

Liquid Alliances

An Integrated Approach to US Water Diplomacy in the Middle East and
North Africa

Martin Mont

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Emmanuel College | Boston

Abstract:

As global water scarcity intensifies due to climate change and population growth, water diplomacy has emerged as a critical strategy in international relations. Traditionally centered on bilateral and multilateral negotiations over transboundary water bodies, classical water diplomacy, with its principles of no significant harm and cooperative management, has facilitated historical agreements such as the Indus Waters Treaty and the Nile Basin Initiative. However, this classical approach narrowly focuses on contiguity of partner states has limited the discourse on water diplomacy. This paper explores a branch of water diplomacy termed “Water Partnership Diplomacy”. This approach integrates elements of soft power to expand the scope of traditional water diplomacy. This paper will analyze water partnership diplomacy through the narrowed scope of US foreign policy, specifically USAID’s water initiatives. By leveraging humanitarian aid, capacity building, and economic development, USAID’s water projects often foster cooperation and stability, even in regions where the U.S. lacks direct geographic ties. To assess the presence of this strategy, this paper examines two case studies: the Jordan River Basin and Egypt’s Nile River. These case studies illustrate how USAID’s initiatives address water security challenges and promote regional stability in the Middle East and North Africa in the same ways as classical water diplomacy. This study highlights how Water Partnership Diplomacy addresses both the issue of non-contiguity and preventative action, which has limited the literature on water diplomacy. The findings underscore the potential of integrating soft power strategies with classical water diplomacy principles to create a holistic framework capable of navigating the intricate dynamics of 21st-century water management and international relations.

Introduction

Water is essential for life, and its importance cannot be overstated. Approximately 70% of the Earth's surface is covered by water, yet only about 2.5% of it is fresh water, and less than 1% is accessible for human use.¹ As the global population continues to rise and climate change exacerbates water scarcity, managing and preserving this vital resource becomes increasingly critical. Water's role goes beyond supporting agriculture and energy. The UN has dedicated two sustainable development goals (SDG 6 and 14) just to water.² With so much riding on it, water is a key part of diplomatic efforts. Water diplomacy, broadly defined by the Global Water Forum in 2018 as the use of diplomatic instruments to manage shared water resources and address water-related conflicts, has emerged as a key strategy in international relations.³ By addressing broader issues of conflict resolution and regional stability, water diplomacy is more than simply resource management.

One historical example of water diplomacy is the Indus Waters Treaty signed in 1960 between India and Pakistan. Amidst the backdrop of political tension and conflict, the World Bank facilitated negotiations to ensure the equitable distribution of the Indus River's waters. This treaty, still in effect today, stands as a testament to the power of diplomacy in managing shared resources and preventing conflict.⁴ By combining technical expertise with track two diplomacy, water diplomacy has the potential to transform water scarcity challenges into opportunities for cooperation and peace.⁵

The literature surrounding water diplomacy has focused on its application and its effectiveness in these types of historical scenarios. “Classical” water diplomacy (Classical being the term given to

¹ NOAA, “Where Is All of the Earth’s Water?,” National Oceanic and Atmospheric Administration, June 16, 2024, <https://oceanservice.noaa.gov/facts/wherewater.html>.

² “THE 17 GOALS | Sustainable Development,” accessed January 2, 2025, <https://sdgs.un.org/goals>.

³ Susanne Schmeier, “What Is Water Diplomacy and Why Should You Care?,” Global Water Forum, para. 5, accessed October 29, 2024, <https://www.globalwaterforum.org/2018/08/31/what-is-water-diplomacy-and-why-should-you-care/>.

⁴ Susanne Schmeier, “International Water Law Principles in Negotiations and Water Diplomacy Symposium on Interstate Disputes over Water Rights: Essay,” *AJIL Unbound* 115 (2021): 176.

⁵ Sumit Vij, Jeroen Warner, and Anamika Barua, “Power in Water Diplomacy,” *Water International* 45, no. 4 (May 18, 2020): 250, <https://doi.org/10.1080/02508060.2020.1778833>.

represent that it is the most commonly referred to example of water diplomacy), grounded in principles of no significant harm and cooperative management, has traditionally guided the literature. It also follows concepts that appear in literature regarding international water law.⁶ This classical form, however, has been relatively limited to solutions between geographically contiguous states. It has also been limited to states that are currently at odds with each other. This could be seen in the Indus water treaty example. Although the World Bank acted as a non-government intermediary, the negotiations were between Pakistan and India who are geographically contiguous and were not necessarily at peace with one another at the time. With these two limitations in place, it may seem that the US might only participate in water diplomacy with its neighbors such as Mexico or Canada and potentially some Caribbean nations. Considering the relations between these countries at first glance it may seem water diplomacy doesn't have a place in US foreign policy. Yet, for a state that is so well equipped for water diplomacy, being home to leading water technology innovators, biotech companies, and billion-dollar aid organizations, it seems that not finding a way to participate in such an effective method of peace building and cooperative regional stability would be a waste.

As it turns out, The United States and other actors such as EU countries and China have been able to utilize their resources in a form of water diplomacy. Whereas the World Bank simply served as a facilitator in the Indus water negotiations, these actors have been observed to be serving as active collaborators. With objectives that align with those of classical water diplomacy, actors such as the United States through USAID have engaged in regions where they do not have geographic borders. Furthermore, USAID's work in water management projects, capacity building, and humanitarian aid creates a favorable environment for the United States to have a seat at the negotiation table, leveraging soft power to build influence and stability. In addition to governmental agencies, non-governmental organizations (NGOs) have become pivotal in this modern framework. By partnering with local organizations, NGOs bring

⁶ Schmeier, "International Water Law Principles in Negotiations and Water Diplomacy Symposium on Interstate Disputes over Water Rights," 175–76.

technical expertise, local knowledge, and community trust to the table. This has both complemented governmental efforts by enhancing the effectiveness of diplomatic efforts and has also worked on its own to create stability and bottom-up systems that enhance foreign policy objectives indirectly.

This paper seeks to answer the question: Can the United States, through its water aid initiatives and NGO collaborations, achieve the same results as conventional water diplomacy in promoting cooperation, stability, and sustainable development in regions outside its geographic boundaries? To explore this, the paper will test the hypothesis that the United States, by leveraging its water aid initiatives through agencies such as USAID and indirectly through NGOs, can foster cooperation, stability, and sustainable development in the Middle East and North Africa, achieving outcomes similar to conventional water diplomacy despite not being regionally adjacent, and in regions that are not directly in conflict. This paper aims to analyze water diplomacy through the lens of soft power initiatives in the Middle East and North Africa, focusing on their impact on regional stability and the achievement of U.S. foreign policy goals. By examining the literature as well as the practical applications of water diplomacy, this study will highlight how this integrated approach—termed “Water Partnership Diplomacy”—has addressed both of the conventional challenges seen in the literature which seemed to limit classical water diplomacy.

Literature Review

Water diplomacy serves as more than just a tool to resolve riparian disputes. Its growing relevance in the field has been predated by a history of effective negotiations, for which it was a key tool for conflict resolution and promoting regional stability.⁷ This classical water diplomacy, as mentioned previously, has traditionally been seen in literature as bilateral or multilateral negotiations over transboundary water bodies in disputes over water utilization and sustainability.⁸

⁷ Martina Klimes et al., “Water Diplomacy: The Intersect of Science, Policy and Practice,” *Journal of Hydrology* 575 (August 1, 2019): 1363, <https://doi.org/10.1016/j.jhydrol.2019.02.049>.

⁸ Schmeier, “What Is Water Diplomacy and Why Should You Care?,” para. 6.

This classical water diplomacy operates on a few core principles including: no significant harm and cooperative management.^{9,10,11} These principles are evident in agreements like the Indus Waters Treaty and the Nile Basin Initiative, which have facilitated cooperation despite underlying political tensions.¹² With these principles, however, water diplomacy has grown from purely negotiations regarding water into a method in which to grow negotiations from the collaboration and connected challenges presented by water.¹³ As Engelke and Michel (2016) argue, the traditional focus on resource allocation evolved to address broader political and security dynamics.¹⁴ With this shift also comes a shift in definition of water challenges. Busby (2017) emphasizes the importance of considering water as a national security issue, highlighting the need for a more integrated approach that incorporates security and development objectives.¹⁵ Huntjens and de Man (2017) provide a framework for defining this transition that highlights technical, political, and humanitarian elements that have been integrated to evolve from water cooperation to sustainable political outcomes.¹⁶ This is a more modern approach toward water challenges than simply fishing rights and resource allocation disputes of that nature that had driven the conversation around water diplomacy. This point also highlights that an overemphasis on resource allocation coincided with less sustainable outcomes because it often overlooked sociopolitical complexities of water conflicts.

⁹ Schmeier, "International Water Law Principles in Negotiations and Water Diplomacy Symposium on Interstate Disputes over Water Rights," 174.

¹⁰ Schmeier, 175.

¹¹ Charlotte Grech-Madin et al., "Negotiating Water across Levels: A Peace and Conflict 'Toolbox' for Water Diplomacy," *Journal of Hydrology* 559 (April 1, 2018): 100, <https://doi.org/10.1016/j.jhydrol.2018.02.008>.

¹² Jan Selby, "The Geopolitics of Water in the Middle East: Fantasies and Realities," *Third World Quarterly* 26, no. 2 (2005): 329.

¹³ Tareq Baconi, "Testing the Water: How Water Scarcity Could Destabilise the Middle East and North Africa" (European Council on Foreign Relations, 2018), 11, <https://www.jstor.org/stable/resrep21615>.

¹⁴ Peter Engelke and David Michel, "The United States' Leadership Opportunity," *TOWARD GLOBAL WATER SECURITY* (Atlantic Council, 2016), 2–5, <https://www.jstor.org/stable/resrep03671.4>.

¹⁵ Joshua Busby, "Water and U.S. National Security" (Council on Foreign Relations, 2017), 8, <https://www.jstor.org/stable/resrep05726>.

¹⁶ Patrick Huntjens and Rens de Man, "Water Diplomacy: Making Water Cooperation Work" (The Hague Institute for Global Justice, April 2017), 4, <https://thehagueinstituteforglobaljustice.org/portfolio/water-diplomacy-making-water-cooperation-work-2/>.

Political engagement facilitates dialogue and negotiation, helping to build trust and resolve conflicts.¹⁷ Susskind (2017) argues that the political and cultural dimensions of water diplomacy are essential for its success.¹⁸ This perspective is supported by Grech-Madin, Döring, Kim, and Swain (2018), who present a "Peace and Conflict Toolbox" for water diplomacy, illustrating how political and cultural factors can be leveraged to enhance cooperation.¹⁹ Prioritizing humanitarian needs and development goals also builds trust and fosters cooperation. The growth of water diplomacy in literature from basic resource allocation to a more complex method of birthing diplomatic talks is important. The strategies which were employed on the ground to physically engage with the riparian disputes have not necessarily changed except to evolve with new technologies. It is simply how the literature conceives the importance of resolving these disputes and what can stem from them that is important.

For instance, the World Bank played a pivotal role as intermediary in negotiations in the Indus River Valley.²⁰ Although their efforts were plagued with bureaucratic hurdles, the results of the talks were positive.²¹ The impact the World Bank made on the physical elements of the dispute through funds and expertise was limited. The success of this story comes from the ability of these efforts to transcend purely physical elements by creating fertile grounds for diplomatic negotiation.

Literature on classical water diplomacy, however, often highlights historical examples that are associated with this diplomatic method. There are two significant limitations to this often-narrow focus. The first limitation is that classical water diplomacy in its historical context has been marked by

¹⁷ Schmeier, "International Water Law Principles in Negotiations and Water Diplomacy Symposium on Interstate Disputes over Water Rights," 175–76.

¹⁸ Lawrence E. Susskind, "The Political and Cultural Dimensions of Water Diplomacy in the Middle East," in *Water Security in the Middle East*, ed. Jean Axelrad Cahan, Essays in Scientific and Social Cooperation (Anthem Press, 2017), 186, <https://www.jstor.org/stable/j.ctt1jktqmk.14>.

¹⁹ Grech-Madin et al., "Negotiating Water across Levels," 101.

²⁰ "Funding A Water-Secure Future: An Assessment of Public Spending Key Messages," Text/HTML, World Bank, accessed January 15, 2025, <https://www.worldbank.org/en/topic/water/publication/funding-a-water-secure-future>.

²¹ Joyeeta Gupta et al., "Policymakers' Reflections on Water Governance Issues," *Ecology and Society* 18, no. 1 (2013): 35–36, <https://www.jstor.org/stable/26269276>.

diplomatic negotiations.²² Water diplomacy that may not directly result in active negotiations may still be done with the same process and goals in mind.²³ This highlights the first limitation which this paper has boiled down to the following: literature on classical water diplomacy limits water diplomacy to active conflicts which can be diplomatically negotiated. We must consider that not all conflicts are hot conflicts. There are many conflicts that still require trust building that may not require direct treaties to be signed. We must also consider that one of the goals of water diplomacy is stability. Michel (2020) highlights the importance of addressing water security as a means to promote peace and stability, a view echoed by Yıldız (2024), who advocates for preventive water diplomacy to mitigate conflicts before they escalate.²⁴ If water diplomacy with all of its pillars and goals in mind can be deployed to prevent direct confrontations, it has achieved its goal. Inadvertently because of this it might be left out of being considered water diplomacy in the literature.

The second limitation is that water diplomacy has classically been thought of as negotiations between two entities that somehow share a water resource.²⁵ This paper finds this a limitation because it doesn't allow non-contiguous states to engage in water diplomacy. With the historical context, however, we see that this geographic limitation is not necessarily the full picture of this situation. One of the misconceptions with technical water efforts is that solutions that do not address the primary source of conflict are not included in the rigid definition of water diplomacy.²⁶ For example, the Nile basin initiative, which is widely considered a success of water diplomacy, focuses, among its various goals, on clean water and water treatment.²⁷ Another country hoping to increase regional stability along the Nile might see that water treatment is a bottleneck that is creating a lot of tension in the region. Acting with the

²² Huntjens and de Man, "Water Diplomacy," 5.

²³ David Michel, "Water Governance and Water Diplomacy," *Water Conflict Pathways and Peacebuilding Strategies* (US Institute of Peace, 2020), 23, <https://www.jstor.org/stable/resrep26059.9>.

²⁴ Dursun Yıldız, "A Step Forward for Putting Preventive Water Diplomacy into Action in the Middle East," *World Water Management, Diplomacy & Science News*, January 1, 2024, 2.

²⁵ Gupta et al., "Policymakers' Reflections on Water Governance Issues," para. 13.

²⁶ Schmeier, "What Is Water Diplomacy and Why Should You Care?," para. 7.

²⁷ Ruedi Küng, "Addressing the Dimensions of Transboundary Water Use: The Nile Basin Initiative," *Mountain Research and Development* 23, no. 1 (2003): 6.

Nile basin initiative to engage with multiple countries that share the Nile's resources would be considered water diplomacy by the literature. An effort with similar effectiveness that focuses on rainwater capture and purification for individuals in Egypt would not be considered. This lack of consideration by scholars such as Küng (2003), Michel (2020), and others examined in this paper is not a purposeful exclusion but rather a limitation that arises from looking at water diplomacy from its recorded diplomatic successes rather than taking a more holistic approach. This rigidity often leads to the exclusion of crucial local perspectives and needs, which can undermine the sustainability and effectiveness of water management initiatives.²⁸

To address these limitations, the paper explores the concept of soft power initiatives as a measurement of water diplomacy. USAID's approach to water diplomacy extends beyond traditional frameworks, incorporating elements of soft power to enhance its impact.²⁹ This strategy leverages humanitarian aid and capacity building, with an end goal focused on economic development to foster cooperation and stability. This is in line with the goals of classical water diplomacy. USAID's water projects often prioritize immediate humanitarian needs, providing essential services like clean water and sanitation to improve living conditions and build goodwill.³⁰ Strengthening local institutions and governance structures is another key component of USAID's strategy, ensuring sustainable management of water resources, which also has effects on more general institutional integrity with partnering governments at both micro and macro levels.³¹ By investing in water infrastructure, USAID can boost economic growth and stability, thereby reducing the potential for conflict.³² These efforts demonstrate how soft power can be effectively employed in water diplomacy to achieve broader foreign policy

²⁸ Gupta et al., "Policymakers' Reflections on Water Governance Issues," 35.

²⁹ Michel, "Water Governance and Water Diplomacy," 23.

³⁰ Busby, "Water and U.S. National Security," 6.

³¹ Huntjens and de Man, "Water Diplomacy," 2–3.

³² Vij, Warner, and Barua, "Power in Water Diplomacy," 250–51.

objectives. This in turn allows for instances of soft power to be a new opportunity to record water diplomacy within the literature, especially as these instances are not bound by the same limitations.

NGOs play a pivotal role in enhancing the effectiveness of water diplomacy. Their involvement helps bridge gaps between governmental efforts and local needs, fostering a more comprehensive approach to water management. NGOs have been instrumental in implementing water projects that address both immediate needs and long-term sustainability. For example, Klimes and Yaari (2019) highlight the role of NGOs in facilitating dialogues and building trust among stakeholders.³³ Similarly, Maghen (2020) emphasizes the importance of NGO involvement in ensuring water security in the Middle East, where their efforts complement governmental projects and enhance overall impact.³⁴ Several NGOs have made significant contributions to water diplomacy, including the World Wildlife Fund (WWF) which, “works to build integrated water management plans, endorsed by the resource users, [which is] an important contribution to maintaining watershed functionality and freshwater access”.³⁵ Another smaller organization is the New England Aquarium's BlueSwell program, which supports innovative solutions for ocean and water sustainability.³⁶ Furthermore, others include International Rivers, which advocates for the protection of rivers and the rights of communities dependent on them, and the Global Water Partnership (GWP), which works on integrated water resource management. This paper recognizes the NGO's have similarly been excluded from much of the literature due to the same limiting concerns. The paper also takes into account that NGO's do contribute to a state's soft power whether directly or inadvertently. This is the rationale behind including NGOs in the analysis.

By looking at classical water diplomacy through the lens of soft power initiatives such as USAID and NGOs, this paper highlights a more comprehensive framework for water diplomacy. This "Water

³³ Martina Klimes and Elizabeth A. Yaari, “Water Diplomacy: Facilitating Dialogues” (Stockholm International Water Institute, 2019), 3, <https://www.jstor.org/stable/resrep39350>.

³⁴ Liel Maghen, “Ensuring Water Security in the Middle East: Policy Implications,” *Euromesco*, January 1, 2020, 56–57.

³⁵ “Water,” World Wildlife Fund, 2025, https://www.wwfca.org/en/our_work/water/.

³⁶ “BlueSwell Program,” BlueSwell Program, 2025, <https://blueswell.sea-ahead.com>.

Partnership Diplomacy" model is bound by the same pillars and goals as classical water diplomacy but overcomes the limitations that have been set through literature. It defines more clearly a branch of water diplomacy that has not been clearly defined. Similarly to classical water diplomacy, water partnership diplomacy recognizes that technical cooperation is crucial for effective water management.³⁷ Projects analyzed by Klimes, Michel, Yaari, and Restiani (2019) highlight the importance of such cooperation, demonstrating how scientific knowledge can inform diplomatic efforts and foster sustainable solutions.³⁸ This model presents a holistic analysis that goes beyond traditional methods. As noted by Schmeier (2021), international water law principles can provide a foundation for negotiations, while the use of soft power strategies enhances the effectiveness of diplomatic efforts.³⁹

This paper chooses to highlight water partnership diplomacy in the Middle East and North Africa specifically considering its historical presence in the region and its modern applicability. Baconi (2018) warns that water scarcity could destabilize the Middle East and North Africa, highlighting the urgent need for innovative approaches to water diplomacy.⁴⁰ This is an argument that has been echoed by foreign policy strategists from the U.S. State Department as well.⁴¹ This was a flashpoint of conversation during the Cop 28 conference.⁴² Engelke and Michel (2016) argue that the United States has a leadership opportunity in global water security, emphasizing the importance of integrating development and security objectives.⁴³ USAID has demonstrated its ability to impact geopolitical situations through water partnership diplomacy and by analyzing soft power initiatives like this one, water partnership diplomacy effectively overcomes the two limitations seen in the literature surrounding classical water diplomacy.

³⁷ Klimes et al., "Water Diplomacy," 1362–63.

³⁸ Klimes et al., 1368.

³⁹ Schmeier, "International Water Law Principles in Negotiations and Water Diplomacy Symposium on Interstate Disputes over Water Rights," 176.

⁴⁰ Baconi, "Testing the Water," 2.

⁴¹ "U.S. Support for Water Security as a Climate Adaptation Priority," *United States Department of State* (blog), 2025, para. 3, <https://www.state.gov/u-s-support-for-water-security-as-a-climate-adaptation-priority/>.

⁴² "COP28: Water Is Critical to Climate Change Mitigation," UN-Water, para. 5, accessed February 2, 2025, <https://www.unwater.org/news/cop28-water-critical-climate-change-mitigation>.

⁴³ Engelke and Michel, "The United States' Leadership Opportunity," 4.

Water Partnership Diplomacy and USAID

The key differentiating factor between water partnership diplomacy and classical water diplomacy is the acknowledgement of the benefits of soft power. For the home country, when deploying resources such as technological innovations through NGO's or professionals and monetary support (through government programs such as USAID), there are long term political benefits.⁴⁴ In this study soft power is best classified by the methods in which organizations produce it. These namely include the same basic tenants that uphold classical water diplomacy. One might think of the provision of essential services such as clean water and sanitation which improve living conditions, or the strengthening of local institutions to ensure sustainable management of resources. These elements forge a foundation of trust or cooperation which in the same ways as classical water diplomacy mitigate potential conflicts over scarce resources. The key difference? Water partnership diplomacy transcends geographical boundaries which have bound its effectiveness as a diplomatic tool. This has enabled actors across the world but especially the United States to engage effectively and water diplomacy in regions that they do not share direct geographic connection. The importance of this approach is defined by its adaptability to address the multifaceted challenges of water scarcity in a modern era which goes hand in hand with geopolitical tensions.

There are so many organizations that contribute to the United States' large amount of international soft power, so when developing this research, a challenge was boiling it down. USAID was chosen as a case study to display water partnership diplomacy because of its approach. The most central component of which is the provision of essential services including clean water and sanitation. It is an active goal of USAID to not only address immediate humanitarian needs but also build goodwill among local communities. They understand through their work that this goodwill is crucial for fostering

⁴⁴ "What Is Soft Power?," CFR Education from the Council on Foreign Relations, May 16, 2023, para. 5, <https://education.cfr.org/learn/reading/what-soft-power>.

cooperation and trust building, which are foundational elements to achieving their goals of more regional stability.⁴⁵ These goals align nearly perfectly with those of classical water diplomacy, and they are being achieved in a very similar manner. Obviously, USAID outlines that there are operational achievements in their work.⁴⁶ For example, clean water and sanitation services do help prevent waterborne diseases which improve public health and reduce burdens on local health care systems.⁴⁷ These accomplishments are monetarily valuable to societies as they are cost saving and opportunity cost saving, but the real successes within these programs is the stable environments that they create.

Going beyond the technical challenges that USAID is able to address in communities in terms of water, they also prioritize local institutions. Effective water management does require strong institutions and governance frameworks that can oversee both technical improvements and sustainable use of water resources, but it is yet again an example of trust building. Another key pillar of classical water diplomacy is cooperative management. USAID has been successful in its capacity building programs that focus on enhancing the skills of local individuals, enabling them to manage these resources more effectively.⁴⁸ This might include training local officials to make institutions more capable or training engineers to regularly test equipment and perform maintenance.⁴⁹ By building local capacity, they ensure that the pillar of cooperative management is being effectively handled. By doing so, just as classical water diplomacy does, water partnership diplomacy promotes institutional integrity at both micro and macro levels, contributing to overall good governance and a more stable region.

The technical expertise and strengthened institutions that USAID and other NGOs provide are often able to create mandates and procedures. This creates clearly defined objectives as well as capacities

⁴⁵ “Water Resources & Environment | Jordan | Archive - U.S. Agency for International Development,” USAID.gov, December 10, 2020, <https://2017-2020.usaid.gov/jordan/water-and-wastewater-infrastructure>.

⁴⁶ “Water Resources & Environment | Jordan | Archive - U.S. Agency for International Development.”

⁴⁷ “UNICEF Middle East and North Africa,” September 2022, <https://www.unicef.org/mena/>.

⁴⁸ Bruce Bedford et al., “Usaid,” STATE DEPARTMENT REFORM REPORT (Atlantic Council, 2017), 36, <https://www.jstor.org/stable/resrep03724.11>.

⁴⁹ “Water and Sanitation | What We Do,” USAID.gov, January 24, 2025, <https://www.usaid.gov/water-and-sanitation>.

for these organizations. It also provides them with legal precedent which is important for stability. These are the same achievements that river basin organizations (RBOs) are so successful at achieving, which makes them so valuable in classical water diplomacy.⁵⁰

The integration of soft power into water partnership diplomacy allows it to overcome the common challenges associated with classical water diplomacy, namely geographic limitations. Organizations that are able to achieve soft power goals enables the United States or other actors who might benefit from these soft power goals to engage in water partnership diplomacy in regions where they do not share geographic ties. This is imperative in regions like the Middle East and North Africa where water scarcity has coincided with geopolitical tensions and is expected to continue to do so in the future.⁵¹ This region particularly has proven to require diplomatic flexibility as situations often involve many conflicting alliances, questionable governance, and climate issues that will continue to become even more prominent.⁵² Water partnership diplomacy has proven to provide this level of flexibility. USAID demonstrates its flexibility by working with a broad umbrella of challenges that may be relevant and bringing expertise from many different backgrounds to address those challenges.

Furthermore, U.S.-based NGOs often operate independently of USAID, engaging in Water Partnership Diplomacy either deliberately or inadvertently. NGOs are responsive to local needs and are able to implement policy effectively. For example, collaborations with the World Wildlife Fund (WWF) have led to the development of integrated water management plans that ensure sustainable access to freshwater resources.⁵³ Similarly, partnerships with the New England Aquarium's BlueSwell program have supported innovative solutions for ocean and water sustainability.⁵⁴ These NGOs, equipped with significant resources and expertise, can implement water management projects that align with the principles of Water Partnership Diplomacy, promoting cooperation and stability in regions far from U.S.

⁵⁰ Klimes et al., "Water Diplomacy," paras. 12–13.

⁵¹ Baconi, "Testing the Water," 10.

⁵² Baconi, 10–11.

⁵³ "Water."

⁵⁴ "BlueSwell Program."

borders. Their independent initiatives further illustrate the versatility and impact of soft power in water partnership diplomacy. For instance, NGOs like the International Rivers and the Global Water Partnership work on projects that manage water resources, advocate for community rights, and facilitate cooperation among stakeholders.⁵⁵ These organizations demonstrate that effective water diplomacy does not necessarily require direct governmental involvement, as NGOs can also play a crucial role in fostering regional stability and sustainable development through their efforts.

Case Study 1: The Jordan River Basin

The Jordan river basin and the Egyptian Nile are two good examples of water diplomacy in the Middle East. Within this research, case studies were identified in which water partnership diplomacy had been seen in the field. One of the major caveats of this paper is that it does not attempt to measure the effectiveness of water partnership diplomacy nor classical water diplomacy. This paper simply tries to answer its previously stated research question. Further research would be necessary to determine effectiveness. The case studies that were chosen were limited to regional applicability in a region has seen a drastic increase in cross-border violence over the past two years as well as food and water instability. Although cross-border violence and water and stability seem more common, this research methodology specifically sought out food instability as well when determining case studies as the export and usage of food stuffs is in fact a large consumption of water for a country through irrigation and through crop water retention.⁵⁶

The first case study of the Jordan river basin both illustrates the practical applicability of water partnership diplomacy and a situation where classical water diplomacy was employed. The Jordan river basin is a critical water source, supporting the livelihoods of millions of people and playing a significant role in the region's agricultural, domestic, and industrial water needs in Jordan, Israel, and Palestine.

⁵⁵ "Governance Readiness," Global Water Partnership, accessed January 25, 2025, <https://www.gwp.org/en/we-act/what-we-do/governance-readiness/>.

⁵⁶ "The Hidden Global Trade in Water | YaleGlobal Online," para. 5, accessed January 25, 2025, <https://archive-yaleglobal.yale.edu/content/hidden-global-trade-water>.

Additionally, the river's historical significance adds to its cultural value, making its sustainable management a priority.⁵⁷ This also means that it has been the linchpin in multiple geopolitical tensions.

The history of modern conflict in the Jordan river basin can be said to have started in 1949 with the Armistice agreements that created demilitarized zones after the 1948 Arab Israeli war. In the early 1950s, the Israeli national water carrier project as well as Syrian objections to the demilitarized zones led to skirmishes over water usage. This led to the Johnston plan in 1955 which was a US brokered resolution to this water crisis that aimed at equitable water allocation.⁵⁸ This was accepted by technical committees but was rejected by the Arab League. This later was combined with other events and in 1964 sparked a conflict between Israel and Arab neighbors over control of water resources. This conflict was essentially a collection of multiple armed skirmishes as well as a deterioration of communal trust as civilians became closely tied with their sides in the conflict. A turning point in this history happens in 1973 as a result of the Yom Kippur war. The Jordanian government wanting to ease its own political situation with Israel agreed to talks and eventually established the Jordan Valley Authority (JVA), officially chartered in 1977, which is a river basin organization with technical goals similar to the Johnston plan but with much less geopolitical attention being drawn to it.⁵⁹ This is a prime example of classical water diplomacy. Jordan valley authority began as a track to technical solutions-oriented organization but was eventually encompassed into the ministry of water and irrigation of Jordan in 1988.

Key to this paper's research, USAID has worked with the Jordan valley authority in more recent history. Their technical expertise and monetary support have played a pivotal role in addressing water

⁵⁷ "Water Resources & Environment | Jordan | Archive - U.S. Agency for International Development."

⁵⁸ David M. Wishart, "The Breakdown of the Johnston Negotiations over the Jordan Waters," *Middle Eastern Studies* 26, no. 4 (October 1990): 536.

⁵⁹ "Jordan Valley Authority," accessed January 25, 2025, https://portal.jordan.gov.jo/wps/portal/Home/GovernmentEntities/Ministries/Ministry/Ministry%20of%20Water%20and%20Irrigation/Jordan%20Valley%20Authority!/ut/p/z1/hdBNCSlwEAXgq8QDylwxFboMtdb-CVbRmo0ErG2gJhKjUE9vkW6tsxv4HvMYEFCC0PKlaumU0bLt95NYnDkL9x5GPN7SgiHPNkEYZUWylSgcwB_DEcQ4_nkH-gbUJsHeQ3iLL0zVfpqoMyVVg9nO2Ku5ChdZYnUFxJbO1SHMjH2ljU5yLatOsKfrjFWua4vLEZPMjoO-GwxAM9fxlGQYo4r6vXAT_2UeXNENoCRr-wqDfdb-c7WqOlpn3wAuMPiUA!!/.

related projects such as strengthening water governance. By working with Jordanian organizations to reduce non-revenue water loss and by training over 9000 water sector personnel, they're able to establish connections with local government and strengthen those institutions that it works with.⁶⁰ Another accomplishment of USAID's work in the Jordan River Valley has been the social media campaigns supported by USAID in Jordan to promote awareness and encourage best practice.⁶¹ This media attention demonstrates a large soft power capacity that USAID has created in Jordan. Lastly, USAID demonstrated a prime example of water partnership diplomacy by partnering with the Aqaba Water Company, a private organization in Jordan that distributes water. Aqaba's loss rate has been cut in half from 50% to just 26% since the partnership and their total number of customers has increased to nearly 500,000.⁶² By building relationships with private organizations, USAID is demonstrating cooperative management beyond just its physical successes.

NGO's have been instrumental in complementing these efforts in the Jordan river basin. A notable example is the Ecopeace Middle East project. This NGO is able to bring together Israeli, Palestinian, and Jordanian environmentalists to promote cooperative water management as well as environmental sustainability for the Jordan River Valley.⁶³ This is facilitating dialogue amongst stakeholders which is building the trust needed to encourage joint management of the basins water resources. But what makes this an example of water partnership diplomacy is that Ecopeace Middle East project has specifically worked with the JVA.⁶⁴ Because they are better suited for assessing sector readiness to utilize treated wastewater, their pilot practices have been implemented. This group specifically focuses and finding alternative sources of groundwater such as treated wastewater and desalinated groundwater. They do this with the specific goal of posing no significant harm to environmental or societal health.⁶⁵ This

⁶⁰ "Water Resources & Environment | Jordan | Archive - U.S. Agency for International Development."

⁶¹ "Water Resources & Environment | Jordan | Archive - U.S. Agency for International Development."

⁶² "Aw - مياه العقبة - Aqaba Water," accessed January 16, 2025, <https://aw.jo/web/>.

⁶³ "Water Desalination in the Jordan Valley," *EcoPeace Middle East* (blog), accessed January 16, 2025, <https://ecopeaceme.org/water-desalination-in-the-jordan-valley/>.

⁶⁴ "Water Desalination in the Jordan Valley."

⁶⁵ "Water Desalination in the Jordan Valley."

organization is well integrated into US foreign policy through university programs as well as connections with the US Congress and relationships with the UN specifically membership in ECOSOC.⁶⁶

Other NGO's such as the global water partnership have also played a critical role in the region by engaging communities and promoting water conservation practices. These efforts collectively have enhanced the overall effectiveness of water management initiatives in the Jordan river basin. This does also exemplify that these organizations do not necessarily need to be ones that originate in or around areas of conflict and areas of riparian dispute. These organizations can form globally and act in the interest of countries like the United States or organizations like the United Nations. Specifically in Jordan, we have seen that geographical distance has not made an impact on what organizations operate or promote water partnership diplomacy. We have also seen that these organizations continue to operate and pop up even during peacetime to further build relationships and continue to provide a more stable region. With that, water partnership diplomacy proves to have been used and continues to be used in the Jordan River Valley and identifying that may help more accurately define water diplomacy in the academic field.

Case Study 2: Egypt and the Nile

The second case study that this analysis chose to demonstrate water partnership diplomacy is that of Egypt and the Nile. The Nile River provides about 70% of the country's fresh water supply.⁶⁷ This makes it crucial for agricultural activities which both occupy a central place in Egypt's economy as well as having large amounts of cultural importance. The river has supported Egyptian civilization for millennia and its waters are deeply entrenched with the nation's cultural and historic identity.

Conflicts over the Nile have continued to spur up as water scarcity challenges emerged from climate change and geopolitical tension. Rapid population growth and urbanization have also exacerbated

⁶⁶ "Water Desalination in the Jordan Valley."

⁶⁷ "Looming Crisis of the Much Decreased Fresh-Water Supply to Egypt's Nile Delta," ScienceDaily, accessed January 25, 2025, <https://www.sciencedaily.com/releases/2017/03/170313135006.htm>.

the water scarcity issues in Egypt.⁶⁸ The apex of these challenges has come in the form of a geopolitical confrontation with Ethiopia over the grand Ethiopian renaissance dam (GERD).⁶⁹ In a nutshell, Ethiopia constructed a dam along the Nile upstream from Egypt in order to achieve a high level of non-carbon energy production which it sees as necessary for Ethiopia's future. Both Egypt and Sudan who are downstream from the dam have experienced sharp water shortages which have caused increases in arable land loss amongst other riparian issues.⁷⁰ Egypt, Sudan, and Ethiopia have engaged in protracted negotiations to resolve these disputes; however, they are currently ongoing and have collapsed multiple times.

This unfortunate scenario makes for a particularly interesting case study for water partnership diplomacy. NGO collaboration has significantly enhanced water security in Egypt. The Egyptian water partnership, another NGO with local roots, has received technical advice and funding from an EU sponsored deal it secured in 2023.⁷¹ This has helped to create stakeholder engagement and produce dialogue that promotes a more inclusive approach to water management. It has also been able to receive technical support from European partners that want some form of regional stability in Egypt. This might make sense considering that the Suez Canal in Egypt is one of Europe's largest import paths from China. There's a direct connection between these NGO's and soft power initiatives from European countries as well as the United States.

USAID has worked in Egypt since 1978, contributing to over 25 million Egyptians gaining access to clean water and sanitation services.⁷² They have also created the integrated water solutions support technical assistance program which is a program officially adopted by the government of Egypt to

⁶⁸ Jongeun You, "Policy Conflict around the Grand Ethiopian Renaissance Dam," *World Water Policy* 9, no. 4 (2023): 967, <https://doi.org/10.1002/wwp2.12139>.

⁶⁹ You, 960–61.

⁷⁰ You, 966.

⁷¹ "Joint Declaration By The Arab Republic Of Egypt And The European Union (Eu) On An Egypt-Eu Water Partnership | Eeas," accessed January 16, 2025, https://www.eeas.europa.eu/delegations/egypt/joint-declaration-arab-republic-egypt-and-european-union-eu-egypt-eu-water-partnership_en?s=95.

⁷² "Water and Sanitation | Egypt," U.S. Agency for International Development, March 8, 2023, <https://www.usaid.gov/egypt/water-and-sanitation>.

promote wastewater best practice. An outlined goal by USAID in this process is institutional strengthening.⁷³ they have specifically worked with local industrial partners as well as government corporations across Egypt creating local ties and helping to support regional stability.

A large foreign policy concern for the United States in the Middle East and North Africa is the potential geopolitical ramifications of the GRED project. There is a real chance that hot conflict will break out in this region over water in the next decade. Complex alliance networks have started to form such as Ethiopia recognizing Somaliland in order to get reliable port access and Egypt sending money and troops to Somalia and Eritrea in response.⁷⁴⁷⁵ With tensions at an all-time high, water partnership diplomacy in this case seeks to buy conventional diplomacy more time. Instead of engaging in purely bilateral talks, there's a recognition that those talks have not come to fruition. Working with one partner at a time might be the best way for the US to promote its goals of regional stability in Egypt. There is a very clear threshold for water availability in Egypt and if that is not able to be met because of a reduction in water capacity due to the GRED project, there will not be another option except conflict. How water partnership diplomacy achieves its goals in this scenario is through lowering that threshold by creating systems that are more efficient and by providing technical expertise that reduces reliance and increases sustainable efforts. This does favor US foreign policy and create a more stable Egypt, but it goes beyond that. By partnering with so many companies and local governments, USAID does manage to increase US soft power. The same can be said for European allies through NGO's.

Conclusion and Discussion

This paper has explored the concept of water partnership diplomacy within the greater field of classical water diplomacy. By examining USAID's goals and initiatives in the Middle East and North

⁷³ "Water and Sanitation | Egypt."

⁷⁴ Abdi Sheikh and Giulia Paravicini, "Egypt Sends Arms to Somalia Following Security Deal, Sources Say," *Reuters*, August 29, 2024, sec. Africa, <https://www.reuters.com/world/africa/egypt-sends-arms-somalia-following-security-pact-sources-say-2024-08-28/>.

⁷⁵ "Ethiopia-Somaliland Deal: Can the Horn of Africa Rift Be Healed?," January 8, 2024, <https://www.bbc.com/news/world-africa-67911057>.

Africa, particularly in the case studies chosen, the research has highlighted how this approach addresses the same goals as classical water diplomacy but overcomes the significant challenges to that classical approach mainly geographical adjacency. This in turn holds the promise of limiting hot conflict by using soft power initiatives as a marker for water partnership diplomacy.

This research demonstrated that water partnership diplomacy has been a powerful tool in promoting US soft power and foreign policy goals. It has also shown that The United States and its allies can engage in water diplomacy beyond their geographical boundaries. This is important considering the fact that the United States and northern European countries specifically have vast technical expertise and strategic willingness to contribute to water diplomacy. The paper expands the current literature surrounding water diplomacy by carving out a very clear definition of water partnership diplomacy in the gray area. Currently, literature does not include something like water partnership diplomacy, but this research has clearly demonstrated that this is not due to the lack of technical achievement but surely due to a lack of clear definition. The fact of the matter is that water partnership diplomacy has existed and will continue to exist as a strategic asset for foreign policy as well as a humanitarian accomplishment for countries with technical expertise. It involves the same pillars as water diplomacy of cooperative management while expanding which and when entities can participate. With water being such a crucial geopolitical resource and water diplomacy being such an important tool in international relations, clearly defining water partnership diplomacy in the literature will help us recognize past frameworks that may be applicable in future scenarios as well as viable future opportunities within foreign policy initiatives. As the world continues to grapple with the impacts of climate change and population growth the importance of innovation as well as flexible strategies will only become more pronounced. Water partnership diplomacy will make a meaningful difference in addressing these most pressing issues of our time.

References

- “Aw - مياه العقبة - Aqaba Water.” Accessed January 16, 2025. <https://aw.jo/web/>.
- Baconi, Tareq. “Testing the Water: How Water Scarcity Could Destabilise the Middle East and North Africa.” European Council on Foreign Relations, 2018. <https://www.jstor.org/stable/resrep21615>.
- Bedford, Bruce, Rand Beers, Chester Crocker, Karen Hanrahan, Jodi Herman, Brad Higgins, Daniel Levin, et al. “Usaid.” STATE DEPARTMENT REFORM REPORT. Atlantic Council, 2017. <https://www.jstor.org/stable/resrep03724.11>.
- BlueSwell Program. “BlueSwell Program,” 2025. <https://blueswell.sea-ahead.com>.
- Busby, Joshua. “Water and U.S. National Security.” Council on Foreign Relations, 2017. <https://www.jstor.org/stable/resrep05726>.
- CFR Education from the Council on Foreign Relations. “What Is Soft Power?,” May 16, 2023. <https://education.cfr.org/learn/reading/what-soft-power>.
- EcoPeace Middle East. “Water Desalination in the Jordan Valley.” Accessed January 16, 2025. <https://ecopeaceme.org/water-desalination-in-the-jordan-valley/>.
- Engelke, Peter, and David Michel. “The United States’ Leadership Opportunity.” TOWARD GLOBAL WATER SECURITY. Atlantic Council, 2016. <https://www.jstor.org/stable/resrep03671.4>.
- “Ethiopia-Somaliland Deal: Can the Horn of Africa Rift Be Healed?” January 8, 2024. <https://www.bbc.com/news/world-africa-67911057>.
- Global Water Partnership. “Governance Readiness.” Accessed January 25, 2025. <https://www.gwp.org/en/we-act/what-we-do/governance-readiness/>.
- Grech-Madin, Charlotte, Stefan Döring, Kyungmee Kim, and Ashok Swain. “Negotiating Water across Levels: A Peace and Conflict ‘Toolbox’ for Water Diplomacy.” *Journal of Hydrology* 559 (April 1, 2018): 100–109. <https://doi.org/10.1016/j.jhydrol.2018.02.008>.
- Gupta, Joyeeta, Aziza Akhmouch, William Cosgrove, Zachary Hurwitz, Josefina Maestu, and Olcay Ünver. “Policymakers’ Reflections on Water Governance Issues.” *Ecology and Society* 18, no. 1 (2013). <https://www.jstor.org/stable/26269276>.
- Huntjens, Patrick, and Rens de Man. “Water Diplomacy: Making Water Cooperation Work.” The Hague Institute for Global Justice, April 2017. <https://thehagueinstituteforglobaljustice.org/portfolio/water-diplomacy-making-water-cooperation-work-2/>.
- “Joint Declaration By The Arab Republic Of Egypt And The European Union (Eu) On An Egypt-Eu Water Partnership | Eeas.” Accessed January 16, 2025. https://www.eeas.europa.eu/delegations/egypt/joint-declaration-arab-republic-egypt-and-european-union-eu-egypt-eu-water-partnership_en?s=95.
- “Jordan Valley Authority.” Accessed January 25, 2025. https://portal.jordan.gov.jo/wps/portal/Home/GovernmentEntities/Ministries/Ministry/Ministry%20of%20Water%20and%20Irrigation/Jordan%20Valley%20Authority!/ut/p/z1/hdBNCSIwEAXgq8QDyIwxFboMtdb-CVbRmo0ErG2gJhKjUE9vkW6tsxv4HvMYEFCC0PKlaumU0bLt95NYnDkL9x5GPN7SgiHPNkEYZUWyLSgcvwB_DEcQ4_nkH-gbUJsHeQ3iLl0zVfpqoMyVVg9nO2Ku5ChdZYnUFxJbO1SHMjH2IjU5yLatOsKfrjFWua4vLEZPMjoO-GwxAM9fxlGQYo4r6vXAT_2UeXNENoCRr-wqDfdb-c7WqOIpn3wAuMPiUA!!/.
- Klimes, Martina, David Michel, Elizabeth Yaari, and Phillia Restiani. “Water Diplomacy: The Intersect of Science, Policy and Practice.” *Journal of Hydrology* 575 (August 1, 2019): 1362–70. <https://doi.org/10.1016/j.jhydrol.2019.02.049>.
- Klimes, Martina, and Elizabeth A. Yaari. “Water Diplomacy: Facilitating Dialogues.” Stockholm International Water Institute, 2019. <https://www.jstor.org/stable/resrep39350>.
- Küng, Ruedi. “Addressing the Dimensions of Transboundary Water Use: The Nile Basin Initiative.” *Mountain Research and Development* 23, no. 1 (2003): 4–6.

- Maghen, Liel. “Ensuring Water Security in the Middle East: Policy Implications.” *Euromesco*, January 1, 2020, 98.
- Michel, David. “Water Governance and Water Diplomacy.” *Water Conflict Pathways and Peacebuilding Strategies*. US Institute of Peace, 2020. <https://www.jstor.org/stable/resrep26059.9>.
- NOAA. “Where Is All of the Earth’s Water?” National Oceanic and Atmospheric Administration, June 16, 2024. <https://oceanservice.noaa.gov/facts/wherewater.html>.
- Schmeier, Susanne. “International Water Law Principles in Negotiations and Water Diplomacy Symposium on Interstate Disputes over Water Rights: Essay.” *AJIL Unbound* 115 (2021): 173–77.
- . “What Is Water Diplomacy and Why Should You Care?” Global Water Forum. Accessed October 29, 2024. <https://www.globalwaterforum.org/2018/08/31/what-is-water-diplomacy-and-why-should-you-care/>.
- ScienceDaily. “Looming Crisis of the Much Decreased Fresh-Water Supply to Egypt’s Nile Delta.” Accessed January 25, 2025. <https://www.sciencedaily.com/releases/2017/03/170313135006.htm>.
- Selby, Jan. “The Geopolitics of Water in the Middle East: Fantasies and Realities.” *Third World Quarterly* 26, no. 2 (2005): 329.
- Sheikh, Abdi, and Giulia Paravicini. “Egypt Sends Arms to Somalia Following Security Deal, Sources Say.” *Reuters*, August 29, 2024, sec. Africa. <https://www.reuters.com/world/africa/egypt-sends-arms-somalia-following-security-pact-sources-say-2024-08-28/>.
- Susskind, Lawrence E. “The Political and Cultural Dimensions of Water Diplomacy in the Middle East.” In *Water Security in the Middle East*, edited by Jean Axelrad Cahan, 185–206. Essays in Scientific and Social Cooperation. Anthem Press, 2017. <https://www.jstor.org/stable/j.ctt1jktqmk.14>.
- “THE 17 GOALS | Sustainable Development.” Accessed January 2, 2025. <https://sdgs.un.org/goals>.
- “The Hidden Global Trade in Water | YaleGlobal Online.” Accessed January 25, 2025. <https://archive-yaleglobal.yale.edu/content/hidden-global-trade-water>.
- “UNICEF Middle East and North Africa,” September 2022. <https://www.unicef.org/mena/>.
- United States Department of State. “U.S. Support for Water Security as a Climate Adaptation Priority,” 2025. <https://www.state.gov/u-s-support-for-water-security-as-a-climate-adaptation-priority/>.
- UN-Water. “COP28: Water Is Critical to Climate Change Mitigation.” Accessed February 2, 2025. <https://www.unwater.org/news/cop28-water-critical-climate-change-mitigation>.
- U.S. Agency for International Development. “Water and Sanitation | Egypt,” March 8, 2023. <https://www.usaid.gov/egypt/water-and-sanitation>.
- USAID.gov. “Water and Sanitation | What We Do,” January 24, 2025. <https://www.usaid.gov/water-and-sanitation>.
- USAID.gov. “Water Resources & Environment | Jordan | Archive - U.S. Agency for International Development,” December 10, 2020. <https://2017-2020.usaid.gov/jordan/water-and-wastewater-infrastructure>.
- Vij, Sumit, Jeroen Warner, and Anamika Barua. “Power in Water Diplomacy.” *Water International* 45, no. 4 (May 18, 2020): 249–53. <https://doi.org/10.1080/02508060.2020.1778833>.
- Wishart, David M. “The Breakdown of the Johnston Negotiations over the Jordan Waters.” *Middle Eastern Studies* 26, no. 4 (October 1990): 536–46.
- World Bank. “Funding A Water-Secure Future: An Assessment of Public Spending Key Messages.” Text/HTML. Accessed January 15, 2025. <https://www.worldbank.org/en/topic/water/publication/funding-a-water-secure-future>.
- World Wildlife Fund. “Water,” 2025. https://www.wwfca.org/en/our_work/water/.
- Yıldız, Dursun. “A Step Forward for Putting Preventive Water Diplomacy into Action in the Middle East.” *World Water Management, Diplomacy & Science News*, January 1, 2024, 13.
- You, Jongeun. “Policy Conflict around the Grand Ethiopian Renaissance Dam.” *World Water Policy* 9, no. 4 (2023): 960–72. <https://doi.org/10.1002/wwp2.12139>.

