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The Right to the World's Longest River: Reopening the Vexing Case of the Nile River

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THE RIGHT TO THE WORLD'S LONGEST RIVER: REOPENING THE VEXING CASE OF THE NILE RIVER

AMIN R. YACOUB* & BECKY BRIGGS**

*Whiskey is for drinking; water is for fighting over.*¹

—Mark Twain

ABSTRACT

Disputes over rivers and water resources extend back to early civilizations. Yet, the current dispute between Egypt and Ethiopia may rank among the most vexing water disputes in modern history. The Grand Ethiopian Dam filling is close to completion, and, if no cooperative or legal solution is reached, many adverse consequences will start appearing gradually on the Egyptian share of the Nile River, which may ultimately pose a threat to the African peace. Currently, the international community is standing in vain after multiple unsuccessful attempts at negotiation and mediation. While legal and political scholars have discussed mechanisms and substantive standards applicable to water disputes, no scholarship currently exists regarding the application of those mechanisms and standards specific to the Nile River dispute. Accordingly, this Article scrutinizes the current legal, political, and quasi-legal mechanisms and substantive standards governing water disputes to determine the most suitable mechanism of dispute resolution to adopt in the Nile River dispute. Further, it assesses the landmark U.S. Supreme

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¹ Barbara Schmidt, *Whiskey*, TWAINQUOTES, <http://www.twainquotes.com/WaterWhiskey.html> [<https://perma.cc/7SKY-VX5N>].

Court decisions in interstate water disputes to identify the most adequate substantive standard that may likely resolve the Nile River dispute.

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INTRODUCTION

Geographically, the Nile River is regarded as the world's longest river.² The river flows from the south of eastern Africa (Uganda, Tanzania, and Kenya), passes through ten African nations (including Ethiopia), and empties, to the north, into the Mediterranean Sea, located in Egypt.³ Historically, the Nile River is where the Ancient Egyptian civilization first began thousands of years ago.⁴ Disputes over rivers and water resources extend back to early civilizations on both international and domestic levels.⁵ The river dispute between Egypt and Ethiopia originated after Ethiopia decided—without regard to the vital needs of neighboring countries—to build the Grand Ethiopian Renaissance Dam.⁶ Ethiopia asserted that establishing this Dam is necessary to fulfill its needs for hydropower and irrigated agriculture, which are both required to promote development.⁷ The Dam filling is close to completion, and the adverse consequences will start appearing gradually on every African nation between Ethiopia and Egypt, leaving Egypt particularly susceptible to a critical water shortage.⁸

Generally, current literature discusses both the mechanisms available to resolve international river disputes and substantive principles applicable to these disputes.⁹ Regarding the former, scholars have scrutinized the role of commissions and cooperative action in resolving international

² *Nile River*, NAT'L GEOGRAPHIC [hereinafter *Nile River*], <https://www.nationalgeographic.org/encyclopedia/nile-river/> [<https://perma.cc/6ARW-3Q38>] (last visited Jan. 12, 2022).

³ *Id.*

⁴ *Ancient Egyptian civilization*, KHAN ACAD., <https://www.khanacademy.org/humanities/world-history/world-history-beginnings/ancient-egypt-hittites/a/egypt-article> [<https://perma.cc/5JAA-TU4G>] (last visited Jan. 12, 2022).

⁵ An example of an early interstate conflict over water took place in 2500 and 2350 BC between the Sumerian states of Lagash and Umma. *See, e.g.*, Karen A. Rasler & William R. Thompson, *Contested Territory, Strategic Rivalries, and Conflict Escalation*, 50 INT'L STUD. Q. 145, 145 (2006).

⁶ Gary Polakovic, *Water Dispute on the Nile River Could Destabilize the Region*, USC NEWS (July 13, 2021), <https://news.usc.edu/188414/nile-river-water-dispute-filling-dam-egypt-ethiopia-usc-study/> [<https://perma.cc/P8E2-ZBEB>].

⁷ *Id.*

⁸ *Id.*

⁹ Tamar Meshel & Moin A. Yahya, *International Water Law and Fresh Water Dispute Resolution: A Cosean Perspective*, 92 UNIV. COLO. L. REV. 510, 510–22 (2021).

river disputes through international agreements.¹⁰ Furthermore, scholars analyzed the role of international organizations, such as the United Nations and its bodies, in resolving international water disputes.¹¹ They discussed the role of the United Nations Security Council (“UNSC”) in intervening to either induce cooperation or produce an order, through the UNSC, to resolve a vexing international water dispute that may result in erupting war.¹² On the other hand, scholars scrutinized the spectrum of the applicable standards on international water disputes.¹³ The substantive standards are mostly found in international water law treaties.¹⁴ Yet, the application of these standards has differed from one case to another. While the International Court of Justice (“ICJ”) frequently adopted the *equitable standard* in the distribution of water resources among disputing nations, the most successful cases resolved before the ICJ were those where the Court applied either the “*no significant harm*” standard or a *hybrid* standard, which encompasses both the equitable standard and the no significant harm standard.¹⁵ Scholars have reviewed, in depth, the application of the no significant harm standard and the equitable distribution standard.¹⁶ Yet there remains a gap in the current literature with regards to assessing how successful a holistic approach—that considers the history of the water resource, geography, significant harm, equitable standard, prior appropriation, prior use, future use, and the interests of nations in conflict—would be. We can find support for this holistic standard under the latest U.S. Supreme Court decisions, which adopted an all-inclusive standard encompassing multiple criteria such as states’ interests, pollution, waste, water force, equitable shares, and prior apportionment.¹⁷

¹⁰ Tamar Meshel, *Swimming Against the Current: Revisiting the Principles of International Water Law in the Resolution of Fresh Water Disputes*, 61 HARV. INT’L L.J., 135, 135–37 (2020).

¹¹ *Transboundary Waters*, U.N. DEP’T ECON. & SOC. AFFAIRS (“UNDESA”) (Oct. 23, 2014), https://www.un.org/waterforlifedecade/transboundary_waters.shtml [https://perma.cc/2XU9-NJFF].

¹² James D. Fry & Agnes Chong, *UN Security Council Resolution of International Water Disputes*, 50 GEO. J. INT’L L. 363, 364–68 (2019).

¹³ Eve Warburton, *A Right, a Need, or an Economic Good? Debating our Relationship to Water*, COLUM. CLIMATE SCH.: STATE OF THE PLANET (June 6, 2011), <https://news.climate.columbia.edu/2011/06/06/a-right-a-need-or-an-economic-good-debating-our-relationship-to-water/> [https://perma.cc/JN54-ZZWJ].

¹⁴ G.A. Res. 51/229, art. 5 (May 21, 1997).

¹⁵ See Meshel & Yahya, *supra* note 9, at 511–20.

¹⁶ Bernadette R. Nelson, *Muddy Water Blues: How the Murky Doctrine of Equitable Apportionment Should Be Refined*, 105 IOWA L. REV. 1827, 1829, 1838–41 (2020).

¹⁷ *Id.* at 1829, 1843–44, 1846, 1850–51.

This Article aims to review both international and domestic approaches to solving complex water disputes. It not only offers the best mechanism of resolving international river disputes, but also attempts to offer the most suitable substantive legal principles that have a successful history in resolving such disputes.

First, this Article provides the factual matrix behind the Egypt-Ethiopia River dispute in Part I.¹⁸ In Part II, we will review and evaluate the available methods of resolving international water disputes by hypothetically applying them to the Nile River dispute.¹⁹ These methods include collaborative and cooperative international political negotiations through river commissions, the engagement of the UNSC, and the role of the ICJ in resolving international water disputes. In addition, we review international arbitration as a viable mechanism to resolve vexing international water disputes.²⁰ Finally, in Part III, we scrutinize the substantive principles applicable to water disputes on both the international and national levels, using the United States as an example.²¹ We conclude by offering our recommendations on resolving the Nile River dispute by applying the most suitable mechanism and substantive standards.²²

I. THE FACTUAL MATRIX BEHIND THE EGYPTIAN-ETHIOPIAN NILE RIVER DISPUTE

A. *A Brief History of the Nile River Dispute*

The dispute over the Nile River is considered one of the most complex water disputes in the world.²³ The clash between Egypt and Ethiopia started more than six decades ago when Ethiopia announced that it seriously intended to build a huge dam to generate hydroelectric energy to satisfy its domestic needs of electricity.²⁴ The news was first received with skepticism from Egypt since it was an undisputed fact that

¹⁸ See discussion *infra* Part I.

¹⁹ See discussion *infra* Part II.

²⁰ See discussion *infra* Sections II.B.1–4.

²¹ See discussion *infra* Part III.

²² See discussion *infra* Conclusion.

²³ Amira El-Fekki & Andrew James, *Egypt and Ethiopia Clash Over Nile River Dam as Water Scarcity Looms World-Wide*, WALL ST. J. (July 10, 2021, 10:00 AM), <https://www.wsj.com/articles/egypt-and-ethiopia-clash-over-nile-river-dam-as-water-scarcity-looms-world-wide-11625925602> [<https://perma.cc/SW4W-7SP3>].

²⁴ See *id.*

Egypt had control over the Nile River since the Pharaonic Period.²⁵ Yet, Ethiopia's intentions came to life when the construction workers began building the Renaissance Dam.²⁶ Since the 1950s, Egypt has threatened Ethiopia with military action to deconstruct the dam.²⁷ Nonetheless, Ethiopia did proceed with no military consequences.²⁸ The dam construction was completed during El-Sisi's regime.²⁹ El-Sisi—the current president of Egypt—also threatened Ethiopia with military action if they did not stop filling a huge reservoir behind the Dam.³⁰ Again, Ethiopia filled a huge reservoir adjacent to the Dam to its peak after two phases of filling.³¹ The second of which was completed in July 2021.³²

Disagreements between Egypt and Ethiopia have peaked in recent years.³³ These disagreements mainly concern how much water from the Nile River each country shall be allotted.³⁴ The African Union (“AU”), alongside many African countries, have attempted to mediate those disagreements between Egypt and Ethiopia with no success.³⁵ Egypt's foreign ministry has revealed, in a statement, that filling the reservoir adjacent to the dam “threatens ‘security and peace’ in the region.”³⁶ Egypt, unsatisfied with the AU efforts in resolving the river dispute, resorted to the UNSC and the United States to intervene.³⁷ After the UNSC convened upon Egypt's request, the UNSC's only approach was to re-encourage mediation and negotiations between the two countries through the AU.³⁸ On the other hand, U.S. President Biden made clear that the United States adopts a neutral stance towards Egypt, Sudan, and Ethiopia.³⁹

The consequence of filling the Ethiopian Dam's reservoir is paramount to Egypt. According to the ministry of irrigation, the Egyptian population—estimated to be more than a 100 million—“consumes about

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ El-Fekki & James, *supra* note 23.

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ El-Fekki & James, *supra* note 23.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

84 billion cubic meters of water and needs 114 billion cubic meters of water each year, with 55.5 billion cubic meters of which is coming from the Nile.”⁴⁰ Although Egypt recycles wastewater and desalinated seawater to make available fresh water, “the country depends on the Nile River for more than 90% of its freshwater needs.”⁴¹

Ethiopia, on the other hand, wants to transform itself from an agrarian to industrial economy through the dam.⁴² As a country of 115 million people, Ethiopia called the dam “the Grand Ethiopian Renaissance Dam” (“GERD”) and decided to use it to close its electric energy deficit.⁴³

The Nile River water originates from the upstream in Uganda and Ethiopia and passes through multiple African countries before it reaches Egypt, the final downstream country.⁴⁴ Constructing a dam in an upstream country is a frequent cause of erupting water disputes.⁴⁵ This is because it both affects water supply and quality in downstream countries, leaving these countries with weak water force or polluted water.⁴⁶ As a result, countries on a river basin often have an international water management agreement to regulate their water usage.⁴⁷ Indeed, Egypt has international agreements with many African countries on the Nile River.⁴⁸ The oldest agreement in the modern era was concluded in 1929 by the United Kingdom (which colonized most of North Africa at the time) to give Egypt the right to veto any construction projects—even in upstream countries—that may reduce Egypt’s share of the Nile River water.⁴⁹ Further, according to a later agreement concluded in 1959, Egypt was entitled to 55.5 billion cubic meters of water of the Nile River each year and Sudan received 18.5 billion cubic meters.⁵⁰ Ethiopia’s storage capacity after filling the reservoir to the dam is 74 billion cubic meters of water.⁵¹ Since

⁴⁰ *Id.*

⁴¹ El-Fekki & James, *supra* note 23.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Nile River*, *supra* note 2.

⁴⁵ Robert Mandel, *Sources of International River Basin Disputes*, 12 J. CONFLICT STUD. 25, 26, 28, 30 (1992).

⁴⁶ *Id.*

⁴⁷ *See id.*

⁴⁸ El-Fekki & James, *supra* note 23.

⁴⁹ Ying Zhang et al., *Ethiopia’s Grand Renaissance Dam: Implications for Downstream Riparian Countries*, 141 J. WATER RES. PLAN. MGMT. 1, 2 (2015), <https://ascelibrary.org/doi/full/10.1061/%28ASCE%29WR.1943-5452.0000520> [<https://perma.cc/L3KL-KBBS>].

⁵⁰ El-Fekki & James, *supra* note 23.

⁵¹ *Grand Ethiopian Renaissance Dam Project, Benishangul-Gumuz*, WATER TECH., <https://>

then, countries in the upstream have started to rebel against Egypt's control over the Nile River and its veto power to oppose any construction projects.⁵² By 2010, there were more efforts among Nile basin countries to bring Egypt's control over the Nile River down after its influence started to diminish.⁵³

Not surprisingly, centuries ago, an Ethiopian emperor threatened to cut off the Nile River flow to Egypt.⁵⁴ Many centuries later, after the former Egyptian President Hosni Mubarak threatened Ethiopia with military action if it decided to proceed with constructing a dam, he was subject to a failed assassination attempt in Addis Ababa in 1995 during his visit for a summit of African leaders.⁵⁵ Ethiopia found a political opening to build the giant dam amid Egypt's Arab spring protests.⁵⁶ In 2015, Egypt, Ethiopia, and Sudan signed an agreement on cooperation that included a seven-year timeline for filling the dam.⁵⁷ While Egypt and Sudan aimed for a binding accord, Ethiopia favored flexibility.⁵⁸

Currently, the construction of the dam is near completion according to the United Nations ("UN").⁵⁹ Nonetheless, Egypt has exerted sufficient efforts to modernize the country's irrigation systems and to reduce the possibility of drought.⁶⁰ Yet, the dispute between Egypt and Ethiopia has reached its peak due to its struggle to find a common ground through negotiations, especially water management in times of possible drought.⁶¹

www.water-technology.net/projects/grand-ethiopian-renaissance-dam-africa/ [https://perma.cc/MG6N-KTPK] (last visited Jan. 12, 2022).

⁵² JOHN WATERBURY, *THE NILE BASIN: NATIONAL DETERMINANTS OF COLLECTIVE ACTION* 80 (2002).

⁵³ *Id.* at 171.

⁵⁴ Andrew Carlson, *Who Owns the Nile? Egypt, Sudan, and Ethiopia's History-Changing Dam*, 6 *ORIGINS* (Mar. 2013), <https://origins.osu.edu/article/who-owns-nile-egypt-sudan-and-ethiopia-s-history-changing-dam> [https://perma.cc/PXN2-9NGY].

⁵⁵ See El-Fekki & James, *supra* note 23; Aya Nader, *Egypt Forced to Face Music, Sign GERD Agreement: Mubarak's Last Irrigation Minister*, *DAILY NEWS EGYPT* (June 12, 2015), <https://dailynewsegypt.com/2015/06/12/egypt-forced-to-face-music-sign-gerd-agreement-mubaraks-last-irrigation-minister/> [https://perma.cc/Z7AP-DYRY].

⁵⁶ Basillioh Mutahi, *Egypt-Ethiopia Row: The Trouble Over a Giant Nile Dam*, *BBC NEWS* (Jan. 22, 2020), <https://www.bbc.com/news/world-africa-50328647> [https://perma.cc/2GZZ-4B99].

⁵⁷ El-Fekki & James, *supra* note 23.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

B. What Happened at the United Nations Security Council Meeting?

During the UNSC meeting, the senior UN official for the Horn of Africa advised that Egypt, Ethiopia, and Sudan should negotiate, in good faith, their legitimate claims regarding the use of the Nile River.⁶² The Chair of the AU—President Felix Tshisekedi of the Democratic Republic of Congo—opined that although the history of negotiations over the river’s use has been stagnating for more than a decade, the tensions have substantially increased recently upon the construction of the dam.⁶³ On the other hand, the League of Arab States advised that Ethiopia shall refrain from filling the reservoir until all countries reach an agreement among them regarding the use of the Nile River.⁶⁴ The executive director of United Nations Environment Programme (“UNEP”)—Inger Andersen—noted that the river has been the primary source of freshwater, agriculture, and livelihood for populations in Egypt, Ethiopia, and Sudan for thousands of years, yet the Ethiopian Dam will generate massive hydropower that would not only feed Ethiopia but could also feed the short energy supply of the region.⁶⁵ The three states have resorted to collaborative and cooperative engagement regarding the Nile River dispute, and they signed an agreement on declaration of principles of “cooperation on transboundary water resources” in 2015 (“2015 Agreement”).⁶⁶ This tri-agreement aims for resolving the Nile River disputes peacefully under the auspices of the AU.⁶⁷ Yet the agreement mentioned no arrangements or mechanisms for disputes regarding the consequences of the dam, such as drought.⁶⁸ During the UNSC meetings, some Council members took the floor and noted that the dam’s potential for significant misunderstanding and tension in the region cries for compromise among the three nations.⁶⁹

In sum, most of the delegates at the UNSC meeting—by sharing their historical experiences as similar riparian states—have emphasized

⁶² U.N. SCOR, 75th Sess., 8816th mtg., U.N. Doc. SC/14576 (July 8, 2021) [hereinafter Meeting Coverage], <https://www.un.org/press/en/2021/sc14576.doc.htm> [<https://perma.cc/5TZC-JANB>].

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ Meeting Coverage, *supra* note 62.

⁶⁹ *Id.*

the importance of continuing peaceful cooperative negotiations among the tri-states under the AU while they mainly recognized the tri-states' shares in the Nile River.⁷⁰ Mexico shared its experience in managing water disputes by suggesting the International Boundary and Water Commission (a 1989 agreement between the United States and Mexico) as a template to resolve similar disputes among the tri-states.⁷¹ Sudan's Minister of Foreign Affairs made clear that although Sudan supported the construction of the Ethiopian Dam, the solo acts of Ethiopia regarding the Nile River, such as filling its dam without informing Sudan and Egypt, may substantially endanger both Sudan and Egypt.⁷²

The Egyptian Minister for Foreign Affairs emphasized that more than 100 million Egyptians face an existential threat because Ethiopia has unilaterally begun filling the dam.⁷³ He added that Ethiopia's unilateral decision to fill the dam is both a breach of international law and an instrument of political control over the river.⁷⁴ Finally, he called for adopting Tunisia's draft resolution, which proposes an equitable agreement within a defined timeline.⁷⁵

Moreover, in the course of the UNSC meeting, Ethiopia's Minister for Water, Irrigation and Energy stated: "[N]one of us ought to stand thirsty while watching the others drink."⁷⁶ He emphasized that both Egypt and Sudan constructed dams and canals without regards to the rights of other riparian countries.⁷⁷

The UNSC meeting floated a few crucial points to the surface. First, the three countries have failed to negotiate a settlement mechanism.⁷⁸ After Sudan—supported by Egypt—proposed that mediation be conducted by the AU, UN, the European Union ("EU"), and the United States, Ethiopia suggested changes to the mediation scheme. This compromised their ability to reach an agreement.⁷⁹ Second, Ethiopia was reluctant to adopt a drought mitigation agreement with Egypt and Sudan.⁸⁰

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ Meeting Coverage, *supra* note 62.

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ Meeting Coverage, *supra* note 62.

II. WHAT IS THE BEST MECHANISM AVAILABLE TO RESOLVE THE NILE RIVER DISPUTE?

Notwithstanding the complexity of international river disputes, many of the riparian states could settle or negotiate a water-management agreement without resorting to military action.⁸¹ In this part of the Article, we attempt to understand the sources of international river disputes in order to resolve such disputes. We will first review the sources of international river disputes.⁸² Then we will discuss the mechanisms of resolving these disputes such as appointing a commission or resorting to mediation, arbitration, or to the ICJ.⁸³ After that, we will analyze the substantive applicable principles that are often applied to resolve international river disputes.⁸⁴ Finally, we will analyze the common scheme among resolved water disputes to find the best combination of the most successful dispute resolution mechanism and the best applicable substantive principle.⁸⁵

A. *The Sources of International Water Disputes: Why Do We Have Water Disputes?*

In this section, we are not trying to outline all the reasons behind the eruption of a water dispute. Rather, we attempt to focus on the main dynamics that often lead to transforming a water-management problem into a water dispute. Scholars point out that there are three main elements that may constitute the sources for water disputes.⁸⁶ The first element is a non-cooperative setting, which includes a predisposition to perceive other states' actions in a hostile way.⁸⁷ This predisposition often leads to impeding resolution of water disputes.⁸⁸ The second element is environmental imbalance, which is described by Mandel to be a major source of impeding the resolution of water disputes due to building on pre-existing antagonisms resulting from the gap between aspirations and the reality of water access.⁸⁹ When each riparian country attempts to

⁸¹ Mandel, *supra* note 45, at 26.

⁸² See discussion *infra* Section II.A.

⁸³ See discussion *infra* Section II.B.

⁸⁴ See discussion *infra* Part III.

⁸⁵ See discussion *infra* Section III.E.

⁸⁶ Mandel, *supra* note 45, at 26.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

control the water resource in an antagonistic way, this leads to the feeling of unfair distribution of the water resource and inequitable water management that often does not meet the domestic needs of one of the riparian states.⁹⁰ Third, the power asymmetry itself is considered the conflict—serving as a predicate to the previous two elements.⁹¹ The power asymmetry causes riparian states to respond to the conflict in a physical manner.⁹²

Mandel applied the three elements on the Nile River dispute between Egypt and Sudan, which arose in 1952.⁹³ At the time, Egypt's construction of the Aswan Dam Project erupted in a dispute between Egypt and Sudan.⁹⁴ Although Egypt suggested that there would be equitable water apportionment as a result of Egypt's construction of the Aswan Dam, Sudan resented Egypt's move on constructing the Dam before consulting with Sudan regarding the potential droughts or water shortages that may result due to the Dam's operation.⁹⁵ Negotiations began between the two countries in 1954, before a military confrontation took place, due to several other political aspects, in 1958.⁹⁶ Nonetheless, the Soviet Union, which contributed to funding the Aswan Dam, influenced the new Sudanese regime to forego their water concerns.⁹⁷ This led to the adoption of the Full Utilization of the Nile Waters agreement in 1959, establishing a Permanent Joint Technical Commission that made the river distribution between both states more equitable.⁹⁸

Analyzing the history of the disputes between Egypt and Sudan, Mandel argued that the three elements were the source of the Nile River dispute.⁹⁹ He found that Egypt and Sudan had a history of intense disputes over the Nile River.¹⁰⁰ First, there were historical national antagonisms between Egypt and Sudan that influenced the Nile River dispute. Yet, there was a chance for integrated river management as revealed by the 1929 accord.¹⁰¹ Nonetheless, the second element—environmental

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² Mandel, *supra* note 45, at 26.

⁹³ *Id.* at 42.

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ Mandel, *supra* note 45, at 42.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

imbalances—has been more severe.¹⁰² Although both countries have faced water scarcity, Egypt's economy fully relies on the river since it is a desert nation.¹⁰³ Third, the power asymmetry between Egypt and Sudan was present since Egypt was vastly stronger militarily and politically than Sudan despite Sudan's control over the upstream of the river.¹⁰⁴ Finally, Mandel predicted that as Egypt's future needs of the Nile River would grow, its dominance among riparian states would decrease, and its dependence on the upstream riparian would increase.¹⁰⁵

After reviewing several international river disputes in light of the three suggested elements, Mandel concluded that water dispute cases involving human-initiated disruptions such as dams and water flow diversion caused more severe conflicts compared to cases involving ecological water apportionment.¹⁰⁶

One could argue that the three elements suggested by Mandel are present in the current Nile River dispute among Egypt, Sudan, and Ethiopia. Historically, there has been national antagonism between the three nations, especially because of the Nile River.¹⁰⁷ Furthermore, there has been even a greater national antagonism between Egypt and Ethiopia. Since Ethiopia controlled the source of the Nile River, Egypt—as a dominant political power in the region—has always felt threatened by Ethiopia and has engaged in two lost wars with the latter.¹⁰⁸ The national antagonism is further influenced by the sentiment of Egyptians and Egyptian governments that Egypt owns the Nile River.¹⁰⁹ This belief is a

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ Mandel, *supra* note 45, at 42.

¹⁰⁵ *Id.* at 43.

¹⁰⁶ *Id.* at 47.

¹⁰⁷ Carlson, *supra* note 54.

¹⁰⁸ *Id.*

¹⁰⁹ Tamar Meshel, *Swimming Against the Current: Revisiting the Principles of International Water Law in the Resolution of Fresh Water Disputes*, 61 HARV. INT'L L.J. 135, 139 (2020). As Tamar Meshel provides:

The Egyptian government has adopted a similarly nationalist orientation toward the Nile, clinging to contested historic agreements that denied Ethiopia its share of the Nile waters, and has included its “historic water rights” in the new Egyptian constitution adopted in 2013. Accordingly, the political leadership in Egypt “has set a course that will strongly restrict its room for maneuver in the Nile question.” Egypt has also exhibited its willingness to use force by collaborating with Sudan to build an airstrip for the stated purpose of bombing the dam if necessary, and by declaring that “if our share of the Nile water decreases by a single drop, our blood will be the alternative.”

result of the historical domination of Egypt over the Nile River.¹¹⁰ Nonetheless, this belief does not stand scrutiny, at least under a geographical analysis. This is because Egypt is—geographically—the last downstream country on the Nile River Basin, while Ethiopia is an upstream country that can control the source of the Nile River.¹¹¹ Concerning environmental imbalance, while Ethiopia needs the dam to produce adequate energy levels for its people, the consequence of the full operation of the dam will lead to extreme shortages in Egypt's share of the Nile River.¹¹² As a civilization built exclusively on the Nile River, this may lead to unavailability of fresh water for drinking, droughts, and a failure to meet the agricultural needs of 100 million Egyptians.¹¹³ Each country has legitimate interests in using the Nile River water.¹¹⁴ Yet the Egyptian interests substantially prevail over the Ethiopian need for generating more electricity since it touches a fundamental need of fresh water, drinking, and agriculture, rather than a secondary need, generating electricity.

The assessment of the power asymmetry among Egypt, Sudan, and Ethiopia reveals that there is a close power tension between Egypt and Ethiopia. While Egypt has the upper hand in military power,¹¹⁵ Ethiopia has the exclusive control over the upstream source of the Nile River¹¹⁶—the Egyptian vein of life.¹¹⁷ The tie in political powers between the two nations make it ineffective to engage in war or threaten war. Since military attacks and wars rarely—if ever—solve a river dispute,¹¹⁸ Ethiopia's political power tips the scale since it controls what Egypt needs the most—an equitable share of the Nile River.

It is worth noting that while the current Egypt-Ethiopia dispute over the Nile River has similarities to the 1952 Egypt-Sudan dispute, there is a key difference. Both disputes have erupted as a result of human intervention—constructing a dam that may affect the river flow

¹¹⁰ Mandel, *supra* note 45, at 42.

¹¹¹ *See id.* at 141.

¹¹² Mutahi, *supra* note 56.

¹¹³ Carlson, *supra* note 54.

¹¹⁴ Mutahi, *supra* note 56.

¹¹⁵ *See The Top 20 Military Forces in the World*, NEWSWEEK (Aug. 24, 2021, 7:00 AM), <https://www.newsweek.com/most-powerful-military-forces-world-america-china-russia-1621130> [<https://perma.cc/GU3C-GV2G>]; *see also Ranked: The World's 20 Strongest Militaries*, BUS. INSIDER INDIA (July 13, 2021, 12:22 PM), <https://www.businessinsider.in/defense/ranked-the-worlds-20-strongest-militaries/slidelist/51930339.cms> [<https://perma.cc/4BK4-KZTX>]. Both sites list Egypt, and not Ethiopia, as a top 20 global military power.

¹¹⁶ Meshel, *supra* note 109, at 141.

¹¹⁷ Carlson, *supra* note 54.

¹¹⁸ Meshel, *supra* note 109, at 137–38.

or quality.¹¹⁹ Further, in both disputes, the country constructing the dam—whether it was Egypt or Ethiopia—failed to consult or adequately notify the other riparian country.¹²⁰ Yet both disputes have a remarkable difference: Egypt was not the upstream country controlling the source of the Nile River when it constructed the Aswan dam.¹²¹ Constructing a dam in a downstream riparian country rarely creates issues regarding the water supply or quality to upstream riparian countries, but not vice versa.¹²² Accordingly, Sudan's share of the Nile River in the Egypt-Sudan dispute was not substantially affected by the Aswan Dam. On the other hand, an upstream country controlling the source of the river—such as Ethiopia—constructing a dam is almost always a problem to all countries in the river basin, and especially to the last downstream country.¹²³ As we discussed above, the Ethiopian Dam reservoir would deprive Egypt of thousands of cubic meters—reducing its Nile River share exponentially.¹²⁴ Further, constructing a dam at the upstream source country often leads to significant pollution and reduction of the water quality that reaches the last downstream country.¹²⁵

Yet, we argue that there is a fourth important element that could be the primary source of water disputes: the absence of a multilateral or bilateral binding international treaty for regulating water management by the river basin riparian countries.¹²⁶ Although the United Nations Convention on the Law of the Non-navigational Uses of International Watercourses (“UNWC”) was adopted in May 1997, it still lacks the necessary number of ratifications by member states to become a binding agreement.¹²⁷ Although such agreements may be subject to construing disputes, they shorten the mediation path to resolving an interpretation dispute rather than going east and west to convince stakeholders to agree on the applicable substantive standards.¹²⁸

¹¹⁹ Mandel, *supra* note 45, at 42.

¹²⁰ *Id.*

¹²¹ *Id.* at 43.

¹²² *Id.* at 28.

¹²³ *See id.*

¹²⁴ See Damian Zane, *River Nile Dam: Why Ethiopia Can't Stop It Being Filled*, BBC (July 8, 2021), <https://www.bbc.com/news/world-africa-53432948> [<https://perma.cc/9ZDE-JJS6>].

¹²⁵ Mandel, *supra* note 45, at 28.

¹²⁶ See Salman M. A. Salman, *Mediation of International Water Disputes—the Indus, the Jordan, and the Nile Basins Interventions*, in *INTERNATIONAL LAW AND FRESHWATER: THE MULTIPLE CHALLENGES* 360, 360 (Laurence Boisson de Chazournes et al. eds., 2013).

¹²⁷ *Id.*

¹²⁸ *See id.* at 361.

In conclusion, comprehending the sources of water disputes is the first step towards finding the best solution to resolving such disputes. This is because international river disputes often involve diverse historical, geographical, and political factors, as discussed above.¹²⁹

B. The Most Suitable Mechanism to Resolve the Nile River Dispute

The current scholarship suggests multiple mechanisms and applicable standards to resolve international river disputes. Some scholars argue that the most suitable method of resolving water disputes is through collaborative governance, that often takes place through negotiations or mediation.¹³⁰ Other scholars emphasize the role of the UNSC in resolving these disputes by issuing binding orders—especially in cases that may develop into armed conflict.¹³¹ Almost all scholars agree on the importance of peaceful negotiations, mediation, or conciliation to sustainably resolve water management disputes.¹³² Yet, scholars have also discussed the role of the ICJ and international arbitration in resolving disputes that cannot be resolved through peaceful political means such as negotiation and mediation.¹³³

In this section, we will discuss the collaborative (mediation and negotiation) mechanisms on one hand and UNSC intervention, litigation (ICJ), or international arbitration on the other. Our goal here is to review both available mechanisms for resolving complex international river disputes such as the Nile River dispute. Thus, we will attempt to apply each mechanism to the factual matrix of the Egypt-Ethiopia dispute over the Nile River to find and treat the shortcomings of each mechanism.

¹²⁹ See *id.*

¹³⁰ See Rodrigo Rojas et al., *Advancing Collaborative Water Governance: Unravelling Stakeholders' Relationships and Influences in Contentious River Basins*, 12 WATER 1, 2 (2020).

¹³¹ See Manish Bapna et al., *UN Security Council Examines the Connection Between Water Risk and Political Conflict*, WORLD RES. INST. (Nov. 5, 2018), <https://www.wri.org/insights/un-security-council-examines-connection-between-water-risk-and-political-conflict> [<https://perma.cc/2BL5-QMCW>].

¹³² See Patrick Huntjens & Rens de Man, *Water Diplomacy: Making Water Cooperation Work*, PLANETARY SEC. INITIATIVE: THE HAGUE INST. GLOBAL JUST. 3 (2017), https://www.planetarysecurityinitiative.org/sites/default/files/2017-04/PB_Water_Diplomacy_WG_4.pdf [<https://perma.cc/6HCC-VEQL>].

¹³³ See Kate Halloran, *Is the International Court of Justice the Right Forum for Trans-boundary Water Pollution Disputes?*, 10 SUSTAINABLE DEV. L. & POL'Y 39, 39 (2009).

1. Resolving the Nile River Dispute Through Negotiation and Mediation

Collaborative governance has received considerable attention by academics.¹³⁴ This method emphasizes the participation of the public, private, and voluntary stakeholders in negotiations involving resolving water disputes.¹³⁵ Collaborative governance methods are praised for ensuring that the suggested solutions are fair, equitable, and representative of all interests of stakeholders.¹³⁶ They are also considered by some scholars to be the best mechanisms since they can resolve very complex water disputes by honoring competing interests.¹³⁷ This method was adopted successfully in resolving the Colorado River Basin dispute.¹³⁸

Collaborative governance often takes place through negotiation or mediation.¹³⁹ Once a transboundary water conflict erupts, states often resort to negotiation due to the vagueness of international water law and the low costs involved in negotiation as opposed to legal mechanisms.¹⁴⁰ The most common method of resolving a water dispute under negotiation is to appoint a joint commission.¹⁴¹ The Madrid Declaration, the 1923 Geneva Convention, and the Helsinki Rules provide for permanent joint commissions as a mechanism to resolve water disputes.¹⁴² Nonetheless, negotiation—as a mechanism—often fails to resolve water disputes when there is a gap in power between both sides at the negotiation table.¹⁴³ Further, negotiation can only be successful when there is an intent to compromise on both sides.¹⁴⁴ In the absence of such intent, negotiation complicates and prolongs water disputes with no avail.¹⁴⁵

¹³⁴ Rojas et al., *supra* note 130, at 2.

¹³⁵ Surabhi Karambelkar & Andrea K. Gerlak, *Collaborative Governance and Stakeholder Participation in the Colorado River Basin*, 60 NAT. RES. J. 1, 6 (2020).

¹³⁶ *Id.* at 1.

¹³⁷ *Id.* at 7.

¹³⁸ *See id.* at 12.

¹³⁹ *International Annual UN-Water Zaragoza Conference 2012/2013 Preparing for the 2013 International Year*, U.N., https://www.un.org/waterforlifedecade/water_cooperation_2013/mediation_and_dispute_resolution.shtml [<https://perma.cc/53K9-QS55>] (last visited Jan. 12, 2022).

¹⁴⁰ Tamar Meshel, *The Evolution of Interstate Arbitration and the Peaceful Resolution of Transboundary Freshwater Disputes*, 2016 J. DISP. RESOL. 361, 368 (2016).

¹⁴¹ *See id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 369.

¹⁴⁵ *Id.*

Mediation, on the other hand, is considered one of the most important mechanisms in resolving water disputes.¹⁴⁶ Mediation usually involves a third party to facilitate the dialogue among the riparian countries in resolving their river dispute.¹⁴⁷ Further, a third party may intervene and refine the parties' proposals to narrow the gap between them or conduct an investigation to present its own solutions to stakeholders, which is often known as conciliation.¹⁴⁸ One of the most successful river disputes resolved through conciliation/mediation is the Indus River mediation, where the World Bank was the third party managing the mediation of the dispute between India and Pakistan.¹⁴⁹ The mediation efforts conducted by the World Bank involving Pakistan and India resulted in the Indus Waters Treaty,¹⁵⁰ which allocated the Eastern rivers of the Indus to India and Western Rivers of the Indus to Pakistan.¹⁵¹ The treaty further established the Permanent Indus Commission to oversee a sustained implementation of the treaty and proposed binding methods of resolving future disputes regarding questions or differences arising out of the treaty.¹⁵² Some scholars argue that the success of this conciliation was due to the active involvement of the World Bank personnel at the highest level, who established personal and continuous relationships with both countries' highest officials while resolving the river dispute.¹⁵³ The World Bank further appointed an engineering adviser to work with the engineering advisers of both countries.¹⁵⁴ Furthermore, both countries highly respected the mediation process and were committed to finding a common solution.¹⁵⁵

The basis for such mediation in international law can be tracked to the Hague Convention for the Pacific Settlement of International Disputes (1899), which stipulates in Article 2 that: "In respect of serious disagreement or conflict, before an appeal to arms, the Signatory Powers

¹⁴⁶ Salman, *supra* note 126, at 361.

¹⁴⁷ *Id.* at 362.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.* at 371.

¹⁵⁰ See The Indus Waters Treaty 1960 Between the Government of India, the Government of Pakistan and the International Bank for Reconstruction and Development, art. 2-3, Sep. 19, 1960, 419 U.N.T.S. 125.

¹⁵¹ Salman, *supra* note 126, at 371.

¹⁵² *Id.*

¹⁵³ *Id.* From the very start, Eugene Black, the then-President of the World Bank, was personally and directly involved in the attempts to resolve the dispute.

¹⁵⁴ *Id.* at 371-72.

¹⁵⁵ *Id.* at 372.

agree to have recourse, as far as circumstances allow, to the good offices or mediation of one or more friendly Powers.”¹⁵⁶ Scholars point out that these methods include “negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.”¹⁵⁷ Moreover, UNWC Article 33(2) first suggests resorting to an agreement between the conflicting states before applying the treaty’s suggested mechanisms. The treaty provides that:

If the parties concerned cannot reach agreement by negotiation requested by one of them, they may jointly seek the good offices of, or request mediation or conciliation by, a third party, or make use, as appropriate of any joint watercourse institutions that may have been established by them or agree to submit the dispute to arbitration or to the International Court of Justice.¹⁵⁸

Unlike the language of both treaties, we argue that arbitration is not one of the collaborative mechanisms of resolving water disputes. This is because arbitration—same as litigation—often results in one winning party that takes all.¹⁵⁹ In contrast, in mediation—which is considered a more developed form of negotiation—both countries seek to compromise to find an equitable and fair allocation of the river water.¹⁶⁰ Nonetheless, the drawback of mediation is that it is not legally binding like arbitration or litigation—at least until a treaty is signed by disputing parties.¹⁶¹ Thus, mediation requires good faith and a commitment to resolve the water dispute by both competing sides.¹⁶² If such commitment is lacking, one country may not accept mediation or the mediator, or neglect the mediator’s

¹⁵⁶ 1899 Convention for the Pacific Settlement of International Disputes, art. 2, July 29, 1899, 1 A.J.I.L. Supp 107, 187 C.T.S. 4100.

¹⁵⁷ For the text of the UN Charter, see 1369 U.N.T.S. 181. As Salman argues: “Article 33 of the Charter should be read together with Article 2(3) of the Charter, which urges all Member States to settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered.” See Salman, *supra* note 126, at 363 n.11.

¹⁵⁸ Convention on the Law of the Non-navigational Uses of International Watercourses, art. 33(2), May 21, 1997, 36 I.L.M. 703 [hereinafter UNWC].

¹⁵⁹ See Salman, *supra* note 126, at 365.

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 368.

¹⁶² *Id.* at 365.

findings and suggestions altogether.¹⁶³ Nonetheless, the importance of mediation in resolving international river disputes remains undeniable for two prominent reasons. First, it is the most resorted to method when both disputants reach a stalemate or are out of options.¹⁶⁴ Second, both disputants are likely to compromise and offer concessions to resolve the dispute through a third party rather than directly offering compromises to each other.¹⁶⁵

Susskind and Babbitt opined that there are five preconditions for effective international mediation:

- (a) disputants must realize that they are unlikely to get what they want through unilateral action;
- (b) the alternative to agreement must involve unacceptable economic or political costs;
- (c) the representatives of the disputants must have enough authority to speak for whom they represent;
- (d) other international or regional interests with a stake in the dispute must exert pressure for a resolution; and
- (e) a mediator must be available who is acceptable to all sides.¹⁶⁶

Thus, the choice of a third-party mediator becomes the first most important step towards resolving a river dispute through mediation.¹⁶⁷ In most successfully resolved international river disputes, the UN, or one of the respected regional organizations, handled the mediation between the disputant countries.¹⁶⁸

The timeline of the GERD Dam Negotiations can be summarized as follows:

- (1) September 2011, Ethiopia started the construction of the GERD dam without the consent of downstream states.¹⁶⁹ Egypt and Ethiopian officials

¹⁶³ *Id.*

¹⁶⁴ *Id.* at 366.

¹⁶⁵ Salman, *supra* note 126, at 366.

¹⁶⁶ Eileen Babbitt & Lawrence Susskind, *Overcoming the Obstacles to Effective Mediation of International Disputes*, in *MEDIATION IN INTERNATIONAL RELATIONS: MULTIPLE APPROACHES TO CONFLICT MANAGEMENT* 30, 31–35 (Jacob Bercovitch & Jeffrey Rubin eds., 1992).

¹⁶⁷ *Id.* at 35.

¹⁶⁸ *Id.* at 30.

¹⁶⁹ Noha El Tawil, *Declaration of Principles on Renaissance Dam Is 'Exclusive Agreement' Binding Egypt, Ethiopia, Sudan Together: Intl. Law Expert*, *EGYPT TODAY* (June 23, 2020),

- agreed to form a committee of experts to study the impact of the dam.¹⁷⁰
- (2) May 2012, the committee—which is comprised of Egyptian, Ethiopian, Sudanese, and international experts¹⁷¹—began its assessment of the impact of the GERD dam on Egypt and Sudan.¹⁷²
 - (3) June 2014, the President of Egypt asked the Ethiopian Prime Minister to resume negotiations at the African Union Summit.¹⁷³
 - (4) August 2014, the Egyptian and Ethiopian ministers of irrigation formed National Experts Committee (Tripartite National Committee) to accomplish the recommendations of the international committee of experts.¹⁷⁴
 - (5) November 2017, the Tripartite National Committee meeting was hosted in Cairo with no success after fourteen rounds of consultation due to the Ethiopian rejection of the guidelines proposed.¹⁷⁵
 - (6) December 2017, Egypt suggested to include the World Bank as a mediator in the Tripartite Committee of Experts.¹⁷⁶ Ethiopia declined in 2018.¹⁷⁷
 - (7) April 2018, foreign affairs ministers of Egypt, Ethiopia, and Sudan met at Khartoum to negotiate, but they did not reach an agreement.¹⁷⁸
 - (8) September 2018, the Tripartite Committee of Experts met with the irrigation Ministers of the three states and failed to reach an agreement.¹⁷⁹
 - (9) November 2019, the three states agreed to meet in Washington D.C., in 2020, to resume talks with the

8:50 AM), <https://www.egypttoday.com/Article/1/88909/Declaration-of-Principles-on-Renaissance-Dam-is-exclusive-agreement-binding> [<https://perma.cc/E5XQ-WNK6>].

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ Tawil, *supra* note 169.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

- participation of the World Bank and the United States.¹⁸⁰
- (10) December 2019, the three states attended the second technical meeting in Cairo to tackle the rules of filling the reservoir in times of drought, extended drought, and refill, and the coordination needed among the three states.¹⁸¹
- (11) January 2020, the three states met at Washington D.C., to conclude a further technical meeting.¹⁸² The delegations reached an agreement providing for a timetable to fill the reservoir including times of drought.¹⁸³ This agreement is in conjunction with the Declaration of Principles on the GERD that was concluded in 2015.¹⁸⁴

By reviewing the factual matrix of the current Nile River dispute between Egypt, Sudan, and Ethiopia, we reach several alarming findings. Egypt and Ethiopia have been negotiating the construction of the Ethiopian Dam for more than a decade with no success until 2015—when Egypt, Sudan, and Ethiopia signed The Declaration of Principles on the GERD in Khartoum.¹⁸⁵ Yet, Ethiopia had taken unilateral actions by constructing the dam and filling its reservoir in a direct breach of the agreement—without first informing Egypt and Sudan.¹⁸⁶ In fact, Ethiopia has a history of not joining the Nile River Basin management agreements.¹⁸⁷ The only agreement signed by Ethiopia before was the Cairo Cooperation Framework of July 1993, in which “both countries pledged not to implement water projects harmful to the interests of the other and consult over projects to reduce waste and increase the flow of waters,” and the cooperation agreement signed in 2015.¹⁸⁸

¹⁸⁰ *Id.*

¹⁸¹ Tawil, *supra* note 169.

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ Reuters Staff, *FACTBOX: Nile River Agreements and Issues*, REUTERS (July 27, 2009, 11:50 AM), <https://www.reuters.com/article/us-egypt-nile-factbox-sb/factbox-nile-river-agreements-and-issues-idUSTRE56Q3MD20090727> [<https://perma.cc/X7NZ-DQHW>].

¹⁸⁸ *Id.*

Furthermore, Egypt and Sudan have proposed a third-party mediator multiple times (the World Bank or the United States), and Ethiopia blatantly rejected both and chose to stick to the AU's unsuccessful negotiations.¹⁸⁹ High national antagonism between Egypt and Sudan was revealed through Ethiopia's comments at the UNSC meeting, when Ethiopia pointed out that downstream countries construct dams, and it should not be the only one thirsty, and neglecting the fact that it is an upstream country controlling the source of the Nile River.¹⁹⁰ In addition, Ethiopia's insistence that the AU be the only mediator does not stand scrutiny.¹⁹¹ While the AU has more knowledge about the peculiarities of African nations, the World Bank and the United States possess considerable expertise and resources to conduct successful mediation proceedings.¹⁹² The World Bank has mediated many successful international river disputes, such as the Indus River dispute.¹⁹³ Further, the United States has considerable experience in mediating interstate water disputes through adopting compacts and a thorough body of applicable standards that were developed over the years by the U.S. Supreme Court decisions—as discussed in depth below.¹⁹⁴ If Ethiopia was committed to resolving the Nile River dispute, it would have accepted either the World Bank or the United States as a mediator or a conciliator.¹⁹⁵ At the very least, Ethiopia should have informed Egypt and Sudan before it began filling the GERD dam reservoir. Failing to inform them in accordance with the 2015 agreement constitutes a direct breach of both the agreement and international law.¹⁹⁶ Further, Ethiopia's reluctance to engage the World Bank as mediator or conciliator does not show any sign of cooperation or good faith. Again, as we discussed above, the first step towards a successful negotiation or mediation is good faith.¹⁹⁷ If one of the parties cannot compromise on the mediator, they are not expected to reach a compromising agreement regarding water shares of the Nile River. This

¹⁸⁹ Meeting Coverage, *supra* note 62.

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ See Salman, *supra* note 126, at 369.

¹⁹⁴ See discussion *infra* Section II.B.2; John Echeverria & Taylor Tavormina, *Looming United States Water Wars*, VT. J. ENV'T L., <https://vjel.vermontlaw.edu/-10-2021> [<https://perma.cc/P2XJ-878M>] (last visited Jan. 12, 2022).

¹⁹⁵ United Nations Security Council, Letter dated May 1, 2020 from Permanent Representative of Egypt to the President of the Security Council, U.N. Doc. S/2020/355 at 2–5 (May 1, 2020), <https://undocs.org/pdf?symbol=en/S/2020/355> [<https://perma.cc/SZ3T-863H>].

¹⁹⁶ *Id.* at 2, 5.

¹⁹⁷ *Id.* at 6, 12.

begs the question, if one disputant country is not willing to cooperate in resolving a water dispute through negotiation or mediation, how can such a dispute be resolved peacefully?

2. The Potential Role of the United Nations Security Council in Resolving the Nile River Dispute

Although there is extreme variation between scholars on whether water disputes lead to armed conflicts, this variation is a result of how scholars define an "armed conflict."¹⁹⁸ Scholars who argue that water disputes often lead to an armed conflict adopt an expansive definition of armed conflict that often includes deploying soldiers at the border.¹⁹⁹ In contrast, the other group of scholars adopt a restrictive definition of armed conflict that only includes waged wars.²⁰⁰

The UNSC involvement in international river disputes finds its basis in its authority to respond to threats to international security under the UN Charter.²⁰¹ In cases of potential threats to international security, the UNSC may suspend the application of international treaties and substitute it with other international obligations.²⁰² Specifically, regarding water disputes, the UNSC had suspended and substituted international obligations in at least eight international water disputes.²⁰³ Although the UNSC is not considered a source of international water law, its coercive powers under the UN Charter allow it to create and impose new water law that can suspend and substitute existing treaty obligations.²⁰⁴ Thus,

¹⁹⁸ Fry & Chong, *supra* note 12, at 364. Fry and Chong provide that:

Aaron Wolf occupies one extreme, with his assertion that the last international armed conflict over water occurred over 4,500 years ago, with the intervening millennia being more accurately characterized as international water cooperation. The Pacific Institute occupies the other end of the spectrum, pointing to at least 166 instances of international armed conflict over water, with the most recent observed in 2018 when Turkey allegedly attacked water infrastructure in northern parts of Syria.

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ U.N. Charter art. 39.

²⁰² Fry & Chong, *supra* note 12, at 366.

²⁰³ *Id.* at 365.

²⁰⁴ Article 25 of the U.N. Charter is particularly important: "The Members of the United Nations agree to accept and carry out the decisions of the Security Council in accordance with the present Charter." U.N. Charter art. 25. Article 103 gives these decisions higher normative value than conflicting treaty obligations: "In the event of a conflict between the obligations of the Members of the United Nations under the present Charter and

the UNSC resolutions regarding international water disputes are binding on contesting member states.²⁰⁵ This authority of the UNSC has also been confirmed by the ICJ in the *Lockerbie* case, which emphasized that the UNSC resolutions passed under Chapter VII trump conflicting treaty rights and obligations.²⁰⁶ It is worth noting that the UNSC involvement through issuing resolutions under Chapter VII does not negate the ICJ jurisdiction over the dispute nor does it make the dispute inadmissible before the Court.²⁰⁷

Fry and Chong analyzed six instances where the UNSC used its Chapter VII powers to resolve non-navigational international water disputes.²⁰⁸ They noted that all these instances involved an ill-will from one nation to deny the other its right to a regular supply of water.²⁰⁹

One relevant incident where the UNSC intervened under Chapter VII involved Yemen.²¹⁰ In 2011, Yemen faced an emergency as a result of suffering severe water shortages due to inefficient water usage with farming practices that led to a decreased supply in mountain springs.²¹¹ As a result, the UNSC adopted the Resolution No. 2014, citing its “primary responsibility for the maintenance of international peace and security under the Charter of the United Nations,” and expressing its serious

their obligations under any other international agreement, their obligations under the present Charter shall prevail.” U.N. Charter art. 103.

²⁰⁵ Fry & Chong, *supra* note 12, at 376.

²⁰⁶ Fry and Chong state that:

In the *Lockerbie* case, Libya asked the ICJ to declare Libya in full compliance with its obligations under article 5 of the 1971 Montreal Convention, which require that Libya either try or extradite two Libyan nationals who allegedly were responsible for the bombing of Pan Am Flight 103 over Lockerbie, Scotland. Libya sought provisional measures including an injunction against the United Kingdom and the United States in forcing Libya to surrender the suspects. Meanwhile, the Security Council had adopted several resolutions under its Chapter VII powers essentially suspending the “try or extradite” option of the Montreal Convention [which the ICJ upheld]

Id. at 378.

²⁰⁷ *Id.*

²⁰⁸ *Id.* at 398.

²⁰⁹ *Id.* at 398–99.

²¹⁰ *Id.* at 414.

²¹¹ See William A. Rugh, *Yemen and the United States, Conflicting Priorities*, 34 FLETCHER F. WORLD AFF. 109, 113 (2010); Ranee Khooshie Lal Panjabi, *Not a Drop to Spare: The Global Water Crisis of the Twenty-First Century*, 42 GA. J. INT'L & COMP. L. 277, 306 (2014). These water problems had been foreseen a few years before the start of the crisis. See, e.g., Amr Hamzawy & Marina Ottaway, *When Islamists Go Into Politics*, 33 FLETCHER F. WORLD AFF. 37, 43 (2009).

concern regarding the difficult access to safe water.²¹² The UNSC also demanded that the Yemeni authorities' acts comply with humanitarian and human rights laws.²¹³ Further, the UNSC passed the Resolution 2402 in 2018 to renew the call for applying such humanitarian obligations to preserve the right to life and dignity of the Yemeni people.²¹⁴ The Yemeni water shortage is relevant to our research because there were allegedly Saudi-led attacks on a Yemeni bottled water plant and a pipe factory in 2015 and 2016, which led to the death of thousands of Yemeni, due to water-related fighting.²¹⁵ Although there are no similar attacks from the Ethiopian side on the Nile River share of Egypt or Sudan, the construction of the Ethiopian Dam and its huge reservoir amounts to a strategic attack on a shared water resource that may lead to similarly devastating humanitarian atrocities. Yet, the UNSC resolutions failed to resolve the situation, and Yemeni are still suffering from water shortages to this day.²¹⁶ Our assertion is also emphasized by the UNSC's latest approach in Resolution No. 2216, which called for the implementation of Gulf Cooperation Council Initiative and resuming "national dialogue" instead of issuing a binding resolution to resolve the humanitarian crisis in Yemen.²¹⁷ Nonetheless, Fry and Chong argue that these resolutions are—at least theoretically—binding in nature since they were issued under Chapter VII.²¹⁸ However, they do not suggest a back-up mechanism to resolve non-compliance with UNSC Chapter VII resolutions calling for compliance with international humanitarian law and human rights law obligations.

Another relevant situation where the UNSC intervened under Chapter VII to resolve a water-related situation concerned Syria.²¹⁹ In 2011, Syria suffered from a severe drought that forced more than 1.5 million people to flee from rural areas and find a new life in the urban parts of Syria.²²⁰ The water shortage was a result of a damaged main water pipeline in Aleppo, cutting the supply of around 3 million people.²²¹ In 2012, rebels took control over an important hydroelectric dam in Syria.²²²

²¹² Fry & Chong, *supra* note 12, at 414.

²¹³ *Id.*

²¹⁴ *Id.* at 414–15.

²¹⁵ *Id.* at 415.

²¹⁶ *Id.*

²¹⁷ *Id.* at 416–18.

²¹⁸ Fry & Chong, *supra* note 12, at 415–18.

²¹⁹ *Id.* at 418–19.

²²⁰ *Id.* at 418.

²²¹ *Id.*; *Aleppo Water Supply Cut as Syria Fighting Rages*, BBC (Sept. 8, 2012), <https://www.bbc.co.uk/news/world-middle-east-19533112> [<https://perma.cc/HNW2-3F9H>].

²²² See Bassem Mroue, *Activists: Syrian Rebels Seize Major Dam in North*, DAILY STAR

Further, rebels obstructed a key spring in Damascus and al-Qaeda fighters bombed the main water pipeline in Aleppo.²²³ These consecutive attacks on key water resources in Syria resulted in the shortage of water supply to Syrians and the contamination of available water.²²⁴ As a result, many Syrians got sick from contaminated water.²²⁵ In 2015, rebels controlled a key spring in Damascus, which reduced Damascus's water supply by ninety percent.²²⁶ Finally, Russian forces wrongfully bombed a water treatment facility near Aleppo cutting off the water supply to over 3 million people.²²⁷ The UN Secretary General noted that siege and starvation is considered a war tactic since the Syrian Government, Islamic State Iraq and the Levant, rebels, and the Nusra Front used water as a weapon of war.²²⁸ In 2016, it was estimated that 7.7 million civilians were affected by water cuts.²²⁹ The UNSC issued a resolution, which revealed its grave concern over the situation in Syria.²³⁰ The UNSC "demanded that all parties, in particular the Syrian authorities, immediately comply with their obligations under international law, including international humanitarian law . . ."²³¹ This included access to water. Again, the UNSC president clarified the connection between water shortages and international humanitarian law when he stated that he "call[ed] on all parties to fully respect their obligations under international humanitarian law and to take all appropriate steps to protect civilians, including by desisting from attacks directed against civilian objects, such as medical centers, schools and *water stations*. . ."²³²

Fry and Chong argued that the UNSC resolution called stakeholders in Syria to comply with Resolutions 2191 and 2258 of 2014 and 2015, and 2464 of 2018, which "call[ed] on all parties to the Syrian domestic conflict to . . . respect international humanitarian law."²³³ They also noted

(Nov. 26, 2012, 10:14 PM), <https://www.dailystar.com.lb/News/Middle-East/2012/Nov-26/196180-activists-syrian-rebels-seize-major-dam-in-north.ashx> [<https://perma.cc/8DM4-WUS4>].

²²³ See Alisa Reznick, *Weaponizing Syria's Water*, BOSTON REV. (Jan. 4, 2016), <https://www.bostonreview.net/world/syria-water-alisa-reznick> [<https://perma.cc/UL3E-ZFDK>].

²²⁴ Fry & Chong, *supra* note 12, at 418–19.

²²⁵ *Id.*

²²⁶ *Id.* at 419.

²²⁷ See Ewan MacAskill, *Russian Claims on Syria Airstrikes 'Inaccurate on Grand Scale', Says Report*, GUARDIAN (Apr. 5, 2016, 9:36 AM), <https://www.theguardian.com/world/2016/apr/05/russian-claims-syria-airstrikes-inaccurate-report> [<https://perma.cc/957B-Y3JJ>].

²²⁸ Fry & Chong, *supra* note 12, at 419.

²²⁹ *Id.*

²³⁰ *Id.* at 419–20.

²³¹ *Id.* at 420.

²³² *Id.*

²³³ *Id.*

that the UNSC classification of the water shortages dispute in Syria as a domestic one was a result of political reasons due to Russia's membership in the UNSC.²³⁴ Yet it does not negate the fact that the UNSC imposed an obligation on all states to comply with international humanitarian laws in water disputes.²³⁵

Accordingly, it is foreseeable that the UNSC may intervene in the Egypt-Ethiopia dispute over the Nile River if the complexity of the dispute meets a certain threshold. If the UNSC intervened, it will likely issue a binding resolution to refer the dispute to a specific mediator or conciliator (such as the World Bank).²³⁶ The UNSC may use its Chapter VII powers to ensure compliance with its binding resolution.²³⁷ Moreover, as discussed above, the UNSC often prioritizes vital humanitarian needs over industrial or electric needs.²³⁸ In other words, if the UNSC intervened, it is more likely to side with Egypt due to the probability of a water shortage that will gradually result from the GERD dam and reservoir usage. Since water shortage relates to vital human needs in Egypt, such as the availability of drinking water and agriculture, it will take priority over Ethiopia's interest in generating excessive electricity in Ethiopia.²³⁹ Nonetheless, that does not mean that the UNSC may order the deconstruction of the GERD dam or emptying of the reservoir, but rather it may require managing the reservoir and the dam in a way that guarantees a sufficient water flow to Egypt.²⁴⁰

3. The International Court of Justice as a Judicial Mechanism Available to Resolve the Nile River Dispute

The ICJ has jurisdiction to resolve disputes arising between UN member states.²⁴¹ Not surprisingly, many of these disputes involve water disputes arising between nations contesting each others' right to a shared water resource.²⁴² There is a consensus among scholars that these disputes are very complex in nature.²⁴³

²³⁴ Fry & Chong, *supra* note 12, at 420.

²³⁵ *Id.*

²³⁶ *See generally* U.N. Charter art. 39–40.

²³⁷ *Id.* art. 39, 40.

²³⁸ *See discussion infra* notes 420–56 and accompanying text.

²³⁹ *See discussion infra* notes 420–56 and accompanying text.

²⁴⁰ *See generally* Fry & Chong, *supra* note 12, at 419, 422.

²⁴¹ Statute of the International Court of Justice, art. 1, art. 34, ¶ 1, art. 38, ¶ 1.

²⁴² Salman M. A. Salman, *International Water Disputes: A New Breed of Claims, Claimants, and Settlement Institutions*, 31 WATER INT'L 2, 3 (2006).

²⁴³ *See id.* at 3.

One of the most famous ICJ water dispute cases is the Gabčíkovo-Nagymaros case.²⁴⁴ The factual matrix behind the case began in 1977, when Hungary and Czechoslovakia signed a treaty to construct dams and other projects alongside the Danube River bordering the two nations.²⁴⁵

The case concerned a water dispute between Hungary and Czechoslovakia regarding two barrages constructed by the latter on the Danube River under a treaty concluded in 1977, between both countries.²⁴⁶ The construction of the two barrages began in the late 1970s.²⁴⁷ In the mid-1980s, environmental groups in Hungary claimed the project had a negative impact on the environment and organized protests against building the barrages.²⁴⁸ These protests led to the discontinuation of constructing the barrages by the Hungarian Government in 1989.²⁴⁹ In contrast, Czechoslovakia argued that there were no negative environmental impacts resulting from constructing the barrages and proceeded unilaterally with building a single barrage on its side.²⁵⁰ However, the construction of the single barrage required the diversion of a considerable amount of the Danube River.²⁵¹ Czechoslovakia justified that diversion on the basis of the 1977 treaty.²⁵² Consequently, Hungary decided to terminate the 1977 treaty based on ecological necessity and the unilateral action taken by Czechoslovakia.²⁵³ The dispute became even more complex when Czechoslovakia split into two countries (the Czech Republic and the Slovak Republic, or Slovakia), where the agreement's effect passed to Slovakia allowing it to own the Czechoslovakian part of the project.²⁵⁴ Slovakia also constructed dams on the Danube and diverted its waters into its territory.²⁵⁵ In April 1993, after negotiations had failed between the two countries, the dispute was referred to the ICJ—under the pressure of the Commission of the European Communities.²⁵⁶ At the time, it was the first international water dispute to be referred to and

²⁴⁴ *Id.* at 4.

²⁴⁵ Case Concerning the Gabčíkovo-Nagymaros Project (Hung. v. Slov.), Judgment, 1997 I.C.J. 11, ¶ 2 (Sept. 25).

²⁴⁶ *Id.*

²⁴⁷ *Id.* at 25, ¶ 21.

²⁴⁸ Salman, *supra* note 242, at 4.

²⁴⁹ *Id.*

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ Salman, *supra* note 242, at 4.

²⁵⁵ *Id.*

²⁵⁶ *Id.*

decided by the ICJ.²⁵⁷ The ICJ resorted to the law of treaties, state responsibility, environmental law, sustainable development, and international watercourses laws to issue a decision in this complex case.²⁵⁸ The Court ruled in 1997, that both countries erred.²⁵⁹ Hungary was not entitled to terminate the 1977 treaty on ecological necessity grounds or suspend the work on the project in 1989 on environmental grounds.²⁶⁰ On the other hand, Czechoslovakia, and later Slovakia, was not entitled to develop the project without Hungary's agreement.²⁶¹

The ICJ reasoning behind the decision was that the use, development, and protection of an international watercourse shall take place in an equitable and reasonable manner that respects cooperation between both nations.²⁶² Accordingly, the ICJ found that Hungary was deprived of its right to an equitable and reasonable share of the Danube River because Czechoslovakia unilaterally constructed the barrage.²⁶³ The Court advised both countries to resume the joint regime to achieve the treaty's objectives and common utilization of shared water resources.²⁶⁴ Thus, Czechoslovakia was not authorized to proceed without Hungary's consent.²⁶⁵

In the Nile River case, Egypt may refer the dispute to the ICJ since Ethiopia breached the 2015 agreement—specifically Articles III, IV, and V.²⁶⁶ Article III of the 2015 agreement stipulates:

The three countries will take all necessary measures to avoid causing a significant harm while using the Blue Nile/main river. In case a significant harm occurs to one of the states, the state that caused such harm—in the absence of an agreement on that act—must take all suitable measures in coordination with the harmed state to

²⁵⁷ *Id.*

²⁵⁸ *Id.*

²⁵⁹ *Id.*

²⁶⁰ Salman, *supra* note 242, at 4.

²⁶¹ *Id.*

²⁶² Case Concerning the Gabčíkovo-Nagymaros Project (Hung. v. Slov.), Judgment, 1997 I.C.J. 56, ¶ 85 (Sept. 25).

²⁶³ *Id.*

²⁶⁴ Salman, *supra* note 242, at 4.

²⁶⁵ *Id.*

²⁶⁶ Agreement on Declaration of Principles between The Arab Republic of Egypt, The Federal Democratic Republic of Ethiopia and The Republic of the Sudan on The Grand Ethiopian Renaissance Dam Project, Mar. 23, 2015 [hereinafter GERDP Agreement], https://www.internationalwaterlaw.org/documents/regionaldocs/Final_Nile_Agreement_23_March_2015.pdf [https://perma.cc/XP2Y-CUPW].

alleviate or inhibit the harm and discuss the compensation matter, if suitable.²⁶⁷

Further, Article IV provides for the guidelines necessary to share the Nile River water impartially, including:

The elements of geography, water geography, water, climate, environment, and other natural elements, social and economic needs of the concerned basin countries, the residents who depend on the water resources in each of the basin countries, impact of the use of water resources in one of the basin countries on fellow basin countries, the existing and possible uses of water resources, and the factors of preservation, protection, development, economics of water resources use, and the cost of measures taken for the matter, the extent of alternatives availability—given the existence of comparative value—for planned or limited use, the extent of each state's contribution in the Nile River system, and the extension and surface percentage of the basin in each basin state.²⁶⁸

Finally, Article V calls for the cooperation of the three states in the first filling and management of the Dam reservoir, their respect and enforcement of the Tripartite Committee's recommendations, and informing the other two states before initiating the process of filling the reservoir.²⁶⁹

The main dispute does not only concern the breach of different articles in the 2015 agreement, but also what constitutes an equitable water share for Egypt and whether the GERD dam poses a significant harm to Egypt or Sudan. According to Egypt, the dam can reduce Egypt's share of the Nile River water by 55.5 billion cubic meters.²⁷⁰ On the other hand, Ethiopia insists that the dam will not harm downstream countries.²⁷¹ Thus, Egypt may resort to the ICJ to claim that it may face a

²⁶⁷ Tawil, *supra* note 169.

²⁶⁸ *Id.*

²⁶⁹ *Id.*

²⁷⁰ Mwangi S. Kimenyi & John Mukum Mbaku, *The Limits of the New "Nile Agreement,"* BROOKINGS (Apr. 28, 2015), <https://www.brookings.edu/blog/africa-in-focus/2015/04/28/the-limits-of-the-new-nile-agreement/> [<https://perma.cc/VJ5V-QQMB>].

²⁷¹ *Ethiopia Announces 2nd Filling GERD Reservoir, Reassures Downstream Countries,* EGYPT INDEP. (July 22, 2021), <https://egyptindependent.com/ethiopia-announces-successful-2nd-filling-of-gerd-reservoir-reassures-downstream-countries/> [<https://perma.cc/F8E8-G945>].

significant harm if Ethiopia continues acting unilaterally and fully using the reservoir.

Nonetheless, states, including Egypt, may be reluctant to resort to the ICJ for many reasons. First, the international water law remains vague especially with regards to key aspects in resolving water disputes.²⁷² Second, the ICJ has a limited ability to review scientific and technical data, which is indispensable in resolving water disputes.²⁷³ The latter reason can be observed vividly in both the *Gabcikovo-Nagymaros* case and the *Pulp Mills* case.²⁷⁴ In the *Nagymaros* case, the ICJ failed to evaluate data regarding the quality and amount of water needed to maintain an environmental balance.²⁷⁵ In the *Mills* case, the ICJ placed insufficient weight on experts' testimonies.²⁷⁶ On the other hand, the ICJ judges—while experts in international law—often lack technical knowledge regarding water disputes, which leaves the matter to the parties' experts, who might be biased.²⁷⁷ Moreover, many water disputes need a hybrid legal-political approach that considers equity, rather than a strict legal approach that only applies the letter of law.²⁷⁸ Finally, the ICJ decisions, despite being legally binding, sometimes are unenforceable due to the state's reluctance to obey international law.²⁷⁹ And if Ethiopia has been reluctant to observe the current 2012 treaty with Egypt and Sudan, it may also be reluctant to uphold the international rule of law by enforcing an ICJ decision rendered against it.

Accordingly, although Egypt may refer the Nile River dispute to the ICJ, this expensive mechanism of resolving the Nile River dispute may not reach a successful result at the end.²⁸⁰ Even if the current Ethiopian administration agreed to enforce an ICJ decision, a future administration

²⁷² See Tamar Meshel, *The Permanent Court of Arbitration and the Peaceful Resolution of Transboundary Freshwater Disputes*, 5 ESIL REFLECTIONS, Jan. 15, 2016, at 1–2.

²⁷³ *Id.*

²⁷⁴ *Id.* at 2.

²⁷⁵ *Id.*

²⁷⁶ *Id.*

²⁷⁷ See Lucas C. Lima, *The Debate on the Use of Experts By the International Court of Justice: An Injury Through Sociological Lenses*, 34 TEMP. INT'L & COMPAR. L.J. 253, 254, 260 (2020).

²⁷⁸ Meshel, *supra* note 272, at 2.

²⁷⁹ See Amunda-Kannike Abiodun SAN & Sylvanus Abila, *A Critical Examination of the Enforcement of ICJ Decisions Through the Organs of the United Nations*, 6 J. L. CRIM. JUST. 21, 21, 26 (2018).

²⁸⁰ See Edna Udobong, *The Rising Conflict on the Nile Waters: Understanding Its Legal, Environmental, and Public Health Consequences*, 10 LIBERTY UNIV. L. REV. 466, 499 (2016).

may not.²⁸¹ Thus, sustainable cooperative mechanisms are highly preferable to litigation when it comes to resolving water disputes.

4. Should Egypt Refer the Nile River Case to International Arbitration?

In the last century, international arbitration became one of the most efficient mechanisms of alternative dispute resolution.²⁸² This is due to the flexibility, technical expertise, less formality, and speed it offers to disputants that are not available in litigation.²⁸³ Nonetheless, arbitration has rarely been used in resolving water disputes.²⁸⁴ Yet the Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment of the Permanent Court of Arbitration (“PCA”) offers a fertile ground for states to resolve their environmental disputes, including water disputes.²⁸⁵ Notwithstanding the novelty and importance of these rules, only six environmental cases were commenced under them, and none of the cases concerned a water dispute.²⁸⁶ Furthermore, governments were never a party in any of these cases, except indirectly in one case where a governmental agency was a party.²⁸⁷ In other words, these rules, despite being adequate to some extent, exist without the existence of a proper mechanism to apply them, unless parties request their application by an international arbitration tribunal.²⁸⁸

Although there have been very few wars related to water disputes in the last few centuries, it is worth noting that over 150 water-related conflicts have been recorded between 1900–2010, and sixty percent of the world’s international river basins are neither controlled nor regulated under a cooperative management framework that may avoid future conflicts.²⁸⁹ Regardless, it is foreseeable that there will be violent wars in the future as a direct result of the increasing water demand for limited water resources.²⁹⁰ This is because “[w]ater is one of the few scarce

²⁸¹ Mohamed Saied, *Nile Dam Dispute Remains Stalled as Egypt, Sudan Run Out of Options*, AL-MONITOR (Sept. 5, 2021), <https://www.al-monitor.com/originals/2021/09/nile-dam-dispute-remains-stalled-egypt-sudan-run-out-options> [https://perma.cc/M2CQ-8MYT].

²⁸² See Meshel, *supra* note 272, at 6.

²⁸³ See *id.* at 2, 5.

²⁸⁴ *Id.* at 2.

²⁸⁵ See *id.* at 2–4.

²⁸⁶ *Id.* at 2.

²⁸⁷ *Id.*

²⁸⁸ See Meshel, *supra* note 272, at 2.

²⁸⁹ Meshel, *supra* note 140, at 361–62.

²⁹⁰ *Id.* at 362, 370.

resources for which there is no substitute, over which there is poorly developed international law”²⁹¹

A water dispute that is referable to international arbitration must meet a certain threshold: “a sufficient level of conflictual interaction between disputing states.”²⁹² This is measured by the rules stipulated by the Conflict and Peace Databank’s (“COPDAB”) International Co-operation and Conflict Scale.²⁹³ Under these rules, disputes may meet the gravity threshold without involving situations of formal declarations of war or military acts.²⁹⁴ Thus, a dispute may be considered a serious water conflict in a situation that involves “strong verbal expressions displaying hostility,” “diplomatic-economic hostile actions,” or “political-military hostile actions,” defined under the COPDAB scale.²⁹⁵ On the other hand, “mild verbal expressions displaying discord in interaction” or “neutral or non-significant acts for the inter-nation situation” do not meet the threshold to constitute a water dispute.²⁹⁶

It is worth noting that the current legal framework regulating water disputes is based on the limited territorial sovereignty doctrine.²⁹⁷ This doctrine dictates that no state shall adopt an internal water policy that may significantly harm another riparian state.²⁹⁸ Thus, the limited territorial sovereignty doctrine serves as a “mutual limitation of sovereign rights” and combines two core substantive principles: equitable and reasonable utilization and no significant harm.²⁹⁹ Although the equitable and reasonable utilization principle is regarded as the basic standard by most water law experts, both principles act as two faces of the same coin.³⁰⁰ Yet, aside from the substantive principles, the most common theme behind resolving water disputes through arbitration is the spirit of negotiation

²⁹¹ JEROME D. PRISCOLI & AARON T. WOLF, *MANAGING AND TRANSFORMING WATER CONFLICTS* 1 (2009).

²⁹² *Id.*

²⁹³ Shira Yoffe et al., *Geography of International Water Conflict and Cooperation: Data Sets and Applications*, 40 *WATER RES. RSCH.*, May 2004, at 1, 9.

²⁹⁴ *Id.* at 9.

²⁹⁵ *Id.* at 10.

²⁹⁶ *Id.*

²⁹⁷ STEPHEN MCCAFFREY, *THE LAW OF INTERNATIONAL WATERCOURSES* 135 (2d ed. 2007); see Joseph Dellapenna & Joyeeta Gupta, *Toward Global Law on Water*, 14 *GLOB. GOVERNANCE* 437, 444 (2008); see also Salman M. A. Salman, *The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law*, 23 *INT'L J. WATER RES. DEV.* 625, 627 (2007).

²⁹⁸ *Id.*

²⁹⁹ See Salman, *supra* note 297, at 627.

³⁰⁰ See MCCAFFREY, *supra* note 297, at 385.

and compromise of arbitrators.³⁰¹ Thus, arbitrators in water disputes combine both the legal dimension and the diplomatic dimension of mediation, negotiation, and compromise.³⁰² Arbitration, in its very structure, is the only mechanism that can combine legal procedures and bindingness on one hand and negotiation/mediation on the other hand.³⁰³ Accordingly, arbitrators who consider water disputes often act as diplomats besides acting as lawyers; combining both approaches often leads to rendering an effective and fair outcome.³⁰⁴ Although many scholars only prefer the purely judicial version of arbitration, the hybrid nature of arbitration often renders the best results in resolving complex water disputes.³⁰⁵

Arbitration—as a mechanism—succeeds in resolving many water disputes due to multiple reasons related to its unique structure.³⁰⁶ First, parties before an arbitral tribunal do not share the same negative sentiments associated with litigation at the ICJ such as prestige or competition of power.³⁰⁷ Second, the arbitral tribunal is established only to resolve the dispute referred to it, which makes it more prepared, specialized, and neutral.³⁰⁸ Third, in arbitration, states may choose their decision makers, allowing them to appoint arbitrators who have expertise in the subject matter of the dispute.³⁰⁹ Thus, this advantage overcomes the lack of technical expertise of ICJ judges.³¹⁰ Since, by their very nature, water disputes often involve technical aspects, appointing arbitrators who have technical expertise in water issues fills the gap created by both the ICJ as a judicial system and mediation/negotiation as a diplomatic solution.³¹¹ Furthermore, parties to the arbitration retain considerable control over the arbitral process, including the procedural and substantive rules applicable by the tribunal.³¹² In addition, they can determine the rules

³⁰¹ See Dellapenna & Gupta, *supra* note 297, at 444, 450.

³⁰² See Meshel, *supra* note 272, at 2, 5.

³⁰³ See William H. Ross & Donald E. Conlon, *Hybrid Forms of Third-Party Dispute Resolution: Theoretical Implications of Combining Mediation and Arbitration*, 25 ACAD. MGMT. REV. 416, 416–17 (2000); see also Dellapenna & Gupta, *supra* note 297, at 444.

³⁰⁴ See Dellapenna & Gupta, *supra* note 297, at 444; see also Meshel, *supra* note 272, at 5.

³⁰⁵ Ross & Conlon, *supra* note 303, at 417.

³⁰⁶ See Meshel, *supra* note 272, at 2.

³⁰⁷ See William T. Worster, *Competition and Comity in the Fragmentation of International Law*, 34 BROOKLYN J. INT'L L. 119, 137 (2008).

³⁰⁸ See GUIDE TO INTERNATIONAL ARBITRATION, LATHAM & WATKINS, 4–5, 27 [hereinafter LATHAM & WATKINS], <https://www.lw.com/thoughtleadership/guide-to-international-arbitration-2017> [<https://perma.cc/KZ5Q-HG4E>] (last visited Jan. 12, 2022).

³⁰⁹ See *id.* at 6; see also Meshel, *supra* note 272, at 4–5.

³¹⁰ See Meshel, *supra* note 272, at 1–2.

³¹¹ *Id.*

³¹² See LATHAM & WATKINS, *supra* note 308, at 5–6.

applicable to evaluating scientific and technical evidence.³¹³ Finally, the arbitral tribunal may apply the rules of equity besides resorting to international water law.³¹⁴

Referring the Nile River dispute to arbitration would require the presence of an arbitration agreement in any international treaty between Egypt and Ethiopia.³¹⁵ Since the 2015 agreement only mentions conciliation, mediation, and referring the Nile River dispute to the heads of state, arbitration—at least initially—is not an available mechanism to resolve the Nile River dispute.³¹⁶ Nonetheless, arbitration can still be possible if Egypt and Ethiopia agreed to adopt a new arbitration agreement as a contractual matter that is separate and independent of the presence of an international agreement between them. If Ethiopia does not agree to conclude an arbitration agreement, Egypt will have no choice but to refer the dispute to conciliation or to the ICJ. A recommended option to both sides is to refer the Nile River dispute to conciliation by selecting esteemed scholars of international water law and experts as conciliators.

Nonetheless, we argue that if the current negotiation and mediation under the supervision of the AU led to the conclusion of an arbitration agreement, referring the Nile River dispute to international arbitration would constitute the best possible solution. Since mediation, negotiation, and conciliation need an intent to compromise, and litigation needs respecting and abiding by the international rule of law, Ethiopia's reluctance to compromise or to respect international rule of law leaves the Nile River dispute with no viable mechanism for resolution except international arbitration. If Egypt referred the Nile River dispute to international arbitration, Ethiopia would be bound to appear before the tribunal and to enforce its decision.³¹⁷ Unlike respecting the ICJ decisions, the enforcement of arbitral awards is stipulated by the Washington Convention and New York Convention, which Ethiopia is a party to.³¹⁸

We conclude that arbitration is the most effective mechanism to resolve the Nile River dispute. Yet if both disputant countries could not

³¹³ See Meshel, *supra* note 272, at 4–5.

³¹⁴ *Id.* at 2, 5.

³¹⁵ See LATHAM & WATKINS, *supra* note 308, at 1.

³¹⁶ See GERDP Agreement, *supra* note 266.

³¹⁷ See *Egypt Threatens to Take Ethiopia to Court Over Nile Dam*, GLOB. CONSTRUCTION REV. (Apr. 2, 2014), <https://www.globalconstructionreview.com/egypt-threatens-t8thiopia-court-ove2r-nile-dam/> [<https://perma.cc/8UP4-4W9A>].

³¹⁸ See U.N. GAOR, 51st Sess., 229th mtg. at 1, U.N. Doc. A/51/49 (May 21, 1997); *see also* Convention on the Settlement of Investment Disputes Between States and Nationals of Other States, Oct. 14, 1966, 575 U.N.T.S. 159 [hereinafter The Washington Convention].

adopt an arbitration agreement to allow them to refer the Nile River dispute to arbitration, conciliation becomes the second-best option. However, if neither Ethiopia nor Egypt has a serious intent to compromise, the ICJ becomes the only peaceful option to resolve the Nile River dispute. After discussing the most effective mechanisms, the next logical step is to assess different substantive rules governing water disputes to choose the most effective substantive standards to resolve the Nile River dispute.

III. WHAT IS THE MOST SUITABLE SUBSTANTIVE STANDARD TO RESOLVE THE NILE RIVER DISPUTE?

Historically, substantive standards governing water disputes resolution evolved drastically. First, under the prevailing prior appropriation standard, whoever makes use of the water first, enjoys prevailing property rights to the water share.³¹⁹ Second, under the priority of water use standard, water used for drinking and agriculture is worth more than water used for generating electricity.³²⁰ Third, under the equitable apportionment standard, water shall be shared equitably and fairly between the disputant states.³²¹ Finally, under the appreciable harm and significant harm standards, no state shall use its water share in a way that significantly harms the other riparian state.³²² Regarding the last two standards, scholars are split into two groups on evaluating the current best substantive standards applicable to water disputes.³²³ The first group of scholars has found that the best applicable standard is the equitable and fair distribution standard.³²⁴ A second group of scholars argues for the significant harm standard over the equitable standard in

³¹⁹ Daina D. Apple, *Evolution of U.S. Water Policy: Emphasis on the West*, 24 WOMEN NAT. RES. (2003–04), <https://www.srs.fs.usda.gov/pubs/45416> [<https://perma.cc/N9RF-U8XH>].

³²⁰ Jarret C. Oeltjen & Loyd K. Fischer, *Allocation of Rights to Water: Preferences, Priorities, and the Role of the Market*, 57 NEB. L. REV. 245, 249 (1978).

³²¹ Bernadette R. Nelson, *Muddy Water Blues: How the Murky Doctrine of Equitable Apportionment Should Be Refined*, 105 IOWA L. REV. 1827, 1837 (2020).

³²² STEPHEN MCCAFFREY, UN ECONOMIC COMMISSION FOR EUROPE, THE UN CONVENTION ON THE LAW OF THE NON-NAVIGATIONAL USES OF INTERNATIONAL WATERCOURSES: PROSPECTS AND PITFALLS 20–21 (2008), https://unece.org/fileadmin/DAM/env/water/cwc/legal/UNConvention_McCaffrey.pdf [<https://perma.cc/KR64-GDZW>].

³²³ See Owen McIntyre, *The Current State of Development of the No Significant Harm Principle: How Far Have We Come?*, 20 INT'L ENV'T AGREEMENTS: POL. L. ECON. 601, 601 (2020); see also Waseem A. Qureshi, *Equitable Apportionment of Shared Transboundary River Waters: A Case Study of Modifications of the Indus Waters Treaty*, 18 SAN DIEGO INT'L L.J. 199, 200 (2017).

³²⁴ See Qureshi, *supra* note 323, at 200.

resolving water disputes.³²⁵ By resorting to the U.S. Resolution of Interstate Water Disputes, we find a holistic approach standard adopted to resolve complex water disputes. In this Part, we will scrutinize the substantive standards applicable to water disputes in order to reach the best available substantive standard to resolve the Nile River dispute.³²⁶

A. *Prior Appropriation as a Standard of Water Share Entitlement*

Known as “first in time, first in right,” the prior appropriation doctrine states that water rights are determined by senior priority of beneficial use or purpose.³²⁷ Prior appropriation treats water resources much differently from riparian rights that water-rich eastern, southern, and midwestern states follow.³²⁸ This legal doctrine was developed in water-scarce southwestern and western states.³²⁹ These water rights are considered a type of property right, which can be bought and sold separately from land.³³⁰ To claim the water, a user must simply divert the water for some purpose and use it for a reason that is beneficial.³³¹ The first entity to use the water (“senior appropriator”) obtains a right to the water resources (the “priority”) against a future user (“junior appropriator”).³³² However, the junior appropriator can file a claim against the senior appropriator if they make a change to the flow of the water resources that materially injures the junior user (“no injury rule”).³³³ Yet, the claim of injury is not absolute—certain changes in water use that impact downstream flows may occur even though they may harm the junior consumer.³³⁴ A key aspect of prior appropriation rights is the concept of “beneficial

³²⁵ See McIntyre, *supra* note 323, at 601.

³²⁶ See *infra* Section III.A.

³²⁷ Colorado v. New Mexico, 459 U.S. 176, 176 (1982).

³²⁸ Riparian rights belong to the land that is contiguous with the water resources. The landowner is entitled to use them unimpeded as far as quantity and quality of water (“natural flow theory”) but must use them in such a manner that respects the needs of other appropriators (“reasonable use theory”). See *id.* at 196 n.4; see also Peter A. Fahmy, Colorado v. New Mexico II: *Judicial Restraint in the Equitable Apportionment of Interstate Waters*, 62 DENV. L. REV. 858, 858 n.11 (2021).

³²⁹ Brigham Daniels, *Emerging Commons and Tragic Institutions*, 37 ENV'T L. 517, 558 (2007).

³³⁰ *Id.*

³³¹ Colorado, 459 U.S. at 179 n.4.

³³² See, e.g., Montana v. Wyoming, 563 U.S. 368, 378 (2011) (holding that the “doctrine of appropriation in Wyoming and Montana allows appropriators to improve the efficiency of their irrigation systems, even to the detriment of downstream appropriators.”).

³³³ *Id.*

³³⁴ *Id.* at 378–79.

use.”³³⁵ The legal principle was developed in common law but has been codified in many western states’ statutes and constitutions.³³⁶ Beneficial use in water governance regimes has two concepts—water users: (1) must not waste water resources; and (2) must continuously use their water resources for a productive purpose (e.g., agriculture, mining, etc.).³³⁷

Historically, Egypt is the first country in Africa to make use of the Nile River water; the Nile River became the cornerstone of the early Egyptian Pharaonic Civilization.³³⁸ For centuries, Egypt maintained exclusive control over the Nile River.³³⁹ Thus, Egypt has the ultimate right to the Nile River under the prior appropriation theory.³⁴⁰ Even under the

³³⁵ *Id.* at 370.

³³⁶ *See, e.g.*, Colo. Rev. Stat. § 37-92-103(4), which codified the definition of “beneficial use” as meaning:

the use of that amount of water that is reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriation is lawfully made. Without limiting the generality of the previous sentence, “beneficial use” includes: (a) The impoundment of water for firefighting or storage for any purpose for which an appropriation is lawfully made, including recreational, fishery, or wildlife purposes; (b) [t]he diversion of water by a county, municipality, city and county, water district, water and sanitation district, water conservation district, or water conservancy district for recreational in-channel diversion purposes; and (c) [f]or the benefit and enjoyment of present and future generations, the appropriation by the state of Colorado in the manner prescribed by law of such minimum flows between specific points or levels for and on natural streams and lakes as are required to preserve the natural environment to a reasonable degree.

See also Cal. Const. art. X, § 2, which states:

It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or method of use or unreasonable method of diversion of water.

³³⁷ Daniels, *supra* note 329, at 555; *see also* Colo. Rev. Stat. § 37-92-101.

³³⁸ Enku Tensay Woldemaryam, *Making the Nile River a Point of Cooperation Between Ethiopia and Egypt: Building Confidence Through Water Diplomacy*, 3 BUDAPEST INT’L RSCH. CRITICS INST. J. 2494, 2495 (2020).

³³⁹ Mutahi, *supra* note 56.

³⁴⁰ Woldemaryam, *supra* note 338, at 2495.

no injury rule,³⁴¹ Egypt's usage of the Nile River as the end downstream country cannot technically harm other downstream nations. In the last few decades, other African nations such as Sudan and Ethiopia began assuming control over their share of the Nile River.³⁴² Accordingly, what matters the most is how an upstream riparian country manages its water share, not what a downstream country does with its share.³⁴³ Assuming that Ethiopia is right, that Egypt builds dams and wastes water resources, this does not give Ethiopia the right to do the same to its Nile River share for two apparent reasons. First, Ethiopia does not have a prior appropriation right to the Nile River.³⁴⁴ Second, Ethiopia—an upstream nation controlling the source of the Nile River—should carefully use its water share so as not to injure the rest of the Nile basin riparian countries.³⁴⁵

Nonetheless, this doctrine does not withstand scrutiny since cooperative management of international water resources has become the norm among riparian countries since the last century.³⁴⁶ Further, it contradicts other international law doctrines such as sovereignty and non-interference in domestic affairs, which gives the right of a nation to use its domestic resources however it pleases³⁴⁷—under certain guidelines and limitations discussed below.

B. *Priority of Water Use*

The prior appropriation doctrine evolved into the priority of shared water usage from the most to the least vital.³⁴⁸ While the 1997 UNWC constitutes the main body of international water law that governs water usage, it does not explicitly rank or prioritize any water usage over another.³⁴⁹ Nonetheless, the language of Article 10(2) of the Convention emphasizes a special regard to vital human needs in resolving water conflicts.³⁵⁰ On the other hand, the Helsinki Rules on the Uses of Waters

³⁴¹ ED WHITELAW, ANALYSIS OF PROPOSED CHANGE POINT OF DIVERSION AND THE NO INJURY RULE, ECONorthwest 3 (Sept. 1, 2016), https://www.waterboards.ca.gov/water_rights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/CSPA%20et%20al/cwin_6.pdf [<https://perma.cc/DQ9Y-8RGY>].

³⁴² Woldemaryam, *supra* note 338, at 2495.

³⁴³ *Id.*

³⁴⁴ *Id.*

³⁴⁵ *Id.* at 2496.

³⁴⁶ *Id.*

³⁴⁷ *Id.* at 2494.

³⁴⁸ Woldemaryam, *supra* note 338, at 2495–97.

³⁴⁹ UNWC, *supra* note 158, art. 5, ¶ 1.

³⁵⁰ Art. 10, ¶ 2 of the UNWC provides that: “In the event of a conflict between uses of an

of International Rivers 1966 (“Helsinki Rules”)—the second most important international water law agreement—expressly deny any priority of water usage over another in Article IV.³⁵¹ Nonetheless, one scholar tracked and reviewed the eight water disputes where the UNSC became involved.³⁵² His analysis revealed that the priority to the UNSC in international water disputes is drinking water over other uses of water even when water treaties do not prioritize specific uses of water.³⁵³ It appears that the UNSC intervened and prioritized certain water usages for humanitarian purposes in six different situations.³⁵⁴

Accordingly, if the Egypt-Ethiopia Nile River dispute posed a serious threat to international world peace, the UNSC would be expected to intervene and prioritize the most vital humanitarian usage of the Nile River water.³⁵⁵ While Ethiopia’s GERD reservoir is used for generating electricity,³⁵⁶ Egypt uses most of the Nile River water for drinking and agriculture.³⁵⁷ Thus, it is very likely that the UNSC intervention will decide for the priority of water use by Egypt due to its vital humanitarian needs. However, that does not translate into deconstructing the GERD dam or emptying the reservoir, but rather managing both in a way that guarantees enough flow of the Nile River water with an acceptable quality.

C. *Equitable and Reasonable Use Standard*

The equitable standard, often referred to as the “equitable and reasonable use” standard, entitles basin states to have access to an equitable and reasonable share of the water resources, and amounts of water are allocated according to equity.³⁵⁸ The UNWC defines equitable use of water resources to include “attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the

international watercourse, it shall be resolved with reference to articles 5 to 7, with special regard being given to the requirements of vital human needs.”

³⁵¹ Art. VI of the Helsinki Rules states: “A use or category of uses is not entitled to any inherent preference over any other use or category of uses.” United Nations, Helsinki Rules, art. 6, 1966.

³⁵² Fry & Chong, *supra* note 12, at 365.

³⁵³ *Id.*

³⁵⁴ *Id.* at 368–69.

³⁵⁵ *Id.* at 364.

³⁵⁶ Woldemaryam, *supra* note 338, at 2495.

³⁵⁷ *Id.* at 2496.

³⁵⁸ See Meshel, *supra* note 109, at 139–40.

watercourse.”³⁵⁹ Further, the UNWC embraced the principle that states consider the development and protection over shared water resources as part of their equitable and reasonable use, which would also “include[] both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof”³⁶⁰

In the United States, for more than a century, the Supreme Court has determined issues of equitable apportionment.³⁶¹ Equitable apportionment is federal common law governing the Supreme Court’s determinations over which states get what water rights of water resources between states.³⁶² It is a doctrine based on equity, the particularities of the case, and a balancing of states’ interests.³⁶³ Based on the Compact Clause of the U.S. Constitution, the Supreme Court has original jurisdiction to hear these types of cases between states and inherent authority to equitably apportion interstate water resources between states.³⁶⁴ The doctrine of equitable apportionment is the legal standard used by courts when they are going beyond the interpretation of an interstate river compact to determine questions of water allocation.³⁶⁵

D. *Appreciable Harm Standard vs. Significant Harm Standard*

Another principle for interstate water resource governance is the concept of “appreciable harm.”³⁶⁶ Article VII of the UNWC includes this principle of appreciable harm, whereby states have an obligation when using international water resources not to cause significant harm to other watercourse states;³⁶⁷ however, if harm is caused, then states must take

³⁵⁹ UNWC, *supra* note 158, art. 5.

³⁶⁰ *Id.*

³⁶¹ *See, e.g.*, *Kansas v. Colorado*, 206 U.S. 46 (1907).

³⁶² *See id.* at 113–14 (determining that a court should consider the particular circumstances and the rules of equity and balance each states’ interests when allocating water resources rights between states).

³⁶³ *See Fahmy, supra* note 328, at 857–58.

³⁶⁴ *Florida v. Georgia*, 141 S. Ct. 1175, 1180 (2021).

³⁶⁵ “Where, as here, the Court is asked to resolve an interstate water dispute raising questions beyond the interpretation of specific language of an interstate compact, the doctrine of equitable apportionment governs our inquiry.” *Florida v. Georgia*, 138 S. Ct. 2502, 2513 (2018).

³⁶⁶ Memorandum from James A. Hanlon on Implementation of Clean Water Act Section 316(a) Thermal Variances in NPDES Permits (Review of Existing Requirements) to the Water Division Directors, Regions 1–10 (Oct. 28, 2008), <https://www3.epa.gov/region1/npdes/merrimackstation/pdfs/ar/AR-338.pdf> [<https://perma.cc/H2DP-QAKN>].

³⁶⁷ UNWC, *supra* note 158, art. 7, ¶¶ 1–2.

all appropriate measures to eliminate or mitigate such harm and even pay damages.³⁶⁸ This legal standard was first used in transboundary pollution cases, such as in the *Trail Smelter Arbitration*,³⁶⁹ to distinguish between occasional damage by pollution and damage that would significantly alter the quality or appearance of the environment.³⁷⁰ Scholars have defined appreciable harm “as harm that is significant—i.e., not trivial or inconsequential—but is less than ‘substantial.’”³⁷¹ “The term ‘harm’ is used in its factual sense. There must be an actual impairment of use, injury to health or property, or a detrimental effect on the ecology of the watercourse.”³⁷²

On the other hand, the do no “significant harm” principle means that states should not use their territory in such a manner to cause significant harm to another state.³⁷³ This principle was the main guiding policy for international basin management, but now it is seen as equal to or slightly lower in priority than equitable use.³⁷⁴ In particular, the recent report by the International Law Commission (“ILC”) recognizes that this principle is key in places that share transboundary water resources, including rivers, aquifers, and other inland bodies of water.³⁷⁵ Further, the UNWC defines “significant harm” as the requirement that States “in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other

³⁶⁸ Watercourse states shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse states. Where significant harm nevertheless is caused to another watercourse state, the states whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of Article 5 and Article 6, in consultation with the affected state, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.

Id.

³⁶⁹ See generally *Trail Smelter Arbitration* (U.S. v. Canada), 3 R.I.A.A. 1911 (1941).

³⁷⁰ See generally *id.*; see also Gabriel Eckstein, *Application of International Water Law to Transboundary Groundwater Resources, and the Slovak-Hungarian Dispute over Gabčíkovo-Nagymaros*, 19 SUFFOLK TRANSNAT'L L. REV. 67, 77 (1995).

³⁷¹ Charles B. Bourne, *The International Law Commission's Draft Articles on the Law of International Watercourses: Principles and Planned Measures*, 3 COLO. J. INT'L ENV'T L. POL'Y 65, 81 (1992).

³⁷² See *id.* See also Eckstein, *supra* note 370, at 78.

³⁷³ Meshel, *supra* note 109, at 140.

³⁷⁴ *Id.*

³⁷⁵ See Int'l Law Comm'n, *Rep. on the Work of Its Seventy-First Session*, U.N. Doc. A/74/10 (Aug. 20, 2019), at 278 [hereinafter *ILC Report*].

watercourse States.”³⁷⁶ The ILC defines a “significant” level of harm as “something more than ‘detectable’ but need not be at the level of ‘serious’ or ‘substantial’” and “[s]uch harm must lead to real detrimental effects on the environment.”³⁷⁷ The significant harm standard can also include negative impacts to the enjoyment of human rights, such as the right to water, right to life, or right to food.³⁷⁸

E. A Holistic Approach Standard Developed in the Footprints of the U.S. Supreme Court Resolution of the Interstate Water Disputes

Regarding interstate water disputes in the United States, the Supreme Court has original jurisdiction over these types of cases based on constitutional law and by statute.³⁷⁹ Many of the cases discussed below involved a “River Master” or a “Special Master” to handle the disputes.³⁸⁰ The Court looks to the text of the compacts to help determine legal outcomes, especially on water apportionment issues.³⁸¹ We will briefly discuss two of the most recent U.S. Supreme Court cases resolving interstate water disputes before emphasizing the holistic criteria often adopted by the Court to determine the equitable apportionment of interstate water shares.

1. *Texas v. New Mexico*, 141 S. Ct. 509 (2020)

The 1949 Pecos River Compact (“the Compact”) provides an equitable apportionment of water resources between Texas and New Mexico, where a River Master annually calculates New Mexico’s water allocation to Texas.³⁸² Due to the flow of the Pecos River, the Compact does not specify how much water must be allocated but rather requires that the river not be depleted.³⁸³ In this case, a dispute arose between Texas and New Mexico over water resources that were lost due to evaporation.³⁸⁴ A

³⁷⁶ See UNWC, *supra* note 158, art. 7.

³⁷⁷ ILC Report, *supra* note 375, at 272 (internal quotations and citations omitted).

³⁷⁸ *Id.* at 271.

³⁷⁹ 28 U.S.C.S. § 1251; U.S. CONST. art. III, § 2; *see, e.g.*, *Texas v. New Mexico*, 138 S. Ct. 954, 957–58 (2018).

³⁸⁰ *See, e.g.*, *Florida v. Georgia*, 141 S. Ct. 1175, 1178 (2021).

³⁸¹ *Montana v. Wyoming*, 563 U.S. 368, 386–89 (2011).

³⁸² *See* Pecos River Compact, N.M. STAT. ANN. § 72-15-19 (West 1949) (see Article I specifically).

³⁸³ *Texas v. New Mexico*, 141 S. Ct. 509, 512 (2020) (citing Article III(a) of the Compact).

³⁸⁴ *Id.* at 510.

tropical storm hit the Pecos River Basin in 2014 causing heavy rainfall.³⁸⁵ The Texas River Commissioner for the Compact requested that some of the Pecos River water be stored in New Mexico, and New Mexico agreed.³⁸⁶ However, approximately 21,000 acres of water evaporated before New Mexico released the water to Texas in 2015.³⁸⁷ The issue before the Court was whether New Mexico should receive delivery credit for the water it accepted from Texas, even though the water evaporated.³⁸⁸

The Court analyzed the text of the Compact as well as the River Master's Manual to determine whether New Mexico would receive delivery credit.³⁸⁹ Article III(a) of the Compact establishes the delivery obligation that ". . . New Mexico shall not deplete . . . the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water [measured by the 1947 level] . . ." ³⁹⁰ Under Article VI(c), the Compact contains the "inflow-outflow method" as the calculation used to determine New Mexico's 1947 interstate Pecos River allocation of water.³⁹¹ Additionally, the Court looked to the River Master's Manual, which was added to the Compact in a 1988 amendment.³⁹² Referencing the River Master's Manual Section C.5 regarding storage, the Court determined that the language was clear that since Texas requested their water to be stored in New Mexico, New Mexico would receive delivery credit.³⁹³ Even though some of the water evaporated, Texas bore the responsibility for any loss of water because New Mexico would have released the water downstream had Texas not requested them to hold it.³⁹⁴ On December 14, 2020, the Court held that New Mexico received credit for the water resources because, but for Texas's

³⁸⁵ *Id.* at 511, 513.

³⁸⁶ *Id.*

³⁸⁷ *Id.* at 513.

³⁸⁸ There was a timeliness issue as well regarding the filings, but for purposes of this Article it will not be discussed.

³⁸⁹ *Texas*, 141 S. Ct. at 511–12.

³⁹⁰ N.M. STAT. ANN. § 72-15-19 (1949).

³⁹¹ *Texas*, 141 S. Ct. at 512 (referring to N.M. STAT. ANN. § 72-15-19).

³⁹² *Id.* at 515.

³⁹³ If a quantity of the Texas allocation is *stored* in facilities constructed in New Mexico *at the request of Texas*, then . . . *this quantity will be reduced by the amount of reservoir losses attributable to its storage*, and, when released for delivery to Texas, the quantity released less channel losses is to be delivered by New Mexico at the New Mexico-Texas state line.

Id. at 513.

³⁹⁴ *Id.* at 515.

request, New Mexico would have delivered their water allocation to Texas.³⁹⁵ Thus, New Mexico received the delivery credit, even though the water resources evaporated.³⁹⁶ Had Texas not requested New Mexico to store the water, then the result would likely have been different.

2. *Florida v. Georgia*, 141 S. Ct. 1175 (2021)

This case involves another dispute between Florida and Georgia over the proper apportionment of water resources in the Apalachicola-Chattahoochee-Flint River Watershed Basin (“ACF Basin”).³⁹⁷ The watershed is comprised of the three rivers (Apalachicola, Chattahoochee, and Flint) as well as three states (Florida, Georgia, and Alabama).³⁹⁸ The Chattahoochee River originates in northern Georgia, flows south past Atlanta, meanders on a southern route along the Alabama border, before it enters Florida in Lake Seminole, where it meets the Flint River, thereby becoming the Apalachicola River.³⁹⁹ Then it flows into northwest Florida before it enters the Apalachicola Bay in the Gulf of Mexico.⁴⁰⁰ The water resources from the watershed are drained by Georgia, Alabama, and Florida by seventy-four percent, fifteen percent, and eleven percent, respectively.⁴⁰¹ The U.S. Army Corps of Engineers operates a series of dams along these rivers. They regulate the flow of water in the Apalachicola River by storing and releasing water within the basin.⁴⁰² The Master Manual, the document that governs the allocation of water between these states, was completed in 1958, and has not been updated significantly since then.⁴⁰³ There is a compact for the ACF Basin, adopted by Congress in 1997.⁴⁰⁴

Florida asserted that Georgia had caused irreparable injury and harm to its oyster fisheries and to its river ecosystems when it overconsumed water resources in the ACF Basin.⁴⁰⁵

³⁹⁵ *Id.* at 511–12.

³⁹⁶ *Id.* at 511–12, 516.

³⁹⁷ *Florida v. Georgia*, 141 S. Ct. 1175, 1178–79 (2021).

³⁹⁸ *Id.*

³⁹⁹ *Id.*

⁴⁰⁰ *Id.*

⁴⁰¹ UNIV. OF FLA., WATER STRESS IN FLORIDA 25 (2015).

⁴⁰² *Florida*, 141 S. Ct. at 1179.

⁴⁰³ *Florida v. Georgia*, 138 S. Ct. 2502, 2531 (2018) (Thomas, J., dissenting).

⁴⁰⁴ H.R.J. Res. 91., 105th Cong. (1997).

⁴⁰⁵ *Florida v. Georgia*, 138 S. Ct. at 2531.

The issues before the Court were: (1) whether Florida was entitled to equitable apportionment of the waters of the ACF River Basin; and (2) whether injunctive relief against Georgia for sustaining an adequate flow of water into the Apalachicola region was appropriate.⁴⁰⁶ The long-standing principle that states have “an equal right to make a reasonable use of the Basin waters” guides equitable apportionment cases.⁴⁰⁷ As a riparian state, Florida has an extra burden to show how the equitable apportionment of water would be a beneficial use.⁴⁰⁸ However, the Court did not get to the merits of reapportionment of water to Florida and reasonable or beneficial use.⁴⁰⁹

On April 1, 2021, a unanimous Court issued its decision in favor of Georgia, because it found that Florida failed to meet its burden of persuasion for the Court to go against the findings of the Special Master.⁴¹⁰ Florida failed to prove that Georgia’s overconsumption of its water resources caused the collapse of the oyster fisheries and harm to the river wildlife and plant life; the evidence presented pointed to increased salinity and predation that harmed the resources.⁴¹¹

Although Georgia won in this dispute, it could be argued that it was a procedural win rather than a substantive one for not meeting its high burden of proof.⁴¹²

3. The U.S. Supreme Court Applies the Equitable Apportionment Standard Through a Holistic Approach Including Multiple Factors

By tracking and analyzing multiple U.S. Supreme Court decisions, we observed the multiple factors the U.S. Supreme Court considers in determining the equitable apportionment of water share between states.

The first factor is allowing for greater efficiency of water usage.⁴¹³ The “doctrine of appropriation in Wyoming and Montana allows appropriators to improve the efficiency of their irrigation systems, even to the detriment of downstream appropriators.”⁴¹⁴ In other words, the U.S.

⁴⁰⁶ *Id.*

⁴⁰⁷ *Id.*

⁴⁰⁸ *Id.*

⁴⁰⁹ *Id.*

⁴¹⁰ *Id.* at 1183.

⁴¹¹ *Florida v. Georgia*, 141 S. Ct. 1175, 1181–82 (2021).

⁴¹² *Id.* at 1180.

⁴¹³ *Colorado v. New Mexico*, 459 U.S. 176, 187–88 (1982).

⁴¹⁴ *Montana v. Wyoming*, 563 U.S. 368, 378 (2011).

Supreme Court accepts the detriment of downstream riparian states, so long as there is an efficient usage of water resources by the upstream riparian state.⁴¹⁵ If we hypothetically applied this factor alone on the Nile River case, the GERD would constitute no water management issues—at least in the hypothetical mind of the U.S. Supreme Court—since it constitutes an efficient use of the Nile River water to the detriment of Egypt (the downstream riparian country).

A second factor the U.S. Supreme Court considers when applying equitable apportionment is the public health, welfare, or commerce of the riparian state's population.⁴¹⁶ This often takes place through one state polluting water that is shared with another state.⁴¹⁷ In this regard, the U.S. Supreme Court opined that a state can file “another suit for injunction if the proposed sewer in operation shall prove sufficiently injurious to the waters of the Bay to lead the State of New York to conclude that the protection of the health, welfare or commerce of its people requires another application to this court.”⁴¹⁸ Unlike the first factor, the second factor alone—if applied hypothetically to the Nile River case—would tip the scale for Egypt. That is because both the GERD and reservoir technically lead to polluting Egypt's share of the Nile River water.⁴¹⁹ Assuming that the ICJ or arbitrators have the authority to issue an injunction, by arguing that the polluted share of the Nile River water will injure its people's health, welfare, or commerce, Egypt would qualify for obtaining an injunction against Ethiopia.

The third factor is a cost-benefit analysis that considers the particular circumstances of each case and the rules of equity. In *Kansas v. Colorado*, the U.S. Supreme Court stated that:

[W]hile from the testimony it is apparent that the diversion of the waters of the Arkansas River by Colorado for purposes of irrigation does diminish the volume of water flowing into Kansas, yet it does not destroy the entire flow. The benefit to Colorado in the reclamation of arid lands has been great, and ought not lightly to be destroyed. The detriment to Kansas by the diminution of the flow of the

⁴¹⁵ *Id.* at 371, 381.

⁴¹⁶ *New York v. New Jersey*, 256 U.S. 296, 298, 301–02 (1921).

⁴¹⁷ *Id.* at 298.

⁴¹⁸ *Id.* at 314.

⁴¹⁹ Essam Heggy et al., *Egypt's Water Budget Deficit and Suggested Mitigation Policies for the Grand Ethiopian Renaissance Dam Filling Scenarios*, 16 ENV'T RSCH. LETTERS 1, 1, 3–4 (2021).

water, while substantial, is not so great as to make the appropriation of the part of the water by Colorado an inequitable apportionment between the two States.⁴²⁰

Here, the third factor significantly tips the scale for Ethiopia if applied to the Nile River dispute. By way of analogy to the *Kansas v. Colorado* case, Ethiopia would argue—as it did at the UNSC meeting⁴²¹—that the diminution of the flow of water to Egypt, if substantial, is not so great as to prevent it from operating the dam and reservoir at full capacity. Yet, it could also be applied differently due to the peculiarities of Egypt's share of the Nile River and the technical reports that predicted droughts in Egypt if the dam and reservoir operated at full capacity.⁴²² In other words, the cost-benefit analysis of the Nile River water management between Egypt and Ethiopia might be extremely complex and unpredictable. Nonetheless, applying the rules of equity ensures the most efficient management of the Nile River water between the Nile Basin countries.

The fourth factor concerns the duty of each state to exploit its water resources in a reasonable and calculated means to preserve water supply. In *Wyoming v. Colorado*, the U.S. Supreme Court made clear that:

Both [States] subscribe to the doctrine of appropriation, and by that doctrine rights to water are measured by what is reasonably required and applied. Both States recognize that conservation within practicable limits is essential in order that needless waste may be prevented and the largest feasible use may be secured. This comports with the all-pervading spirit of the doctrine of appropriation and takes appropriate heed of the natural necessities out of which it arose. We think that doctrine lays on each of these States a duty to exercise her right reasonably and in a manner calculated to conserve the common supply.⁴²³

This factor, in addition to the third factor, may come close to the international “significant harm” standard.⁴²⁴ Applying the fourth factor to the Nile River dispute reveals that Ethiopia had already breached its duty

⁴²⁰ *Kansas v. Colorado*, 206 U.S. 46, 47 (1907).

⁴²¹ U.N.S.C., 76th Sess., 8816th mtg. at 27–28, U.N. Doc. S/PV.816 (July 8, 2021).

⁴²² Heggy et al., *supra* note 419, at 2–3.

⁴²³ *Wyoming v. Colorado*, 259 U.S. 419, 484 (1922) (emphasis added).

⁴²⁴ G.A. Res. 51/299, art. 7 (May 21, 1997).

to manage its water share in a reasonable and calculated manner to preserve the supply of the Nile River water to other river basin countries. This becomes apparent by analyzing Ethiopia's acts. First, it constructed a huge dam rather than a mid-sized dam.⁴²⁵ Second, it constructed the dam at a time when Egypt was distracted by the 2011 revolution.⁴²⁶ Third, it breached the 2015 treaty concluded with Egypt and Sudan by not informing Egypt before filling the dam's reservoir.⁴²⁷ Fourth, Ethiopia filled the dam's reservoir to its full capacity.⁴²⁸ Finally, it exerted bad faith and selfishness in negotiations with Egypt, meetings at the UN General Assembly, and the UNSC.⁴²⁹ These acts do not conform with a proper, reasonable, and "calculated" management of waters resources to "conserve" the common supply of water to other countries. Egypt's interests tip the scale under this factor.

Yet hypothetically applying each factor or standard alone on the Nile River case does not reap the best results since it often disregards other important considerations that may influence assigning equitable apportionment. Thus, and most notably, the Court explicitly emphasized its holistic approach in applying equitable apportionment when it opined that:

Equitable apportionment is the doctrine of federal common law that governs disputes between States concerning their rights to use the water of an interstate stream. It is a flexible doctrine which calls for the exercise of an informed judgment on a consideration of many factors to secure a just and equitable allocation. We have stressed that in arriving at the delicate adjustment of interests which must be made, [] we must consider all relevant factors, including: physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, and the damage to upstream areas as compared to the benefits to downstream

⁴²⁵ See Meeting Coverage, *supra* note 62.

⁴²⁶ Sherif Mohyelddeen, *The Egypt-Sudan Border: A Story of Unfulfilled Promise*, CARNEGIE MIDDLE EAST CTR. (June 11, 2020), <https://carnegie-mec.org/2020/06/11/egypt-sudan-border-story-of-unfulfilled-promise-pub-81995> [<https://perma.cc/QP97-9HPQ>].

⁴²⁷ Meeting Coverage, *supra* note 62.

⁴²⁸ *Id.*

⁴²⁹ See discussion *supra* Section II.B.2.

areas if a limitation is imposed on the former. Our aim is always to secure a just and equitable apportionment without quibbling over formulas.⁴³⁰

Accordingly, adopting a holistic approach to apply the equitable apportionment standard proves to be the most reliable substantive standard of all. This is because a court or an arbitral tribunal using a holistic approach may consider all relevant circumstances, such as prior appropriation, priority of water use, environmental issues, consumption, pollution, downstream flow, and damages to upstream users versus benefits for downstream users—these factors are not exhaustive. As the U.S. Supreme Court opined:

Apportionment calls for the exercise of an informed judgment on a consideration of many factors. Priority of appropriation is the guiding principle. But physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former—these are all relevant factors. They are merely an illustrative, not an exhaustive catalogue. They indicate the nature of the problem of apportionment and the delicate adjustment of interests which must be made.⁴³¹

CONCLUSION

Applying a holistic approach in the footsteps of the U.S. Supreme Court decisions is more beneficial than applying a single factor, standard, or criteria to decide on water management issues. To adequately analyze and resolve the Nile River dispute, we reviewed the competing interests among the three disputant nations: Egypt, Sudan, and Ethiopia.⁴³² Assessing the harmful impact of the GERD on Egypt and Sudan reveals that, although Sudan may face some adverse consequences, the most

⁴³⁰ *Colorado v. New Mexico*, 459 U.S. 176, 183 (1982) (internal quotations, citations, and brackets omitted).

⁴³¹ *Nebraska v. Wyoming*, 325 U.S. 589, 618 (1945).

⁴³² See discussion *supra* Section I.A.

significant harms will be on the Egyptian side, as it is the last downstream nation and is wholly dependent on the Nile River.⁴³³ According to all available technical resources, Egypt's share of the Nile River will decrease substantially.⁴³⁴ Further, the limited water share that will reach Egypt will be rather polluted.⁴³⁵ Since Egypt has a steep population growth, scarcity of drinking water is also expected.⁴³⁶ Moreover, the agriculture output of Egypt will significantly decrease.⁴³⁷ On the other hand, Ethiopia's main interests revolve around generating hydroelectric power to satisfy the energy needs of its population.⁴³⁸ Further, Ethiopia claims that the hydroelectric power generated can be used to feed electricity needs in the whole region.⁴³⁹ In addition, the GERD and its reservoir will be used in agricultural and industrial development.⁴⁴⁰

According to game theory, first developed by John Nash,⁴⁴¹ a sequence of games involving the same players who cannot foresee or predict the end is likely to induce cooperation even without external intervention.⁴⁴² Eyal Benvenisti argues that since game theory is likely to produce cooperation among riparian states, enhancing interaction among the actors becomes the priority.⁴⁴³ One way Egypt and Ethiopia could achieve more harmonized interactions is to initiate talks between the Coptic church of Egypt and the Ethiopian church. The historical connection between the two churches may indeed enhance interaction between the two nations on the larger political scale.⁴⁴⁴ The connection between the Coptic church of Egypt and the Ethiopian church goes back to the fifth century.⁴⁴⁵ In fact, the Coptic church of Egypt maintained control over the Ethiopian church until its recent independence in 1959.⁴⁴⁶ The relationship between

⁴³³ Mohyeldeen, *supra* note 426.

⁴³⁴ Eyal Benvenisti, *Collective Action in the Utilization of Shared Freshwater: The Challenges of International Water Resources Law*, 90 AM. J. INT'L L. 384, 390 (1996).

⁴³⁵ Heggy et al., *supra* note 419, at 3.

⁴³⁶ Mutahi, *supra* note 56.

⁴³⁷ *See id.*

⁴³⁸ *Id.*

⁴³⁹ *Id.*

⁴⁴⁰ *Id.*

⁴⁴¹ John F. Nash, Jr. *Equilibrium Points in N-Person Games*, 36 PROC. NAT'L ACAD. SCI. U.S. 48, 48–49 (1950).

⁴⁴² *See* Benvenisti, *supra* note 434, at 391.

⁴⁴³ *Id.* at 392.

⁴⁴⁴ Melissa Petruzello, *Ethiopian Orthodox Tewahedo Church*, ENCYC. BRITANNICA (Jan. 3, 2020), <https://www.britannica.com/topic/Ethiopian-Orthodox-Tewahedo-Church> [<https://perma.cc/V7XK-6K45>].

⁴⁴⁵ *Id.*

⁴⁴⁶ *Id.*

the two churches remains strong regardless of the politics between the two countries.⁴⁴⁷ If the Coptic church of Egypt could initiate talks with the Ethiopian church to induce more cooperation and lower the feelings of animosity between the two nations, the Nile River negotiation or mediation may succeed.

In contrast, under game theory, distrust relating to the expectations of one player's performance may deconstruct any hope for cooperation.⁴⁴⁸ It is also undisputable that water disputes are a matter of sensitive foreign policy.⁴⁴⁹ Moreover, as we mentioned before, unresolved water disputes often lead to military action initiated by the most harmed nation.⁴⁵⁰ Negotiations between Ethiopia and Egypt have not been successful for the last decade and neither were any attempts to mediate the Nile River dispute suggested by Sudan or Egypt.⁴⁵¹ On the other hand, Ethiopia had not shown a good faith commitment to reaching an agreement with other Nile River Basin countries—especially Egypt.⁴⁵² First, it took a unilateral action in constructing the dam at a time when Egypt was distracted with the 2011 revolution and its political consequences.⁴⁵³ Second, Ethiopia continued the construction of the dam amid the ongoing negotiations with Egypt.⁴⁵⁴ Third, Ethiopia unilaterally filled the dam's huge reservoir two times without consulting with Egypt or Sudan.⁴⁵⁵ In the latest UNSC meeting, Ethiopia revealed strong national antagonism against Egypt, claiming that it also constructs dams and canals, which affects the Nile River basin, with no technical or scientific basis for this assertion.⁴⁵⁶ Finally, Ethiopia rejected any proposals of mediating the Nile River dispute through the World Bank or the United States and decided to stick to the unsuccessful AU negotiations.⁴⁵⁷

The next question that arises is dangerous to ask, yet necessary for our analysis. If there are no cooperation efforts from the Ethiopian side as shown above, should Egypt resort to military action to protect its share of the Nile River? Our answer is in the negative for three prominent

⁴⁴⁷ *See id.*

⁴⁴⁸ *See Benvenisti, supra note 434, at 409–10.*

⁴⁴⁹ *See Mandel, supra note 45, at 49.*

⁴⁵⁰ *See supra* Section II.B.4.

⁴⁵¹ Mutahi, *supra note 56.*

⁴⁵² *Id.*

⁴⁵³ Tawil, *supra note 169.*

⁴⁵⁴ *See id.*

⁴⁵⁵ *See discussion supra* Section I.A.

⁴⁵⁶ Meeting Coverage, *supra note 62.*

⁴⁵⁷ *Id.*

reasons. First, the management of shared water resources can never be forced through military action, especially if the other disputant controls the source of the river. Scholars almost unanimously agree that the best method of resolving shared water resources is through adopting an international agreement as a result of successful negotiation or mediation.⁴⁵⁸ Thus, peaceful means are the only available means to sustain a resolution to an existing water dispute. Second, although Egypt has the upper hand in military power, it would lose its favorable political position in the African region if it engaged in a military action against the GERD.⁴⁵⁹ Further, Egypt would lose its favorable political position to the United States, EU, and Russia if it used force against Ethiopia.⁴⁶⁰ Accordingly, there is no benefit in using military power in a situation where a country would lose its political influence in the region and the world. Finally, if Egypt decided to engage in a military action against Ethiopia, it would lose its international financial standing.⁴⁶¹ Since Egypt's economic needs are still satisfied by World Bank loans and U.S. subsidized exports, it becomes unwise to engage in a military action that would come with adverse financial consequences.⁴⁶² These financial consequences may include a higher interest rate on its World Bank loans, less subsidized exports from the United States, and a blow to its foreign direct investment regime.⁴⁶³

If Egypt can no longer negotiate or mediate successfully with Ethiopia—whether through the government or the Coptic Church—due to the latter's reluctance to engage in resolving the Nile River dispute, and Egypt cannot engage in the use of force for the above-stated reasons, what can Egypt do to resolve the Nile River dispute? As we suggested in Part II, Egypt may resort to conciliation, arbitration (after adopting an arbitration agreement), or refer the case to the ICJ.⁴⁶⁴ Moreover, the UNSC may intervene under Chapter VI of the UN Charter to recommend binding means of settlement.⁴⁶⁵

⁴⁵⁸ See discussion *supra* Section II.B.

⁴⁵⁹ See discussion *supra* Section I.B.

⁴⁶⁰ See discussion *supra* Section I.B.

⁴⁶¹ See U.N. Charter art. 39, 41.

⁴⁶² See *id.* art. 41.

⁴⁶³ See *id.*

⁴⁶⁴ See discussion *supra* Part II.

⁴⁶⁵ U.N. Charter, art. 37, ch. VI stipulates:

Should the parties to a dispute of the nature referred to in Article 33 fail to settle it by the means indicated in that Article, they shall refer it to the Security Council.

If the Security Council deems that the continuance of the dispute is in

Finally, we recommend that—if the case has reached a court or a tribunal—the ICJ, conciliators, or arbitrators apply a holistic approach that encompasses multiple standards including the significant harm, prior appropriation, priority of water use, and equitable apportionment standards. As discussed above, the holistic standard allowed the U.S. Supreme Court to successfully resolve many complex interstate water disputes.⁴⁶⁶ Furthermore, although some scholars have pointed to the prevalence of the significant harm standard over the equitable apportionment standard, they do not deny that taking both into account reaps the same positive results.⁴⁶⁷ Similarly, applying a holistic standard may prove successful in resolving the Nile River dispute between Egypt and Ethiopia, whether through international arbitration, conciliation, or the ICJ.

fact likely to endanger the maintenance of international peace and security, it shall decide whether to take action under Article 36 or to recommend such terms of settlement as it may consider appropriate.

U.N. Charter, art. 37.

⁴⁶⁶ See discussion *supra* Section III.D.

⁴⁶⁷ See Meshel, *supra* note 109, at 135.