coming Conflicts in the Middle East* (London: Victor Gollancz, 1993), 165.

[18] Jan Selby, "The Geopolitics of Water in the Middle East: Fantasies and Realities," *Third World Quarterly* 26, no. 2 (2005): 330, https://doi.org/10.1080/0143659042000339146.

[19] Ismail Serageldin, "Water," http://www.serageldin.com/water.htm.

[20] UN News, "Ban Ki-moon warns that water shortages are increasingly driving conflicts," *United Nations*, February, 6, 2008, https://news.un.org/en/story/2008/02/248092-ban-ki-moon-warns-water-shortages-are-increasingly-driving-conflicts.

[21] Lilian Barajas, ed., "World Humanitarian Data And Trends 2018," *United Nations Office for the Coordination of Humanitarian Affairs (OCHA)*, 2018, 34-35, https://interactive.unocha.org/publication/datatrends2018/.

[22] Katz and Shafran, "Energizing Mid–East Water Diplomacy," 293; Zawahri, "The Multidimensional Aspect of Water Security in the Middle East and North Africa," 175.

[23] Kitty Van Der Heijden and Callie Stinson, "Water is a growing source of global conflict. Here's what we need to do," *World Economic Forum*, March, 18, 2019, https://www.weforum.org/agenda/2019/03/water-is-a-growing-source-of-global-conflict-heres-what-we-need-to-do/.

increasing visibility of climate change effects and increasing water insecurity worldwide, expected to aggravate the supposed relationship between water scarcity and conflicts.[24]

2.2 The theoretical context of hydropolitics

Although the "water war hypothesis" is often used as a ready-made and tangible explanation for instability in the region, existing research does not provide convincing evidence for wars over water, not in the past and not in the future.[25] The public discourse cannot be viewed in isolation from the academic literature on the topic of water scarcity. Some scholars attempt to support this premise by developing theories and, to a much lesser extent, empirical evidence around it. Nevertheless, the literature on hydropolitics has evolved in multiple directions over the years, ranging from conflict forecasts and peace prospects to theories transcending the conflict/peace dichotomy.

Although water is an interdisciplinary topic, I will mainly focus on the debates taking place in international relations theory as these are most applicable to the case-study of Israel and Jordan. Moreover, when discussing water conflicts or cooperation, the literature mostly refers to transboundary water contexts. Water resources that are shared across borders provide a climate in which both tension and cooperation could easily occur between states. While my research does include off course the transboundary water interaction between Jordan and Israel, it also investigates other aspects of water-related cooperation. The literature on transboundary waters will thus be applied in a lenient way in order to involve all aspects of inter-state water cooperation.

2.2.1 The traditional debate on hydropolitics: Environmental security theory

The traditional debate on hydropolitics in the Middle East found its way in international relations theory and security literature during the 1980s and 1990s.[26] With the growing attention for environmental issues and the end of the Cold War, the focus of international security studies shifted to non-military aspects.[27] Environmental security is a field that connects natural

[24] Susanne Schmeier et al., "Water scarcity and conflict: Not such a straightforward link," *ECDPM Great Insights magazine* vol. 8, no. 4, October, 31, 2019, https://ecdpm.org/great-insights/complex-link-climate-change-conflict/water-scarcity-conflict/.

[25] Katz, "Hydro-Political Hyperbole," 13.

[26] Dolatyar and Gray, "The Politics of Water Scarcity in the Middle East," 71; Shlomi Dinar, "Negotiations and International Relations: A Framework for Hydropolitics," *International Negotiation* 5, no. 2 (January 1, 2000): 375, https://doi.org/10.1163/15718060020848712.

[27] Gleick, 81.

resources to security, peace and development.[28] As water supply is integral to human survival, environmental security theory entails that increasing water scarcity influences domestic and regional stability, and therefore, it becomes an issue of individual security, food security, national security and regional security. The main debate over the issue of environmental security concerns the level to which environmental threats have security implications. Regarding water scarcity, the environment in which water conflicts take place is questioned. While "traditionalists" define water scarcity as state-limited, "holists" approach the issue from a more comprehensive perspective, identifying water scarcity as a global security threat that requires international action in order to avoid violent conflict over water.[29] Despite this division in the environmental security scholarship, both camps rely on the link between environmental problems and security concerns to make sense of water scarcity. I will focus here mainly on the traditionalist strand as their approach has been the most influential in the environmental security literature on hydropolitics.

The state-centered perspective on environmental problems, in this case water scarcity, implies that countries would go to war with each other to secure their water supply.[30] This realist perspective informed the popular narrative that frames water stress as "a source of dispute between states and a cause for regional instability".[31] The bulk of public discourse on hydropolitics corresponds with the argument that is produced by this strand of scholarship.[32] Much of the literature in this field treats water scarcity mainly as a factor that precipitates or exacerbates violent conflict within and between states. According to this view, scarce water resources either induce countries to wage war, in order to obtain or maintain access to water, or intensify existing conflicts because of increased competition for limited water supplies and/or transboundary migration.[33] While this could pose a threat in several regions, the negative impact of water scarcity has mainly been underlined with regards to the Middle East. Bulloch

[28] Marvin S. Soroos, "Global Change, Environmental Security, and the Prisoner's Dilemma," *Journal of Peace Research* 31, no. 3 (1994): 318; Shlomi Dinar, "Negotiations and International Relations: A Framework for Hydropolitics," *International Negotiation* 5, 2 (2000): 375, https://doi.org/10.1163/15718060020848712.; Mounah Abdel-Samad and Amal Khoury, "Water Scarcity in the Middle East: Balancing Conflict, Development, and Survival in Turkey, Syria and Iraq," *Journal of Peacebuilding & Development* 3, no. 1 (2006): 64.

[29] Dolatyar and Gray, "The Politics of Water Scarcity in the Middle East," 71-72; Abdel-Samad and Khoury, "Water Scarcity in the Middle East: Balancing Conflict, Development, and Survival in Turkey, Syria and Iraq," 64.

[30] Mostafa Dolatyar, "Hydropolitics: Challenging the Water-War Thesis," *Conflict, Security & Development* 2, no. 2 (2002): 118, https://doi.org/10.1080/14678800200590612.

[31] Dinar, "Negotiations and International Relations," 377.

[32] Katz, "Hydro-Political Hyperbole: Examining Incentives for Overemphasizing the Risks of Water Wars."

[33] Ibid., 14.

and Darwish put it as follows: "whoever controls water or its distribution can dominate the Middle East and all its riches".[34] Though scholars in this field have acknowledged that a majority of global water issues led to peaceful resolutions and negotiations, they often consider it inapplicable to the Middle East, a region in which "water is evolving into an issue of "high politics," and the probability of water-related violence is increasing".[35] Water-related issues are often identified as direct or indirect drivers of the region's main political conflicts since 1948.[36] The Jordan River watershed is seen as the generator of the most serious water-related conflicts in the region, whereby the 1967 Arab-Israeli war is frequently cited as example.[37] Shared by Israel, Syria, Lebanon, Jordan, the West Bank, and Gaza, the Jordan basin was also predicted to be the hotbed for international conflicts between its riparians in the future.[38] Gleick relies on water-related conflicts that go as far as 5000 years back in order to demonstrate how the Middle East in particular is prone to resource scarcity, and therefore, to instability and conflict.[39] This vulnerability has different roots but scholars mostly point to political instability, resource gaps and the extremely arid environment of the region. A popular tendency is to connect water scarcity to demographic change: populations grow, especially in the Middle East, as is mostly suggested, and so does the demand for water.[40] The neo-Malthusian premise of over-population is then often used to predict increased water competition, which will subsequently lead to different kinds of violence.[41] Homer-Dixon claims that resource depletion, especially of fresh water, is a result of the high fertility rates in Islamic countries like Egypt and Jordan.[42]

These assumptions often result in a narrative resembling the water war hypothesis, as exemplified by Gleick: "Given the high level of political conflict … and the inability of nations

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[34] Bulloch and Darwish, *Water Wars,* 161.

[35] Gleick, 80.

[36] Aaron T. Wolf, *Hydropolitics along the Jordan River* (Tokyo: United Nations University Press, 1995), 1.; Gleick, "Water and Conflict: Fresh Water Resources and International Security," 85.

[37] Cooley, "The War over Water," 3.; Gleick, "Water and Conflict: Fresh Water Resources and International Security"; Bulloch and Darwish, *Water Wars: Coming Conflicts in the Middle East*.

[38] Bulloch and Darwish, *Water* Wars, 34.

[39] Gleick, "Water and Conflict," 85-89;92;96; Peter H. Gleick, "Water Conflicts Continue to Worsen Worldwide," Pacific Institute, March 17, 2022, https://pacinst.org/water-conflicts-continue-to-worsen-worldwide/.

[40] Malin Falkenmark, "Fresh Water: Time for a Modified Approach," *Ambio* 15, no. 4 (1986): 192, https://www.jstor.org/stable/4313251.

[41] Fischhendler Itay, "Ambiguity in Transboundary Environmental Dispute Resolution: The Israeli–Jordanian Water Agreement," *Journal of Peace Research* 45, no. 1 (2008): 91, https://doi.org/10.1177/0022343307084925.

[42] Thomas F. Homer-Dixon, "Environmental Scarcity," in *Environment, Scarcity, and Violence* (Princeton University Press, 1999), 57, https://doi.org/10.1515/9781400822997.47/HTML.

in these regions to reach agreements on water sharing, future water-related disputes appear inevitable."[43] Overall, the empirical evidence that is produced in this field of research is rather meagre. Of the few empirical studies that do exist, the finding that countries sharing a river have a higher chance of facing violent conflict, than those that do not, comes closest to support the traditionalist hypothesis.[44] Other empirical studies have demonstrated that water availability per capita and changing patterns of rainfall are statistically correlated with the potential for violent domestic and international conflict.[45]

In addition, discourses of political leaders and central governmental figures in the MENA-region often incorporate water war scenarios as well.[46] The first Prime Minister of Israel, David Ben-Gurion, declared that "Israeli's wars in the region are water wars".[47] In 1979, just after the signing of the peace treaty with Israel, Egypt's President Anwar Sadat declared that "the only matter that could take Egypt to war again is water", directed at Ethiopia, the upstream hydro-hegemon of the Nile.[48] Similarly, in 1990 King Hussein of Jordan warned for water-related wars, intended both to obtain international financial support and to appeal to Jordan's public opinion. The rhetoric used by these political actors reflect the centrality and historical role of water resources in their regimes and policies.[49] Hussein et al. argue that public discourses on water-related topics are politically driven and both influence and are influenced by internal political circumstances. [50] Decision-makers apply both regional and domestic blaming-strategies when addressing water scarcity, such as the negative impact of refugees on water stress and the deterioration of the water quality.[51] Political actors often approach transboundary water disputes as zero-sum games, "with one party's gains coming at the expense of another's",

[43] Ibid., 111.

[44] Hans Petter Wollebaek Toset, Nils Petter Gleditsch, and Håvard Hegre, "Shared Rivers and Interstate Conflict," *Political Geography* 19, no. 8 (2000): 990, https://doi.org/10.1016/S0962-6298(00)00038-X.

[45] Katz, "Hydro-Political Hyperbole: Examining Incentives for Overemphasizing the Risks of Water Wars," 15.

[46] David Katz, "Hydro-Political Hyperbole: Examining Incentives for Overemphasizing the Risks of Water Wars," *Global Environmental Politics* 11, no. 1 (2011): 19, https://muse.jhu.edu/article/414254.

[47] Mostafa Dolatyar and Tim S. Gray, "The Politics of Water Scarcity in the Middle East," *Environmental Politics* 9, no. 3 (2000): 66, https://doi.org/10.1080/09644010008414538.

[48] Joyce R Starr, "Water Wars," *Foreign Policy*, no. 82 (1991): 19;23, https://www.jstor.org/stable/1148639.

[49] Mounah Abdel-Samad and Amal Khoury, "Water Scarcity in the Middle East: Balancing Conflict, Development, and Survival in Turkey, Syria and Iraq," *Journal of Peacebuilding & Development* 3, no. 1 (2006): 64.

[50] Hussam Hussein et al., "Syrian Refugees, Water Scarcity, and Dynamic Policies: How Do the New Refugee Discourses Impact Water Governance Debates in Lebanon and Jordan?," *Water (Switzerland)* 12, no. 2 (2020): 325, https://doi.org/10.3390/w12020325.

[51] Ibid., 324

which, according to Katz and Shafran, contributes to the intractability of interstate water conflicts. [52]

Analyses of water scarcity and its risks are often blended with "imperial oriental imagination", assuming that the MENA-region, due to underdevelopment or inferiority, is not able to manage its own resources.[53] In an attempt to address the root causes of water scarcity in the Middle East, North Africa and Central Asia, "easily the most water-scarce region in the world", Chellaney connects water stress to "exploding populations, a pervasive lack of jobs, high illiteracy, and fast-spreading extremism" as being caught in a vicious circle.[54] He does this by equating water crisis with political instability, and by reducing an immense region to what he calls "the contiguous arc of water crisis", "the arc of Islam", and even "the arc of international terrorism". [55] However, he does not provide clear evidence on the assumed intersection of water scarcity, overpopulation, and terrorism. In addition, no evidence is given in order to proof his assumption that internal wars are fought around the courses of waterways. Reports from global players such as the World Bank point to wasting and misusing water resources as one of the most important causes of water scarcity in the MENA-region.[56] In his analysis of the MENA region's water crisis, Selim refers to the lack of awareness, incompetent water management, and the nonexistence of a culture of rationalizing water "among some citizens".[57] He warns of large-scale conflicts in the near future, arguing that access to water and control of water resources will be the primary drivers of disputes in a region "which is already replete with conflicts".

Although being more common in earlier writings, scholars still use the scarcity of water as an all-encompassing explanation for conflict, for instance, in Syria.[58] In a recent contribution on water security in the Middle East and North Africa, Zawahri concludes that water scarcity

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[52] Katz and Shafran, 292.

[53] Clemens Hoffmann, "Environmental Determinism as Orientalism: The Geo-Political Ecology of Crisis in the Middle East," *Journal of Historical Sociology* 31, no. 1 (March 1, 2018): 94, https://doi.org/10.1111/JOHS.12194.

[54] Chellaney, "The Intersection of Water Scarcity, Overpopulation, and Terrorism," 219-221.

[55] Ibid., 220.

[56] World Bank, "Beyond Scarcity: Water Security in the Middle East and North Africa," MENA Development Report (Washington, DC: World Bank, 2018).

[57] Selim, "The MENA Region's Water Crisis".

[58] Colin P. Kelley et al., "Climate Change in the Fertile Crescent and Implications of the Recent Syrian Drought," *Proceedings of the National Academy of Sciences - PNAS* 112, no. 11 (2015): 3241–46, https://doi.org/10.1073/pnas.1421533112.; Gleick, "Water, Drought, Climate Change, and Conflict in Syria," 331; Jan Selby et al., "Climate Change and the Syrian Civil War Revisited," *Political Geography*, no. 60 (2017): 233, https://doi.org/10.1016/j.polgeo.2017.05.007.

can ultimately lead to state failure as it triggers poverty, regional tension, socio-economic pressure, and weak institutions.[59] Increasing water pressure impedes, as she argues, the cooperation between already hostile states that share transboundary water resources. The role of water in Jordan's protests during the 2011 Arab uprisings is also discussed by Zawahri, as the provision of safe and sufficient water was one of the demands of the people. The lack of water contributed to the popular discontent with the Jordanian government, and continued to play a role after the wave of protests in 2011, leading to threats and attacks against officials from the water sector. Domestic tensions and the risks related to sharing water resources are subsequently used here to underpin assertions on the likelihood of interstate and regional conflict. The environmental security literature increasingly endorsed the assumption that water scarcity can increase insecurity which, in turn, aggravates violent conflict, instead of the outright war over water claim. Although this assumption relies on stronger empirical support than the water war hypothesis, the causal relationship between water scarcity and conflict has been challenged in several studies.[60]

2.2.2 Beyond conflict: water scarcity and cooperation

Both within the field of environmental security and beyond, the emphasis on water war scenarios and the like has been criticized. A growing number of scholars, such as Deudney, Wolf, Yoffe, Dolatyar and Gray, challenged the unilateral perspective on water and conflict and rejected the theories and weak empirical evidence behind it.[61] Most importantly, there are no precedents proving that the statements about the occurrence of wars over water in the Middle East are valid. The lack of evidence has been cited by many critics, making it the strongest argument against the water war hypothesis. In the past, armed conflicts in the region rarely broke out because of water scarcity.[62] Wolf only found seven examples of water-related disputes along international waterways in the 20th century, and concluded that "no war has ever been fought over water".[63] Another main critique is that early studies identify water scarcity as

[59] Zawahri, "The Multidimensional Aspect of Water Security in the Middle East and North Africa," 171-175.

[60] Katz, "Hydro-Political Hyperbole: Examining Incentives for Overemphasizing the Risks of Water Wars," 17.

[61] Daniel H. Deudney, "Environmental Security: A Critique," in *Contested Grounds : Security and Conflict in the New Environmental Politics*, ed. Daniel Deudney and Richard A. Matthew (Albany: State University of New York Press, 1999), 187–219; Katz, 2011, 15; Dolatyar and Gray, "The Politics of Water Scarcity in the Middle East," 65.; Aaron T. Wolf, "Shared Waters : Conflict and Cooperation," *Annual Review of Environment and Resources* 32, no. 1 (2007): 241, https://doi.org/10.1146/annurev.energy.32.041006.101434.

[62] Dolatyar and Gray, 84.

[63] Aaron T. Wolf, "Conflict and Cooperation along International Waterways," *Water Policy* 1, no. 2 (1998): 251, https://doi.org/10.1016/S1366-7017(98)00019-1.

a single determinant of transboundary water conflict, thereby neglecting other causes of conflict such as "historical relationships between parties, riparian position, military balance (or asymmetry) of power, governance, and decision-making structures".[64] It has also been rebutted that water was a cause of the 1967 Arab–Israeli war. Water played, at most, a minor, incidental, time-lagged, indirect or instrumental role in the outbreak of the war, as has been affirmed in multiple systematic analyses on the war.[65] The same has been observed concerning other hostilities in which water has often been analyzed as underlying trigger, including the Israeli assaults on Lebanon in 1978 and 1982.[66] In all these cases, water as the causal and direct factor of conflict has been highly contested. Criticism on the environmental security argument is also provided by economists and technologists.[67] They approach water scarcity as an issue that can be combated by supply or demand techniques such as efficiency in the agricultural section, virtual water, desalination and water pricing.[68] Moreover, an important economic argument is that the costs of military interventions to secure water supplies outweigh the gains in terms of water, which make war over water less likely.[69] This relates to the water rationality argument, by which scholars claim that "water is too vital a resource to be put at risk by war".[70] Several empirical studies developed around the "scarcity theory of water conflict", and found, among others, that regime and institutional characteristics are much more significant than water scarcity as indicators of potential conflicts.[71] Still other studies identified resource abundance, instead of scarcity, as a major and direct driver of conflict.[72] The linkage between water scarcity

[64] Katz, 15.

[65] Wolf, *Hydropolitics along the Jordan River*, 80; Greg Shapland, *Rivers of Discord : International Water Disputes in the Middle East*, (London: Hurst, 1997), 1, 17; Elmusa, "The Land-Water Nexus in the Israeli-Palestinian Conflict, 72".

[66] Munther J Haddadin, "Water in the Middle East Peace Process," *Source: The Geographical Journal* 168, no. 4 (2002): 326, https://www.jstor.org/stable/3451475.

[67] Dolatyar, "Hydropolitics: Challenging the Water-War Thesis," 118.

[68] Dolatyar and Gray, "The Politics of Water Scarcity in the Middle East," 67; J. Anthony Allan, "Hydro-Peace in the Middle East: Why No Water Wars?: A Case Study of the Jordan River Basin," *SAIS Review* 22, no. 2 (2002): 255–72, https://doi.org/10.1353/sais.2002.0027..

[69] Katz, "Hydro-Political Hyperbole: Examining Incentives for Overemphasizing the Risks of Water Wars," 16.

[70] Dolatyar and Gray, "The Politics of Water Scarcity," 67.

[71] Nils Petter Gleditsch et al., "Conflicts over Shared Rivers: Resource Scarcity or Fuzzy Boundaries?," article, *Political Geography* 25, no. 4 (2006): 361, https://doi.org/10.1016/j.polgeo.2006.02.004; S Yoffe, AT Wolf, and M Giordano, "Conflict and Cooperation over International Freshwater Resources: Indicators of Basins at Risk," article, *Journal of the American Water Resources Association* 39, no. 5 (2003): 1109–26, https://doi.org/10.1111/j.1752-1688.2003.tb03696.x.

[72] Jan Selby and Clemens Hoffmann, "Beyond Scarcity: Rethinking Water, Climate Change and Conflict in the Sudans," *Global Environmental Change* 29 (2014): 367-368, https://doi.org/10.1016/j.gloenvcha.2014.01.008.

and conflict has been refuted by much of this scholarship, leading many to the conclusion that water scarcity is not very likely to cause interstate wars.

This finding has been corroborated by studies claiming that cooperation over water resources is more common than armed conflicts.[73] Hence, an alternative strand of literature developed around the idea that sharing scarce water resources is more likely to lead to peace than to conflict.[74] According to this perspective, water functions both as a catalyst and as a tool for cooperation, even if being a scarce resource. In general, water scarcity is described by this literature as an incentive for involved parties to agree, coordinate, and reconcile over water disputes in order to reach sustainable solutions.[75] Nations that share a basin are rather encouraged to resolve disputes over water, even in hostile settings, because of their shared needs.[76] In turn, successful examples of agreements between riparians in the Middle East have demonstrated that both parties benefit in terms of interests, even beyond water.[77] Scholars argue that there has always been some form of cooperation, or at least accommodation, in the Jordan River basin, as well as in the Tigris-Euphrates basin.[78] In the countries of the Arabian Peninsula, water scarcity has also been a source of cooperation rather than discord. Dialog and collaboration over water is presented here as a win-win solution, in contrast to the zero-sum logic of violence and competition.[79] Wolf states that hydropolitics could "help induce ever-increasing cooperation in planning or projects between otherwise hostile riparians, in essence "leading" peace talks".[80] Some scholars in this field argue that solutions to water disputes could contribute to achieving larger peace objectives, in particular between the Arab states and Israel.[81] However, there is an ongoing debate on how water-related cooperation contributes to progression in peace processes in general, and to peace in the Middle East in

[73] Shira Yoffe, Aaron T. Wolf, and Mark Giordano, "Conflict and Cooperation over International Freshwater Resources: Indicators of Basins at Risk," *Journal of the American Water Resources Association* 39, no. 5 (2003): 1109–26, https://doi.org/10.1111/j.1752-1688.2003.tb03696.x.

[74] Katz and Shafran, "Energizing Mid–East water diplomacy," 293.

[75] Dolatyar, "Hydropolitics: Challenging the Water-War Thesis," 117.

[76] Aaron T. Wolf, "Shared Waters: Conflict and Cooperation," *Annual Review of Environment and Resources* 32 (2007): 262, https://doi.org/10.1146/annurev.energy.32.041006.101434.

[77] Munther J Haddadin, "Water: Triggering Cooperation between Former Enemies" 36, no. 2 (2011): 184-185, https://doi.org/10.1080/02508060.2011.557996.

[78] Dolatyar and Gray, "The Politics of Water Scarcity in the Middle East," 73-79.

[79] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 99.

[80] Wolf, *Hydropolitics along the Jordan River*,3.

[81] Dolatyar and Gray, 84.; Daniel Hillel, *Rivers of Eden : The Struggle for Water and the Quest for Peace in the Middle East* (New York: Oxford University Press, 1994), 283.; Wolf, *Hydropolitics along the Jordan River*, 3.

particular. Optimists believe that water agreements precede political steps towards peace, encouraging parties to work together towards wider objectives.[82] This view is based on the functionalist theory of cooperation, which considers cooperation on specific and technical issues as a stepping stone to comprehensive political cooperation.[83] According to this view, functional cooperation in shared waters creates a spill-over effect on other matters of mutual interest, eventually resulting in broad inter-state cooperation. If we apply the functionalist argument to the Jordan River basin region, which is, as Lowi describes, "characterized by an overarching political conflict", functional arrangements on water disputes could shape the required environment for the resolution of the Arab-Israeli conflict.[84] In other words, regional development would lead to regional peace.

Most academics in this field, however, dismiss this view and claim that a solution to water scarcity requires a broader peace settlement.[85] Compromise and cooperation over water is, in their view, only possible when there is no "persistent state of war and violence".[86] These scholars have noted that the existence of hydropolitical Arab-Israeli relations has not led to a wider regional settlement on Israel and Palestine, as functionalists would argue. Instead, the persistence of a protracted conflict often prevented the optimal resolution of water scarcity, since water disputes constitute an intrinsic part of the larger political conflict.[87] Dolatyar and Gray conclude from the 1994 peace treaty between Israel and Jordan, signed after a Palestinian-Israeli peace agreement had been reached, that "water settlements follow, rather than precede, general moves towards peace in the region."[88] Nevertheless, once states are able to reach an agreement on transboundary water disputes, it is likely that they will continue to collaborate on other issues, which in turn leads to more peaceful bonds and regional stability.[89]

These two main strands of scholarship, connecting water-related issues either to conflict or to peaceful cooperation, have been influential in the hydropolitics literature. Although these

[82] Dolatyar and Gray, 71.

[83] Lowi, *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin*, 5-6.

[84] Lowi, 7-8.

[85] Lowi, 9; Dolatyar and Gray, 71; Dinar, "Negotiations and International Relations: A Framework for Hydropolitics," 386.

[86] Abdel-Samad and Khoury, "Water Scarcity in the Middle East: Balancing Conflict, Development, and Survival in Turkey, Syria and Iraq," 64.

[87] Dinar, "Negotiations and International Relations: A Framework for Hydropolitics," 386.

[88] Dolatyar and Gray, 71.

[89] Abdel-Samad and Khoury, "Water Scarcity in the Middle East: Balancing Conflict, Development, and Survival in Turkey, Syria and Iraq," 72.

approaches mainly prevailed in the earlier established debate, they are still widely applied in recent research on the topic.[90] However, the analysis of scarce water in terms of war, and, as a reaction, in terms of peace, has been criticized for merely representing water issues from a dichotomous perspective. The academic debate has been enriched by scholars who go beyond the discussion on the link between environment and security, referred to as critical hydropolitics.[91]

2.2.3 Beyond conflict and cooperation: Critical hydropolitics

Whether predicting violence or peace in troubled waters, critics label both perspectives as environmental determinism, belonging to the same spectrum of environmental security studies.[92] Although the more moderate approach on water as a potential 'threat multiplier' of conflict proved to be more useful, the emphasis on the linkage between climate and conflict is considered problematic and "neither cautious nor rigorous".[93] Moreover, it is argued that cooperation over water does not necessarily exclude the occurrence of conflict.[94] In other words, conflict and peace could coexist since the absence of violence does not necessarily mean that water cooperation results in a mutual beneficial and equitable relationship.[95] This is the case when cooperation over water emerges in asymmetrical contexts, which critics have equated with a non-violent, but still conflictual, situation.[96] The conceptual framework of hydro-hegemony has been developed to analyze transboundary water interaction that takes place in such instances of unequal power, characterized by the hydro-hegemon's subordination of the less powerful party.[97] Based on her research in the Jordan River basin, Lowi presents the

[90] Mark Zeitoun, Naho Mirumachi, and Jeroen Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," *International Environmental Agreements : Politics, Law and Economics* 11, no. 2 (2011), 160, https://doi.org/10.1007/s10784-010-9134-6.

[91] Ahmed Tayia, "Transboundary Water Conflict Resolution Mechanisms: Substitutes or Complements," *Water* 11, no. 7 (2019): 23, https://doi.org/10.3390/w11071337.

[92] Mark Zeitoun et al., "Analysis for Water Conflict Transformation," *Water International* 45, no. 4 (2020): 367, https://doi.org/10.1080/02508060.2019.1607479.

[93] Selby et al., "Climate Change and the Syrian Civil War Revisited," 241.

[94] Katz and Shafran, "Energizing Mid–East Water Diplomacy: The Potential for Regional Water–Energy Exchanges," 293.

[95] Mark Zeitoun, "The Conflict vs. Cooperation Paradox: Fighting Over or Sharing of Palestinian-Israeli Groundwater?" *Water International 31*(1) (2007): 105; Jeroen F. Warner and Mark Zeitoun, "International Relations Theory and Water Do Mix: A Response to Furlong's Troubled Waters, Hydro-Hegemony and International Water Relations," *Political Geography* 27, no. 7 (2008): 807, https://doi.org/10.1016/j.polgeo.2008.08.006.

[96] Mark Zeitoun and Jeroen Warner, "Hydro-Hegemony - A Framework for Analysis of Trans-Boundary Water Conflicts," *Water Policy* 8, no. 5 (2006): 435–60, https://doi.org/10.2166/wp.2006.054.

[97] Tayia, "Transboundary Water Conflict Resolution Mechanisms: Substitutes or Complements," 24.

hegemonic theory of cooperation as the explanatory framework behind the interactions and cooperation in the basin.[98] This theory builds on the realist theory of hegemonic stability, which prescribes, according to Keohane and other realists, that cooperation between states takes place when it is in the interest of the hegemon, who dictates the rules and framework of collaboration with which the other party has to comply.[99] Asymmetric power relations can be manifested in multiple ways. Zeitoun and Warner distinguish negative and positive forms of hydro-hegemony: the hydro-hegemon can either act as a dominative power, using interaction only to its own benefit, or from a leadership approach, providing benefits for all the riparians.[100] Although most hydro-hegemonic configurations contain features of both dominative and leadership forms of hegemony, it is the negative, dominative form that often prevails in the MENA region, according to these scholars.

The hydro-hegemon, the one holding more relative power vis-à-vis its counterpart in a shared basin, relies on forms of hard and soft power in order to secure control over water resources.[101] Material capabilities, negotiation power, discursive or ideational power, and, to a lesser extent, geographical position, are the main pillars underlying asymmetrical relationships.[102] While a hydro-hegemon is not necessarily a regional hegemon, military, technological and economic power, and international political support, do play a role in the control over resources.[103] These capabilities are referred to by Lowi as relative power resources, "available to one state relative to the other state with which it interacts", and identified by Zeitoun et al. as "hard power".[104] The second dimension, bargaining power, reflects the ability of the dominant power to have control and influence over negotiations by setting the political agenda and determining the negotiable issues. This form of power emphasizes the process of transboundary water interaction between parties, which could alter the outcomes initially predicted by the static material powers of each party.[105] As a third dimension, the one who dominates the realms of discourse and ideas, and thus the narrative, to legitimate transboundary

[98] Lowi, *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin*, 203.

[99] Lowi, 5; Dinar, "Negotiations and International Relations: A Framework for Hydropolitics," 2000, 381.

[100] Zeitoun and Warner, 439.

[101] Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," 165.

[102] Tayia, "Transboundary Water Conflict Resolution Mechanisms: Substitutes or Complements," 24.

[103] Dinar, 389.

[104] Lowi, 11; Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," 161.

[105] Dinar, 390.

water interaction is able to manage its direction and process.[106] In order to assess discursive power, one should look at "the way water issues are perceived and discussed within the different parties."[107] Finally, geographical superiority in terms of water resources typically means having an upstream location rather than a downstream one.[108] However, riparian position is not a decisive feature for obtaining control over water resources, since downstream riparians could still benefit from a superior power position in other, more influential, sectors.[109]

Lowi evaluates the hydropolitical interaction between Jordan and Israel from the hegemonic cooperation perspective, arguing that their cooperation has only been achieved because Israel, identified as the dominant power in the basin "since the mid-1960s", established and designed the terms of it.[110] Moreover, she states that an asymmetrical cooperation between the two was inevitable since the non-hegemon Jordan is dependent on Israel for its water supply. Her research identifies relative power and resource need as the central determinants of cooperative arrangements, brought about by the hegemonic power. In other words, cooperation only emerges when the dominant power significantly needs water resources, if this need threatens its national security, and, importantly, if the basin hegemon does not have an upstream position.[111] According to Lowi and some other scholars, the combination of a superior riparian position and superior access to water resources does not create incentives large enough to cooperate with other riparians.[112] In contrast, scholars such as Wolf have pointed to the ability of regional hegemons, occupying a superior geographic position, to impose unilateral agreements. Supporters of critical hydropolitics draw our attention to the 'soft' forms of power, which are discursive and ideational, away from the more observable manifestations of power ('hard' power), on which Lowi primarily relies, and violent conflict.[113] Hard power is defined as material power which involves the use of force, while soft power, often in more subtle ways,

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[106] Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," 161; Hussein et al., "Syrian Refugees, Water Scarcity, and Dynamic Policies: How Do the New Refugee Discourses Impact Water Governance Debates in Lebanon and Jordan?" 4.

[107] E. Feitelson, "Implications of Shifts in the Israeli Water Discourse for Israeli-Palestinian Water Negotiations," *Political Geography* 21, no. 3 (2002): 296, https://doi.org/10.1016/S0962-6298(01)00038-5.

[108] Lowi, 10.

[109] Zeitoun and Warner, 2006, 436, 442.

[110] Lowi, 201.

[111] Lowi, 203.

[112] Fischhendler Itay, "Ambiguity in Transboundary Environmental Dispute Resolution: The Israeli–Jordanian Water Agreement," 92.

[113] E. Feitelson, "Implications of Shifts in the Israeli Water Discourse for Israeli-Palestinian Water Negotiations," *Political Geography* 21, no. 3 (2002): 294, https://doi.org/10.1016/S0962-6298(01)00038-5; Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," 160.

relies on persuasion. They argue that in hegemonic political contexts, the "'first among equals' has a greater ability to exploit 'soft' to power and shape the outcome of the conflict."[114] Related to discursive power is the promotion of water interaction as 'cooperation' by the hegemon and, in some cases by third parties, which might sustain patterns of unequal access to water resources and even conflict.[115] An emphasis on the inferior party's consent to an agreement may hide the negative and destructive dynamics underlying such cooperative arrangements. An outstanding example of how the discursive use of 'cooperation' is used to obscure Israeli domination in Israeli-Palestinian water relations is offered by Selby.[116] By assessing the results of the Oslo agreements on the balance of power in terms of water resources, he concludes that the denominator 'cooperation' mainly serves the international donor community and maintains Israeli domination. Furthermore, Feitelson highlights the importance of internal policy discourses in the analysis of inter-state water negotiations, as shifts in discourse influence both internal and external water policies.[117] It is also argued that discourses "can be constructed and deployed to shape people's understanding of water issues opening policy-solutions and driving towards which policies should be adopted".[118] Zeitoun and colleagues connect soft power mechanisms to transboundary water interactions in the form of treaties and negotiations, which could consolidate and prolong conflicts despite its supposed aim of resolving them. They also include issues of compliance and consent in their analysis. Treaties are critically assessed by these scholars, as such agreements could "institutionalize the *status quo*" between the hegemon and the non-hegemon, and produce negative outcomes for the weaker side.[119] Three features of treaties may contribute to and reinforce asymmetrical relationships: first, the weaker side has no effective enforcing mechanism to prevent violations of the agreement by the hegemon; second, the signing of a deal that is designed by the stronger side and that sustains the existing balance of power, may occur in circumstances of coercion; thirdly, bilateral agreements can

[114] Zeitoun, Mirumachi, and Warner, 161.

[115] Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," 159, 173.

[116] Jan Selby, "Dressing up Domination as 'Cooperation': The Case of Israeli-Palestinian Water Relations," *Review of International Studies* 29 (2003): 138, https://doi.org/10.1017/S026021050300007X.

[117] Feitelson, "Implications of Shifts in the Israeli Water Discourse for Israeli-Palestinian Water Negotiations," 296.

[118] Hussam Hussein, et al., "Syrian Refugees, Water Scarcity, and Dynamic Policies: How Do the New Refugee Discourses Impact Water Governance Debates in Lebanon and Jordan," *Water* 12, no. 2 (2020): 3, https://doi.org/10.3390/w12020325.

[119] Zeitoun and Warner, "Hydro-Hegemony - A Framework for Analysis of Trans-Boundary Water Conflicts," 447.

leave out other riparians, that are, nevertheless, also involved in the issues the treaty deals with. As such, the rights of a non-participating party could be affected without having control over it. The 1994 Peace Treaty between Israel and Jordan is often cited as an example of an unbalanced and thus problematic treaty, because the agreement exists of several weaknesses, leaves important issues unresolved, and does not include Palestinian, Syrian and Lebanese participation.[120] Remarkable here is the divergence between the discourse – the treaty has been lauded by negotiators of both sides as a success – and the material agreement, which establishes an inequitable distribution of water resources disadvantaging Jordan.[121] Fischhendler's assessment on the ambiguity of this treaty is in line with the above observations.[122] He focuses on the intentional incorporation of ambiguity in agreements on water issues and found three types of ambiguity in the water annex of the 1994 Israeli-Jordanian agreement, one of which being the different strategies of selling the treaty at home. This ambiguous element relates to discursive power, as Jordan presented the product of an asymmetrical relationship as one of a "virtual symmetrical relation", thereby concealing power imbalances for Jordanian domestic opposition.[123] However, it is believed that the ambiguities in the treaty are leveraged by Jordan in the implementation process of the treaty and can actually undermine conflict. Fischhendler's emphasis on the potential of the alleged non-hegemon to benefit from certain weaknesses of the stronger party has been further developed in a later contribution in which he proposes a reconceptualization of power dynamics in transboundary waters. The authors of this contribution point out that much of the literature on hydro-hegemony highlight the power capabilities and superiority of the hegemon while neglecting hegemonic weaknesses, which comprise "interlinkages between water and non-water issues, internal and external expectations, and consideration of whether the water-related issue at hand is crucial to each party's survival".[124] By taking structural weaknesses of both parties into account, the outcome of interaction over water could be predicted more realistically, including the recognition of beneficial outcomes for the weaker party. Recently, there has been an increasing focus on

[120] Zeitoun and Warner, 447-448.

[121] Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power," 167-169.

[122] Fischhendler Itay, "Ambiguity in Transboundary Environmental Dispute Resolution: The Israeli–Jordanian Water Agreement."

[123] Fischhendler Itay, 105-106.

[124] Jacob D Petersen-Perlman and Itay Fischhendler, "The Weakness of the Strong: Re-Examining Power in Transboundary Water Dynamics," *International Environmental Agreements: Politics, Law and Economics* 18 (2018): 275, https://doi.org/10.1007/s10784-018-9387-z.

environmental peacebuilding in the literature on water and cooperation. The multidisciplinary theoretical framework includes aspects of environmental risks, environmental cooperation, ecological diplomacy and sustainable development, while taking into account power asymmetries and both positive and negative forms of peace.[125] The theoretical framework of environmental peacebuilding will be further elaborated in the next chapter on the research design and the methodological framework, and in the empirical chapters.

A critique that often resonates within the critical hydropolitical field is that mainstream neoliberal and neo-realist theories of international relations fall short of including important variables, other than visible power and the international context, in the analysis of water issues.[126] Scholars such as Dinar, Feitelson and Selby underscore the importance of domestic variables and internal aspects of water to the negotiation processes between states and international water agreements. While most of the academics call for a broadening of the primarily geopolitical and international focus on water-related matters, Selby downplays the geopolitical importance that has been attributed to water in expert and public opinion.[127] He claims that intra-state conflicts over water scarcity are more important and pressing than inter-state water crises. In his works, he analyses water issues through the lens of political economy and rejects explanations in more naturalistic and liberal-technical terms.

In sum, critical hydropolitics has benefited from interdisciplinary insights from various fields of study, including international relations, political economy, political ecology, peacebuilding studies and negotiation studies. In the past two decades, advocates of a hydro-social approach have contributed to broader research in order "to critically evaluate the processes that establish transboundary water arrangements", which advances our understanding of such arrangements.[128] Although being in an early stage, the development of a multi-level hydro-hegemonic framework allows us to analyze water-related cooperation in complex and hegemonic political contexts such as the Israeli-Jordanian one, by including these new insights

[125] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework"; Tobias Ide et al., "The Past and Future(s) of Environmental Peacebuilding," *International Affairs* 97, no. 1 (2021): 1–16, https://doi.org/10.1093/ia/iiaa177; Tobias Ide and Adrien Detges, "International Water Cooperation and Environmental Peacemaking," *Global Environmental Politics* 18, no. 4 (2018): 63–84, https://doi.org/10.1162/glep_a_00478.

[126] Dinar, "Negotiations and International Relations: A Framework for Hydropolitics," 2000, 386-387; Warner and Zeitoun, "International Relations Theory and Water Do Mix: A Response to Furlong's Troubled Waters, Hydro-Hegemony and International Water Relations," 808; Feitelson, "Implications of Shifts in the Israeli Water Discourse for Israeli-Palestinian Water Negotiations," 315.

[127] Selby, "The Geopolitics of Water," 331.

[128] Zeitoun et al., "Analysis for Water Conflict Transformation.", 2020, 378.

and perspectives. This brings us to the question of how power is divided in the relationship between Israel and Jordan and how this has an impact on water-related matters between the two. The next chapter explains how the research design and methodology will help to conduct the analysis.

3. Research design and methodology

Building on theoretical analysis and a qualitative empirical study, this research tries to make sense of the hydropolitical relations between Jordan and Israel, in light of the newly reached agreement that unites the two on the issue of water and energy. In order to fully grasp the form of cooperation between the two, and how this particular relationship has been impacted by the larger political context and narratives about water, the research relies on a mix of methods, combining insights from critical and more traditional hydropolitical research. Methodologically, my research builds on the framework of environmental peacebuilding, developed by Dresse et al., in the context of hydro-hegemony.[129] This will allow for analyzing how the recent cooperation between Israel and Jordan is a form of environmental peacebuilding, while acknowledging the power asymmetry between the parties. Therefore, I will include elements from Zeitoun and Warner's framework of hydro-hegemony and take into account soft power strategies, in particular discursive power, in my analysis. The existing frameworks are adapted to my research by opening it up to out-of-basin aspects of water cooperation and by involving key elements from the field of critical hydropolitics, important to counterbalance the vast amount of traditional hydropolitics studies. These elements include, among others, the domestic context in which the relationship took place, which allows for an analysis that looks beyond elite interests.

Firstly, I will provide an overview of the physical aspects and the political context, including a historical overview of Israeli-Jordanian relations, along which the hydropolitical relation has been shaped. Secondly, the mechanisms, such as the type of cooperation and the implementation modalities, behind the Declaration of Intent between Israel, Jordan and the United Arab Emirates will be investigated. The third chapter will focus on the outcomes of the cooperation in terms of potential benefits and risks and political costs. Finally, I will shed light on the discursive elements found in primary source material from the period surrounding the signing of this agreement, in order to examine how the relationship is reflected in discourse and vice-versa.

[129] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework."

Expressions of discursive power could be found in media language, negotiation discourses and public discourse.[130] The discourse analysis will be applied to the following set of primary source material:

- The 2021 Declaration of Intent between the Hashemite Kingdom of Jordan, the State of Israel and the United Arab Emirates[131];
- Relevant reports, press releases and declarations of the involved ministries of both Israel and Jordan, such as the Israel Water Authority and the Jordan Ministry of Water and Irrigation;
- Speeches and statements of high-level governmental figures dealing with the hydro-political relationship between Jordan and Israel;
- News articles from the press agencies of the involved parties, covering the water-for-energy deal.

Some of the material has been derived from the BBC Monitoring Service and additionally, some material had to be translated from Arabic or Hebrew to English, using the Google Translate plug-in for websites.

The methodological choices of this research are inspired by Zeitoun and colleagues' recent call for transformative analysis of water conflicts, which could contribute to the transformation of inequitable and unsustainable water arrangements. I selected some suggested methods which best fit my research, including the blending of disciplines and the execution of an in-depth case study on Israel and Jordan, whereby the existing arrangements and potentially destructive cooperation are identified.[132]

4. Analysis of the current Israeli-Jordanian hydropolitical relationship

4.1 Physical aspects and political context of the Israeli-Jordanian relationship

This chapter corresponds to the first building block of the environmental peacebuilding framework, highlighting the initial conditions under which the hydropolitical relationship between Israel and Jordan took place.[133] Therefore, the most important biophysical aspects of

[130] Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II: The Influence of 'soft' Power."

[131] "Declaration of Intent between the Hashemite Kingdom of Jordan, the State of Israel and the United Arab Emirates," November 22, 2021, https://www.gov.il/BlobFolder/news/press_221121/en/DOI_221121.pdf.

[132] Zeitoun et al., "Analysis for Water Conflict Transformation," 365-367.

[133] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 105-106.

the relationship will be summarized, identifying the triggers for cooperation. Then, a historical overview of the relations between Israel and Jordan follows which is divided in a pre-1994 and a post-1994 period, marking the shift in their relationship since the peace treaty came into being. Furthermore, the level of power asymmetry, the domestic context and the role of external actors and interests are outlined, important factors influencing the socio-political environment in which the relationship takes place.

4.1.1 Physical aspects and environmental challenges

The Hashemite Kingdom of Jordan is currently the second most water scarce country in the world and shares parts of the Jordan River basin with Israel, the Occupied Territories, Lebanon and Syria.[134] Jordan's limited availability of water resources is caused by a number of facts, including highly variable and especially low precipitation levels, arid and semi-arid lands, the lack of water storage facilities, and, importantly, the limited amount and low quality of water provided by subterranean and shared surface resources.[135] Jordan's two main surface waters, the Jordan and Yarmouk rivers, originate in neighboring countries, making the country dependent of agreements on the distribution of the water resources. Many analysts also point to the rapid population increase and migration pressure – Jordan is ranked second globally in the amount of refugees per capita it hosts - , which exacerbates Jordan's already severe water scarcity.[136] According to estimates of the FAO, both Jordan's and Israel's per capita water availability contains less than 100 cubic meters per year, well below the 500 m^3 international threshold which defines "absolute water scarcity".[137] Of the five riparian entities of the Jordan basin, Israel, Jordan and the Palestinians are the most neediest and thus the most dependent of its water resources, of which 80% lies within their territories.[138]

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[134] "Water, sanitation and hygiene," *Unicef Jordan*, accessed December 14, 2021, https://www.unicef.org/jordan/water-sanitation-and-hygiene.

[135] Hussein et al., "Syrian Refugees, Water Scarcity, and Dynamic Policies: How Do the New Refugee Discourses Impact Water Governance Debates in Lebanon and Jordan?" 5-6.

[136] Bruce Borthwick, "Water in Israeli-Jordanian Relations: From Conflict to the Danger of Ecological Disaster," 2010, 170, https://doi.org/10.1080/714003523; UNICEF, "The Impact of Water Scarcity on Children in the Middle East and North Africa," 2021, 15; "1 per Cent of Humanity Displaced: UNHCR Global Trends Report," June 18, 2020, https://www.unhcr.org/jo/13317-1-per-cent-of-humanity-displaced-unhcr-global-trends-report.html..

[137] "Water, sanitation and hygiene," *Unicef Jordan*, https://www.unicef.org/jordan/water-sanitation-and-hygiene; "Renewable Internal Freshwater Resources per Capita (Cubic Meters) - Israel, Jordan," *The World Bank | Data*, 2018, https://data.worldbank.org/indicator/ER.H2O.INTR.PC?locations=IL-JO.

[138] Lowi, 10-20, 107.

4.1.2 Relationship pre-1994

Shortly after the establishment of Israel in 1948, Israel and Jordan each developed unilateral and competing projects on the Jordan basin, serving their own interests.[139] The Johnston mission, named after US special envoy Eric Johnston, was launched in 1953 to address these unilateral actions and to reconcile the riparians in a regional agreement. It was the most comprehensive effort towards cooperation in the basin and initially succeeded in reaching an agreement on the technical level with both the Israeli and the Arab side.[140] Although the Johnston mission officially failed because of the outbreak of the June 1967 War and the subsequent opposition by the Syrian and Lebanese governments, Israel and Jordan tacitly adhered to the Johnston Unified Plan, which set out rules for the division of the Jordan and Yarmouk rivers' water resources. As a consequence of the Arab defeat in the 1967 war, Israel captured the West Bank from Jordan, and Lebanon and Syria lost their superior position in the basin, which made the waters of the Jordan river almost exclusively accessible to Israel.[141] It represented a shift in the basin's already asymmetrical power balance in favor of Israel, which, together with Jordan, now became the principal actors in the basin. The Jordanian government, pressured by its acute need of water resources, was willing to put aside its commitment to non-cooperation with Israel, without publicly and politically recognizing its "official enemy".[142] From 1967 on, the two countries were involved in technical negotiations that became known as the 'Picnic Table Talks'.[143]

In general, efforts aimed at cooperation between *all* the riparians of the Jordan basin have never been successful. Often being US-sponsored initiatives, these projects were designed in the hope that a water-sharing regime would lead to overall peace.[144] The political context of Israel-Arab enmity and the Israeli occupation, referred to by Lowi as the "protracted conflict setting", always prevented basin-wide cooperation. As the Jordan system had a central role in the establishment of the Israeli state from 1948 on, the Arab states were reluctant to contribute to their adversary's economic and demographic development through water agreements. This

[139] Fischhendler Itay, "Ambiguity in Transboundary Environmental Dispute Resolution: The Israeli–Jordanian Water Agreement," 96.

[140] Munther J. Haddadin, *Diplomacy on the Jordan, International Conflict and Negotiated Resolution* (Springer US, 2002), 67-123, https://doi.org/10.1007/978-1-4615-1513-5.

[141] Lowi, 144.

[142] Lowi, 165-170.

[143] Bruce Borthwick, "Water in Israeli-Jordanian Relations: From Conflict to the Danger of Ecological Disaster," *Israel Affairs*, 9:3 (2003): 181-183, DOI: 10.1080/714003523.

[144] Lowi, *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin*, 49,193-195.

has been especially the case for Lebanon and Syria, which were, in addition, the upstream riparians, and thus never had interest in basin-wide cooperation.

In the period prior to the signing of the 1994 Peace Treaty, the only interaction that took place in the basin was limited to some minor, task-based arrangements between Jordan and Israel.[145] Despite the absence of direct cooperation through a formal agreement, there was already an unspoken alliance between Israel and Jordan in highly specific, functional matters, encouraged by mutual domestic needs and geostrategic concerns and allowing for the build-up of mutual trust.[146]

4.1.3 Relationship post-1994

The Middle East peace process, launched with the Madrid Conference in 1991 and aimed at reconciliation between Israel and the Arab states, provides the context in which the signing of the peace treaty between Jordan and Israel took place.[147] The conference consisted of bilateral peace negotiations between Israel on the one side and the Palestinians, Jordan, Syria and Lebanon on the other, and of multilateral working groups dedicated to, among other topics, water resources. The bilateral negotiation track between Jordan and Israel included discussions on their main water disputes, such as Israel's divertion and overexploitation of the shared rivers.[148] The conclusion of the PLO-Israeli Declaration of Principles in September 1993, commonly known as the Oslo Accords, served as an important catalyst for the achievement of formal peace between Israel and Jordan.[149] The signing of the Washington Declaration on 25 July 1994 ended the official state of belligerence between Israel and Jordan and increased their mutual confidence, further advancing the bilateral negotiation process and paving the way for a full-fledged peace treaty.[150] The negotiations ultimately culminated in the signing of the Israeli-Jordanian Treaty of Peace by King Hussein of Jordan and Israeli prime minister Rabin

[145] Lowi, 165.

[146] Borthwick, "Water in Israeli-Jordanian Relations: From Conflict to the Danger of Ecological Disaster," 181; Laura Zittrain Eisenberg and Neil Caplan, "Out of the Shadows and into the Light: The Jordanian-Israeli Peace Process, 1991–1994," in *Negotiating Arab-Israeli Peace: Patterns, Problems, Possibilities* (Bloomington: Indiana University Press, 2010), 117.

[147] Munther J Haddadin, "Water in the Middle East Peace Process," *Source: The Geographical Journal* 168, no. 4 (2002): 324, https://www.jstor.org/stable/3451475.

[148] Haddadin, 2002, 331; .Haddadin, 2011, 178-179; Fischhendler Itay, "Ambiguity in Transboundary Environmental Dispute Resolution: The Israeli–Jordanian Water Agreement," 96.

[149] Al O'ran Mutayyam, "The Long Journey to Peace: Jordanian–Israeli Relations until the Treaty of Peace of 1994," in *Jordanian-Israeli Relations : The Peacebuilding Experience* (New York: Routledge, 2009), 19.

[150] Mutayyam, "The Long Journey to Peace," 19-20.

on 26 October 1994.[151] The treaty, aiming at the normalization of relations between the two, includes an extensive agreement on water-related matters and foresees in the establishment of a Joint Israeli-Jordanian Water Committee (JWC) to implement the water arrangements.[152]

However, in the years following the peace treaty, a series of incidents on both sides put the Israeli-Jordanian relations under pressure. This includes Israel's political shift from the left under Labour to the right under Likud since 1995, which led to a setback in the peacebuilding process.[153] Additionally, the assassination of Rabin in 1995 and the death of King Hussein in 1999 marked an end to the stable and personal partnership between the leaders of both countries.[154] In times of pressure with regard to the water resources, such as a major drought in both countries in 1999 which led Israel to withhold a proportion of the promised water for Jordan, the relations were strained.[155] From the 2000s onwards, the cooperation between the two has faced ups and downs, yet, in general, their relationship deteriorated. Scholars point to the spill-over effects of Israeli-Palestinian violence, the general setback in Arab-Israeli relations since the mid-2000s, including the termination of peace talks, the growing Jordanian anti-Israeli sentiment and popular support for the Palestinians, and the lack of any prospect for a settlement between the Israelis and the Palestinians as the main reasons behind the "cold peace" between Israel and Jordan.[156] Their relationship is also referred to as a "frozen normalization".[157]

Nevertheless, the regulations from the water annex of the peace treaty have been respected throughout the years aside from some exceptions and a delay in fully implementing some provisions.[158] During the 2000s, Israel and Jordan embarked on some common water projects, of which the Red Sea - Dead Sea Water Conveyance project was the most ambitious.[159] The project was to foresee Israel, the Palestinian Territories and Jordan from potable water by bringing water from the Red Sea to the fast-shrinking Dead Sea, thereby generating electricity

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[151] Jeffrey K. Sosland, "The 1990s Madrid Peace Process and After, 1991–2006," in *Cooperating Rivals : The Riparian Politics of the Jordan River Basin* (Albany: SUNY Press, 2007), 173.

[152] Anders Jägerskog, "Israeli-Jordanian water cooperation," UNDESA, January 2013, https://www.un.org/waterforlifedecade/water_cooperation_2013/jordan_israeli_peace_agreement.shtml.

[153] Haddadin, "Water: Triggering Cooperation between Former Enemies," 184.

[154] Eisenberg and Caplan, "The Jordanian-Israeli Peace Process, 1991–1994," 129-130.

[155] Anders Jägerskog, "Why States Co-Operate Over Shared Water: The Negotiations In The Jordan River Basin," 2007, 15.

[156] Russell E Lucas, "Public Attitudes on Peace with Israel in Jordanian Politics," *Middle Eastern Studies* 57, no. 3 (2021): 477,469, https://doi.org/10.1080/00263206.2021.1898380.

[157] Ibid, 469.

[158] Sosland, "The 1990s Madrid Peace Process and After, 1991–2006," 198-200.

[159] Sosland, "The 1990s Madrid Peace Process and After, 1991–2006," 182-183.

for the desalination process. Approval in 2002 between Jordan and Israel over the building of a pipeline from the Red Sea to the Dead Sea was followed by a commitment of international donors, such as the World Bank, to fund the project. After years of delay, the project was officially signed in 2013, only to be abandoned by Jordan in June 2021, reportedly because of a lack of Israeli commitment to the project.[160] Recently, Jordan has increasingly been focusing on national instead of regional projects, such as the construction of a desalination plant in Aqaba and the development of a Jordan National Water Carrier. [161]

On 22 November 2021, Israel and Jordan signed a Declaration of Intent to cooperate in the areas of water and energy.[162] The "water-for-energy" deal, as it is commonly referred to, has been achieved in the context of a cool peace between Israel and Jordan, following a period of Jordanian discontent with Israel's policy towards the Palestinians, on the side of the Jordanian government as well as the Jordanian public, an increase in unilateral Jordanian water projects at the expense of bilateral projects with Israel and a distant relationship between Jordanian King Abdullah and the then-Israeli Prime Minister Benjamin Netanyahu. However, the relationship appeared to have improved since the installation of Naftali Bennett as the new prime minister of Israel in June 2021. While the leaders of both countries had not met with each other for multiple years, Bennett secretly met with the king in Amman shortly after his inauguration.[163] Additionally, in October 2021, the two parties agreed on new arrangements concerning water resources within the framework of the Joint Water Committee, which involves the doubling of Israel's annual water supply to Jordan as enshrined in the peace treaty.[164]

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[160] "After Years of Delays, Jordan Said to Nix Red Sea-Dead Sea Canal with Israel, PA ," *The Times of Israel*, June 17, 2021, https://www.timesofisrael.com/after-years-of-delays-jordan-said-to-nix-red-sea-dead-sea-canal-with-israel-pa/.

[161] Hussein et al., "Syrian Refugees, Water Scarcity, and Dynamic Policies: How Do the New Refugee Discourses Impact Water Governance Debates in Lebanon and Jordan?" 10.

[162] "UAE, Jordan and Israel Collaborate to Mitigate Climate Change with Sustainability Project," Israeli Ministry of Energy, November 22, 2021, https://www.gov.il/en/departments/news/press_221121.

[163] Aaron Magid, "Israel and Jordan's Relationship Is Better Than It Looks," *Foreign Policy*, July 29, 2021, https://foreignpolicy.com/2021/07/29/israel-jordan-palestine-bennett-netanyahu-abdullah-cold-peace/.

[164] "Minister of Energy Elharrar and Jordanian Minister of Water and Irrigation Al-Najjar Meet in Jordan," Israeli Ministry of Foreign Affairs, press release, October 11, 2021, https://www.gov.il/en/Departments/news/israel-minister-of-energy-and-jordanian-minister-of-water-and-irrigation-meet-in-jordan-11-october-2021.

4.1.4 Domestic context of Jordan

For a complete picture on the context behind the Israeli-Jordanian transboundary interactions, the domestic context should also be considered, next to the international, regional and inter-state context. Analysis on Jordanian public opinion shows a shift from a supportive to a negative attitude towards Israel and its peace process with Jordan during the 1990s.[165] This divergence coincides with the rapprochement between Jordan and Israel in the first half of the 1990s, culminating in the Washington Declaration and the peace treaty, and the subsequent deterioration of the relationship. 80% percent of the Jordanian public was found to be in favor for the Washington Declaration.[166] Despite the general negative attitude towards Israel among Jordanians, the government's promotion of the peace treaty in terms of economic progress for the people increased the support for the peace process. However, by 1999, public discontent with the absence of the promised economic benefits, the government crackdown on anti-normalization opposition groups, the Israeli treatment of Palestinians and incidents between Israel and Jordan translated into the disapproval of peace with Israel among 70% of the people.[167] Since then, popular support for the peace process between Jordan and Israel remained at a very low point.

4.1.5 Power asymmetry

The initial conditions of environmental peacebuilding are also determined by the level of power (a)symmetry between the parties, as asymmetrical relations could impede equitable forms of cooperation.[168] The relationship between Israel and Jordan has been identified by multiple scholars as an asymmetrical one, due to several factors.[169] First of all, Jordan's lack of access to water resources, compounded with a downstream riparian position, makes it, next to the Palestinians, the least powerful actor in the basin, and in the relationship with Israel in particular. Israel is identified as the dominant actor in the relationship – in this context the "basin hegemon" or hydro-hegemon - because of its relative economic and political power, its military strength, its alliance with the US, and its access to and control of water resources. The 1994 peace agreement was partly achieved because of Jordan's position as the most neediest

[165] Lucas, "Public Attitudes on Peace with Israel in Jordanian Politics," 470-471.

[166] Russell E. Lucas, "Jordan: The Death of Normalization with Israel," *Middle East Journal* 58, no. 1 (2004): 95-96, https://www.jstor.org/stable/4329976.

[167] Hilal Khashan, "Arab Attitudes toward Israel and Peace," *The Washington Institute for Near East Policy*, 2000, 27, https://www.washingtoninstitute.org/policy-analysis/arab-attitudes-toward-israel-and-peace.

[168] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 107.

[169] Lowi, 201; Dinar, 389; Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II," 167.

and least powerful actor, making cooperation with Israel over water resources the only option to secure water resources.[170] Israel's willingness to collaborate, motivated by the substantial gains it could win from regional cooperation on water, further allowed the successful conclusion of a peace treaty. Traditionally, observers have described the signing of the 1994 Peace Agreement as the inauguration of a "post-conflict era" and as the termination of the "state of war" between the two.[171] However, the peace treaty has never been fully materialized in economic terms for Jordan, and the asymmetrical power balance remained intact despite, or, perhaps, just because of the agreement.[172] The provisions of the water proportion of the treaty, which ensures a larger share of the shared resources for Israel, maintains the dominative hegemonic position of Israel. Therefore, the existing form of water interaction between Jordan and Israel has been defined as a negative one, since Israel's distributive power diminishes the options for conflict resolution.[173] Despite some concessions throughout the years, the imbalance in the relationship and the factors contributing to this, are sustained.

4.1.6 External actors and interests

Environmental peacebuilding projects are often driven and financially supported by the international donor community, third parties, and international and non-governmental organisations.[174] They mostly take up the role of funding institutions or act as neutral mediators between the involved parties. Throughout the history of the Israeli-Jordanian relationship, the United States has always functioned as a power-broker, aiming at regional cooperation between Israel and the Arab states. A new regional actor in the Israeli-Jordanian relationship, however, is the UAE, who not only mediated the recent water-for-energy deal, but also plays a central role in the execution of it. The deal results from the diplomatic relations between Israel and the United Arab Emirates since the two countries normalized ties under the US-brokered Abraham Accords in August 2020.[175] The UAE's intermediary and financial role in the project reflects its objective of becoming the regional peace-maker and the regional leader on climate issues – the UAE will host the 2023 UN Climate Change Conference (COP28). Some have criticized

[170] Lowi, *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin*, 202-203.

[171] Haddadin, "Water: Triggering Cooperation between Former Enemies," 178; Lowi, Preface, xxi.

[172] Eisenberg and Caplan, "The Jordanian-Israeli Peace Process, 1991–1994," 131; Al Oran Mutayyam, "Introduction," in *Jordanian-Israeli Relations : The Peacebuilding Experience* (New York: Routledge, 2009), 1–8.

[173] Zeitoun, Mirumachi, and Warner, "Transboundary Water Interaction II," 172.

[174] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 107.

[175] "UAE, Jordan and Israel Collaborate to Mitigate Climate Change with Sustainability Project ," Israeli Ministry of Energy, Press Release, November 22, 2021, https://www.gov.il/en/departments/news/press_221121.

the UAE's involvement in the project, arguing that it weakens Jordan's political importance in the process.[176] Moreover, a recent poll by the Washington Institute demonstrates the mass disapproval of the normalization agreements, by 85% of Jordanians.[177]

International support and financial mobilization are identified as important "hegemonic compliance-producing mechanisms" in the framework of hydro-hegemony.[178] It is argued that asymmetrical power relations are also reflected in the unequal opportunities for attracting international funding and support. The external parties of the agreement, the US and the UAE, are close partners of Israel, and their generous funding of bilateral water projects with Israel is leveraged for the advancement of regional cooperation with Israel. The difficulty of Jordan to attract international funds from its weak position, intended to finance its national water projects, reflects the preferences of the international donor community. Furthermore, the superior economic and political power of hydro-hegemons is visible from their disproportionate representation in international aid organisations, NGO's and research institutions, and further reinforces asymmetrical power relations.[179]

4.2 Mechanisms behind the Israeli-Jordanian cooperation

This section will elaborate on the type of cooperation, the implementation modalities and the institutionalization relating to the newly agreed cooperation. These factors pertain to the second building block of the environmental peacebuilding framework, being the mechanisms of cooperation.[180]

4.2.1 Type of cooperation

Twenty-seven years after the conclusion of the peace treaty, the governments of Jordan, Israel and the United Arab Emirates signed a Declaration of Intent (DOI) on 22 November 2021 in

[176] Serena Bilanceri, "Water for Energy: A Controversial Deal in a Thirsty Region," Friedrich Naumann Foundation, April 4, 2022, https://www.freiheit.org/middle-east-and-north-africa/water-energy-controversial-deal-thirsty-region.

[177] Kate Knight and David Pollock, "Domestic Reform Still Top Issue for Jordanians; Most Reject New Peace Deals with Israel, but Perceived Value of U.S. Ties Up Sharply," The Washington Institute, December 18, 2020, https://www.washingtoninstitute.org/policy-analysis/domestic-reform-still-top-issue-jordanians-most-reject-new-peace-deals-israel.

[178] Zeitoun and Warner, "Hydro-Hegemony - A Framework for Analysis of Trans-Boundary Water Conflicts," 449-450.

[179] Zeitoun and Warner, "Hydro-Hegemony - A Framework for Analysis of Trans-Boundary Water Conflicts," 454.

[180] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 107.

Dubai.[181] The deal was signed by Jordan's Minister of Water and Irrigation, the Israeli Minister of Energy and the Minister of Climate Change and Environment of the UAE, and under the auspices of the US Special Envoy for Climate, John Kerry and the UAE's Minister of Industry and Advanced Technology, Sultan Ahmed Al Jaber.[182] In the agreement, Israel and Jordan express the intention to develop a project that promotes water and energy security in the region, in order to address the challenges posed by climate change.[183] The cooperation plan exists of two projects, Prosperity Green and Prosperity Blue, allowing the trade of solar energy from Jordan in exchange for desalinated water from Israel.

The water-energy nexus approach in the deal is designed to create mutually beneficial outcomes in terms of sustainable water supply for Jordan and renewable energy for Israel, as appears from the agreed text.[184] The cooperation project entails the allocation of at least 600 MW of solar energy and additional electric storage to Israel, generated by a UAE-funded solar farm in Jordan. In turn, Jordan would receive up to 200 million cubic meters annually of desalinated water from Israel. The renewable energy provided by Jordan should contribute to Israel's carbon emission target of getting 30% of its energy from renewables by 2030, and a net zero emission by 2050. The energy from the solar power plant would be purchased by Israel at the price of $180 million per year, a proceed to be split between Jordan and Masdar, a UAE renewable energy company owned by the government.[185]

There are some options for the weaker party to improve the skewed relationship, of which issue linkage is identified as an important countermeasure to resist hegemony.[186] Issue linkage is the central mechanism in the water-for-energy deal, and is considered as a strategy that could offset the detrimental consequences of the asymmetric hydropolitical cooperation between Israel and Jordan.[187] Moreover, issue linkage could possibly lead to a more stable

[181] "Declaration of Intent between the Hashemite Kingdom of Jordan, the State of Israel and the United Arab Emirates," November 22, 2021, https://www.gov.il/BlobFolder/news/press_221121/en/DOI_221121.pdf.

[182] "UAE, Jordan and Israel Collaborate to Mitigate Climate Change with Sustainability Project ."

[183] "Declaration of Intent".

[184] "Declaration of Intent between the Hashemite Kingdom of Jordan, the State of Israel and the United Arab Emirates," November 22, 2021, https://www.gov.il/BlobFolder/news/press_221121/en/DOI_221121.pdf.

[185] Mohammed Mahmoud, "Exploring the Feasibility of the Jordan-Israel Energy and Water Deal," Middle East Institute (MEI), December 16, 2021, https://www.mei.edu/publications/exploring-feasibility-jordan-israel-energy-and-water-deal.

[186] Zeitoun and Warner, "Hydro-Hegemony - A Framework for Analysis of Trans-Boundary Water Conflicts," 454.

[187] Katz and Shafran, "Energizing Mid–East Water Diplomacy: The Potential for Regional Water–Energy Exchanges," 292.

outcome. In this case, Jordan's dependency on Israel for water supply is replaced by a mutual interdependency between the parties. The linkage between water and non-water issues in this agreement reduces the potential gains for the less dependent party, here Israel, if a partial or complete disruption of the water supply would take place. Although the ability of Jordan to respond with a similar disruption of electricity flow is less drastic for Israel, it does lower the political, security, trade and other gains that Israel could win with unilateral water projects. However, the water-energy nexus has not been initiated by Jordan itself as an attempt to reach a more equitable cooperation with Israel, but originates in EcoPeace's project proposal. Therefore, further research should examine the NGO's initiative as well as the organization itself on how it reflects the existing power relationship or, conversely, tries to counter asymmetrical relationships.

On the basis of the Declaration of Intent, we could conclude that the envisaged cooperation between Israel and Jordan belongs to the category of technical cooperation in the environmental peacebuilding framework. This kind of cooperation is established "under the pretext of neutrality and efficiency".[188] Indeed, these two features appear from the DOI.

4.2.2 Implementation modalities

Technical cooperation is typically implemented by means of coordinated action, which does not require direct interaction between the parties but simply consists of technical coordination.[189] The cooperation could also be implemented through direct dialogue and negotiations, or, if the parties are close partners, by undertaking collective action. From the declaration of intent, it appears that the form of interaction needed for the implementation of the project is purely based on technical coordination. The text outlines that the parties "shall facilitate discussions between their respective representatives, for purposes of coordination, exchange of views and consultation with regards to the objective of this DOI."[190] Apart from this mention on coordinated action, the agreement does not officially require direct contact between Israel, Jordan and the UAE. As a minimum, the counties agreed to "ensure a free flow of information between them with regards to matters relating to the implementation of this DOI and each project."[191] This form of cooperation reflects the cold peace between Israel and Jordan,

[188] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 107.

[189] Ibid.

[190] Declaration of Intent between the Hashemite Kingdom of Jordan, the State of Israel and the United Arab Emirates," November 22, 2021, https://www.gov.il/BlobFolder/news/press_221121/en/DOI_221121.pdf.

[191] Ibid.

however, the involved ministers of each country conducted negotiations and met with each other in the run-up to and on the signing ceremony. Hence, a mix of coordination on technical issues and direct collaboration will probably take place when the project will be further executed. Nevertheless, the discursive analysis will point out that Jordan finds itself squeezed between high-level inter-state cooperation and the reluctant domestic attitude towards cooperation with Israel.

4.2.3 Institutionalisation

Institutionalisation is described as a set of shared rules, norms or arrangements that shapes a normative framework for the involved parties, increasing the degree of predictability of cooperation and reducing uncertainty.[192] In the case of the Israeli-Jordanian relationship, existing institutions are the 1994 peace treaty and the Joint Water Committee (JWC), created by this treaty to implement the hydropolitical arrangements. Despite repeated attempts by Jordanian opposition groups to abandon the 1994 peace treaty, the accords have hold and its provisions have been more or less respected.[193] However, the DOI makes no mention of the existing peace agreement between Israel and Jordan and the JWC is not involved as an institution, despite the agreement's statement to "ensure lasting peace, stability, security and prosperity for each of the Parties and the Middle East region in its entirety".[194] From the DOI's text, it appears that no joint institutions will be created, nor will existing institutions support the execution of the agreement. Moreover, the DOI is not legally binding. However, the creation of joint institutions could still be regulated in next stages of the project, as the detailed characteristics of the project have to be proposed by Autumn 2022. In this case, the newly created institutions should be investigated on the power relations it reflects.

Nevertheless, the signing of the agreement *an sich* institutionalizes the norms and framework for future cooperation. Treaties and agreements are also identified as normative compliance-producing mechanisms, which could institutionalize the status quo in hydro-hegemonic contexts.[195] The signing of an agreement in periods of rapprochement between parties could be used as a strategy by the hydro-hegemon to exploit the weaker party and gain control over resources. Unresolved issues and the reflection of existing inequalities in the agreement could subsequently harm the weaker side. Applied to our case-study, it is still unclear

[192] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 108.

[193] Magid, "Israel and Jordan's Relationship Is Better Than It Looks."

[194] Declaration of Intent.

[195] Zeitoun and Warner, "Hydro-Hegemony - A Framework for Analysis of Trans-Boundary Water Conflicts," 447.

from the DOI how the arrangements will be enforced and what happens in case of violations by one of the parties. The potential risks for Jordan in case of resource disruption is further outlined under the 'Outcomes' section. Another weakness in this agreement is that the Palestinians are not included, despite their shared concerns over water and energy issues. However, the initiative by EcoPeace called a "Green Blue Deal for the Middle East", which lies at the basis of the water-for-energy deal, initially included Palestine in the project.[196] Leaving out Palestine from the agreement results in a fragmented resolution, reducing the sustainability of the solution to provide water and energy security in the region. This gap has also been noticed by analysts, stating that "including the West Bank in a future iteration of the deal would make sense for all parties involved."[197]

4.3 Outcomes

The third component of environmental peacebuilding consists of direct and indirect outcomes and the financial, environmental and political costs related to the cooperation.[198] For the purpose of my research, I adapted these categories along the lines of the hydro-hegemonic framework, and took into account the provisory character of the arrangements. The outcomes of the environmental cooperation under the water-for-energy agreement will be assessed on the following variables: the potential benefits and risks, the indirect outcomes in terms of power asymmetry and the political costs in terms of the domestic context.

4.3.1 Potential direct benefits and risks

Potential benefits

A prefeasibility study conducted by EcoPeace and the Konrad Adenauer Stiftung points out that the water-energy nexus could bring significant economic, technical, environmental as well as geopolitical benefits to the parties involved.[199] First of all, addressing water scarcity and increasing water security in the region in general, and especially in Jordan, is a central component of the envisaged cooperation. Desalination is thereby considered as a crucial technique, since 80% of Israel's domestic water consumption, or about one third of its total

[196] Gidon Bromberg, Nada Majdalani, and Yana Abu Taleb, "A Green Blue Deal for the Middle East," EcoPeace Middle East, December 2020, www.ecopeaceme.org.

[197] Bruce Riedel and Natan Sachs, "Israel, Jordan, and the UAE's Energy Deal Is Good News ," Brookings Institution, November 23, 2021, https://www.brookings.edu/blog/order-from-chaos/2021/11/23/israel-jordan-and-the-uaes-energy-deal-is-good-news/.

[198] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 108.

[199] Bromberg, Majdalani, and Abu Taleb, "A Green Blue Deal for the Middle East," 6-8.

water supply, stems from desalinated water.[200] Jordan's national desalination project in Aqaba and the conveyance of desalinated water from the Dead Sea in the South to its populated areas in the North, however, would be immensely expensive and unfeasible to increase the country's water supply.[201] Meanwhile, transporting desalinated water from Israel to Jordan is a much cheaper solution, because of Israel's technological know-how of desalination and the Mediterranean's proximity to Jordan's population centers.[202] Furthermore, Jordan's unpopulated and open spaces in the eastern and southern deserts, combined with the reception of lots of sun and solar irradiation, makes the area highly suitable for the production of solar energy.[203] The lower price of solar energy from Jordan, in comparison to the high costs of solar energy production in Israel, is a clear economic gain for Israel.[204] Concerning Jordan, producing and selling renewable energy to Israel would increase its GDP by 3 or 4% and significantly expand its foreign financial reserves, according to EcoPeace's estimates. This money could then be invested again in desalinated water from Israel, allowing Jordan to achieve water security in an economically interesting way and help prevent the overuse and pollution of the Jordan River. In addition to these economic benefits, the project would reduce environmental problems, which is in line with the expected benefits from environmental peacebuilding.[205]

Geopolitically, an important gain to Jordan is the mutual interdependency this project creates.[206] Whereas the one-sided Jordanian dependency on Israel for water and energy asks for a dominative relationship, interdependency reduces the possibility of Israeli domination and could rebalance the relationship. Regarding Israel, integrating in the region by means of cooperation with an Arab state and by boosting economic development, is an important foreign policy objective. Both countries could also benefit from a regional leadership position as renewable energy exporter in the case of Jordan and desalination pioneer in Israel's. The rationale behind the regional cooperation project stems from functional motives, formulated by EcoPeace as follows: "cooperation on water and energy has the potential to be a springboard for broader cooperation, greater stability, and better living conditions for all in

[200] Katz and Shafran, "Energizing Mid–East Water Diplomacy: The Potential for Regional Water–Energy Exchanges," 295.

[201] Mahmoud, "Exploring the Feasibility of the Jordan-Israel Energy and Water Deal."

[202] Bromberg, Majdalani, and Abu Taleb, "A Green Blue Deal for the Middle East," 10.

[203] Katz and Shafran, 295.

[204] Bromberg, Majdalani, and Abu Taleb, 9-10.

[205] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 108.

[206] Ibid.; Katz and Shafran, "Energizing Mid–East Water Diplomacy: The Potential for Regional Water–Energy Exchanges," 301.

the Middle East."[207] However, the expected build-up of trust between the parties because of the internalization of cooperation, as prescribed by the environmental peacebuilding literature, might not fully work out regarding Jordan's strained position, both as the non-hegemon and in relation to its domestic context.

Potential risks

Scholars have pointed to the risks of relying on desalination in the context of asymmetrical power relations, because it creates dependency on technologically generated water, reduces the potential for alternative water policies in the future, and, important here, it reinforces inequalities in accessing water.[208] There are also risks related to the cooperation on energy issues, especially because the deal requires the establishment of a cross-border electricity grid. For regional energy interconnection projects to be successful, trust and a stable political relationship between the parties is needed.[209] Hence, the Jordanian and broader Arab opposition against cooperation with Israel and the earlier deterioration of the Israeli-Jordanian relationship could possibly be an obstacle to a smooth implementation of the electricity grid connection, which has been the case in earlier attempts at integration of the Jordanian-Israeli electricity grid.[210] The increasing interdependency between Israel and Jordan for critical resources could pose political and economic risks.[211] Especially in cases of asymmetric resource needs, supply disruption harms the most neediest party more than the less dependent party. Given Jordan's acute water need and the ability of energy reserves to be stored, a disruption of the water supply presents a bigger threat to Jordan than a potential energy disruption would pose to Israel. As the energy needs of the project, being the desalination and the transport of the water to Jordan, would be fully covered by the energy produced by Jordan, a disruption of the energy supply could induce a vicious circle that would mainly affect Jordan itself. As such, Jordan's rights to water could be denied by the hydro-hegemon.

Moreover, we could contend that Israel has a significant advantage over Jordan in fulfilling the commitments of the agreement. Israel has been cited as a "world leader in areas

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[207] Bromberg et al., 10.

[208] Joe Williams and Erik Swyngedouw, "Politicizing the Salt of the Seas," in *Tapping the Oceans: Seawater Desalination and the Political Ecology of Water*, ed. Joe Williams and Erik Swyngedouw (Edward Elgar Publishing, 2018), 188-189.

[209] Itay Fischhendler, Lior Herman, and Jaya Anderman, "The Geopolitics of Cross-Border Electricity Grids: The Israeli-Arab Case," *Energy Policy* 98 (2016): 534, https://doi.org/10.1016/j.enpol.2016.09.012.

[210] Ibid., 538.

[211] Katz and Shafran, "Energizing Mid–East Water Diplomacy: The Potential for Regional Water–Energy Exchanges," 302-303.

such as solar energy storage, sustainable protein alternatives, agriculture technology and desalination" and has already built 5 desalination plants, with 2 more to be completed.[212] Jordan, in contrast, is dependent on the UAE for the building of its solar farm and, consequently, has to share the proceeds of the collaboration with the Gulf country.

In sum, the risks for both countries are not equal, and the interdependency created by the agreement could further institutionalize the asymmetric relationship.

4.3.2 Indirect outcomes in terms of power asymmetry

The water arrangements from the 1994 peace treaty have not been re-negotiated, except for the recent agreement on the doubling of water supply to Jordan, and are thus still in force despite the new water-for-energy accord. This means that the asymmetrical cooperation over water is sustained, and potentially spills over to the new form of cooperation. It could even be argued that, just because of the existing asymmetric arrangements, Jordan had no other choice than accept the new arrangements outlined in the declaration of intent. Apart from the effects of climate change on the transboundary waters, one could ask if Jordan had to resort to the expensive alternative of desalinated water if Israel would have reallocated the water resources in a more equitable way. It is stated that this was the case in the past when Jordan had to look for expensive and almost unfeasible alternatives such as the Red Sea-Dead Sea project, in order to compensate for the asymmetric distribution of shared waters with Israel.[213]

4.3.3 Political costs in terms of domestic context of Jordan

Recent research on Jordanian public opinion on peace with Israel demonstrates that the new agreement between Israel and Jordan took shape in a context of general distrust of Israel and a rejection of regional peace with Israel.[214] The peace process with Israel has been facing fierce opposition from the Jordanian public throughout the past two decades, culminating in 2019 with the rejection by 93 per cent of Jordanians of their country's recognition of Israel, according to the Arab Opinion Index.[215] Taken together, it appears from polls from the past six years that roughly half of the Jordanians identify Israel as the country forming the biggest threat to the

[212] "Background - Seawater Desalination in Israel," Israeli Ministry of Finance, November 9, 2020, https://www.gov.il/en/departments/general/project-water-desalination-background; "Israel, Touting Technology, Aims for Zero Emissions by 2050," AP News, October 29, 2021, https://apnews.com/article/climate-technology-israel-middle-east-tel-aviv-56d3aa1257d0ad43bc7354ffd738c58d.

[213] Zeitoun, Mirumachi, and Warner, 169.

[214] Lucas, "Public Attitudes on Peace with Israel in Jordanian Politics,"

[215] "The 2019-2020 Arab Opinion Index: Main Results in Brief," *Arab Center for Research and Policy Studies*, November 16, 2020, https://arabcenterdc.org/resource/the-2019-2020-arab-opinion-index-main-results-in-brief/.

security and stability of the region.[216] That Jordan's foreign policy towards Israel, especially with the conclusion of a new deal, remains relatively unaffected by the negative public opinion has a number of reasons. First, due to a persistent economic crisis in Jordan, internal issues take precedence over foreign policy concerns when it comes to the public.[217] In 2020, 75% of Jordanians found domestic issues relating to economic and political reform more important than foreign policy issues.[218] The internal focus intensified due to the peaking unemployment rate, exacerbated by the covid-19 pandemic, and political unrest accompanied by government repression on dissent. Second, although the peace process with Israel and the rights of Palestinians remains the most important foreign policy issue for Jordanians, other regional issues, such as the Syrian civil war and the major influx of Syrian refugees into Jordan, have gained importance. Finally, the failure of the Jordanian authorities to address the protesters' demands for more democracy and political reforms during the Arab uprisings has left many Jordanians alienated from politics.[219] One researcher refers to it as the overburdening of the Jordanians.[220]

Regarding the little pressure the Jordanian public could exert on the government, the regime is able to conduct its foreign policy towards Israel in relative isolation from the public opinion. However, the signing of the deal has been met with mass protests in Jordan and a walk-out of Parliament by Jordanian politicians opposing the agreement.[221] The protests went on in 2022 and despite a ban on protests, Jordanians have been demonstrating against the cooperation on multiple Fridays in Amman since the announcement.[222]

4.4 Discourse analysis

Through a systematic textual analysis of the signed declaration of intent, government press releases, political statements and media coverage in both countries, this chapter will examine how the discourse reflects asymmetry in the relationship between Israel and Jordan, if and how

[216] Ibid., 472.

[217] Ibid., 475-478.

[218] Knight and Pollock, "Domestic Reform Still Top Issue for Jordanians; Most Reject New Peace Deals with Israel, but Perceived Value of U.S. Ties Up Sharply."

[219] Martin Beck and Simone Hüser, "Jordan and the 'Arab Spring': No Challenge, No Change?," *Middle East Critique* 24, no. 1 (2015): 84, https://doi.org/10.1080/19436149.2014.996996.

[220] Lucas, "Public Attitudes on Peace with Israel in Jordanian Politics," 477.

[221] "Jordan MPs Walk out of Session on Israel Electricity-for-Water Deal," Middle East Monitor, December 9, 2021, https://www.middleeastmonitor.com/20211209-jordan-mps-walk-out-of-session-on-israel-electricity-for-water-deal/.

[222] Bilanceri, "Water for Energy: A Controversial Deal in a Thirsty Region."

discourse and perceptions of the other and the self shaped the actual agreement, and how the signing of the deal possibly impacted the discourse.

The concept of "sanctioned discourse", developed through Allan's water policy research and part of Zeitoun and Warner's framework of hydro-hegemony, will be applied here.[223] The concept refers to the prevailing discourse that is mostly defined by the hegemon and used to underline the benefits of water cooperation while hiding aspects of asymmetry or inequity. Third parties, such as international donors and supporting governments, the media, and even the non-hegemonic party often help in sanctioning the discourse by adopting it. In this case, the emphasis on cooperation between the partners as well as its mitigating effects on climate change and mutual benefits are identified as the main elements of the sanctioned discourse.

4.4.1 Before the signing of the Declaration of Intent

In the run-up to the signing of the declaration of intent, the relations between Israel and Jordan had been improved, exemplified by the meeting between the two heads of state, as described above. While the Israeli official discourse consequently emphasizes the partnership with Jordan, the discourse employed by the Jordanian government is characterized by ambiguity. The Israeli public perspective appears from statements from the Ministry of Foreign Affairs, commenting on cooperative events between Israel and Jordan over the summer of 2021. After meeting with his Jordanian counterpart in July 2021, minister of Foreign Affairs Yair Lapid announced that Israel would "broaden economic cooperation for the good of the two countries", referring to Jordan as "an important neighbour and partner".[224] The meeting led to the signing of an agreement on water and trade in October 2021, signaling the rapprochement between Israel and Jordan and "the importance of cooperation on the issue of water as an impetus for promoting further relations between countries", as expressed in an Israeli press release.[225] The rapprochement was underscored by discourses on both sides that increased the potential for reaching the agreement with the UAE, one month later. Following the signing of the agreement on the doubling of the annual water supply to Jordan, the Israeli Minister of Energy, Karine Elharrar, wished that the agreement would be the precursor for further cooperation, "which will

[223] Zeitoun and Warner, "Hydro-Hegemony - A Framework for Analysis of Trans-Boundary Water Conflicts," 448-449.

[224] Dan Williams, "Israel Doubles Water Supply to Jordan; Source Says PM Met King," *Reuters*, July 9, 2021, https://www.reuters.com/world/middle-east/israel-sell-jordan-additional-water-this-year-minister-says-2021-07-08/.

[225] "Minister of Energy Elharrar and Jordanian Minister of Water and Irrigation Al-Najjar Meet in Jordan."

benefit both peoples in grappling with today's challenges."[226] In April 2021, a former Jordanian minister and member of the Senate already expressed the hope for better relations: "Any Israeli premier other than Netanyahu would be better for Jordan."[227] However, the only clear mention of the improved relationship and the will to further cooperate happened in July 2021, during an interview with Jordanian King Abdullah in English on the American news channel CNN.[228] The Jordan Times provided the full transcript of the interview, yet only in English, making the content inaccessible to non-English speaking Jordanians. King Abdullah stated in the interview that "we have seen in the past couple of weeks, not only a better understanding between Israel and Jordan, but the voices coming out of both Israel and Palestine that we need to move forward and reset that relationship."[229] This message has neither been reiterated on other occasions, nor by other Jordanian officials.

On the contrary, the Jordanian government discourse often diverges from the actual policy choices it makes. Discursively, Jordan often condemns Israel in order to demonstrate its support for the Palestinian cause, such as a statement by the Jordanian foreign ministry on the same day of the first - albeit in secret - meeting with the new Israeli government, calling the eviction of Palestinian families from Sheikh Jarrah in East Jerusalem "a war crime".[230] The official language towards Israel - "which […] allows extremists to storm the mosque in large numbers under the protection of the Israeli police" - when Palestinians rights are violated, go hand in hand with the concealment of meetings and friendly relationships between the leaders.[231] Despite the seemingly improved relationship, Jordan did not openly congratulate the new Israeli government under Naftali Bennett in July 2021 and no pictures or press release has been dedicated to the first meeting with the new prime minister. Although it appears from Jordan's official discourse that it is in line with the population's opinion on the relations with Israel, the accusations have not been translated into tangible action, demonstrated by the maintenance of the peace treaty and the recent agreement.

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[226] Ibid.

[227] Mohammad Ersan and Mustafa Abu Sneineh, "Netanyahu vs King Abdullah: Israel and Jordan Relationship Hits Low Point," Middle East Eye, April 2, 2021, https://www.middleeasteye.net/news/israel-jordan-netanyahu-king-abdullah-relationship-low-point.

[228] Fareed Zakaria, "On GPS: King Abdullah II of Jordan" (CNN Video, July 25, 2021), https://edition.cnn.com/videos/tv/2021/07/25/exp-gps-0725-king-abdullah-biden-middle-east.cnn.

[229] "King Speaks to CNN's Fareed Zakaria in Wide-Ranging Interview," *The Jordan Times*, July 25, 2021, https://www.jordantimes.com/news/local/king-speaks-cnns-fareed-zakaria-wide-ranging-interview.

[230] Barak Ravid, Twitter Post, July 8, 2021, https://twitter.com/BarakRavid/status/1413122242494537728.

[231] Jordanian Foreign Ministry, Twitter Post, July 18, 2021, https://twitter.com/ForeignMinistry/status/1416697034107719681.

In contrast, the tendency in the Israeli discourse is to stress the equality of both countries in cooperation projects, by pointing to similar benefits and/or risks for both Israel and Jordan. The Israeli Ministry of Foreign Affairs, for instance, referred in a press release to "the solidarity that exists between neighbours who are all facing water shortages due to climate change and regional demographics."[232] This suggests that, in line with what the literature prescribes, the sanctioned discourse is shaped and used by the most powerful party.

4.4.2 Declaration of Intent

The text of the Declaration of Intent relies extensively on the sanctioned discourse, with plenty of references to regional cooperation and climate change challenges. The introductory sentence - "Recognizing the need for regional cooperation to meet the challenges posed by the climate crisis on water and energy security in our region," - serves as an example of how the sanctioned discourse is often formulated.[233] For instance, the agreement mentions "collaboration in the Middle East […] which benefit all the Parties and their respective citizens", "cooperation relating to regional water transmission" and demonstrates the adoption of the discourse by the US, encouraging "all other Middle East parties to continue to cooperate on advancing climate ambition and action in the region and globally".[234]

The content of the agreement is remarkable on another point as well. While Israel seeks to achieve its own set goal of reducing the amount of carbon emissions, the goal of the agreement for Jordan is determined by the established fact of water scarcity, expressed in the text as "Aware of the Hashemite Kingdom of Jordan's water scarcity issue". Hence, it seems that Jordan, unlike Israel, had no agency in determining its own goals for the project, which confirms Jordan's inferior position in the relationship in general, and in this agreement in particular.

4.4.3 After the signing of the Declaration of Intent

The contrast in discourses is further demonstrated by the official reactions on the signing of the deal, with the Israeli and third parties' reliance on the sanctioned discourse and the striking silence of the Jordanian government. Israel's Energy Minister Elharrar emphasized that "all residents of the Middle East will benefit from this memorandum of understanding, not just Jordan and Israel," and sees the agreement as an example on how to cooperate "to fight the

[232] "Minister of Energy Elharrar and Jordanian Minister of Water and Irrigation Al-Najjar Meet in Jordan."

[233] Declaration of Intent between the Hashemite Kingdom of Jordan, the State of Israel and the United Arab Emirates," November 22, 2021, https://www.gov.il/BlobFolder/news/press_221121/en/DOI_221121.pdf.

[234] Ibid.

climate crisis".[235] The reaction of the spokesperson of the Jordanian Water Ministry reflects the often used discourse on water scarcity, stating that the project addresses "Jordan's growing demand for permanent water resources, exacerbated by the kingdom's population growth during the last several years."[236] The only reasons that could be detected in the discourses motivating the shift of priorities for water security away from the focus on national water projects in Jordan, are provided by a minor comment of Jordan's Minister of Water and Irrigation Mohammad Al-Najjar, and by the Jordanian director of EcoPeace, Yana Abu-Taleb. Al-Najjar indicated that "climate change and the influx of refugees have further exacerbated Jordan's water challenges, however, there are many opportunities for regional cooperation to help increase sustainability in the sector."[237] Abu-Taleb pointed to the economic benefits of purchasing desalinated water from Israel, as "Jordan cannot rely on one water source," and the technology that makes that "water sources are simply not limited anymore."[238]

Most remarkably here is the absence of Jordanian sources to confirm or declare the signing of the deal, and the way it has been presented at home, in comparison to internationally. First of all, no information or documents relating to the Israeli-Jordanian cooperation over water is found on the official Jordanian government website, neither in English, nor in Arabic, despite containing information from all government entities and open data. Even the media center, providing an extensive list of the latest government news, does not contain any article that mentions the signing of the declaration of intent.[239] Additionally, the website of the Ministry of Water and Irrigation contains only one press item on the declaration, while the document is not provided in the information center under the section "Agreements and Memoranda of Understanding".[240] The press release by the Jordanian government is characterized by some particularities as well. It clearly avoids mentioning Israel by, after naming the country once, referring to "the three countries", "desalinated water from the Mediterranean", "the signatory

[235] "Israel, Jordan to Partner in Water-for-Energy Deal," Reuters, November 22, 2021, https://www.reuters.com/business/energy/israel-jordan-partner-water-for-energy-deal-israeli-ministry-says-2021-11-22/.

[236] Hanna Davis, "Hundreds Protest in Jordan against Water-Energy Deal with Israel," Al Jazeera, November 26, 2021, https://www.aljazeera.com/news/2021/11/26/hundreds-protest-in-amman-against-water-energy-deal-with-israel.

[237] "Israel, Jordan to Partner in Water-for-Energy Deal."

[238] Anchal Vohra, "Water-for-Energy Is Better Than Land-for-Peace," Foreign Policy, December 16, 2021, https://foreignpolicy.com/2021/12/16/water-for-energy-is-better-than-land-for-peace/.

[239] "Media Center," The official website of the e-Government of Jordan, accessed June 15, 2022, https://portal.jordan.gov.jo/wps/portal/Home/MediaCenter/OtherNews.

[240] "Water and Irrigation Publishes a Declaration of Intent Document in Dubai," Ministry of Water and Irrigation, November 2021, http://mwi.gov.jo/Ar/NewsDetails/المياه_والري_تنشر_وثيقة_اعلان_النوايا_في_دبي.

parties" and "the three parties". Moreover, the statement mainly highlights the independence of Jordan regarding the project, by reiterating from the declaration that it "does not entail or affect any obligations or legal rights of the signatory parties under international law" and by underlining that "both projects are conditional on each other, meaning that no project will be implemented without the other." This finding corresponds with the cautious reactions by Jordanian officials, expressing that "the kingdom would only proceed if it [Israel] secured these quantities of water" and that the final agreement only would be signed if it is announced "to Parliament, notables, citizens and all the press and media".[241]

The divergence is also notable from each parties' media outlets. An example from the Israeli press includes an article of the Times of Israel which calls the "huge UAE-brokered deal" the "largest-ever cooperation agreement" between Israel and Jordan.[242] The Emirates news agency, WAM, describes the content of the project and in doing so, it relies primarily on the climate change discourse.[243] It mentions, for instance, the importance of the agreement for the UAE's hosting of the COP28 climate conference in 2023. The coverage of the project by Jordan's news agency Petra, on the other hand, mainly stresses Jordan's water needs, the continuation of the National Water Carrier project, and does not mention the project's part on solar energy.[244] On top of that, the title of the article in the Arabic version differs from the English version, since it left out the name of Israel, while the content of the article itself is identical.[245] The coverage by Al Jazeera proves to be more balanced than the broadly positive reporting, on the one hand, and the cautious reporting, on the other. An article covering Jordanian protests against the deal openly questions if the agreement is about environmental benefits or political gains, and describes how the hydropolitical relations between Israel and Jordan has faced many challenges.[246]

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[241] "Israel, Jordan to Partner in Water-for-Energy Deal"; Davis, "Hundreds Protest in Jordan against Water-Energy Deal with Israel."

[242] "Israel, Jordan Sign Huge UAE-Brokered Deal to Swap Solar Energy and Water ," The Times of Israel, November 22, 2021, https://www.timesofisrael.com/israel-jordan-sign-uae-brokered-deal-to-swap-solar-energy-and-water/.

[243] "The UAE, Jordan and Israel Cooperate to Address the Repercussions of Climate Change by Declaring Intent in the Field of Sustainability," Emirates News Agency - WAM, November 22, 2021, https://www.wam.ae/ar/details/1395302995487.

[244] "Jordan, UAE, Israel to Explore Water-Energy Project," Jordan News Agency (Petra), November 22, 2021, https://petra.gov.jo/Include/InnerPage.jsp?ID=39118&lang=en&name=en_news.

[245] "توقيع إعلان نوايا للبحث في جدوى مشروع إقليمي مشترك للطاقة والمياه," Jordan News Agency (Petra), November 22, 2021, https://petra.gov.jo/Include/InnerPage.jsp?ID=196022&lang=ar&name=news.

[246] Davis, "Hundreds Protest in Jordan against Water-Energy Deal with Israel."

The third parties being involved in the deal, the UAE and the US, mainly resort to the sanctioned discourse on climate change and regional cooperation in their comments on the signing of the agreement. US Climate Envoy John Kerry stressed that for a region facing "some of the worst consequences of climate change" the only solution is to work together in the region, and that, if the project would be implemented, this would be "a diplomatically transformative deal".[247] The UAE's Minister of Foreign Affairs and International Cooperation, Sheikh Abdullah bin Zayed Al Nahyan, emphasized the connection between this agreement and the Abraham Accords, which, according to him, serves to "reinforce regional peace, stability and prosperity, while improving the lives and the future prospects of all the people of the region."[248] He pointed to common benefits for Israel and Jordan in terms of climate security and other interests. His colleague, the UAE's Minister of Industry and Advanced Technology, also underlined how this project reinforces regional stability.

We could conclude that the dominant, sanctioned discourse not only appears in Israel's official statements, but that it is also reproduced by media outlets and third parties. Moreover, Jordan's official discourse on cooperation with Israel is consistent and characterized by a cautious approach. The new deal with Israel did not change anything in the communication strategy of the Jordanian government.

5. Conclusion

Starting from the dichotomous perspective on hydropolitics in the literature, my research is an attempt to move beyond the assumptions presenting water scarcity either as an incentive for conflict or peace. I analyzed the 2021 water-for-energy Declaration of Intent through the framework of environmental peacebuilding, identifying how the intended cooperation is a form of environmental cooperation. Simultaneously, by relying on insights from the field of critical hydropolitics, I examined if and how cooperation over water-related matters can still contain elements of conflict and sustain asymmetrical relationships. My research was guided by the following research question and the corresponding sub-question: '*To what extent is the current hydropolitical relationship between Israel and Jordan characterized by equity?',* and '*To what extent did the Israeli-Jordanian hydropolitical relationship change over time, and why?'*

The main finding of this research is that the current form of hydropolitical cooperation between Israel and Jordan, shaped by the intentions of the water-for-energy agreement, is a case

[247] "UAE, Jordan and Israel Collaborate to Mitigate Climate Change with Sustainability Project ."

[248] Ibid.

of technical environmental peacebuilding, developed in a context of power asymmetry. The recently signed agreement introduces a new form of hydropolitical cooperation by means of issue linkage, providing Jordan with a more beneficial and mutual interdependent position instead of the unilateral dependence on Israel. However, the analysis of the potential benefits and risks, the broader political context, the Jordanian domestic context, and the discourse analysis shows that the cooperation sustains the asymmetrical relationship that has been institutionalized with the 1994 peace treaty between Israel and Jordan. This will probably impede the spillover of successful technical environmental collaboration to broader peace, as suggested in the literature on environmental peacebuilding.[249] First of all, the 2021 agreement does not intend to renegotiate the provisions from the water annex of the peace treaty, mainly serving the interests of the hydro-hegemon Israel, in the favor of Jordan. Second, the power imbalance between Israel and Jordan is maintained and further reinforced through asymmetric risks related to the water-for-energy project, through the involvement of the US and the UAE as third parties, and through the use and reproduction of the sanctioned discourse. These elements lead to the institutionalization of the asymmetric power relationship, while concealing the inequities by emphasizing the cooperative character and the climate mitigating effects of the agreement. Third, Jordan's attitude towards cooperation with Israel is ambiguous, demonstrated by the discrepancy between the Jordanian government discourse and its material relationship with Israel.

My research identified some weaknesses inherent to the water-for-energy agreement. The context in which the agreement has been negotiated and signed, is characterized by a top-down approach which reflects the failure to involve local actors in the process. Combined with the asymmetrical outcomes and political costs related to this project, the envisaged cooperation could potentially further exacerbate existing inequities. Regarding these vulnerabilities, the possibility that this agreement could lead to a long-term solution and sustainable cooperation, is significantly reduced.

Based on these findings, I argue that the current hydropolitical relationship between Israel and Jordan is characterized by a mix of domination and cooperation in a hydro-hegemonic context, thereby partially confirming the first hypothesis, which states that '*The hydropolitical relationship between Israel and Jordan is characterized by domination rather than cooperation, as a consequence of how Israel uses its hegemonic power*.' I further suggest that the relationship did not change significantly over time, since the mechanisms underlying the

[249] Dresse et al., "Environmental Peacebuilding: Towards a Theoretical Framework," 111.

asymmetry between the two are still in place. From the start of the peace process negotiations, there had always been hope for a warm peace between the two. However, more than twenty-five years later, it is clear that the relationship never transcended the cold peace stage and that it not will in the future, since there is little prospect for change in the Israeli-Palestinian relations. For these reasons, the second hypothesis, '*The Israeli-Jordanian cooperation in water-related matters cannot be viewed as an avenue toward regional peace*', could be confirmed.

This research attempted to engage with the recent call of scholars for transformative analysis on hydropolitics, augmenting the chances for improved outcomes of transboundary water interaction. Together with critical hydropolitics, the possibilities for future research in this field lie within these theoretical strands of scholarship. The highly descriptive characteristic of many of the theoretical frameworks on hydropolitics poses a challenge to the operationalization of research and the application of these frameworks to new case-studies. The research field would benefit from clear and updated theoretical frameworks, such as the one on hydro-hegemony. Moreover, the literature that deals specifically with the Israeli-Jordanian relationship has not been updated in recent years. Much of the comprehensive works date from the 2000s, while most of the recent literature, including on the recent agreement, is situated in the physical, geological, or economic field, which is beyond the scope of my research. Finally, I identified in my research the role of EcoPeace as a non-governmental actor in the hydropolitical relations between Israel, Jordan and Palestine, as an interesting potential direction for future research.

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