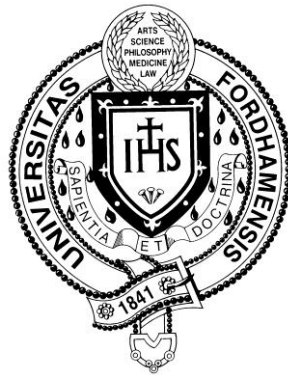


FORDHAM ENVIRONMENTAL LAW REVIEW



CLIMATE CHANGE, COMPETITION, AND CONFLICT ALONG THE RIVER
NILE: THE GRAND ETHIOPIAN RENAISSANCE DAM & SHIFTING
INTERNATIONAL WATER LAW

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WATER LAW

*Salma H. Shitia**

ABSTRACT

Decade-long negotiations between the Arab Republic of Egypt and the Federal Democratic Republic of Ethiopia surround the decision to build the hydroelectric power plant along the River Nile. For much of Ethiopia, the Grand Ethiopian Renaissance Dam represents a beacon of prosperity. For countless Egyptians, the structure embodies a potential catastrophe. Grounded in threats of displacement for Egyptian agricultural communities, some have compared the Grand Ethiopian Renaissance Dam crisis to disasters culminating in mass migration.

This battle for natural resource access has intensified as climate change exacerbates the region's dire conditions. Specifically, exhaustible resource allocation amid climate change indicates that regional development, competition, and associated conflict will increase. While development opportunities along the Nile may in fact facilitate expansive economic transformation for the region, the Grand Ethiopian Renaissance Dam conflict illustrates heightening conflict between two key African states, leaving potential regional success in jeopardy and military combat a growing reality. International water law remains at the conflict's forefront as governments, scholars, and

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international organizations grapple with vital legal questions. The way international water law is applied to the Grand Ethiopian Renaissance Dam crisis will be influential and create powerful international legal precedent for global transboundary waterways. For this reason, international and regional bodies must acknowledge the foreseeable future where upstream and downstream confrontations for exhaustible resource-based development opportunities are common.

INTRODUCTION 539

I. THE RIVER NILE’S ROLE IN EGYPT & ETHIOPIA 541

 A. *Egypt’s Gift of the Nile* 543

 B. *Ethiopia’s Beacon of Prosperity* 545

II. A MODERN INTERNATIONAL WATER LAW 546

 A. *Helsinki Rules on the Uses of the Waters of International Rivers* 549

 B. *United Nations Convention on the Non-Navigational Uses of International Water Courses* 551

 C. *Berlin Rules on Water Resources* 553

III. EQUITABLE UTILIZATION AND THE NO-HARM RULE: A BATTLE FOR THE RIVER NILE 554

 A. *Egyptian Arguments to Preserve River Nile Control* 555

 i. *The No-Harm Rule & Water Scarcity*..... 555

 ii. *The Doctrine of Prior Appropriation*..... 557

 iii. *Natural & Historical Rights: The Nile Water Agreements*..... 558

 B. *Ethiopian Arguments to Gain River Nile Access*..... 561

 i. *River Nile Ownership & The Ethiopian Highlands*.. 561

 ii. *Equitable Utilization & Poverty Alleviation*..... 562

CONCLUSION 564

INTRODUCTION

Along the Blue Nile in Ethiopia's Benishangul-Gumuz region and approximately 40 kilometers east of Sudan, Ethiopia's new Grand Renaissance Dam ("GERD") seeks to generate power through two power stations, three spillways, and a saddle dam.¹ Estimated to reach a height of 145 meters with a length of 1800 meters, the GERD is projected to store an estimated 63 billion cubic meters of water.² The hydropower plant would provide electricity to 60% of Ethiopians at a grand cost of 4.5 billion USD.³ As Africa's largest dam, the GERD spans the Blue Nile tributary where Egypt and Ethiopia receive most of their water resources. Preliminary plans for constructing the GERD became public in March 2011, approximately one month after the Egyptian Mubarak regime's collapse and just a month before construction commenced.⁴ Since the beginning of its construction, Egyptian leaders consistently challenged Ethiopia's legal authority to construct and fill the GERD. In response, Ethiopian leaders cited opposing legal authority to justify their government's unwavering persistence to build and fill the GERD. The GERD is projected to become fully operative between 2020 and 2022.⁵ As of May 2020, the GERD's total construction had reached approximately 73%.⁶

¹ See Aktas & Erdem, *Ethiopia begins filling controversial Nile Dam*, ANADOLU AGENCY (July 16, 2020), <https://www.aa.com.tr/en/africa/ethiopia-begins-filling-controversial-nile-dam/1912030>; Ker Than, *Egypt Moves Forward with Massive Nile Dam Project*, NAT'L GEOGRAPHIC NEWS (July 14, 2011), <https://www.nationalgeographic.com/news/2011/7/ethiopia-south-sudan-nile-dam-river-water/> (The Grand Ethiopian Renaissance Dam, formerly referred to as the Millennium Dam and the Hidase Dam, is also referred to as the Great Renaissance Dam.).

² MWANGI S. KIMENYI & JOHN M. MBAKU, *GOVERNING THE NILE RIVER BASIN*, 107 (2015).

³ Meron Moges-Gerbi, *Tensions over Nile River dam project as heavy rain sows confusions*, CNN (Aug. 13, 2020), <https://www.cnn.com/2020/07/21/africa/ethiopia-nile-river-dam-afr-intl/index.html>.

⁴ Al Jazeera English, *What's behind the Egypt-Ethiopia Nile Dispute?*, YOUTUBE (Jan. 26, 2020), <https://www.youtube.com/watch?v=JdizU0arrJ0&vI=en>.

⁵ See Aaron Maasho, *Ethiopia expected Nile dam to be ready to start operation in late 2020*, REUTERS (Jan. 3, 2019), <https://www.reuters.com/article/us-ethiopia-dam/ethiopia-expects-nile-dam-to-be-ready-to-start-operation-in-late-2020-idUSKCN1OX0T4>.

⁶ Ayah Aman, *Nile dam talks stall again amidst Egyptian-Ethiopian dispute*, MIDDLE EAST MONITOR (May 22, 2020), <https://www.al->

Both Egypt and Ethiopia have exhibited tremendous reluctance to reach a compromise with respect to GERD-related issues. Ethiopia's timetable for filling the GERD's reservoir and the GERD's general management during droughts posed particularly tremendous challenges during negotiations.⁷ While officials in Addis Ababa argue that the GERD would not significantly affect the Nile's water flow and instead name potential benefits to drought migration and water salinity, Egypt rejects such arguments and fears substantial disruption to Nile water access, especially for its commercial water supply.⁸ Egypt has repeatedly called upon the international community to stop Ethiopia's filling of the GERD.⁹ Powers like the United States have cut foreign aid from Ethiopia, which comes at little surprise given the strong U.S.-Egyptian alliance and robust Chinese support for the GERD.¹⁰

As Ethiopia began filling the GERD, Egypt appealed to the United Nations Security Council in May 2020, arguing that Ethiopian intentions to fill the GERD violate Ethiopia's obligation to respect international law.¹¹ Egypt's letter calls upon the international community to urge Ethiopian compliance with its obligations pursuant to a 2015 Declaration of Principles that compelled Egypt, Ethiopia, and Sudan to negotiate a comprehensive solution for the GERD's filling and operation.¹² The Declaration came shortly after the Ethiopian irrigation minister announced Ethiopia's intention to commence the first stage of filling the GERD without having shared the plan's details with either Egypt or Sudan.¹³

[monitor.com/pulse/originals/2020/05/egypt-letter-un-security-council-ethiopia-nile-dam-sudan.html](https://www.monitor.com/pulse/originals/2020/05/egypt-letter-un-security-council-ethiopia-nile-dam-sudan.html).

⁷ See John M. Mbaku, *The controversy over the Grand Ethiopian Renaissance Dam*, BROOKINGS (Aug. 5, 2020), <https://www.brookings.edu/blog/africa-in-focus/2020/08/05/the-controversy-over-the-grand-ethiopian-renaissance-dam/>.

⁸ *Id.*

⁹ *Id.*

¹⁰ *See id.*

¹¹ *Egypt sent letter about GERD crisis to UN Security Council - Foreign Minister*, AHARAM ONLINE (May 7, 2020), <http://english.ahram.org.eg/NewsContentP/1/368823/Egypt/Egypt-sent-letter-about-GERD-crisis-to-UN-Security.aspx>.

¹² *Id.*

¹³ *See id.*

The GERD serves as a timely reminder that exhaustible natural resource disputes enable regional conflict between neighbors. The GERD conflict further elucidates the Nile's role within Africa as a base of historical reliance for Egypt and beacon of hope for Ethiopia. However, the conflict does not merely implicate Egypt and Ethiopia; other nations, particularly riparian nations along the Nile, hold high stakes in the conflict's outcome, especially Sudan, which also receives a significant portion of its water from the Blue Nile tributary to supply and power its nation. This Note argues that the GERD conflict could very well establish international legal precedent for transboundary waterways. As GERD-related negotiations and tensions rise along a transboundary riverway where climate change and poverty alleviation are central concerns, the likelihood for shifting the historical international water law framework along the Nile, and consequently other transboundary riverways, also increases.

The Introduction of this Note has briefly summarized the recent Grand Ethiopian Renaissance Dam crisis and its relationship with international water law. Part I discusses the River Nile's historical and cultural significance to Egypt and Ethiopia to contextualize what led to the crisis. Part II highlights main instruments that are frequently applied to the crisis and universal ideas within the international legal framework. Part III outlines and analyzes the respective legal arguments both parties have used to justify their positions towards the Grand Ethiopian Renaissance Dam's construction and filling. Part IV concludes by arguing that the case of the Grand Ethiopian Renaissance Dam could shape customary international water law by settling the legal principles that dictate water competition along transboundary riverways.

I. THE RIVER NILE'S ROLE IN EGYPT & ETHIOPIA

The GERD conflict highlights the undeniably essential role the Nile plays for many African countries. As the longest river in the world, the Nile flows south to north, with its drainage basin reaching 11 countries.¹⁴ Beginning from Lake Victoria's Nile Basin, the Nile flows over 4100 miles until its final destination off of Egypt's coast into the Mediterranean Sea.¹⁵ The Nile contains two main streams: the

¹⁴ Salam Abdulrahman, *The River Nile and Ethiopia's Grand Renaissance Dam: challenges to Egypt's Security Approach*, 76 INT'L J. OF ENVTL. STUD. 136, 139 (Sept. 3, 2018).

¹⁵ See *id.*

White Nile flowing in Uganda from Lake Victoria composing 30% of the Nile's waters, and the Blue Nile flowing from Ethiopia's Lake Tana composing about 60% of the Nile.¹⁶ Both streams meet near the Sudanese capital of Khartoum. From there, the Nile converges and flows downstream to Egypt.

The Nile Basin Area includes Tanzania, Rwanda, the Democratic Republic of Congo, Kenya, Uganda, South Sudan, Sudan, Eritrea, Egypt, Ethiopia, and portions of Burundi.¹⁷ Each Nile Basin country maintains its own interest in developing hydroelectric projects along the waterway for natural resource and energy access.

Figure 1: The River Nile flows from south to north. The GERD is labeled in red along the Ethiopian-Sudanese border.



As Egypt and Ethiopia assert their social, political, economic, and legal arguments for and against the GERD's construction, each nation's respective value for the Nile has become apparent. For Egypt, the country's relationship with the Nile stretches back to its deep colonial roots and historical reliance upon the Nile for agriculture, commerce, and electricity.¹⁸ Meanwhile, Ethiopian desire for the GERD's construction stems from the Nile's role in connecting Ethiopians to the nation's electric grid, addressing widespread poverty, and elevating Ethiopia's geopolitical position in Africa.¹⁹ To grasp the origin of each party's arguments fully, one must explore the underlying histories that brand the Nile as Egypt's historic gift and Ethiopia's beacon of prosperity.

¹⁶ Kevin G. Wheeler et. al, *Cooperative filling approaches for the Grand Ethiopian Renaissance Dam*, 41 *WATER INT'L* 611, 613–614 (May 11, 2016).

¹⁷ See *Major Subbasins*, NILE BASIN INITIATIVE, <https://nilebasin.org/media-center/maps>.

¹⁸ See Mwangi S. Kimenyi & John Mukum Mbaku, *The limits of the new "Nile agreement"*, BROOKINGS (April 28, 2015), <https://www.brookings.edu/blog/africa-in-focus/2015/04/28/the-limits-of-the-new-nile-agreement/>.

¹⁹ *Id.*

A. *Egypt's Gift of the Nile*

For thousands of years, the Nile has provided Egypt with its main source of freshwater. Modern towns and villages in Egypt are situated along the Nile's banks and its delta.²⁰ Because Egypt's annual rainfall and groundwater are extremely low, Egypt faces an alarming water crisis.²¹ With a population of approximately 370 million, the Nile Basin's population includes 160 million whose livelihood relies upon the watercourse.²² Coupled with its water crisis and dry climate, Egypt's population has grown from 23 million in 1955 to over 99 million today.²³ By 2050, the population is projected to reach 153 million as the Nile supports approximately 95% of the country's population—all of whom live within twelve miles of the Nile or its Delta.²⁴

The Nile's flow across Egypt is principally controlled through the Aswan High Dam located in Upper Egypt where the Nile arrives to Egyptian territories. The Aswan High Dam provides the Egyptian agricultural sector with the ability to cultivate its land by taming the Nile's unpredictable irrigation patterns and flooding while providing many Egyptian villages with electricity.²⁵

Historically, Egypt's legal and political control over the Nile extends back to the nation's historical colonial period in which it

²⁰ Richard Conniff, *The Vanishing Nile: A Great River Faces a Multitude of Threats*, YALE SCHOOL OF FORESTRY & ENVTL. STUD. (April 6, 2017), <https://e360.yale.edu/features/vanishing-nile-a-great-river-faces-a-multitude-of-threats-egypt-dam>.

²¹ Randa Bedawy, *Water resources management: alarming crisis for Egypt*, 4 J. OF MGMT. AND SUSTAINABILITY 108, 115 (Aug. 29, 2014).

²² See Kimenyi, *supra* note 18.

²³ Abdulrahman, *supra* note 14, at 136–37.

²⁴ Salam Abdulrahman, *The River Nile and Ethiopia's Grand Renaissance Dam: challenges to Egypt's Security Approach*, 76 INT'L J. OF ENV. STUD. 136, 136-137 (Sept. 2018); Daniel Abebe, "Egypt, Ethiopia, and the Nile: The Economics of International Water Law, University of Chicago Public Law & Legal Theory Working Paper No. 484, (2014); Declan Walsh & Somini Sengupta, *For Thousands of Years, Egypt Controlled the Nile. A New Dam Threatens That*, THE N.Y. TIMES (Feb. 9, 2020), <https://www.nytimes.com/interactive/2020/02/09/world/africa/nile-river-dam.html>.

²⁵ See M.A. Abu-Zeid & F. Z. El-Shibini, *Egypt's High Aswan Dam*, 13 INT'L J. OF WATER RESOURCES DEV. 209, 209–10 (July 21, 2010).

remained under British control beginning in 1882.²⁶ By allocating waters between Egypt and the Sudan without regard for other riparian nations' potential access to the Nile's waters, the British essentially granted the two nations a veto power over any upstream development projects. Using this as its legal and diplomatic basis for control over the waterway, Egypt built significant natural resource reliance upon the waters it was gifted by its former colonizers. Over the century to come, this reliance would become extremely dangerous and emerge as a recurring theme during numerous rounds of GERD conflict negotiations.

Since 2011, the Egyptian and Ethiopian governments have criticized each other's stances on the GERD's construction. Egypt's foreign policy towards the GERD has illustrated the notion that "with projected climate change and anticipated water shortages in such areas as the Middle East, northern and eastern Africa, South Asia, among others, water is increasingly viewed within the lens of national security."²⁷ As early as 1979, President Anwar Sadat said, "the only matter that could take Egypt to war again is water."²⁸ In 2014, former President Mohamed Morsi indicated "all options are open" in response to the impending water supply threat posed by the GERD, stating that "if [the Nile] diminishes by one drop then blood is the other alternative" alluding to potential military action.²⁹ Egyptian President AbdelFattah al-Sisi recently framed the GERD as a matter of life and death for Egyptians, stating that "the Nile is a question of life, a matter of existence to Egypt."³⁰

²⁶ See David J. Mentiplay, *The British Invasion of Egypt, 1882*, E-INT'L RELATIONS (Mar. 23, 2009), <https://www.e-ir.info/2009/03/23/the-british-invasion-of-egypt-1882/>.

²⁷ Edith B. Weiss, *The Evolution of International Environmental Law*, 54 JAPANESE Y.B. INTL. L. 1, 18 (2011).

²⁸ See *Next on Egypt's to-do: Ethiopia and the Nile*, AL-JAZEERA (Dec. 9, 2013), <https://www.aljazeera.com/features/2013/12/9/next-on-egypts-to-do-ethiopia-and-the-nile>.

²⁹ *Egyptian warning over Ethiopia Nile dam*, BBC AFRICA (June 10, 2013), <https://www.bbc.com/news/world-africa-22850124>.

³⁰ *Sisi says Nile water issue a matter of life and death for Egypt, wants Sudan removed from terror list*, AL-AHRAM ONLINE (Sept. 24, 2019), <http://english.ahram.org.eg/NewsContent/1/64/351461/Egypt/Politics-/Sisi-says-Nile-water-issue-a-matter-of-life-and-de.aspx>; Declan Walsh & Somini Sengupta, *For Thousands of Years, Egypt Controlled the Nile. A New Dam Threatens That*, THE N.Y. TIMES (Feb. 9, 2020), <https://www.nytimes.com/interactive/2020/02/09/world/africa/nile-river-dam.html>.

For the Egyptian government, the GERD threatens a reliance built upon the Nile for millennia. Egyptian government studies estimate that for each decrease “of 1 billion cubic meters of water, 200,000 acres of farmland would be lost” while affecting the livelihoods of 1 million and reducing the Aswan High Dam’s power generation by a third.³¹ Perceived as a potential catastrophe for Egyptians, the GERD would cut Egypt’s water supply, depending on the speed at which Ethiopia chooses to fill the GERD’s reservoir and the GERD’s management during extreme weather events.

B. Ethiopia’s Beacon of Prosperity

Ethiopia’s use of the Nile has been limited by Egypt’s historic control over the Nile as a downstream nation. Ethiopia’s population now exceeds more than 100 million and as its population continues to rise, Ethiopia’s demand for water also increases. While Ethiopia receives considerable amounts of precipitation measured at an average of 815.8 millimeters annually, climate change has disrupted precipitation patterns across Africa, and consequently, destabilized the Nile’s flow.³²

For many Ethiopians, the Nile provides hope for a nation to escape poverty by providing electricity to approximately two-thirds of Ethiopians who lack access.³³ By building one of the largest hydroelectric power plants in the world along its border with Sudan, the GERD, as its name suggests, symbolizes a form of rebirth for approximately 75 million people.³⁴ The GERD would also generate 6,000 megawatts, which is approximately 2,000 megawatts more than Ethiopia’s current generating capacity, enabling Ethiopia to sell and export electricity.³⁵

The Ethiopian government expressed its intention to fill the GERD’s reservoir between the next 5 to 6 years, noting the immediate

³¹ *Death of the Nile: Egypt fears Ethiopian dam will cut into its water supply*, THE TELEGRAPH (Oct. 2, 2017), <https://www.telegraph.co.uk/news/2017/10/02/death-nile-egypt-fearsethiopian-dam-will-cut-water-supply/>.

³² Climate Change Knowledge Portal, *Ethiopia – Country Context*, WORLD BANK GROUP, <https://climateknowledgeportal.worldbank.org/country/ethiopia>.

³³ Al Jazeera English, *supra* note 4.

³⁴ *Id.*

³⁵ *Id.*

benefits of power generation.³⁶ This would reduce the Nile's flow by an estimated 25%, severely impacting the Egyptian economy.³⁷ Instead, Egypt requests that the GERD be filled over a 12 to 18-year timeframe citing Egypt's need to adapt to a "huge water share deficit, causing the end of agricultural expansion" as well as "a possible reduction of the currently cultivated area, an increase of salinity in the northern part of the Delta, damage to potable water stations, the collapse of canals and drains, and environmental destabilization."³⁸

The Nile's significance to the Egyptian and Ethiopian governments differs. While Egyptians view the Nile as a staple of historic civilization and modern sustenance, Ethiopians envision a new future with the GERD as its latest technological contribution to the livelihood of its people. Egypt's and Ethiopia's battle for control over the Nile has only incited greater political, military, and diplomatic escalation.

II. A MODERN INTERNATIONAL WATER LAW

Humans struggle to delineate the legal boundaries that govern bodies of water. As an ambient resource, water does not abide by the boundaries drawn by the humans who seek its access. The world contains many examples of nations that struggle to find mutually beneficial terms to water supply access while at the same time maintaining cordial relations.³⁹ In fact, the 246 largest rivers in the world flow through basins that are shared with another nation.⁴⁰ This is also true in regions like Egypt and Ethiopia, which harbor arid and semi-arid lands.⁴¹ Despite its recent evolution and growth,

³⁶ See Mbaku, *supra* note 7.

³⁷ Foreign Staff, *Death of the Nile: Egypt fears Ethiopian dam will cut into its water supply*, TELEGRAPH (Oct. 2, 2017), <https://www.telegraph.co.uk/news/2017/10/02/death-nile-egypt-fearsethiopian-dam-will-cut-water-supply/>.

³⁸ See Randa Bedawy, *supra* note 66.

³⁹ Joseph W. Dellapenna, *The Berlin rules on water resources: the new paradigm for international water law*, *World Environmental and Water Resource Congress*, ASCE LIBR. 2 (2012), <https://ascelibrary.org/doi/10.1061/40856%28200%29250>.

⁴⁰ *Id.*

⁴¹ *Basin Climate Zones*, NILE BASIN INITIATIVE (last updated 2016-2017), <https://atlas.nilebasin.org/treatise/nile-basin-climate-zones/>.

international water law remains highly decentralized and institutionally underdeveloped.⁴²

Riparian nations tend to rely on highly debated legal concepts within international agreements to argue for river access, including territorial sovereignty and absolute integrity of the river.⁴³ Upstream riparian nations, such as Ethiopia, often argue that absolute territorial sovereignty provides the legal right to access and use a river's water regardless of its effect on other riparian nations.⁴⁴ Meanwhile, downstream riparian nations like Egypt typically rely on claims that invoke the absolute integrity of the river, arguing that upstream riparian nations cannot perform actions that affect the quantity, quality, or flow of the watercourse.⁴⁵ Of the many important international water law principles, two vital legal concepts that fuel GERD negotiations are principles of (1) reasonable and equitable utilization ("equitable utilization") and (2) the duty not to cause significant harm ("no-harm rule"). Both principles are codified in the General Assembly's *United Nations Convention on the Non-Navigational Uses of International Water Courses*.⁴⁶

The international community coined the principle of equitable utilization to balance the tension between absolute territorial sovereignty and absolute integrity of the river.⁴⁷ Equitable utilization provides that all co-riparian nations with a stake in an international watercourse may use its resources in a manner that does not disrupt another co-riparian nation's interest, calling for development and use along the river "but in a fair and reasonable manner."⁴⁸ Employing a

⁴² See Mark Zeitoun, *The relevance of international water law to later-developing upstream states*, 40 WATER INT'L 968, 972 (2015).

⁴³ *User's Guide Factsheet Series: Number 10 - Theories of Resource Allocation*, UN WATERCOURSES CONVENTION 1, 1 (2006), <https://www.unwatercoursesconvention.org/documents/UNWC-Fact-Sheet-10-Theories-of-Resource-Allocation.pdf> [hereinafter *User's Guide Factsheet No. 10*].

⁴⁴ See *id.*

⁴⁵ *Article 5.1.1 Theories of Allocation*, UN WATERCOURSES CONVENTION, <https://www.unwatercoursesconvention.org/the-convention/part-ii-general-principles/article-5-equitable-and-reasonable-utilisation-and-participation/5-1-1-theories-of-allocation/>.

⁴⁶ See *Report of Sixth Committee*, U.N. GAOR 6th Comm., 49th Sess., 3d pen. mtg. at 12, 15, U.N. Doc. A/48/738 art. 5–7 (1994).

⁴⁷ See *User's Guide Factsheet No. 10*, *supra* note 43.

⁴⁸ Albert E. Utton, *Which Rule Should Prevail in International Water Disputes: That of Reasonableness or that of No Harm*, 36 NAT. RESOURCES J. 635, 637 (1996).

theory of limited territorial sovereignty, equitable utilization recognizes all riparian nations' right to use water from a common source with an obligation to ensure that their use does not unreasonably interfere with that of another riparian nation.⁴⁹ Alternatively, lower riparian states rely on the no-harm rule, which requires that States take all appropriate measures to prevent significant harm to other watercourse States through their use of the water source.⁵⁰ The no-harm rule has been defined as a widely recognized principle of customary international law where a State maintains an obligation to prevent, reduce, and control the risk of environmental harm and other significant harm to other watercourse States.⁵¹ Upstream riparian States generally oppose the no-harm rule out of fear that it could curb development opportunities. On the other hand, downstream States generally oppose equitable utilization for fear that it permits harm generated by upstream development that will inevitably impact downstream states. While customary international law embraces the no-harm rule, countries continue to debate the standard for equitable utilization often pitting the clear standard for no-harm at odds with the unclear standard for equitable utilization.⁵²

Although international law outlines parameters for transboundary riverways like the Nile, tensions between the legal concepts of no-harm and equitable utilization persist, demonstrating a chief constraint to resolving the GERD conflict. With the longest river in the world at its focal point, the GERD conflict's underlying legal rationale retains enough influence to shift international water law's historical preference from the no-harm rule to equitable utilization, or instead consolidate the no-harm rule as the dominant legal principle guiding international water law.

⁴⁹ *See id.*

⁵⁰ *User's Guide Factsheet Series: Number 5 - No Significant Harm Rule*, UN WATERCOURSES CONVENTION 1, 1 (2006), <https://www.unwatercoursesconvention.org/documents/UNWC-Fact-Sheet-5-No-Significant-Harm-Rule.pdf> [hereinafter *User's Guide Factsheet No. 5*].

⁵¹ *See* Int'l Law Ass'n [ILA], Rep. of the Fifty-Second Conference, Helsinki, The Helsinki Rules on the Uses of the Waters of International Rivers, (Aug. 14-20, 1966) [Helsinki Rules].

⁵² *See* Attila M. Tanzi, *The inter-relationship between no harm, equitable and reasonable utilisation and cooperation under international water law*, 20 INT'L ENVTL. AGREEMENTS: POL., L. & ECON. 619, 619 (2020), <https://link.springer.com/article/10.1007/s10784-020-09502-7>.

International water law is largely defined in three main legal instruments: *the Helsinki Rules on the Uses of the Waters of International Rivers* (“Helsinki Rules”), *the United Nations Convention on the Non-Navigational Uses of International Water Courses* (“UN Watercourse Convention”), and *the Berlin Rules on Water Resources* (“Berlin Rules”). *The Helsinki Rules*, *UN Watercourse Convention*, and *Berlin Rules* recognize the challenges posed by an application of equitable utilization and attempt to clarify the factors relevant for determining the use of an international watercourse in an equitable and reasonable manner. Adopted by the International Law Association in 2004, *the Berlin Rules* superseded *the Helsinki Rules* and summarize modern international customary water law for domestic freshwater resources and those that cross international borders. Authors of *the Berlin Rules* noted that the guidelines “express rules of law as they presently stand and, to a small extent, rules not yet binding legal obligation,” but those that are budding into customary international law.⁵³ Like equitable utilization, the no-harm rule was also incorporated in *the Helsinki Rules* and later reiterated in *the UN Watercourse Convention* and *the Berlin Rules*. By outlining non-exhaustive, relevant factors and circumstances that weigh in favor or against a nation’s utilization, these legal instruments all identify the following factors in common: geography, hydrology, climate, existing/past utilization, social and economic needs of riparian nations; populations dependent on the watercourse; and availability of alternative resources or uses.⁵⁴

A. *Helsinki Rules on the Uses of the Waters of International Rivers*

Adopted by the International Law Association in August 1966, *The Helsinki Rules* serve as the foundational modern legal document regulating rivers crossing national boundaries.⁵⁵ As one of the initial international legal documents to identify a need for equitable utilization, Article IV of *the Helsinki Rules* rejects a nation’s unlimited sovereignty to maintain “the unqualified right to utilize and dispose of

⁵³ See *Berlin Rules on Water Resources*, ILA (Aug. 21, 2004) (preface).

⁵⁴ See Helsinki Rules, *supra* note 51; *Report of Sixth Committee*, U.N. GAOR 6th Comm., 49th Sess., 3d pen. mtg. at 12, 15, U.N. Doc. A/48/738 (1994); ILA, *Berlin Rules on Water Resources* art. 13, Aug. 21, 2004 [hereinafter *Berlin Rules*].

⁵⁵ See Helsinki Rules art. 4, *supra* note 51.

the waters of an international river flowing through its territories.”⁵⁶ Instead, *the Helsinki Rules* recognize that a State must consider economic and social needs of co-basin States, which could result in one basin State receiving more water than its neighbors.⁵⁷ To determine reasonable and equitable shares of co-basin States, Article V outlines a list of factors to consider, such as the basin’s geography, hydrology, climate, past and existing utilization, and dependent population.⁵⁸ Other factors include each basin State’s economic and social needs, alternatives to satisfy those economic and social needs, additional resource availability, and the degree to which a State’s needs may be met without causing substantial injury to a co-basin State.⁵⁹

While *the Helsinki Rules* acknowledge ideas of cooperation, appropriate compensation, and equitable distribution of waters, they lack an enforcement mechanism.⁶⁰ The incredibly vague set of factors weighed in totality without a dispute resolution mechanism other than the joint agency procedure outlined in Chapter 6 of *the Helsinki Rules* creates a major dilemma for international water law: the two simultaneously applicable legal doctrines, equitable utilization and no-harm, can be weaponized by multiple parties and result in a conflict based on riparian States’ inconsistent interests. Without objectively institutionalizing equitable utilization, dispute resolution institutions engineered by *the Helsinki Rules* are bound to face numerous obstacles. At the time of its adoption by the International Law Association, *the Helsinki Rules* were not considered binding international law. Nevertheless, *the Helsinki Rules* forged the beginnings of a growing body of law, leading to *the UN Watercourse Convention and the Berlin Rules*, respectively.⁶¹

Since the International Law Association’s adoption of *the Helsinki Rules*, equitable utilization has become a principal tenet of

⁵⁶ *See id.*

⁵⁷ *See id.*

⁵⁸ *Id.* art. 5.

⁵⁹ *See id.* (*The Helsinki Rules* also incorporate chapters about pollution, navigation, timber floating, and procedures to prevent and settle disputes.); *see also* Berlin Rules, *supra* note 53, at 4.

⁶⁰ *See* Alan Nicol, *The Nile: Moving Beyond Cooperation*, UNESCO, 23 (2003), <https://unesdoc.unesco.org/ark:/48223/pf0000133301>.

⁶¹ Salman M.A. Salman, *The World Bank Policy for Projects on International Waterways: An Historical and Legal Analysis. Justice and Development Series.*, 171–72 (2009).

customary international water law. Despite being outlined in both *the UN Watercourse Convention* and *the Berlin Rules*, equitable utilization remains notorious for its ambiguity.⁶² Applying equitable utilization in no-harm situations generates debate and tension among proponents of each respective legal principle.

B. United Nations Convention on the Non-Navigational Uses of International Water Courses

Rather than endorsing *the Helsinki Rules*, the United Nations requested a set of draft articles on non-navigational uses of international watercourses from the International Law Commission, which would be reworked into the General Assembly's *UN Watercourse Convention*.⁶³ Approved by a vote of 103 to 3 with 27 abstentions, *the UN Watercourse Convention* incorporates principal values of international water law to curb potential conflicts, but has yet to be ratified by a single Nile riparian State.⁶⁴ The law also has not evolved at the same speed as pressures surrounding natural resource access, particularly with climate strains in dry regions.

The UN Watercourse Convention has been criticized for its failure to integrate environmental and ecological concerns as well as pertinent human rights into its body of international water law.⁶⁵ The main drafting debate at *the UN Watercourse Convention* was the tension between equitable utilization and the no-harm rule, both of which the General Assembly approved.⁶⁶ *The UN Watercourse Convention* codified the rule of equitable utilization and participation in Article 5, requiring that watercourse states utilize an international watercourse in “an equitable and reasonable manner” with the purpose of “attaining optimal and sustainable utilization thereof and benefits therefrom.”⁶⁷ Under Article 5, equitable utilization must account for downstream nation interests and “adequate protection of the

⁶² See e.g., Tanzi, *supra* note 52.

⁶³ See Salman M.A. Salman, *The United Nations Watercourses Convention Ten Years Later: Why Has its Entry into Force Proven Difficult?*, 32 WATER INT'L 1, 4 (2007).

⁶⁴ See Alan Nicol, *The Nile: Moving Beyond Cooperation*, UNESCO 1, 23 (2003), <https://unesdoc.unesco.org/ark:/48223/pf0000133301>; Salman, *supra* note 63, at 4.

⁶⁵ See *Berlin Rules on Water Resources*, *supra* note 53.

⁶⁶ *Id.* at 5.

⁶⁷ See *Report of Sixth Committee*, art. 5, *supra* note 46.

watercourse.”⁶⁸ Article 5 also provides that riparian States “participate in the use, development and protection of [the] international watercourse in an equitable and reasonable manner,” stipulating that participation includes a right to use the watercourse and duty to cooperate in protection and development.⁶⁹

The UN Watercourse Convention also observes the no-harm rule in Article 7, stating that riparian nations maintain a legal obligation not to cause significant harm to other riparian nations by taking “all appropriate measures” including the elimination or mitigation of such harm as well as potential compensation where appropriate.⁷⁰ While crafted to be read with Articles 5 and 6, Article 7 creates a clearer, more easily applicable legal basis for downstream nations who can prove that greater use or development along a watercourse by other riparian nations could cause significant harm to water use. Based on the *UN Watercourse Convention*, watercourse states must “take all appropriate measures to prevent the causing of significant harm to other watercourse states.”⁷¹ According to the United Nations, the obligation to ‘take all appropriate measures’ is an obligation of due diligence “proportioned to the magnitude of the subject and to the dignity and strength of the power which is exercising it.”⁷² The no-harm rule thereby does not create an absolute ban on transboundary harm. Article 7(2) attempts to clarify the relationship between both principles, maintaining that any State causing harm to another must “take all appropriate measures, having due regard to the provisions of Article 5 and 6 to eliminate or mitigate such harm” where Article 5 provides that States use their waters in an equitable and reasonable manner and Article 6 outlines the non-exhaustive list of factors that should be considered when determining equitable utilization.⁷³

The UN Watercourse Convention’s 37 articles highlight co-riparian obligations to share common resources, consult one another, protect the environment, and resolve disagreements.⁷⁴ While the articles on environmental protection certainly extend beyond

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.* art. 7.

⁷¹ *Id.* art. 7(1).

⁷² *Id.*

⁷³ *Id.* art. 7(2).

⁷⁴ *See id.*

analogous provisions within *the Helsinki Rules*, *the UN Watercourse Convention's* articles are limited in scope to transboundary water issues, refuse to include interdependent groundwater concerns, and fail to elucidate the relationship between the rules of equitable utilization and no-harm for co-riparian States in conflict.

C. *Berlin Rules on Water Resources*

The Berlin Rules serve as a progressive attempt by the International Law Association to reformulate *the Helsinki Rules* to integrate international environmental law and international human rights law. By focusing on domestic and international participatory water management, conjunctive management, integrated management, sustainability, and environmental harm,⁷⁵ *the Berlin Rules* advance concepts crafted for the international and transboundary customary water law context: cooperation, equitable utilization, and no-harm.⁷⁶

Outlined in Article 11 of *the Berlin Rules*, the principle of cooperation ensures that basin States cooperate in good faith while managing waters for the mutual benefit of participating states.⁷⁷ This principle is immediately followed by equitable utilization in Article 12, which reiterates *the UN Watercourse Convention's* definition of equitable utilization while incorporating the obligation to avoid causing significant harm to other basin States.⁷⁸ Additionally, *the Berlin Rules* complement other factors that are considered for equitable utilization determinations, including sustainability of proposed or existing water uses and the minimization of environmental harm.⁷⁹

The Berlin Rules define the no-harm rule to ensure basin States refrain from acts that cause significant harm to other basin States while respecting each basin States right to equitable utilization of waters.⁸⁰ While *the UN Watercourse Convention's* expression of the no-harm rule references equitable utilization as a simultaneous obligation for

⁷⁵ See *Berlin Rules on Water Resources*, art. 9, *supra* note 53 (These principles were not reflected in the Helsinki Rules and were only “developed in rudimentary form” in the UN Watercourse Convention.).

⁷⁶ See *id.* arts. 11-16.

⁷⁷ *Id.* art. 11.

⁷⁸ *Id.* art. 12.

⁷⁹ *Id.* art. 13.

⁸⁰ *Id.* art. 16.

States, *the Berlin Rules* departs from merely referencing equitable utilization by explicitly stating that basin States must “refrain from and prevent acts or omissions within their territory that cause significant harm to another basin State having due regard for the right of each basin State to make equitable and reasonable use of the waters.”⁸¹ *The Berlin Rules* illustrate a strong commitment to no-harm and equitable utilization obligations complementing one another; however, the gap between *the Berlin Rules*, which allow both legal concepts to coexist, and the actual practice of these obligations by basin States is arguably the leading challenge in negotiations during the GERD conflict.

III. EQUITABLE UTILIZATION AND THE NO-HARM RULE: A BATTLE FOR THE RIVER NILE

Conceptualizing the battle for the Nile demands adequate historical, legal, and political analyses. Holistic outlooks in the region have dictated the waterway’s allocation and use for centuries and are currently advanced by riparian States with interests in the river. Clashes often arise when international water law is applied to transboundary watercourses because the interrelationship between equitable utilization and no-harm remains unclear. This tension further contributes to the GERD conflict as the international community struggles to attribute a clear legal rationale behind the GERD’s construction.

The GERD conflict illustrates the complex challenge that national, regional, and international bodies face when attempting to facilitate and negotiate a solution over water control. Egypt and Ethiopia both lay claim to the Nile on the basis of international water law; however, international law remains unsettled as to which claim is more valid than the other, if any. If constructed, filled, and operated successfully, the GERD provides the international legal community with international water law precedent that can shift international water law along the Nile and other transboundary waterways as climate change alters national demands for water. While Egyptian arguments appeal to the no-harm rule, prior use, and colonial and post-colonial legal agreements, Ethiopian arguments instead advance equitable utilization and natural resource property ownership through absolute territorial sovereignty.

⁸¹ *Id.*

A. *Egyptian Arguments to Preserve River Nile Control*

Like many modern struggles for natural resource access and control, political influence has contributed to notable power imbalances. Egypt has historically justified its control over the Nile through legal agreements made with its former colonizer, Britain. Those legal agreements not only exclusively allocated the Nile's waters to Egypt and Sudan, but also granted Egypt with authority over any upstream development projects; however, Ethiopia was not even party to these agreements, calling into question the validity of the legal authority Egypt has consistently relied upon. Egypt subsequently invoked its prior use of the Nile through the appropriation doctrine to advance its opposition to the GERD, which has largely been subordinated to equitable utilization. Egypt's strongest argument to oppose Ethiopia's full sovereignty to build and control the GERD remains through the no-harm rule, a widely accepted and codified principle of customary international water law. Egyptian strategy in GERD negotiations has recently shifted from a focus on Egyptian natural and historical rights to an emphasis on the no-harm rule in an attempt to justify circumstantial Egyptian management of the GERD.

i. *The No-Harm Rule & Water Scarcity*

Egypt's strongest argument to sustain partial control over the GERD stems from the no-harm rule. Within customary international law, the no-harm rule requires that a State maintain its duty to prevent, reduce, or control environmental harm to other States.⁸² Codified in *the Helsinki Rules*, *the UN Watercourse Convention*, and *the Berlin Rules*, the no-harm rule ensures that Egypt's downstream status along the Nile affords it a form of protection from upstream construction that could potentially harm Egypt's access to water resources.

Climate change's effects on the already dry, desert nation serve as a great impetus for Egypt's arguments against GERD construction and Ethiopia's exclusive GERD management. While Ethiopian Prime Minister Abiy Ahmed has told the United Nations General Assembly that Ethiopia has "no intention" of using the GERD to harm Sudan and Egypt, GERD negotiations have halted and remain at a bitter standstill. Currently, Egypt and Sudan demand that any deal be legally binding

⁸² See Utton, *supra* note 48, at 636.

over decisions to establish a dispute resolution mechanism for GERD-related issues, and to designate GERD management and control during periods of drought and reduced rainfall.⁸³ However, before a resolution among Ethiopia, Egypt, and Sudan was reached, Ethiopia unilaterally began filling the GERD at approximately 5 billion cubic meters of water in June 2020.⁸⁴

Based on Egypt's increasing demand for water and economic activities, rapid population growth, and attempts to tackle the impacts of climate change, Egypt maintains a compelling argument for invoking the no-harm rule. With a population of 100 million, Egypt's population mostly lives along the Nile Valley, which is merely 6% of Egypt's total area surrounded by desert on both sides. Based on the World Bank's classification of water scarcity, Egypt meets the definition with a government reported figure at 550 cubic meters of freshwater per person annually.⁸⁵

However, consequential questions arise about what the no-harm rule in practice should look like: should it be a binding legal arrangement between Egypt and Ethiopia that guarantees a *quid pro quo* arrangement for all parties? Would Ethiopia continue its exclusive authority over the GERD's filling or would situations arise that warrant other parties to restrict sole Ethiopian control? Because no institutional framework exists to ensure the Nile Basin region is governed fairly, equitably, efficiently, and sustainably, failure to craft a legal arrangement that addresses the interplay between equitable utilization and no-harm could contribute to a prolonged diplomatic standstill.

In a radical shift from his predecessors, Egyptian President Abdel Fattah al-Sisi recently addressed the United Nations

⁸³ Michelle Nichols, *Ethiopia Tells UN No Intention of Using Dam to Harm Egypt, Sudan*, REUTERS (Sept. 25, 2020), <https://www.reuters.com/article/un-assembly-ethiopia-int/ethiopia-tells-u-n-no-intention-of-using-dam-to-harm-egypt-sudan-idUSKCN26G33>.

⁸⁴ Mohamed S. Helal, *Ethiopia's Power Play on the Nile Has Left the Region in a Deadlock*, FOREIGN POL'Y (Sept. 28, 2020), <https://foreignpolicy.com/2020/09/28/renaissance-dam-ethiopia-egypt-negotiations/>.

⁸⁵ Magdi Abdelhadi, *Nile dam row: Egypt fumes as Ethiopia celebrates*, BBC (July 29, 2020), <https://www.bbc.com/news/world-africa-53573154> (The World Bank classifies a nation as water scarce when there is less than 1000 cubic meters of freshwater per person annually.).

announcing, “The Nile River must not be monopolized by one state. For Egypt the Nile Water is an existential matter. This, however, does not mean that we want to undermine the rights of our brothers and sisters, sharing with us the Nile basin.”⁸⁶ Egypt’s present negotiation strategy is to pursue an agreement that permits Ethiopia to generate hydropower from the GERD while minimizing the GERD’s potential harm to downstream Egypt and Sudan.

ii. *The Doctrine of Prior Appropriation*

Egypt has long relied on the doctrine of prior appropriation (“appropriation doctrine”) to develop an argument that captures its historical past reliance upon the Nile. The appropriation doctrine provides that water rights are determined by priority of beneficial use.⁸⁷ In other words, a person, group, or State who first diverted the Nile for a beneficial use or purpose may acquire individual rights to the water, vesting the first appropriator with a recognized property right.

The appropriation doctrine was first developed in California during the Colorado Silver Boom in the mid-1800s.⁸⁸ Gold miners arriving in the United States were unable to proclaim riparian rights to water because they did not own any land.⁸⁹ Consequently, the miners applied a rule that the first miner to use water productively would automatically maintain the right to continue using the water and to exclude others from its use.⁹⁰ This property right vests for the remainder of the individual’s life allowing for continued use of the resource.⁹¹ However, what this principle of prior appropriation failed to recognize was a right of pre-emption upon unappropriated water supplies.⁹² While the first appropriator could lay claim to the water used, she could not lay claim to waters that “had not yet been reduced to possession.”⁹³

⁸⁶ See Nichols, *supra* note 83.

⁸⁷ Jeffrey D. Azarva, *Conflict on the Nile: International Water Law and the Elusive Effort to Create a Transboundary Water Regime in a Nile Basin*, 25 TEMP. INT’L & COMP. L.J. 457, 470 (2012).

⁸⁸ David A. Schorr, *Appropriation as Agrarianism: Distributive Justice in the Creation of Property Rights*, 32-1 ECOLOGY L.Q. 3, 3 (2005).

⁸⁹ *Id.*

⁹⁰ See Kimenyi, *supra* note 2, at 70.

⁹¹ *Id.*

⁹² See Azarva, *supra* note 87.

⁹³ *Id.*

The appropriation doctrine has since evolved into the rule of natural flow. Based on the rule of natural flow, riparian owners are given “the right to have water flow past the land undiminished in quantity or quality” where the idea of “first in time, first in right” applies.⁹⁴ As a result, land ownership does not affect or influence water rights. The modern appropriation doctrine as a basis for Egyptian control over the GERD fails to garner robust legitimacy. As a rigid principle rooted in absolute claims of right, the appropriation doctrine has become subordinate to equitable utilization through Article 6 of *the UN Watercourse Convention*. Thus, prior appropriation is just one of many factors considered when assessing equitable utilization and is a frail justification for Egypt to secure GERD management control.

iii. *Natural & Historical Rights: The Nile Water Agreements*

Historically, Egypt has controlled the Nile drawing legal rights from a series of agreements with Britain called *the Nile Water Agreements*. *The Nile Water Agreements* are composed of two treaties: the *1929 Anglo-Egyptian Treaty* and the *1959 Bilateral Agreement between Egypt and Sudan*. When negotiations were conducted for the *1929 Anglo-Egyptian Treaty*, Ethiopia was not a British colony. Ethiopia, or the Abyssinian Empire, was instead an independent sovereign polity by the time the *1929 Anglo-Egyptian Treaty* was concluded. Because Ethiopia was neither a signatory nor a participant in the negotiations that directly led to the initial *Nile Water Agreement*, Ethiopian government officials have steadily declined to recognize the validity of *the Nile Water Agreements* and Egypt’s claim for natural and historical rights over Nile waters.⁹⁵

Moreover, British interests in Egyptian monopolization over the River Nile at the commencement of *the Nile Water Agreements* remains undeniable and central to the tale of equitable natural resource distribution. The British’s agricultural interest in Egypt’s Nile Delta

⁹⁴ Maeve Flaherty, *The Test on the Nile: Ethiopia and Egypt’s Conflicting Claims to the Nile River Waters*, COLUM. POL. REV. (Nov. 12, 2020), <http://www.cpreview.org/blog/2020/11/the-test-on-the-nile-ethiopia-and-egypts-conflicting-claims-to-the-nile-river-waters>.

⁹⁵ See Kimenyi, *supra* note 2, at 39.

peaked during the United States Civil War.⁹⁶ Most of Britain's cotton supply had been produced in the United States South, which was in the middle of war with the United States North. As a result, the United States cotton famine increased British reliance upon Egyptian cotton. To minimize any potential disruption of its cotton supply, the British bolstered its foreign policy within the region to secure its economic dominance through *the Nile Water Agreements*, negatively impacting upstream regions.⁹⁷ Britain's unrivaled bargaining power put upstream riparian nations, many of which were British colonies, at a severe disadvantage to gain Nile access. This also resulted in Egypt's loss in economic self-sufficiency with its agricultural industry transforming into a one-crop cotton industry, wholly dependent upon the Nile River's waters.⁹⁸

The 1929 Anglo-Egyptian Treaty

The 1929 Anglo-Egyptian Treaty is a series of agreements exchanged between the British, representing various Nile River Basin countries, and Egypt & Sudan that allocated the Nile's waters to these two countries.⁹⁹ The agreement includes a letter from Egypt's government to the British government and the Nile Commission's 1925 report. Within these letters, both parties recognize Sudan's need for Nile water, yet the Egyptian government qualifies Sudan's right by declaring Egyptian natural and historical rights. One letter specifically states that granting Sudan additional waters would be acceptable so long as it "does not infringe Egypt's natural and historical rights in the waters of the Nile."¹⁰⁰ The agreement also constrains upstream riparian abilities to build along the Nile if such construction would "entail any prejudice to the interests of Egypt, either reduce the quantity of water

⁹⁶ See Patrick L.O. Lumumba, *The Interpretation of the 1929 Treaty and its Legal Relevance and Implications for the Stability of the Region*, 11 AFRICAN SOCIOLOGICAL REV. 10, 12 (2007).

⁹⁷ See *id.*

⁹⁸ See *How the American Civil War Built Egypt's Vaunted Cotton Industry and Changed the Country Forever*, SMITHSONIAN (2016), <https://www.smithsonianmag.com/history/how-american-civil-war-built-egypts-vaunted-cotton-industry-and-changed-country-forever-180959967/>.

⁹⁹ Exchange of Notes between His Majesty's Government in the United Kingdom and the Egyptian Government in Regard to the Use of Waters of the Nile River for Irrigation Purposes (with Seven Diagrams), Cairo, May 7, 1929, L.N.T.S. 2103 (1929) [hereinafter 1929 Anglo-Egyptian Treaty]; MWANGI S. KIMENYI & JOHN M. MBAKU, GOVERNING THE NILE RIVER BASIN, 37.

¹⁰⁰ See 1929 Anglo-Egyptian Treaty, para. 2, *supra* note 99.

arriving in Egypt, or modify the date of its arrival, or lower its level.”¹⁰¹ Ultimately, the series of agreements denied upstream nations, like Ethiopia, access to the Nile for actions that could negatively affect the Nile’s flow to downstream Egypt, including construction and irrigation.¹⁰² At the time, Egypt encompassed the Sudan “for the purpose of sharing Nile water.”¹⁰³ Egypt argues that the *1929 Anglo-Egyptian Treaty* provides the nation with “exclusive proprietary rights to the Nile water without obligation, consent or even voluntary transfer of property rights from Egypt to other riparian countries.”¹⁰⁴

The 1959 Bilateral Agreement between Egypt and Sudan

The 1959 Bilateral Agreement between Egypt and Sudan effectively replaced *the 1929 Anglo-Egyptian Treaty* by exclusively allocating “the entire flow of the Nile water at Aswan to Egypt and Sudan” and reinforcing the 1929 treaty.¹⁰⁵ *The 1929 and 1959 Nile Water Agreements* do not differ greatly. *The 1959 Bilateral Agreement* simply accounts for vast political changes in the region and agricultural demands. According to *the 1959 Bilateral Agreement*, the Nile’s average flow was 84 billion cubic meters per year. Of these 84 billion cubic meters, evaporation and seepage accounted for 10 billion cubic meters per year, and the remaining 74 billion cubic meters per year would be divided between Egypt and Sudan where Egypt would receive 48 billion cubic meters per year and 7.5 billion cubic meters per year in benefits. Sudan would acquire 4 billion cubic meters per year and 14.5 billion cubic meters per year in benefits.¹⁰⁶ This essentially disqualified other upstream, riparian States from attaining water rights to the River Nile by only allocating 10% of the River Nile to upstream States.¹⁰⁷ With downstream nations Sudan and Egypt obtaining water rights over the longest transboundary waterway in the world, Egypt continues to exercise its power by strategically citing the no-harm rule as an important source of customary international law to protect itself from any upstream hydroelectric construction that would

¹⁰¹ *See id.* para. 4, subsec. (i).

¹⁰² M. K. Mahlakeng, *China and the Nile River Basin: The Changing Hydropolitical Status Quo*, 10 *INSIGHT ON AFR.* 73, 76–77 (Dec. 21, 2017).

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 77.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

affect own developments. In contrast, Ethiopia has been unable to assert authority over the Nile river.

As early as 1997 and 1998, Ethiopia's Minister of Water Resources and foreign minister announced, respectively:

As a source and major contribution of the Nile waters, Ethiopia has the right to have an equitable share of the Nile waters and reserves its rights to make use of its waters. There is no earthly force that can stop Ethiopia from benefiting from the Nile.¹⁰⁸

Today's the GERD debate hinges on the question of whether *the Nile Water Agreements* are binding legal agreements upon upstream riparian nations like Ethiopia. If Egypt relies on the natural and historical rights asserted through *the Nile Water Agreements*, it is unlikely to make a compelling argument for controlling upstream development, given that the agreements were made and concluded without the participation of many upstream riparian nations.

B. Ethiopian Arguments to Gain River Nile Access

To justify its authority to build the GERD, Ethiopia repeatedly asserts its absolute, upstream authority to develop along the Nile, despite objections by its downstream neighbors Sudan and Egypt. Home to the White Nile's origin, Ethiopia houses the majority of the White Nile's waters within its highlands. Consequently, the upstream nation invokes a property right argument to the Nile's waters to justify the GERD's construction and Ethiopia's exclusive management over the GERD. However, this claim raises entitlement questions based on the contentious principle of absolute sovereignty along an international waterway, garnering objections from diplomatic and legal circles. Like Egypt, Ethiopia's most powerful claim stems from codified customary international water law through equitable utilization with an emphasis on Ethiopia's scarce energy access.

i. River Nile Ownership & The Ethiopian Highlands

Ethiopia's highlands supply about 86% of the water that the River Nile uses.¹⁰⁹ Because the highlands flow into the Nile, Ethiopian

¹⁰⁸ *Id.*

¹⁰⁹ Ashok Swain, *Challenges for water sharing in the Nile basin: changing geo-politics and changing climate*, 56 *HYDROL. SCI. J.* 687, 688 (2011).

government officials claim, to an extent, ownership over the Nile and oppose Egyptian arguments that attempt to regulate Ethiopia's GERD construction and filling. Ethiopia's property right argument invokes a national sovereignty approach towards the GERD.

Ethiopia's argument raises many questions, particularly as it relates to which country may possess more or less of a transboundary waterway. When contemplating the property right of a transboundary waterway, is the property right attached to the land from which the water originates or the land that provides most of the water used? Similarly, does a property right originate from the land where most of the water flows or the land where most of the water is used? Ironically, by asserting an ownership right over a transboundary waterway to justify the GERD's construction and exclusive control over that structure, the Ethiopian government mirrors the same flawed national sovereignty argument invoked by Egypt. Ethiopia would have a stronger argument by acknowledging an irrefutable co-riparian reliance.

ii. Equitable Utilization & Poverty Alleviation

Ethiopia's use of equitable utilization to justify the GERD's construction and exclusive management of the Dam is the nation's strongest argument. It is no secret that Ethiopia has grappled with widespread poverty, particularly through food insecurity and malnutrition.¹¹⁰ However, the GERD's potential to provide energy access for a considerable number of Ethiopians who remain off the nation's power grid would enhance Ethiopia's standard of living.¹¹¹ The GERD is an attempt to develop Ethiopia's hydroelectric capacity. While Ethiopia's highlands provide Ethiopians with an important water source, only about 3% of Ethiopia's hydropower potential had been reached as of 2001.¹¹² Historically, Ethiopians have relied on other alternative forms of energy that have been more harmful to the environment, including biofuel mass.¹¹³

¹¹⁰ 2020 *Global Report on Food Crisis 2020*, FOOD SECURITY INFORMATION NETWORK [FSIN] (2020), https://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2020_ONLINE_200420.pdf.

¹¹¹ See Kimenyi, *supra* note 18.

¹¹² See Kimenyi, *supra* note 2, at 106.

¹¹³ *Id.*

Ethiopian circumstances certainly warrant invoking equitable utilization. Reaching Ethiopia's untapped energy potential would also make a difference in local communities for millions of Ethiopians.¹¹⁴ For instance, some Ethiopians are relying on their government's promise that the GERD will generate electricity to power their businesses. As a result, individuals have poured their resources into business investments, anticipating the GERD's positive benefits.¹¹⁵ For them, the GERD's failure would be a disaster to their livelihoods.

Ethiopia also contends that the GERD's construction could create benefits for the entire region, promoting equity. Through the GERD, Ethiopia expects to produce enough electricity for the entire nation with surplus amounts of energy, much of which could be exported and sold for affordable prices to neighboring countries that do not have substantial energy access.¹¹⁶ Energy sales could reach as far as China and Western Europe, particularly given the non-African support and financing of the GERD.¹¹⁷ Another benefit that Ethiopia cites is environmental. Although it cannot be said with complete certainty, simulations reveal that despite risks to Egyptian water supplies, the filling period of the reservoir could benefit Ethiopia and Sudan without significantly hindering Egyptian water users.¹¹⁸ However, subsequent multi-year droughts would need to be managed with careful coordination to avoid harmful impacts.¹¹⁹

Under equitable utilization, Ethiopia is entitled to greater Nile access than through the anachronistic *Nile Water Agreements*. At the same time, Ethiopia's current efforts to account for potential downstream harm within Egyptian borders are feeble and do not sincerely incorporate the no-harm rule. If Ethiopia were to successfully construct and fill its reservoir under the legal justification of equitable utilization, without restrictions upon Ethiopian management, new legal precedent could very well be established where international water law's principle of equitable utilization no longer considers the no-harm rule essential.

¹¹⁴ See Al Jazeera English, *supra* note 4.

¹¹⁵ *Id.*

¹¹⁶ See Kimenyi, *supra* note 18.

¹¹⁷ See Kimenyi, *supra* note 2, at 106.

¹¹⁸ Kevin G. Wheeler et. al, *Understanding and managing new risks on the Nile with the Grand Ethiopian Renaissance Dam*, 11 NATURE COMM. 1, 4 (Oct. 16, 2020), <https://www.nature.com/articles/s41467-020-19089-x/>.

¹¹⁹ *Id.*

CONCLUSION

The GERD crisis has pushed legal proponents and opposition to the Dam to explore diverse legal justifications. For each party in the conflict, the strongest legal justifications stem from codified international water law: equitable utilization and no-harm. With a focus on the effects of climate change upon Egypt, the desert nation could certainly invoke the no-harm rule to insist upon a *quid pro quo* solution. At the same time, Ethiopia's economic and social circumstances warrant invocation of equitable utilization to increase its Nile access. Nevertheless, the legal community struggles to explain the interplay between no-harm and equitable utilization in practice.

The concrete response to the GERD conflict could very well set the stage for new legal precedent that applies international water law to transboundary waterways. For instance, if the filling results in a disaster for Egypt, regional and international responses could call for greater emphasis upon the no-harm rule in the future. On the other hand, if the filling results in technological innovation and economic prosperity that overshadows Egyptian water use strife, equitable utilization could very well become completely divorced from the no-harm rule. As circumstances evolve and climate change exacerbates environmental and economic situations along transboundary riverways, the legal community must confront a crucial legal question: how the two competing principles should interplay. Either way, the GERD's filling and operation will help to answer that question and solidify customary international water law.

