

ARTICLES

WATER SECURITY AND HYDRO-EGOISM: ENDOGENOUS HEGEMONY AND THE GRAND ETHIOPIAN RENAISSANCE DAM

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ABSTRACT

In 2011, Ethiopia surprised the international community and its two downstream riparian neighbors, Sudan and Egypt, when it unilaterally announced plans to construct the Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile tributary. In 2021, this self-financed mega-dam project is now fast coming to completion as Ethiopia begins the second phase of filling the massive reservoir that Sudan and Egypt fear will cause water shortages in their respective countries. This impoundment process is of existential concern to Egypt, which is completely dependent on Nile water and is one of the most water stressed countries in the world. A history of hydro-egoism, exacerbated by imperial politics, colonial treaties, and broader disruptions across the Horn of Africa attach to the riverine cultures of the Nile. This history has problematized the legal concept of water security and has forestalled efforts to establish a Cooperative Framework Agreement to holistically manage this transboundary water resource upon which 430 million people depend. While discussions have tended to concentrate on the problem of hydro-hegemony in a historical context, this article introduces the idea of the international law's endogenous hegemony over the creation of the processual structures, emerging courses of dealing, and multi-basin wide practices that already have established the pathway forward toward the transboundary management of this critical resource.

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I. INTRODUCTION

At approximately 6,853 kilometers long, the Nile River is the longest river in the world.¹ More than three hundred million people from eleven countries live along its banks.² It flows from the fabled Mountains of the Moon,³ the two main sources in equatorial Africa—the White Nile and the Blue Nile.⁴ The White Nile rises from the great catchment surrounding Lake Victoria, the greatest of Africa's Great Lakes,⁵ and proceeds toward the Mediterranean Sea from Lake Victoria's northern shore.⁶ It is the longer tributary and obtains its name from the clay

1. The exact length of the Nile River is "a matter of debate." Traci Pedersen, *The Nile: Longest River in the World*, LIVE SCIENCE (Nov. 29, 2016), <https://www.livescience.com/57023-nile-river-facts.html> [<https://perma.cc/JY4N-5KJK>].

2. Richard Paisley, *Why the 11 Countries that Rely on the Nile Need to Reach a River Deal Soon*, CONVERSATION (Aug. 27, 2017), <https://theconversation.com/why-the-11-countries-that-rely-on-the-nile-need-to-reach-a-river-deal-soon-75868> [<https://perma.cc/9RBQ-45TF>] (noting the shared water source covers over ten percent of Africa's landmass and directly affects Ethiopia, Sudan, South Sudan, Egypt, Rwanda, Tanzania, Uganda, Burundi, the Democratic Republic of Congo, Eritrea, and Kenya).

3. The inland origin of the Nile River achieved canonical status with Ptolemy's second-century depiction of the mythical Mountains of the Moon (*Lune Montes*) as represented in his atlas *Geographia*. See PTOLEMY'S GEOGRAPHY: AN ANNOTATED TRANSLATION OF THE THEORETICAL CHAPTERS, Plate 2 (J. Lennart Berggren & Alexander Jones eds., 2000). Ptolemy's origin myth of the Nile captured the western imagination well into the Renaissance. See, e.g., Sebastian Münster, *Totius Africae Tabula, & Description Uniuersalis, Etiam Ultra Ptolemæi Limites Extensa* (Basiliae, 1554), <https://maps.princeton.edu/catalog/princeton-sq87bw441> [<https://perma.cc/LJS7-BAJS>] (but he may have received the idea from Arab sources); see generally WILLIAM DESBOROUGH COOLEY, CLAUDIUS PTOLEMY AND THE NILE (1854).

4. The popular yet dated study of the history of the rivers remains Alan Moorehead's two travel-adventure stories, *The White Nile*, covering the years between 1856 and 1900, and its equally sensational prequel, *The Blue Nile*, which begins half a century before with Napoleon's 1798 invasion of Egypt. See generally ALAN MOOREHEAD, THE WHITE NILE (1960); see generally ALAN MOOREHEAD, THE BLUE NILE (1962).

5. See M.J. Ntiba & W.M. Kudoja, *Management Issues in the Lake Victoria Watershed*, 6 LAKES & RESERVOIRS 211, 211 (2001) (noting its surface area of 68,800 kilometers squared). The White Nile's catchment includes the Central and East African countries of Kenya, Uganda, Tanzania, and the mountain regions of Burundi, Rwanda, and the Democratic Republic of Congo. See Jutta Brunnée & Stephen J. Toope, *The Changing Nile Basin Regime: Does Law Matter?*, 43 HARV. INT'L L.J. 105, 117 (2002) (describing the White Nile catchment area).

6. See Terje Oestigaard, *The Source of the White Nile in Uganda*, NORDIC AFR. INST. (Dec.

sediment that gives the river a discernably light gray color.⁷ The Blue Nile rises in the highlands of Ethiopia and Eritrea and feeds from its commonly misidentified source, the sacred spring at Gish Abay.⁸ The Blue Nile's basin drains the headstreams and rivers of the Northeastern Ethiopian Plateau into Lake Tana,⁹ Ethiopia's largest lake.¹⁰ The Blue Nile is Lake Tana's only outward flowing (exorheic) river,¹¹ coursing a 150 kilometer semi-circular loop clockwise across the central portion of the Northwest Ethiopian Plateau into Sudan.¹² Planetary scientists debate when the Blue Nile first drained into the Ethiopian Highlands to create a watercourse of continental proportion.¹³ Over millennia it

1, 2014), <https://nai.uu.se/research-and-policy-advice/project/finalized/the-source-of-the-white-nile-in-uganda.html> [<https://perma.cc/NN3X-AD5G>] (identifying the outlet at Jinja, Uganda as the source of the White Nile).

7. *Two Niles Meet*, NASA EARTH OBSERVATORY (Apr. 26, 2013), <https://earthobservatory.nasa.gov/images/81186/two-niles-meet> [<https://perma.cc/J585-SLQ6>] (presenting a satellite image of the grayish White Nile joining the darker Blue Nile in North Khartoum).

8. T. Oestigaard & A.F. Gedef, *Gish Abay: The Source of the Blue Nile*, 153 WIT TRANSACTIONS ON ECOLOGY & ENV'T 27, 29 (2011). The search for the source of the Nile, and the exploration of Africa's interior generally, infatuated celebrated Victorian explorers. *See generally* Dorothy Middleton, *The Search for the Nile Sources*, 138 GEO. J. 209 (1972) (tracing the Royal Geographical Society's nineteenth century contributions in the search for the source of the Nile). The European encounter with the source of the "Dark Continent's" great river began with Portuguese missionaries' early seventeenth century reports, which stimulated British interest. *See* Terry Steward, *James Bruce*, HISTORIC UK, <https://www.historic-uk.com/HistoryUK/HistoryofScotland/James-Bruce/> [<https://perma.cc/8U6L-NLNS>]. The Royal Geographical Society funded James Bruce's "discovery" of the Blue Nile at Lake Tana in November 1770 and the publication of his popular multi-volume account of African ventures. *See generally* JAMES BRUCE OF KINNAIRD, *TRAVELS TO DISCOVER THE SOURCE OF THE NILE* (1790). *See also*, MUNGO PARK, *TRAVELS IN THE INTERIOR DISTRICTS OF AFRICA* (1799) (stimulating British interest in colonial enterprise in Africa via African river exploration. Modern hydrographers tend to regard the source of the Nile in terms of its catchment area and the great basins that feed into the river. *See* RUSHDI SAID, *THE RIVER NILE: GEOLOGY, HYDROLOGY AND UTILIZATION* 24 (1993) (noting and listing many sources of the Blue Nile).

9. Jacobus Vijverberg et al., *Lake Tana: Source of the Blue Nile*, in *THE NILE: ORIGIN, ENVIRONMENTS, LIMNOLOGY AND HUMAN USE* 163, 164 (Henri J. Dumont ed., 2009) (covering a catchment area of 324,000 kilometers squared).

10. Oestigaard & Gedef, *supra* note 8, at 27.

11. Vijverberg et al., *supra* note 9, at 163.

12. Nahid D.S. Gani & Mohamed G. Abdelsalam, *Remote Sensing Analysis of the Gorge of the Nile, Ethiopia with Emphasis on Dejen-Gohatsion Region*, 44 J. AF. EARTH SCI. 135, 136 (2006).

13. Scientists date the "highly debated" establishment of a substantial Nile catchment from the Eocene, Oligocene, Miocene, and Pleistocene ages. *See* Laura Fielding et al., *The Initiation and Evolution of the River Nile*, 489 EARTH & PLAN. SCI. LETTERS 166, 170-71 (2018) (citing scientific debates about the proper periodization of the river's formation). The Nile covers about one-tenth of the African continent. *See* Ngambouk Vitalis Pemunta et al., *The Grand Ethiopian Renaissance*

has cut deep and wide depressions throughout central Ethiopia.¹⁴

Forty kilometers south of its unassuming egress from Lake Tana, the Blue Nile enters a 400 km-long canyon,¹⁵ transforming quickly into what Alan Moorehead described as “the grandest spectacle that either the Blue or the White Nile has to offer” – Tissisat Falls.¹⁶ From Tissisat Falls, the Blue Nile cuts through the Ethiopian Highlands to a depth comparable to the gorge cut by the Colorado River to form the Grand Canyon.¹⁷ So begins, according to Moorehead, “the end of all peace on the Blue Nile.”¹⁸ More than a remark about water turbulence, Moorehead’s observation serves as a metaphor for much of the last two hundred years of riparian relations on the Nile.

The deep gorges of the Blue Nile account for eighty-seven percent of the volume of the Nile River.¹⁹ Its confluence with the White Nile in North Khartoum forms its trunk and extends another 3,080 kilometers to the Mediterranean Sea.²⁰ The Nile proper is fed once more by its third major and most northern tributary at Atbara in north-central Sudan.²¹ Thereafter, it flows for 2,700 kilometers across the arid Sahara Desert, maintaining its load despite seepage and evaporation, to debouche into the Mediterranean Sea.²² Most other rivers are not able to pursue their course for that long a distance, making the Nile’s integrity “remarkable and unique.”²³ Importantly, the nutrient-rich sediment supplied to the Nile valley of Egypt, critical to irrigation and large-scale crop cultivation of the Nile delta, comes from the Blue Nile (fifty to sixty-one percent) and the Atbara (twenty to

Dam, Egyptian National Security, and Human and Food Security in the Nile River Basin, 7 COGENT SOC. SCI. 1, 2 (2021).

14. See I. McDougall et al., *Age and Rates of Denudation of the Trap Series Basalts at Blue Nile Gorge, Ethiopia*, 254 NATURE 207, 207 (1975) (noting a gorge 1,400 meters deep and 20 kilometers wide incised into the plateau of the Ethiopian Highlands).

15. *Major Rivers of Ethiopia*, ETHIOVISIT, <https://www.ethiovisit.com/major-rivers-of-ethiopia/34/> [<https://perma.cc/WLT8-VAKM>].

16. MOOREHEAD, THE BLUE NILE, *supra* note 4, at 11-12 (comparing the spectacle of Tissisat Falls with its only rival in all of Africa, Victoria Falls on the Zambezi River).

17. See *Major Rivers of Ethiopia*, *supra* note 15.

18. MOOREHEAD, THE BLUE NILE, *supra* note 4, at 12.

19. Musa Mohammed Abseno, *Nile River Basin*, in THE UN WATERCOURSES CONVENTION IN FORCE: STRENGTHENING INTERNATIONAL LAW FOR TRANSBOUNDARY WATER MANAGEMENT 139, 140 (Flavia Rocha Loures & Alistair Rieu-Clarke eds., 2013) (citing an Eastern Nile Technical Regional Office draft report).

20. J.F. Talling, *The Longitudinal Succession of Water Characteristics in the White Nile*, 11 HYDROBIOLOGIA 73, 73 (1957).

21. From the confluence of the Atbara, the Nile flows through the Sahara and through all of Egypt without receiving additional flow. See Abdelazim Negm et al., *An Overview of Aswan High Dam and Grand Ethiopian Renaissance Dam*, in GRAND ETHIOPIAN RENAISSANCE DAM VERSUS ASWAN HIGH DAM: A VIEW FROM EGYPT 3, 4 (Abdelazim M. Negm & Sommer Abdel-Fattah eds., 2019).

22. SAID, *supra* note 8, at 12.

23. *Id.*

forty-two percent).²⁴ “The extensive swamps of South Sudan (the Sudd) trap the vast majority of White Nile sediment load.²⁵ Consequently, the White Nile accounts for less than three percent of the total sediment reaching the modern delta,²⁶ making Egypt and Ethiopia “more heavily dependent” on the Blue Nile than any other countries.”²⁷ The delta’s fertile cone forms north of Cairo and fans out east and west through its two main distributaries the Rosetta (Rashid, on the west) and the Damietta (Dumyat, on the east).²⁸ It is one of the world’s largest river deltas, and it is the most important source of Egypt’s ecological goods and services.²⁹ Egypt’s construction of the Aswan High Dam increased agricultural production overall in the delta,³⁰ however, it reduced the flushing out of the river, increased sedimentation and soil salinization, severely eroded the delta’s coast, and created a dependence on more intensive harvesting methods and chemical additives.³¹ Rapid urbanization and projected sea-level rise are turning the delta into a “highly vulnerable coastal region,” leading urban designers to strategize about the consequences of additional adulterations to the Nile’s upstream flow as a result of “dams, impoundments, dikes, and canals.”³²

For Egypt, the Nile “is functionally the only real source of water.”³³ Almost all Egyptians live in the low-lying Nile River delta or in the “ribbon of green winding through hundreds of miles of desert sand.”³⁴ Egyptians live on just three and a half percent of their land, and practically all of it is part of the delta or

24. Fielding et al., *supra* note 13, at 166. The delta cone forms north of Cairo and fans out east and west through its two main distributaries the Rosetta (Rashid, on the west) and the Damietta (Dumyat, on the east). *See generally* J.D. Stanley et al., *Geoarchaeological Interpretation of the Canopic, Largest of the Relict Nile Delta Distributaries, Egypt*, 20 J. COAST. RES. 920 (2004).

25. Fielding et al., *supra* note 13, at 169.

26. *Id.*; *see also* McDougall et al., *supra* note 14, at 208 (noting less than two percent).

27. Paisley, *supra* note 2.

28. *See generally* Stanley et al., *supra* note 24.

29. Cornelia Redeker & Sameah A. Kantoush, *The Nile Delta: Urbanizing on Diminishing Resources*, 40 BUILT ENVIRON. 201, 201 (2014).

30. *See Aswan High Dam, River Nile, Sudan, Egypt*, WATER TECH., <https://www.water-technology.net/projects/aswan-high-dam-nile-sudan-egypt/> [<https://perma.cc/L9AH-M6JG>] (noting the dam’s effects on flood control and agricultural production and that the dam’s construction began in 1960, was completed in 1968, and inaugurated in 1971).

31. *See* Hesham Abd-El Monsef et al., *Impacts of the Aswan High Dam After 50 years*, 29 WATER RES. MGMT. 1873, 1882 (2015).

32. Redeker & Kantoush, *supra* note 29, at 201-02 (specifically noting the GERD project).

33. Paisley, *supra* note 2. The independent International Crisis Group estimates that Egypt draws, in toto, “around 90 per cent of its freshwater supply” from the Nile. *Bridging the Gap in the Nile Waters Dispute*, INT’L CRISIS GRP. (Mar. 20, 2019), <https://www.crisisgroup.org/africa/horn-africa/ethiopia/271-bridging-gap-nile-waters-dispute> [<https://perma.cc/6DJC-8C5E>] [*hereinafter Bridging the Gap*].

34. Richard Conniff, *The Vanishing Nile: A Great River Faces a Multitude of Threats*, YALE ENV’T 360 (Apr. 6, 2017), <https://e360.yale.edu/features/vanishing-nile-a-great-river-faces-a-multitude-of-threats-egypt-dam> [<https://perma.cc/YY9D-TRVA>].

adjacent to the Nile valley.³⁵ Egypt is listed as the driest country in the world and surpasses the deficit threshold for countries experiencing severe water scarcity.³⁶ Only through increasingly stressed conservation, recycling, and food subsidy measures is Egypt currently able to cover its Nile River water deficit.³⁷ However, its margins are thin and diminishing.³⁸ These circumstances represent “the heart of the matter” regarding the “ever-deepening controversy” over the Nile’s waters.³⁹

No Eastern Nile basin-wide agreement to utilize and manage the water exists among these three countries.⁴⁰ A succession of colonial treaties established rights and duties that successor states either depend on or dismiss,⁴¹ prompting reconsideration of the law of state succession and the binding nature of colonial obligations as applied to the post-colonial management of the Nile River.⁴²

35. *Id.* (noting that 45-50 million Egyptians live in the Delta, which represents 2.5 percent of Egypt’s land, and the remaining population lives along the banks of the Nile River valley, which represents another 1 percent of the country’s total land).

36. Diplomatiche Akademie Wein, *The Nile, the Grand Ethiopian Renaissance Dam and its Impact*, at 13:24, YOUTUBE (Feb. 5, 2021), <https://www.youtube.com/watch?v=IBakYifb838> (citing the United Nations Food and Agriculture Organization).

37. See Mahmoud Aziz, *Egypt’s Water Challenges: Beyond the Dam Aaga*, AHRAMONLINE (Jan. 15, 2020), <https://english.ahram.org.eg/NewsContent/1/64/359272/Egypt/Politics-/Egypt-s-water-challenges-Beyond-the-dam-saga-.aspx> [<https://perma.cc/36BT-X8QR>] (detailing Egypt’s current 30 billion cubic meter water deficit, its 110 billion cubic meter demand, and its 55.5 billion cubic meter supply from the Nile); Hoda El-Enbaby et al., *What’s the Future of Food Subsidies in Egypt?*, INT’L FOOD POL’Y RES. INST. (July 16, 2019), <https://www.ifpri.org/blog/whats-future-food-subsidies-egypt> [<https://perma.cc/6RYN-9BKS>] (detailing efforts to improve the Tamween food subsidy system, which accounts for six percent of the government’s budget).

38. Nadeen Ebrahim, *This is the Water Crisis that Egypt is Facing*, WORLD ECON. FORUM (Nov. 7, 2019), <https://www.weforum.org/agenda/2019/11/water-crisis-builds-in-egypt-as-dam-talks-falter-temperatures-rise/> [<https://perma.cc/ZUB4-YGES>] (reporting that Egypt’s current and insufficient supply of approximately 570 cubic meters (150,000 gallons) of water per person per year is expected to drop to 500 cubic meters by 2025).

39. HAGGAI ERLICH, *THE CROSS AND THE RIVER: ETHIOPIA, EGYPT, AND THE NILE* 1 (2002).

40. See Hamdy A. Hassan & Ahmad Al Rasheedy, *The Nile River and Egyptian Foreign Policy Interests*, 11 AF. SOC. REV. 25, 26 (2007) (noting “no real organization exists” to regulate the distribution and exploitation of the Nile water).

41. For a list of Nile basin treaties dating from 1891, see Abseno, *supra* note 19, at 144-45.

42. See Wuhibegezer Ferede & Sheferawu Abebe, *The Efficacy of Water Treaties in the Eastern Nile Basin*, 49 AF. SPECTRUM 55, 56-57 (2014) (revisiting the law of state succession, the nature of treaties, and theories of succession). The problem of treaty validity and state succession is often told. See Oscar Schachter, *State Succession: The Once and Future Law*, 33 VA. J. INT’L L. 253, 257 (1992); Menno T. Kamminga, *State Succession in Respect of Human Rights Treaties*, 7 EUR. J. INT’L L. 469, 469 (1996); See generally Matthew C.R. Craven, *The Problem of State Succession and the Identity of States Under International Law*, 9 EUR. J. INT’L L. 142 (1998). General and competing theories of state succession include universal succession, which promotes continuity by committing successor states to the rights and obligations of its predecessor; *e.g.*, H.

Because most of the treaties reflected the water-use interests of Britain⁴³ up to and beyond the formal period of its treatment of Egypt as a protectorate (1882-1922),⁴⁴ upper riparian interests were “virtually forfeit[ed].”⁴⁵ Italy’s failed

WILKINSON, *THE AMERICAN DOCTRINE OF STATE SUCCESSION* 13 (1934); organic substitution theory, which distinguishes the loss of identity of the preceding state from the unaffected continuation of organic forces; e.g., Y. Makonnen, *State Succession in Africa: Selected Problems*, in 1986-V *RECUEIL DES COURS* 93, 106 (1987); the clean slate/*tabula rasa*/Nyerere doctrine, which does not bind successor states to obligations they had no role in formulating; e.g., Mahemud Eshtu Tekuya, *The Egyptian Hydro-hegemony in the Nile Basin: the Quest for Changing the Status Quo*, 26 *J. WATER L.* 10, 12 (2018)); and, *inter alia*, the unequal treaty theory, nullifying treaties imposed to provide foreigners with privileged control and unfair access to less powerful countries; (e.g., Charlotte Ku, *Abolition of China’s Unequal treaties and the Search for Regional Stability in Asia, 1919-1943*, 12 *CHINESE (TAIWAN) Y.B. INT’L L. & AFF.* 67 (1994).

43. On the importance of Nile water in terms of Egyptian cotton production to support British textile trade, see WYNDHAM DUNSTON, *REPORT ON COTTON CULTIVATION IN THE BRITISH EMPIRE AND IN EGYPT* (1904); Ahmad Shokr, *Beyond the Fields: Cotton and the End of Empire in Egypt, 1919-1956* (Dissertation, New York University 2016) (on file with author).

44. Britain occupied Egypt in the summer of 1882 to thwart the nationalist uprising against the Khedive Tewfik (the hereditary viceroy of this part of the Ottoman Empire); it remained there for seventy-four years, but its political influence took different forms. See generally PETER MANSFIELD, *THE BRITISH IN EGYPT* (1971). Between 1882 and 1914, Egypt was an autonomous province of the Ottoman Empire, however, Britain held a de facto “veiled” protectorate over the country, which was managed (until 1907) by “perhaps the most famous of all British imperial proconsuls,” Lord Cromer. *Id.* at x. When the Ottoman Empire joined the other Central Powers (Germany and Austria-Hungary) in World War I, Britain proclaimed a protectorate over Egypt, which lasted between 1914-1922. After the Great War, Egypt adopted a constitution and gained a form of “semi-independence,” which was “still severely limited” by Britain. *Id.* at 245. The 1936 Anglo-Egyptian Treaty of Friendship and Alliance secured British military presence (10,000 troops and 400 pilots) in Egypt to protect British interests over the Suez Canal. See Laila Morsy, *The Military Clause of the Anglo-Egyptian Treaty of Friendship and Alliance, 1936*, 16 *INT’L J. MID. EAST STUD.* 67, 78 (1984) (noting Egypt’s populist Wafd government unilaterally abrogated the treaty in 1951 and Britain’s attempt (with France and Israel) to retake the nationalized canal failed and led to Britain’s humiliating retreat from Egypt).

45. See Abseno, *supra* note 19, at 143. Egypt’s White Nile water interests were bilaterally secured by the British in 1906, 1929, and 1949. The former two guaranteed the supply that Egypt naturally would obtain and the latter intended to increase its share. See Agreement Between Great Britain and the Independent State of the Congo, Modifying the Agreement Signed at Brussels 12 May 1894, Relating to the Spheres of Influence of Great Britain and the Independent State of the Congo in East and Central Africa, U.K.-Dem. Rep. Congo., May 9, 1906, Treaty Series 004/1906: Cd. 2920, <http://gis.nacse.org/tfdd/tfdddcs/40ENG.pdf>; 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 River Nile for Irrigation Purposes, U.K.-Egypt, May 7, 1929, International Water Law Project, Treaty Series 017/1929: Cmd 3348, https://www.internationalwaterlaw.org/documents/regionaldocs/Egypt_UK_Nile_Agreement-1929.html [hereinafter “1929 Exchange of Notes”]; Exchange of Notes Constituting an Agreement Between the Government of the United Kingdom

imperial designs in Ethiopia prompted Great Britain to negotiate an agreement with Ethiopian Emperor Menelik II in 1902.⁴⁶ Although originally structured to settle frontier issues, Britain attached Nile considerations late in the negotiations.⁴⁷ Article III prevented, absent British agreement, any Ethiopian construction that would “arrest the flow” of the Blue Nile.⁴⁸ Ethiopia subsequently construed this provision to preclude full stoppage of the flow; Great Britain assumed it deprived Ethiopia of any use of the water except for domestic consumption and local irrigation.⁴⁹ Egypt further claimed the law of state succession obligated Ethiopia to abide by its terms.⁵⁰ Ethiopia countered that the treaty was not ratified by any Ethiopian government organ, that it failed because of differences between the English and Amharic versions of disputed Article III, and also did not, in line with the principle of *pacta tertiis*⁵¹ create obligations or entitlements on which Egypt could rely because the treaty was only between Britain and Ethiopia.⁵² Filling the gap between these two interpretations presents considerable problems today.

Despite Ethiopia’s geographical status as the “water tower” for the Nile, and

of Great Britain and Northern Ireland and the Government of Egypt Regarding the Construction of the Owen Falls Dam, Uganda, U.K.-Egypt, May 31, 1949, 207 U.N.T.S. 277, <http://gis.nacse.org/tfdd/tfdddcs/142ENG.pdf>.

46. See generally ROBERT MALLETT, *MUSSOLINI IN ETHIOPIA, 1919-1935: THE ORIGINS OF FASCIST ITALY’S AFRICAN WAR* (2015) (discussing Italy’s colonial policy and designs on Ethiopia); See generally JEFF PEARCE, *PREVAIL: THE INSPIRING STORY OF ETHIOPIA’S VICTORY OVER MUSSOLINI’S INVASION, 1935-1941* (2017) (discussing Ethiopia’s ultimately successful resistance to Italy’s invasion).

47. See Tadesse Kassa Woldetsadik, *Anglo-Ethiopian Treaty on the Nile and the Tana Dam Concessions: A Script in Legal History of Ethiopia’s Diplomatic Confront (1900-1956)*, 8 MIZAN L. REV. 271, 274 (2014) (noting that the British Foreign Office attached provisions relating to the Nile waters while negotiations were “winding up.”).

48. Anglo-Ethiopian Treaty of 1902, reprinted in Edward Ullendorff, *The Anglo-Ethiopian Treaty of 1902*, 30 SOAS BULL. 641, 643 (1967).

49. See Woldetsadik, *supra* note 47, at 273, 278 (discussing the genesis of the treaty).

50. See, e.g., remarks by Mohamed Helal, former legal counselor in the Egyptian Ministry of Foreign Affairs (“[T]here is no such thing as a colonial agreement. There are treaties and the law of state succession governs the continued applicability of treaties . . . Ethiopia has never been a colony . . . Ethiopia has always been an independent nation and it signed a series of agreements as an independent nation that continue to bind it to this day”), *Diplomatische Akademie Wein*, *supra* note 36, at 18:02.

51. *Pacta tertiis*, or *pacta tertiis nec nocent nec prosunt*, finds expression in art. 34 of the Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331, (providing that treaties do not “create either obligations or rights for a third State without its consent.”).

52. Salman M.A. Salman, *The Nile River Basin: On the Road Towards Inevitable Cooperation?*, in *A BRIDGE OVER TROUBLED WATER: DISPUTE RESOLUTION IN THE LAW OF INTERNATIONAL WATERCOURSES AND THE LAW OF THE SEA* 377, 379-80 (Hélène Ruiz Fabri et al. eds., 2021) [hereinafter *Salman*, *The Nile River Basin*].

indeed for the Horn of Africa,⁵³ political instability, lack of access to international finance and foreign investment, and regional suspicion and hostility have historically impeded its development of water resources.⁵⁴ Currently, the COVID-19 pandemic, locust infestation, a punishing and persistent drought, and internal displacements contribute to Ethiopia's designation as a food insecurity hotspot.⁵⁵ The United Nations Food and Agriculture Organization and the World Food Program list Ethiopia among the countries of "absolute urgent and imminent concern."⁵⁶

Ethiopia's population growth rate, which is "equal to or greater than Egypt's, establish[es] an equally compelling need for water"⁵⁷ and electricity.⁵⁸ Despite climate model projections of increasing regional precipitation across the Upper Nile basin, the "compound extremes" of particularly hot and dry years indicate chronic if not critical regional water scarcity problems by this century's end.⁵⁹ Notwithstanding capacity advantages for electricity generation, and a well-developed transmission and distribution network,⁶⁰ "[a]bout 70 percent of the population in Ethiopia live without electricity."⁶¹ Only "24 percent of primary

53. Yacob Arsano & Imeru Tamrat, *Ethiopia and the Eastern Nile Basin*, 67 *AQUAT. SCI.* 15, 19 (2005) (noting that the most important river systems in the entire sub-region of the Horn of Africa originate in Ethiopian highlands).

54. *Id.* at 18.

55. WORLD FOOD PROGRAMME & FOOD AND AGRIC. ORG. UNITED NATIONS, HUNGER HOTSPOTS: FAO-WFP EARLY WARNINGS ON ACUTE FOOD INSECURITY: MARCH TO JULY 2021 OUTLOOK 5 (2021).

56. *Id.* at 7, 13.

57. ERLICH, *supra* note 39, at 1. Ethiopia's population is projected to reach 171.8 million in 2050, from a population of 83.7 in 2012. Alemayhu Bekele & Yihunie Lakew, *Projecting Ethiopian Demographics from 2012-2050 Using the Spectrum Suite of Models*, USAID HEALTH POL'Y PROJECT (July 2014), https://www.healthpolicyproject.com/pubs/724_PROJECTING_ETHIOPIAN.pdf [<https://perma.cc/KEC5-3MNP>] (indicating a 1.8 percent fertility rate by 2050). Egypt's population is expected to grow by 60 million (to 225 million) by 2050—a two percent annual increase. See Mira Maged, *UN Recent Report: Egypt's Population to Increase 60 Million by 2050*, EGYPT INDEP. (July 5, 2019), <https://egyptindependent.com/un-recent-report-egypts-population-to-increase-60-million-by-2050/> [<https://perma.cc/MP44-CKTU>] (referencing the UN Department of Economic and Social Affairs 2019 Population Division report).

58. See *infra* notes 61-63 and accompanying text.

59. Ethan D. Coffel et al., *Future Hot and Dry Years Worsen Nile Basin Water Scarcity Despite Projected Precipitation Increases*, 7 *EARTH'S FUTURE* 967, 967-68 (2019).

60. See Keshav Rastogi, *An Emerging and Troubled Power: Ethiopia's (Un)Distributed Renewable Grid*, HARV. POL. REV. (June 9, 2021), <https://harvardpolitics.com/an-emerging-and-troubled-power-ethiopias-undistributed-renewable-grid/> [<https://perma.cc/2WGF-WKTQ>] (noting Ethiopia's growing electric power industry and its status as having the highest installed electric grid in Sub-Saharan Africa).

61. *Ethiopia's Transformational Approach to Universal Electrification*, WORLD BANK (Mar. 8, 2018), <https://www.worldbank.org/en/news/feature/2018/03/08/ethiopias-transformational-approach-to-universal-electrification> [<https://perma.cc/ESA8-KCVL>].

schools and 30 percent of health clinics have access to electricity.”⁶²

As it was in ancient times between the neighboring Nubian Kingdom of Kush and Egyptian pharaonic dynasties, the Blue Nile remains critical to the economies, cultures, and identities of its riverine civilizations.⁶³ Military and diplomatic efforts to control water security on the Nile date as far back as seven hundred years.⁶⁴ From the conflicts between the Christian Ethiopian Zagwe dynasty and Egyptian Islamic rulers of the early Middle Age,⁶⁵ to the golden ages of the Mamluks and the Solomonians,⁶⁶ to the modernizing influences of the Khedive, Muhammad Ali Pasha (1805-1848),⁶⁷ and nineteenth-century Anglo-French intrusions,⁶⁸ the Blue Nile has stood as the totemic touchstone of multicultural identities and imperial designs. Modern sovereign borders now separate Egyptian and Ethiopian identities, with Sudan and its increasingly independent hydro-*politik* situated between the two.⁶⁹ However, the Nile remains the existential umbilical cord that irrevocably connects the futures of these countries and the 430 million people across the continent who use it as their primary water source.⁷⁰

This article examines the looming problem of “water security” and the Blue Nile. It investigates the problem of hydro-hegemony and its more virulent expression of hydro-egoism, not in terms of the significant and dangerous consequences that they undeniably portend,⁷¹ but in terms of the co-substantiating

62. *Id.*

63. See Fekri A. Hassan, *The Dynamics of a Riverine Civilization: A Geoarchaeological Perspective on the Nile Valley, Egypt*, 29 *WORLD ARCHEOLOGY* 51, 52 (1997).

64. WOSSENU ABTEW & SHIMELIS BEHAILU DESSU, *THE GRAND ETHIOPIAN RENAISSANCE DAM ON THE BLUE NILE* 14-16 (2019).

65. See Marie-Laure Derat, *Before the Solomonids: Crisis, Renaissance and the Emergence of the Zagwe Dynasty (Seventh-Thirteenth centuries)*, in *ACOMPANION TO MEDIEVAL ETHIOPIA AND ERITREA* 31 (Samantha Kelly ed., 2020) (discussing Ethiopian dynastic developments following the fall of the Aksumite Kingdom).

66. See ERLICH, *supra* note 39, at 36-38.

67. See generally AFAF LUTFI AL-SAYYID MARSOT, *EGYPT IN THE REIGN OF MUHAMMAD ALI* (1984) (discussing the bureaucratic and military reforms during the reign of this central Egyptian figure).

68. See generally Richard A. Atkins, *The Origins of the Anglo-French Condominium in Egypt, 1875-1876*, 36 *HISTORIAN* 264 (1974) (discussing the seventy-five-year competition and compromises between France and Britain over control of the Nile Valley).

69. See generally Housam Darwisheh, *Egyptian-Sudanese Relations Amidst Changing Geopolitics*, 7 *IDE M.E. REV.* 65 (2020) (discussing Sudan’s shifting and complex environmental, socio-economic, and political Nile interests and riparian relations).

70. See Any Freitas, *Water Politics in the Nile Basin*, *EUR. UNION INST. SEC. STUD.* 1 (May 2013), https://www.iss.europa.eu/sites/default/files/EUISSFiles/Alert_Nile.pdf [<https://perma.cc/F2BG-VL2F>].

71. See HARRY VERHOEVEN, *WATER, CIVILIZATION AND POWER IN SUDAN: THE POLITICAL ECONOMY OF MILITARY-ISLAMIST STATE BUILDING* (2015) (discussing riverain elites and the basin-wide importance of hydro-agriculture and state-building); Biong Kuol Deng, *Cooperation Between*

solutions they tend to obscure. Forty percent of the world's population share the transboundary waters of the 264 largest river basins in the world.⁷² “These basins cover more than forty-five percent of the earth's land surface,”⁷³ and yet two-thirds of the world's transboundary watercourses are not covered by international agreements.⁷⁴ These statistics cloud the inner workings of international law. As an idiomatic expression of international law, water security connotes a primordial impulse so natural and existential as to seemingly defy objection. Yet the idiom has been characterized as a politically loaded Trojan Horse and a vacuous legal idiom.⁷⁵

The power and sway of rational and realist models of egoism identify self-interest as a given and locate its formation in the exogenous relations of an anarchic international system.⁷⁶ Hegemonic stability theory focuses on the stabilizing influence of a single, strong actor to promote international cooperation and desirable collective outcomes for all states in the system.⁷⁷ The presumption of such a dominant actor may have prevailed during the period of British colonial rule, and during Egypt's rise as a regional power with Nasser's pan-Arabism and Sadat's strategic cooperation with the United States,⁷⁸ however, the geopolitics of the region, particularly since the advent of the Arab Spring in 2011, markedly diminish Egypt's strategic plan and ability to control Nile water supplies.⁷⁹

Egypt and Sudan Over the Nile River Waters: The Challenges of Duality, in *THE NILE RIVER AND RIPARIAN STATES: COOPERATIVE DIPLOMACY, REGIONAL STABILITY AND NATIONAL INTERESTS* 39, 51 (Korwa G. Adar & Nicasius A. Check ed. 2011) (noting Egypt's ‘beyond the borders’ military contingency plan (*Waraa-el-hidoud*) involving each country in the Nile basin).

72. Joseph W. Dellapenna, *The Customary International Law of Transboundary Fresh Waters*, 1 INT'L J. GLOBAL ENVTL. ISSUES 264, 265 (2001).

73. BJORN-OLIVER MAGSIG, *INTERNATIONAL WATER LAW AND THE QUEST FOR COMMON SECURITY*, 6 (2015).

74. Patricia Wouters, ‘Dynamic Cooperation’—*The Evolution of Transboundary Water Cooperation*, in *WATER AND THE LAW: TOWARDS SUSTAINABILITY* 13, 63 (Michael Kidd et al. eds., 2014).

75. *See infra* notes 253-55 and accompanying text.

76. Alexander Wendt, *Collective Identity Formation and the International State*, 88 AM. POL. SCI. J. 384, 387 (1994) (noting specifically the influential perspective of Kenneth Walt, *THEORY OF INTERNATIONAL POLITICS* (1979)).

77. Duncan Snidal, *The Limits of Hegemonic Stability Theory*, 39 INT'L ORG. 579 (1985). *See also* CHARLES KINDELBERGER, *THE WORLD IN DEPRESSION, 1929-1939* (1974) (noting the stabilizing systemic effects of benevolent despots).

78. *See generally* Fouad Ajami, *The End of Pan-Arabism*, 57 FOR. AFF. 355 (1979) (describing Arab unification as “a thing of the past”). *See also* BERNARD LEWIS, *WHAT WENT WRONG? WESTERN IMPACT AND MIDDLE EASTERN RESPONSE* (2002) (presenting a macro-interpretation of impediments to Arab unity).

79. *See* Joel Okundi Obengo, *Hydropolitics of the Nile: The Case of Ethiopia and Egypt*, 25 AF. SEC. REV. 95, 99 (2016) (noting Egypt's post-Arab Spring focus on state security rather than hydro-politics, and China's entry into hydroelectric issues across the Horn of Africa); Fred H. Lawson, *Egypt Versus Ethiopia: The Conflict Over the Nile Metastasizes*, 52 INT'L SPECTATOR 129

Of greater interest here is international law's endogenous influence on egoism, which does not always preclude expression in collective form.⁸⁰ Beyond the political theater of Nile riparian relations,⁸¹ beyond the social theory literature on the Nile River and identity formation,⁸² and beyond the practices of othering and vilification,⁸³ which externalizes the blame for pervasive authoritarian misrule along the Nile,⁸⁴ exists the subliminal operation of endogenous international law, moving procedurally and institutionally to substantiate a paradigmatic shift toward an eco-systemic recalibration of hydro-egoism along the Nile.⁸⁵ Only through an understanding of the contours of endogenous international law, founded on institutional influences, the duty to cooperate, and the process-oriented emphases of communication, information exchange, consultation, and management can dynamic meaning extend to such a concept as water security.⁸⁶ The internal workings and intersubjective dynamics of riparian relations, as framed by the discursive and organizational practices at work in the institutional sub-structures of international law, have already created an underappreciated hegemonic framework for cooperation that this article seeks to put into sharper relief.⁸⁷

(2017) (noting the changing geopolitics of the region).

80. See Wendt, *supra* note 76, at 388.

81. See e.g., ERVING GOFFMAN, STRATEGIC INTERACTION (1969) (developing ideas of expression games and strategic interactions); ERVING GOFFMAN, INTERACTION RITUALS (1967) (exploring the ritualization of expressions as elements of social interaction).

82. See generally ISRAEL GERSHONI & MEIR HATINA EDS., NARRATING THE NILE: POLITICS, IDENTITIES, CULTURES (2008) (presenting essays on the river's role in shaping the early modern and contemporary histories).

83. See Leslie E. Wehner, *Developing Mutual Trust: The Othering Process Between Bolivia and Chile*, 36 CANADIAN J. LAT. AM. & CARIB. STUD. 109 (2011) (noting the destructive discursive culture of enmity between Bolivia and Chile); Iver B. Neumann, *Self and Other in International Relations*, 2 EUR. J. INT'L REL. 139 (1996) (investigating identity formation and methods of psychologizing).

84. See Christopher Gelpi, *Democratic Diversions: Governmental Structure and the Externalization of Domestic Conflict*, 41 J. CON. RES. 255 (1997) (empirically investigating methods of diversionary tactics among authoritarian and democratic leaders).

85. On the ecosystemic approach, which accentuates the holistic reappraisal of water resources management to secure a healthy functioning river system, see Attila M. Tanzi, *Substantialising the Procedural Obligations of International Water Law Between Compensatory and Distributive Justice*, in A BRIDGE OVER TROUBLED WATERS: DISPUTE RESOLUTION IN THE LAW OF INTERNATIONAL WATERCOURSES AND THE LAW OF THE SEA 351, 363 (Hélène Ruiz Fabri et al. eds., 2010); VITO DE LUCIA, THE 'ECOSYSTEM APPROACH' IN INTERNATIONAL ENVIRONMENTAL LAW: GENEALOGY AND BIOPOLITICS (2019); Jutta Brunnée, *International Environmental Law and Community Interests: Procedural Aspects*, in COMMUNITY OBLIGATIONS ACROSS INTERNATIONAL LAW (Eyal Benvenisti & Georg Nolte eds., 2017).

86. See Wouters, *supra* note 74, at 64 (discussing the innovations of and dynamism of transboundary water cooperation).

87. See generally James G. March & Johan P. Olsen, *The New Institutionalism:*

Following this introduction, Part II of this article investigates the colonial-era roots pertaining to hegemonic claims to the Nile and the riparian implications regarding the construction of the Grand Ethiopian Renaissance Dam (GERD) project, the filling of its reservoir, and the complexities of border conflicts arising in nearby areas of the Horn of Africa. Part III looks at the concept of hydro-hegemony as an analytic concept in specific relation to transboundary water frameworks, how it has interfered with the establishment of a basin-wide Cooperative Framework Agreement (CFA), and how it has problematized the legal recognition of the idiom of “water security.” Here, international law’s endogenous substructures are discussed as a new kind of hegemony—endogenous hegemony—whereby it is concluded that the elusive solution to water security along the path of the CFA has already taken shape notwithstanding the rhetorical perturbations that deflect attention from the established path forward.

II. COLONIAL HEGEMONY AND SHIFTING POWER DYNAMICS

Customary international law recognizes the principle of reasonable and equitable utilization of transboundary water resources as the *sine qua non* for peaceful riparian relations.⁸⁸ At the same time, customary international law recognizes the principle of no harm, meaning that upper riparians must take appropriate measures to not substantially encroach on lower riparians’ reasonable utilization of the resource.⁸⁹ Harmonizing the tension between these two substantive principles deeply occupies scholarly attention,⁹⁰ and after much discussion, the UN Watercourses Convention struck an admittedly still contentious balance between the two.⁹¹ A third factor affecting the dynamics of

Organizational Factors in Political Life, 78 AM. POL. SCI. REV. 734 (1984) (explaining the amplification on institutionalism and new constitutionalism); JAMES G. MARCH & JOHAN P. OLSEN, REDISCOVERING INSTITUTIONS (1989); Peter A. Hall & Rosemary C.R. Taylor, *Political Science and the Three New Institutionalisms*, 44 POL. STUD. 936 (1996); ROBERT E. GOODIN, THE THEORY OF INSTITUTIONAL DESIGN (1998).

88. Tekuya, *supra* note 42, at 10.

89. See generally Joyeeta Gupta & Susanne Schmeier, *Future Proofing the Principle of No Significant Harm*, 20 INT’L ENVIRON. AGREEMENTS 731 (2020) (problematizing the notion of harm in the Anthropocene). Egypt and Ethiopia recognized the no harm principle. See Framework for General Co-operation Between the Arab Republic of Egypt and Ethiopia art. 5, Eth.-Egypt, July 1, 1993, https://www.internationalwaterlaw.org/documents/regionaldocs/1993_Ethiopia-Egypt-Framework_Agreement-Nile_Basin.pdf [<https://perma.cc/4C95-SPP2>] (“refrain[ing] from engaging in any activity related to the Nile waters that may cause appreciable harm to the interests of the other party”) [hereinafter *Cairo Cooperation Framework*].

90. See, e.g. *id.*; see also Attila M. Tanzi, *The Inter-Relationship Between No Harm, Equitable and Reasonable Utilization and Cooperation Under International Water Law*, 20 INT’L ENVIRON. AGREEMENTS 619 (2020); STEPHEN C. MCCAFFREY, THE LAW OF INTERNATIONAL WATERCOURSES (3d ed., 2019); Salman M.A. Salman, *Downstream Riparians Can Also Harm Upstream Riparians: The Concept of Foreclosure of Future Uses*, 35 WATER INT’L 350 (2010).

91. Article 7(2) of the Convention stipulates that one state causing harm to another must

general international water law are the procedural obligations that give effect to the equitable utilization and no harm principles, namely: information exchange, obligations of notification and consultation, and the practice of setting up of joint administrative and scientific bodies to manage international riparian issues.⁹²

Notwithstanding these three prongs of riparian relations, Egypt has historically “exercised various hegemonic strategies to control the water sources of the Nile,”⁹³ as if it were a birthright. Indeed, the ancient Greek historian Herodotus assumed in the fourth century BCE that Egypt itself was a gift of the river.⁹⁴ Asserting dominion over this donation resulted in a series of conflicts in the eighteenth and nineteenth centuries between Egypt and Ethiopia.⁹⁵ Before decisive defeats at Gundet in 1875 and Gura in 1876, Egypt had advanced toward the Lake Tana area with military conquests of Kasala (1834), Metema (1838), Massawa (1846), Kunama (1869) and Harar (1875), to secure the western frontiers of Ethiopia and establish a “quasi-empire” in Sudan.⁹⁶ The 1929 Anglo-Egyptian Exchange of Notes granted Egypt control of twelve times the water flow allotted to Sudan,⁹⁷ with a veto power over construction projects on the Nile and its tributaries.⁹⁸ The 1959 Nile Waters Agreement adjusted Egypt’s share upward

“take all appropriate measures, having due regard to Article 5 (requiring utilization of waters in an equitable and reasonable manner) and 6 (setting out a non-exhaustive list to determine what constitutes equitable and reasonable use).” Convention on the Law of the Non-Navigational Uses of International Watercourses, May 21, 1997, 2999 U.N.T.S. 52106 [hereinafter *UN Watercourses Convention*]; see also *UN Watercourses Convention User’s Guide Fact Sheet Series: Number 5, No Significant Harm Rule*, UNWATERCOURSESCONVENTION.ORG, <https://www.unwatercoursesconvention.org/documents/UNWC-Fact-Sheet-5-No-Significant-Harm-Rule.pdf> [<https://perma.cc/TJF5-C698>] (noting as well that the “text that was eventually agreed upon by states appears to strike a balance between these two principles [and] is still a contentious issue.”).

92. Tanzi in *A BRIDGE OVER TROUBLED WATERS*, *supra* note 85, at 363.

93. YOUSSEF M. HAMADA, *THE GRAND ETHIOPIAN RENAISSANCE DAM, ITS IMPACT ON EGYPTIAN AGRICULTURE AND THE POTENTIAL FOR ALLEVIATING WATER SCARCITY* 34 (2017).

94. HERODOTUS, *THE HISTORIES*, bk. 2, ch. 5 (A.D. Godley trans. 1920) (“For even if a man has not heard it before, he can readily see, . . . that that Egypt to which the Greeks sail is land deposited for the Egyptians, the river’s gift.”).

95. See Tekuya, *supra* note 42, at 10-11 (noting Ethiopia’s victorious efforts to parry Egyptian coercive hydro-strategy to control the Nile, as most decisively demonstrated at the Battle of Gura in 1876, where Ethiopia annihilated 12,000 Egyptian forces).

96. Daniel Kendie, *Egypt and the Hydro-Politics of the Blue Nile River*, 6 NE. AFR. STUD. 141, 145 (1999) (listing the various Egyptian occupations); MANSFIELD, *supra* note 44, at 65 (noting that Egypt, through the brute force of Mohammed Aly’s armies, invaded Sudan and established a “quasi-empire”).

97. Marina Ottaway, *Egypt and Ethiopia: The Curse of the Nile*, WILSON CTR. (July 7, 2020), <https://www.wilsoncenter.org/article/egypt-and-ethiopia-curse-nile> [<https://perma.cc/J7QK-KSKE>] (noting the sharing arrangement with forty-eight billion cubic meters going to Egypt and four billion to Sudan).

98. See 1929 Exchange of Notes, *supra* note 45, at art. 4(ii) (“[e]xcept with the prior consent of the Egyptian Government, no irrigation works shall be undertaken nor electric generators

to 55.5 billion cubic meters, according 18.5 billion cubic meters to Sudan,⁹⁹ “leaving 10 billion cubic meters to account for seepage and evaporation.”¹⁰⁰ The agreement required any increase in the Nile annual flow above 84 billion cubic meters be shared equally between the two states. However, Sudan has never been able to use its original share (using about 12 billion cubic meters annually), allowing Egypt to use “a far larger amount of Nile waters than 55.5 [billion cubic meters].”¹⁰¹ Egypt’s current water uses contrast with Sudan’s rights established under the 1959 agreement; and although Egypt and Sudan disagree on the operative standard today, “Egypt has not specified any figure as its current uses.”¹⁰² Intake limits as between the two downstream signatories obviously implicated the development rights of upstream Ethiopia, however neither agreement accounted for Ethiopia’s future water needs.¹⁰³ Moreover, the agreement established full utilization of the Nile waters as between Sudan and Egypt, and “[t]he two countries ignored calls from Ethiopia and Uganda” to participate in the negotiations.¹⁰⁴ Before the UN General Assembly in 2019, Egypt’s President, Abdel Fattah Al-Sisi affirmed that “Nile water is a matter of life and an issue of existence for Egypt.”¹⁰⁵ While sounding the existential alarm, Egypt now faces a challenge to its historical sense of hydro-hegemony. Ethiopia’s water minister called Egypt’s claims to the Nile “the most absurd thing you ever heard.”¹⁰⁶

installed along the Nile and its branches . . . which could jeopardize the interests of Egypt either by reducing the quantity of water flowing [sic] into Egypt or appreciably changing the date of its flow or causing its level to drop.”).

99. Agreement Between the United Arab Republic and the Republic of Sudan for the Full Utilization of the Nile Waters, Signed at Cairo, November 8, 1959 and Protocol Concerning the Establishment of Permanent Joint Technical Committee Signed at Cairo, January 17, 1960, art. II (4), United Arab Republic- Sudan, Nov. 8, 1959, https://www.internationalwaterlaw.org/documents/regionaldocs/UAR_Sudan1959_and_Protocol1960.pdf [<https://perma.cc/JX3Z-EPU4>].

100. 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/TSC6-FHVD>]; Salman, *The Nile River Basin*, *supra* note 52, at 381.

101. Salman, *The Nile River Basin*, *supra* note 52, at 391 n.29.

102. *Id.* at 391 n.29 and accompanying text.

103. See Kimenyi & Mbaku, *supra* note 100 (noting that the 1929 and 1959 agreements “did not make any allowance for the water needs of the other riparian states, including even Ethiopia, whose highlands supply more than 80 percent of the water.”).

104. Salman, *The Nile River Basin*, *supra* note 52, at 382.

105. Mohammed El-Said, “Nile Water is a Matter Of Life and an Issue of Existence for Egypt,” *Says Al-Sisi at UNGA 74*, DAILYNEWS (Egypt) (Sept. 24, 2019), <https://dailynewsegypt.com/2019/09/24/nile-water-is-a-matter-of-life-and-an-issue-of-existence-for-egypt-says-al-sisi-at-unga74/> [<https://perma.cc/Y9G5-N9XS>] (quoting the Egyptian President’s speech at the 74th session of the UN General Assembly).

106. Declan Walsh & Somini Sengupta, *For Thousands of Years, Egypt Controlled the Nile. A New Dam Threatens That.*, N.Y. TIMES (Feb. 9, 2020), <https://www.nytimes.com/>

A. The Grand Ethiopian Renaissance Dam

In 2011, Ethiopia began construction of the Grand Ethiopian Renaissance Dam (GERD), a 6000 megawatt hydroelectric dam on the Blue Nile.¹⁰⁷ It will be Africa's "largest hydroelectric power plant."¹⁰⁸ The dam sits in the Guba area of Ethiopia's Benishangul-Gumuz region, approximately 40 kilometers east of the border with Sudan.¹⁰⁹ Construction of the dam began unannounced,¹¹⁰ "after a secretive planning and design process that did not include any other riparian states[,]"¹¹¹ without international funding,¹¹² amid concerns of corruption and financial mismanagement,¹¹³ and without publicly available environmental impact

interactive/2020/02/09/world/africa/nile-river-dam.html [https://perma.cc/A7YQ-ERV9] (quoting Ethiopian water minister Seleshi Bekele in January 2020).

107. *Disputes Over the Grand Ethiopian Renaissance Dam (GERD)*, CLIMATE DIPL., <https://climate-diplomacy.org/case-studies/disputes-over-grand-ethiopian-renaissance-dam-gerd> [https://perma.cc/W2SE-Y6NU].

108. Jean-Daniel Stanley & Pablo L. Clemente, *Increased Land Subsidence and Sea-Level Rise are Submerging Egypt's Nile Delta Coastal Margin*, 27 GSA TODAY 5, 10 (2017).

109. *Grand Ethiopian Renaissance Dam Project, Benishangul-Gumuz*, WATER TECH., <https://www.water-technology.net/projects/grand-ethiopian-renaissance-dam-africa/> [https://perma.cc/8D2K-XSKZ] [hereinafter *Water Technology*]. A 1959 Ethiopian survey commissioned and executed and published by the U.S. Bureau of Reclamation in 1964 identified the site. See also Mahemud Tekuya, *The Imperialist Past that Started Dam Politics Between Egypt, Sudan and Ethiopia*, CONVERSATION (Mar. 21, 2021), <https://theconversation.com/the-imperialist-past-that-started-dam-politics-between-egypt-sudan-and-ethiopia-156760> [https://perma.cc/H2N4-SC5A].

110. See *The Grand Ethiopian Renaissance Dam: A Timeline*, INT'L CRISIS GRP. (June 17, 2020), <https://www.crisisgroup.org/africa/horn-africa/ethiopia/grand-ethiopian-renaissance-dam-timeline> [https://perma.cc/74FL-FENH] (noting Egypt's expression of concern over Ethiopia's surprise announcement of April 2, 2011 on constructing the dam). The owner of the project, Ethiopian Electric Power Corporation, awarded a \$4.8B engineering, procurement, and construction contract to the Italian company, Salini Costruttori. See *id.* Two Chinese companies, China Gezhouba Group and Voith Hydro Shanghai were hired in 2019 to "pick up the pace." See *Chinese Firms Brought In to "Pick Up Pace" on Ethiopia's Nile Dam*, GLOB. CONSTR. REV. (Feb. 19, 2019), <https://www.globalconstructionreview.com/news/chinese-firms-brought-pick-pace-ethiopian-nile-dam/> [https://perma.cc/5SV7-DJ8M].

111. 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> [https://perma.cc/F23A-TQJQ].

112. See ABTEW & DESSU, *supra* note 65, at 167-68 (concluding that Egypt's geopolitical clout successfully hindered Ethiopia's attempt to acquire international financing for the project, fostering a need for internal fund sources such as bonds, lotteries, and domestic crowd funding followed by Chinese capital infusions to upgrade Ethiopia's power grid).

113. Yohannes Gedamu, *Ethiopia and Egypt's Stalemate: What's the Dam Problem?*,

analysis,¹¹⁴ which the International Court of Justice has adjudged to be “a requirement under general international law.”¹¹⁵ “Based on its specifications and sensitive location,” it appears to match Food and Agricultural Organization (FAO), United Nations Development Programme (UNDP), and World Bank criteria establishing GERD as a “high-risk infrastructure” project.¹¹⁶ Ethiopia’s former head of the Ethiopian Environmental Protection Authority, Tewoldebirhan Gebregzabher, noted that a technical workforce of Ethiopian, Sudanese, and Egyptian experts concluded that GERD’s effect on water flow and flooding will be positive in both Sudan and Egypt.¹¹⁷

Others are not so sure. Ecologists have criticized GERD, concluding that its construction has been “rushed and non-transparent” and “has raised serious questions about its sustainability aspects.”¹¹⁸ The Benishangul-Gumuz region where GERD is being built “is one of the last few places in Ethiopia with remnant forest vegetation” and it is expected to flood an area, “90 percent of which is forest resources.”¹¹⁹ Paleobiologists noted in the 1990s the adverse effects to the natural Nile cycle of flow and sediment discharge caused by human disruptions, including the completion of Egypt’s Aswan High Dam.¹²⁰ Evidence now suggests the GERD project will “seriously exacerbate[.]” the water and sediment flow that can now reach the delta coast.¹²¹ A former legal counselor to the Egyptian Foreign Ministry forewarned of GERD’s potential to cause “incalculable harm on Egypt’s

TESFANEWS (Jan. 15, 2020), https://tesfanews.net/ethiopia-egypts-stalemate-dam-problem/#disqus_thread [<https://perma.cc/Z8RW-GXWY>].

114. See *5 Myths Surround the Grand Ethiopian Renaissance Dam (GERD)*, INT’L RIVERS (Jan. 30, 2017), <https://archive.internationalrivers.org/pt-br/node/11894> [<https://perma.cc/J99N-HYGH>] (noting the Ethiopian government has made public “no Environmental and Social Assessment study.”).

115. Case Concerning Pulp Mills on the River Uruguay (Arg. V. Uru.), Judgment, 2010 I.C.J. 135, ¶ 204 (Apr. 20).

116. Amal Kandeel, *Nile Basin’s GERD Dispute Creates Risks for Egypt, Sudan, and Beyond*, ATL. COUNCIL (July 10, 2020), <https://www.atlanticcouncil.org/blogs/menasource/nile-basins-gerd-dispute-creates-risks-for-egypt-sudan-and-beyond/> [<https://perma.cc/ZX9Z-X5TB>].

117. E.G. Woldegebriel, *Ethiopian Dams Won’t Cause Harm - Ex-Head of Ethiopian Environmental Protection Authority*, REUTERS (Aug. 12, 2013), <https://news.trust.org/item/20130812133857-74iy1/> [<https://perma.cc/TXG9-8EJ5>].

118. Huiyi Chen & Ashok Swain, *The Grand Ethiopian Renaissance Dam: Evaluating Its Sustainability Standard and Geopolitical Significance*, 3 ENERGY DEV. FRONT. 11, 17 (2014).

119. *Id.* at 14.

120. See generally Daniel Jean Stanley & Andrew G. Warne, *Nile Delta: Recent Geological Evolution and Human Impact*, 260 SCI. 628 (1993) (calling attention to the “profound impact” and “long-term trends of . . . human activity . . . in the Nile delta ecosystem”); Daniel Jean Stanley & Andrew G. Warne, *Nile Delta in Its Destruction Phase*, 14 J. COASTAL RSCH. 794 (1998) (noting the conversion of the Nile delta to a “destruction phase during the past 150 years[.]” making it no longer a functioning delta but rather a subsiding and eroding coastal plain).

121. Stanley & Clemente, *supra* note 108, at 4.

water interest.”¹²² The Egyptian Ministry of Emigration has asserted that GERD will store five-times the amount of water needed in Ethiopia and cause critical water shortages in Egypt.¹²³ Nationalists in both countries have launched cyber-campaigns to influence international public opinion and taunt the opposition.¹²⁴

Filling the reservoir is expected to take between five and fifteen years.¹²⁵ If Ethiopia fills the reservoir too quickly, Egypt fears it will suffer drought. If Ethiopia maintains too much water in its reservoir during actual periods of drought, Egypt fears the same—food shortages due to irrigation shortages.¹²⁶ “During this period of fill, the Nile’s fresh water flow to Egypt may be cut by 25 percent, with a loss of a third of the electricity generated by the Aswan High Dam.”¹²⁷ The dam and its reservoir will impact human geography, including the resettlement of twenty thousand people,¹²⁸ including five indigenous populations.¹²⁹ Egypt and Sudan demanded a binding agreement over the dam’s operations during this critical but indeterminant fill period, however the parties failed to negotiate such an agreement and Ethiopia is moving apace to fill the reservoir.¹³⁰ A Dutch scientific impact study noted alternative cooperative and adaptive filling strategies that Ethiopia could employ to reduce downstream impact, particularly during dry periods.¹³¹ Beyond the politics of the

122. Diplomatiche Akademie Wein, *supra* note 36, at 15:13.

123. *Egyptians Right to the Water of the Nile*, EGYPTIAN MINISTRY OF EMIGRATION, at 00:56 (June 26, 2020), <https://www.facebook.com/Moemigegey/videos/580390952674023>.

124. See Ayanat Mersie, *The Ethiopian-Egyptian Water War Has Begun*, FOREIGN POL’Y (Sept. 22, 2020), <https://foreignpolicy.com/2020/09/22/the-ethiopian-egyptian-water-war-has-begun/> [<https://perma.cc/7Q3B-FWJ3>] (noting the nationalistic use of online sources such as Facebook and Twitter to influence public opinion and deride opposing views).

125. Conniff, *supra* note 34; See Walaa Y. El-Nashar & Ahmed H. Elyamany, *Managing Risks of the Grand Ethiopian Renaissance Dam on Egypt*, 9 AIN SHAMS ENG’G J. 2383 (2018) (presenting a review of the impounding process and a stochastic assessment of risks relating to GERD).

126. See Negm et al., *supra* note 21, at 13 (discussing the perils to Egypt in the time it may take to fill the reservoir).

127. Stanley & Clemente, *supra* note 108, at 10.

128. Sarah Vaughan & Mesfin Gebremichael, *Resettlement of Gumuz Communities around Ethiopia’s Blue Nile Dam*, FUTURE DAMS WORKING PAPER 010, at 4 (July 2020), <http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/futuredams/futuredams-working-paper-010-vaughan.pdf> [<https://perma.cc/9V4Y-5WF6>].

129. *Id.* at 8 (noting five indigenous “‘owner’ nationalities of the region: [the] Berta, Gumuz, Komo, Mao, and Shinasha.”).

130. *Egypt: Ethiopia’s Unilateral 2nd GERD Filling to Endanger Peace on Regional, International Levels*, EGYPT TODAY (July 5, 2021), <https://www.egypttoday.com/Article/1/105721/Egypt-Ethiopia-s-unilateral-2nd-GERD-filling-to-endanger-peace> [<https://perma.cc/HUK6-CGVG>] (reporting on “an official letter” received by “Ethiopian counterpart . . . confirming that Ethiopia [has] started the second filling phase of” GERD despite Egyptian and Sudanese protests).

131. See *Cairo Water Week 2019*, YOUTUBE at 24:34 (Nov. 11, 2019), <https://www.youtube.com/watch?v=CXd4povRFkM> (presenting Deltares’ Nile impact study conducted by Dr. Elco Van Beek).

impoundment phase is the flow of Nile and Atbara waters into Lake Nasser, the huge reservoir in southern Egypt and northern Sudan created by the Aswan High Dam. This inflow fluctuates substantially on a seasonal and on a yearly basis.¹³² A 102-year study of Lake Nasser's inflow demonstrates that the Nile's natural hydrological cycle can produce low flows that last for years, as occurred during the major drought period in the 1980s.¹³³ Scientific models project that the mean and interannual variability of water flow in the Nile River basin will increase by almost fifteen percent and fifty percent due to climate change.¹³⁴ This coming and dramatic increase in the variability of the Nile's output is one of the "real issues facing the Nile"; it is much bigger than the controversy surrounding the initial yet prolonged filling of GERD's reservoir.¹³⁵ During periods of light rainfall, it is projected that Ethiopia may seek to store GERD water for the purpose of power generation, while Egypt and Sudan would still demand "extra water for agricultural and municipal use."¹³⁶ Therein lies the rub.

B. Ethiopia's Hydro-Hegemony

Ethiopia's unilateral course of action to build the dam reportedly stunned donor countries,¹³⁷ which had supported the enhanced cooperation and management of the waterway through the Nile Basin Initiative (NBI) for more than a decade.¹³⁸ Construction commenced during the Arab Spring, when both

132. The Nile's historically unpredictable flow has been of human interest for millennia and presents a biblical tale. See *Genesis* 41:1-27 (detailing Pharaoh's dreams of seven fat cows arising from the Nile followed by seven scrawny cows, and Joseph's interpretation of seven years of feast followed by seven years of famine).

133. See *Cairo Water Week 2019*, *supra* note 131, at 6:40.

134. Mohamed S. Siam & Elfatih A. B. Eltahir, *Climate Change Enhances Interannual Variability of the Nile River Flow*, NATURE CLIMATE CHANGE, at 1 (Apr. 24, 2017) (correlating the Nile's hydrologic cycle to the changing El Niño/La Niña cycle and rainfall in Ethiopia).

135. David L. Chandler, *Nile Faces Greater Variability: Climate Change Could Lead to Overall Increase in River Flow, but More Droughts and Floods, Study Shows*, MIT NEWS OFF. (Apr. 24, 2017), <https://news.mit.edu/2017/nile-climate-change-droughts-floods-0424> [<https://perma.cc/4GKK-4ZNP>] (quoting MIT professor of civil and environmental engineering, Elfatih Eltahir).

136. *Bridging the Gap*, *supra* note 33, at 25.

137. See *Nile Basin Donors Stunned by Ethiopia's Unilateral Move*, DEV. TODAY (July 8, 2011), https://www.development-today.com/archive/2011/dt-9-10/nile_basin_donors_wait_and_see_after_meles_unilateral_overture [<https://perma.cc/EE2S-RWSK>] (summarizing reactions of donor countries supporting the Nile Basin Initiative).

138. The NBI was created in 1999. It is an intergovernmental partnership of ten Nile basin stakeholders (including Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania and Uganda (with Eritrea observing)), to seek more sustainable and equitable approaches to the river's use. See *generally About*, NILE BASIN INITIATIVE, <https://nilebasin.org/> [<https://perma.cc/Z6B2-LMKV>]. In 2001, ten development partners (Canada, Denmark, the European Union, France, Finland, Netherlands, Norway, Sweden, the United

lower riparians were preoccupied, Egypt by the revolutionary uprising in Tahir Square and Sudan by international investigations into gross human rights violations by the Bashir regime.¹³⁹ The construction undercut the NBI's Eastern Nile Subsidiary Action Program (ENSAP),¹⁴⁰ and the efforts of its executive arm," the Eastern Nile Technical Regional Office (ENTRO),¹⁴¹ to forward a Joint Multipurpose Project (JMP) developing the hydraulic infrastructure of the Blue Nile basin.¹⁴² It blindsided and nullified a joint Ethiopian-Norwegian project to design two other Nile dams,¹⁴³ and it cut against the core objectives of the Nile Basin Discourse, a network of civil society organizations formed in 2003 to

Kingdom, and the World Bank) established the Nile Basin Trust Fund (NBTF) to fund "cooperative water resources management and development[.]" which helped to stimulate \$6 billion in regionally significant projects. *See* Cooperation in International Waters in Africa (CIWA), *The Nile Basin Trust Fund*, WORLD BANK (Jan. 14, 2016), <https://www.worldbank.org/en/programs/cooperation-in-international-waters-in-africa/brief/nile-basin-trust-fund> [<https://perma.cc/9DPM-E5AE>]; *see also* *The Nile Story: Highlights of 15 years of Nile Cooperation (English)*, WORLD BANK GRP. (May 2015), <https://documents1.worldbank.org/curated/en/804531467997253648/pdf/102247-BRI-P092334-PUBLIC-ADD-SERIES-Box394828B-Brief-1-Highlights.pdf> [<https://perma.cc/VY2L-FY5T>] (charting NBTF's pooled funding contributions to leverage Nile investment projects). The NBTF closed in 2015 and development partners consolidated financial support around the Cooperation for International Waters in Africa Trust Fund (CIWA), which was established in 2011 and managed by the World Bank. CIWA expanded support for riparian governments to include Sub-Saharan Africa. *See* *Cooperation in International Waters in Africa (CIWA)*, WORLD BANK, <https://www.worldbank.org/en/programs/cooperation-in-international-waters-in-africa> [<https://perma.cc/G7Y9-8TTH>].

139. Protests in Tahir Square in Cairo forced the resignation of Egyptian president Hosni Mubarak while the International Criminal Court issued a warrant for the arrest of Sudanese president Mohamad Al Bashir for human rights violations. *See* Habtamu Alebachew, *International Legal Perspectives on the Utilization of Trans-Boundary Rivers: The Case of the Ethiopian Renaissance (Nile) Dam*, in *WATER AND THE LAW: TOWARDS SUSTAINABILITY* 66, 75 (Michael Kidd et al. eds., 2014).

140. *See* *About ENTRO-ENSAP*, ENTRO, NILE BASIN INITIATIVE (Feb. 28, 2011), <http://entro.nilebasin.org/entro/who-we-are> [<https://perma.cc/87LJ-BLNP>].

141. *See id.*

142. *See* Azeb Mersha et al., *Eastern Nile Basin Water System Simulation Using HEC-Ressim Model*, CITY UNIV. N.Y. ACAD. WORKS (2014), https://academicworks.cuny.edu/cgi/viewcontent.cgi?article=1372&context=cc_conf_hic [<https://perma.cc/79XC-R7VX>] (noting the considerable work product of ENSAP and its major projects); *see generally* Ana Elisa Cascão & Alan Nicol, *Changing Cooperation Dynamics in the Nile Basin and the Role of the GERD*, in *THE GRAND ETHIOPIAN RENAISSANCE DAM AND THE NILE BASIN: IMPLICATIONS FOR TRANSBOUNDARY WATER COOPERATION* 90, 90-91 (Zeray Yihdego et al. eds., 2018) (analyzing GERD in terms of changing power relations and transboundary integration prospects).

143. *See* *The Grand Ethiopian Renaissance Dam Fact Sheet*, INT'L RIVERS (Jan. 24, 2014), <https://archive.internationalrivers.org/resources/the-grand-ethiopian-renaissance-dam-fact-sheet-8213> [<https://perma.cc/7382-V3GX>] (costing Norway \$2-3 million on forsaken project design).

support sustained integrative river basin management.¹⁴⁴ “[T]wice as tall as the Statue of Liberty and as wide as the Brooklyn Bridge is long[,]”¹⁴⁵ the reservoir behind it will be the eighth largest in the world.¹⁴⁶ With a reservoir impounding capacity of 74 billion cubic meters,¹⁴⁷ it is projected to submerge an area approximately four times the size of Cairo.¹⁴⁸ GERD will join Egypt’s Aswan High Dam, which created the third largest reservoir in the world, to create two gargantuan multipurpose dams operating on the same river system.¹⁴⁹ The rippling effect of mega-dam structures on the Nile River has caused alarm among hydrologists.¹⁵⁰ Although Nile basin countries share challenges relating to water demand, environmental degradation, recurrent flooding, droughts, and energy insecurity—and notwithstanding international efforts to facilitate what now amount to 30 projects of regional significance¹⁵¹—no coordinated and comprehensive agreement holistically manages the Nile.¹⁵² For millennia, claims

144. See *Our Identity*, NILE BASIN DISCOURSE, <https://www.nilebasindiscourse.org/about-nbd/our-identity.html> [<https://perma.cc/6A8G-PHMG>] (detailing the history, vision, and core values of the civil society networks in national and regional partnership with the NBI).

145. *Egypt, Ethiopia and Sudan must learn how to share the Nile river*, ECONOMIST (July 2, 2020), <https://www.economist.com/leaders/2020/07/02/egypt-ethiopia-and-sudan-must-learn-how-to-share-the-nile-river> [<https://perma.cc/BAB8-YJBC>]. The dam is 145 meters high and 1,780 meters long. See *Grand Ethiopian Renaissance Dam Project, Benishangul-Gumuz*, WATER TECH., <https://www.water-technology.net/projects/grand-ethiopian-renaissance-dam-africa/> [<https://perma.cc/772X-R3B4>].

146. Kenneth Strzepek, *Responding to the Crisis of the Filling of the GERD: An International Insurance Approach?* (2015), https://www.iwra.org/wp-content/uploads/2017/03/GERD_Presentation8.pdf [<https://perma.cc/7DRS-6J5S>].

147. *Water Technology*, *supra* note 109. Seventy-four billion cubic meters translates to approximately 64-million-acre feet, or the amount of water needed to submerge 64 million acres in one foot of water. See Conniff, *supra* note 34.

148. *The Grand Ethiopian Renaissance Dam Fact Sheet*, *supra* note 143.

149. Some experts imply that the dam is overbuilt. They contend that the dam’s design will only be able to operate at peak capacity twenty-eight percent of the time, or, during those few months of the year when rainfall is highest in the Ethiopian highlands. See *id.*; see also *Bridging the Gap*, *supra* note 33, at 8. If both countries “seek to simultaneously fill up their reservoirs in anticipation of drought[,] . . . chances for conflict would be high” due to insufficient water supply. *Id.* at 20.

150. “[O]ver 25 dams and major water control infrastructures” operate on the Nile. The GERD will join the Tekeze and Fincha structures in Ethiopia. Sudan operates major dams at Roseires, Sennan, Khasm El Girba, and Gebel El Aulia. Egypt operates the Aswan High Dam on the Nile along with two other dams in the Nile delta. See ABTEW & DESSU, *supra* note 65, at 97-99 (mapping the locations of major dams on the Nile).

151. See *Stronger Together: 20 Years of Cooperation Around the Nile*, WORLD BANK (Feb. 22, 2019), <https://www.worldbank.org/en/news/feature/2019/02/22/stronger-together-20-years-of-cooperation-around-the-nile> [<https://perma.cc/633M-4F4X>].

152. See Hassan & Al Rasheedy, *supra* note 40, at 36 (noting the best option for the states in the Nile region would be to establish a comprehensive and durable legal regime).

to the Nile and uses of its water remained within the domain of hegemonic powers. However, such claims remained abstract, even nominal in terms of affecting the river's holistic integrity. Like Grotius's sixteenth century belief that the oceans were too mighty to be possessed,¹⁵³ the Nile, too, appeared subject only to certain uses such as navigation, fishing, irrigation, and trade. On the cusp of controlling the flow of the Blue Nile, Ethiopia has suddenly brought into sharper relief the shifting course of the Nile's hegemonic history. According to one commentator, "[t]he most troubling lesson one can draw from this [GERD] episode is that unilateralism works."¹⁵⁴

After nearly a decade, the dam is nearing completion. Despite conflicting reports, Ethiopia began filling the reservoir during the 2020 summer rainy season.¹⁵⁵ Egypt responded by placing its armed forces on the "highest state of alert", insinuating military action against the dam.¹⁵⁶ The office of Ethiopia's Prime Minister, Nobel Peace Prize Laureate Abiy Ahmed, then announced that "enough water had accumulated to test . . . two [of the dam's energy-producing] turbines."¹⁵⁷ Sudan complained that this limited filling diminished water flow at its al-Deim water station bordering Ethiopia¹⁵⁸ and "caused interruption to the

153. See HUGO GROTIUS, *MARE LIBERUM* 1609-2009, at 81 (Robert Feenstra ed., with a general introduction by Jeroen Vervliet, 2009) (1609); see also CHRISTOPHER R. ROSSI, *SOVEREIGNTY AND TERRITORIAL TEMPTATION: THE GROTIAN TENDENCY* 1 (2017).

154. *Roundtable: Keeping the Peace in the Nile Basin*, CENTURY FOUND. (Dec. 14, 2020), <https://tcf.org/content/report/keeping-peace-nile-basin/?agreed=1> [<https://perma.cc/CX9P-BT6T>] (comment by Timothy Kaldas). Other examples of unilateralism using Nile water is the highly controversial Toshka Project (New Valley Project), the Merowe Dam in Sudan, the Tekeze Dam in Ethiopia, and the Bujagali Dam in Uganda. See Ana Elisa Cascão, *Nile Water Governance*, in *THE NILE RIVER BASIN: WATER, AGRICULTURE, GOVERNANCE AND LIVELIHOODS* 229, 249-50 (Seleshi Bekele Awulachew et al. eds., 2012).

155. See *River Nile Dam: Reservoir Filling Up, Ethiopia Confirms*, BBC NEWS (July 15, 2020), <https://www.bbc.com/news/world-africa-53416277> [<https://perma.cc/N4HV-5W4H>] (citing Ethiopian Water Minister Seleshi Bekele's statement to an Ethiopian state broadcast that the reservoir had started to fill "in line with the natural process."); but see Addis Ababa, *Ethiopian TV Apologizes for Error in Nile Dam Reporting*, DAILY SABAH (July 16, 2020), <https://www.dailysabah.com/world/africa/ethiopian-tv-apologizes-for-error-in-nile-dam-reporting> [<https://perma.cc/HY53-26Y5>] (clarifying that the Water Minister's remarks "were due to recent heavy rainfall and not due to the conscious efforts to fill the dam.").

156. Arthur Kenny, *The Controversial Geopolitics of Ethiopia's Dam Building*, GEOPOLITICS (Feb. 1, 2021), <https://thegeopolitics.com/the-controversial-geopolitics-of-ethiopia-dam-building/> [<https://perma.cc/8X8C-5SSW>].

157. See *Ethiopia Says It Has Reached First-Year Target for Filling Divisive Mega-Dam*, FRANCE24 (July 21, 2020 at 9:44 PM), <https://www.france24.com/en/20200721-ethiopia-says-it-has-reached-first-year-target-for-filling-divisive-mega-dam> [<https://perma.cc/FSG8-8BMT>].

158. See *River Nile Dam: Sudan Blasts 'Unilateral' Move as Ethiopia Dam Fills*, BBC NEWS (July 16, 2020), <https://www.bbc.com/news/world-africa-53429014> [<https://perma.cc/86ZE-TY5M>].

drinking water supply of Khartoum[.]”¹⁵⁹ Ethiopia’s second filling, contemplated at the commencement of the 2021 rainy season, intends to capture 13.5 billion cubic meters of water—three times the size of the 2020 filling.¹⁶⁰ Egypt maintains that historic rights guarantee its access to receive approximately two-thirds of the Nile’s flow.¹⁶¹ While promising not to threaten anyone, Egypt’s President Abdel Fattah Al-Sisi intoned that no country “can take a single drop of water from Egypt” without stepping over a “red line” and provoking “unimaginable instability.”¹⁶² According to former Egyptian President Anwar Sadat (1918-1981), that red line would not be drawn in Egypt. Responding to Ethiopia’s proposal to build a series of dams on the Nile in 1978, Sadat said, “[w]e are not going to wait and die of thirst in Egypt. . . [w]e’ll go to Ethiopia and die there.”¹⁶³

Al Sisi’s slightly more veiled threat belies a potentially destabilizing condition of powerlessness in view of Ethiopia’s resolute course of action.¹⁶⁴ As neither Ethiopia nor Egypt have ratified the 1997 UN Watercourses Convention,¹⁶⁵ which requires upstream States to consult downstream States

159. *Yasser Abbas: Will There Be Armed Conflict Over Nile Dam Dispute?: Talk to Al Jazeera*, YOUTUBE, at 8:28 (Apr. 1, 2021), <https://www.youtube.com/watch?v=5T723gS9BwQ> (interviewing Sudan’s Irrigation Minister who claims that a drinking water interruption has already caused by the dam’s retention of just four billion cubic meters of water) [hereinafter *Abbas*].

160. Hamza Hendawi, *Grand Ethiopian Renaissance Dam Threatens ‘Unimaginable Instability’ in the Region, Says El Sisi*, NATIONALNEWS (Egypt) (Mar. 30, 2021), <https://www.thenationalnews.com/mena/egypt/grand-ethiopian-renaissance-dam-threatens-unimaginable-instability-in-the-region-says-el-sisi-1.1194089> [<https://perma.cc/ZU94-9FQ7>].

161. Egypt’s historic rights claim received modern expression in two 1929 letters exchanged by Mohammed Mahmoud Pasha, President of the Egyptian Council of Ministers, and Lord Lloyd, the British High Commissioner. For excerpts of the correspondence, see Pierre Crabitès, *The Nile Waters Agreement*, 8 FOR. AFF. 145, 145-47 (1929).

162. *No One Will Take a Drop of Water From Egypt, Otherwise, There Will Be a State of Unimaginable Instability in the Region: Sisi*, EGYPT INDEP. (Mar. 31, 2021), <https://egyptindependent.com/video-no-one-can-take-a-single-drop-of-water-from-egypt-says-sisi/> [<https://perma.cc/TS84-3ZZE>] (quoting and rebroadcasting El Sisi’s remarks).

163. Walsh & Sengupta, *supra* note 106.

164. See Michael Woldemariam, *Nile Be Dammed: Toxic Water Politics Threaten Democracy and Regional Stability*, FOREIGN AFF. (Aug. 10, 2020), <https://www.foreignaffairs.com/articles/africa/2020-08-10/nile-be-dammed> [<https://perma.cc/3T6C-XDPL>] (referring to the GERD project as “a fait accompli”).

165. For a list of signatories, approvals, acceptances, accessions, ratifications, declarations, and reservations to the Watercourses Convention, see Depositary: Status of Treaties, *Convention on the Law of the Non-Navigational Uses of International Watercourses*, UNITED NATIONS TREATY COLLECTION, https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-12&chapter=27&clang=_en [<https://perma.cc/N32C-9E4C>]. In fact, none of the Nile riparian countries are Parties to the convention. Sudan and Kenya voted in favor of the convention but did not sign or ratify it. Egypt, Ethiopia, Tanzania, and Rwanda abstained; Uganda, Eritrea, and the Democratic Republic of Congo did not participate in the vote, and Burundi voted against the convention. See Salman, *The Nile River Basin*, *supra* note 52, at 384 n.19.

before beginning such mega-projects,¹⁶⁶ and, absent any major regional agreement other than a 2015 Declaration of Principles promise to pursue a “spirit of cooperation” on the first filling and operation of the dam,¹⁶⁷ Al-Sisi must pivot away from the *fait accompli* arising on his upstream Nile doorstep and harness international support for a negotiated management scheme or face a potentially disastrous military option.¹⁶⁸

*C. Primordial Politics, Filling the Dam, and the Wider Political
Context of the Horn of Africa*

Research on the likelihood of conflict over transboundary water resources focuses on rational choice calculations on the benefits and limits to negotiating differences.¹⁶⁹ The strongest state in a basin historically has best been able to manage riparian interactions,¹⁷⁰ although “visceral and primordial” issues

166. See, e.g., UN WATERCOURSES CONVENTION, at art. 3(5) (one of 53 references to consultation in the treaty, requiring watercourse states to consult in good faith for the purpose of concluding a watercourse agreement).

167. 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 (GERDP), Principle V, Mar. 23, 2015, https://www.internationalwaterlaw.org/documents/regionaldocs/Final_Nile_Agreement_23_March_2015.pdf [<https://perma.cc/S5AY-9DXN>] (committing the three countries to other principles as well, such as regional integration and sustainability, prevention of causing significant harm, equitable and reasonable utilization, prioritized downstream purchase of power generated, information exchange, dam safety, territorial integrity, peaceful settlement of disputes through requests for conciliation, mediation or Head of State consideration). Salman has argued that the Agreement on Declaration of Principles establishes in its preamble the “equality of all riparians” and “for the first time in history” levels the playing field in the Nile basin. See also Salman, *The Nile River Basin*, *supra* note 52, at 388-89.

168. See generally Charles W. Dunne, *The Grand Ethiopian Renaissance Dam and Egypt's Military Options*, ARAB CTR., WASH. D.C. (July 30, 2020) (assessing Cairo's military options and concluding even a symbolic intervention “would be fraught with risks”).

169. See Mark Zeitoun & Naho Mirumachi, *Transboundary Water Interaction I: Reconsidering Conflict and Cooperation*, 8 INT'L ENV'T AGREEMENTS 297 (2008) (evaluating the coexistence of conflict and cooperation in transboundary water disputes); Paul R. Hensel et al., *Conflict Management of Riparian Disputes*, 25 POL. GEOGRAPHY 383, Abstract (2006) (analyzing the “linkages between resource scarcity and inter-state conflict” in the context of cross-border rivers); Kenneth A. Oye, *Explaining Cooperation under Anarchy: Hypothesis and Strategies*, 38 WORLD POL. 1, 1-2 (1985) (considering how, in certain contexts, anarchy enables cooperation and assessing alternative State strategies for enabling cooperation).

170. See Jaroslav Tir & John T. Ackerman, *Politics of Formalized River Cooperation*, 46 J. PEACE RSCH. 623, 626-27 (2009) (recognizing security concerns of hegemonic states that may lead to riparian cooperation); Marit Brochmann & Paul R. Hensel, *The Effectiveness of Negotiations over International River Claims*, 55 INT'L STUD. Q. 859, 866 (2011) (assessing the likelihood of riparian negotiations based on the relative power of the upstream and downstream state).

attaching to the identities of the riparians can hinder peaceful management.¹⁷¹ Egypt's "role in the Nile basin [provides] an example of a downstream state that has [dictated management terms] due to its relative power advantage."¹⁷² Yet Ethiopia stands alone as the only sub-Saharan African country to successfully resist colonization.¹⁷³ Its ability to unilaterally put into place the financial and administrative means to launch GERD signals its rising economic status¹⁷⁴ and its disregard for anachronistic descriptions of Egypt's hydro-hegemony.¹⁷⁵ The Trump Administration withheld between \$100 to \$270 million in foreign aid to prod Ethiopia to the negotiating table, however the Biden Administration ended that linkage policy to not further antagonize relations with Ethiopia.¹⁷⁶ This policy switch may indicate growing realization of the shifting geopolitical power dynamics governing the Nile River basin.¹⁷⁷ Scholars have spotlighted Ethiopia's challenge to Egyptian hydro-hegemony.¹⁷⁸ Although eschewing a military

171. Miriam R. Lowi, *Rivers of Conflict, Rivers of Peace*, 49 J. INT'L AFF. 123, 123 (1995).

172. Brochmann & Hensel, *supra* note 170, at 865.

173. See Joshua Keating, *Lessons from the Uncolonized*, FOREIGN POL'Y (Apr. 30, 2013, 3:15 PM), <https://foreignpolicy.com/2013/04/30/lessons-from-the-uncolonized/> [<https://perma.cc/CCM3-RD5L>].

174. Although still one of the poorest countries in the world, with an average per capita income of \$850, Ethiopia has the fastest growing economy in the region and has maintained a strong "broad-based" growth average of 9.4% between 2010-2020, establishing positive trends in poverty reduction. See *The World Bank in Ethiopia*, WORLD BANK (Oct. 13, 2021), <https://www.worldbank.org/en/country/ethiopia/overview> [<https://perma.cc/R34P-2P8D>]. Ethiopia attributes its economic expansion to government funded large-scale infrastructure developments and homegrown economic reform, and in 2021 announced a ten-year macroeconomic plan of structural transformation and economic development that clearly intends to utilize the energy and irrigation benefits of GERD. See *Ten Years Development Plan: A Pathway to Prosperity 2021-2030*, FED. DEMOCRATIC REPUBLIC ETH. PLAN. & DEV. COMM. (2021), https://europa.eu/capacity4dev/nexus_ethiopia/documents/ethiopia-ten-years-development-plan-2021-2030-planning-and-development-commission-federal [<https://perma.cc/9SCN-HWLF>].

175. See Tekuya, *supra* note 42, at 11-12 (noting Egypt's leveraging of influence among international financial institutions such as the World Bank and African Development Bank to preserve its resource capture of Nile water).

176. See Salem Solomon, *US Restoration of Foreign Aid to Ethiopia Signals New Course*, VOA NEWS (Feb. 25 2021, 3:55 PM), <https://www.voanews.com/africa/us-restoration-foreign-aid-ethiopia-signals-new-course> [<https://perma.cc/PSZ7-3NY3>] (noting the diplomatic strain between the two countries following President Trump's claim Egypt would "end up blowing up" the dam).

177. See Gashaw Ayferam Endaylalu, *Egypt's Quest for Hydro Hegemony and the Changing Power Relation in the Eastern Nile Basin*, 5 ETH. J. SOC. SCI. 1, at Abstract (2019), <https://journals.bdu.edu.et/index.php/ejss/article/view/154/237> (noting changes in the region that "foreshadow[] a new order"); Intikhab Ahmad, *The New Hydro-Political Situation In Africa: Challenges for Nile River Basin Countries*, 22 WORLD AFF. 60, 60 (2018) (noting changing balance of power dynamics in the Nile basin, complicated most recently by the emergence of the new state of South Sudan).

178. See generally Tekuya, *supra* note 42 (analyzing recent upstream challenges to Egyptian hydro hegemony and proposing a basin-wide treaty); Hala Nasr & Andreas Neef, *Ethiopia's*

response, Sudan's Foreign Minister Mariam al-Sadiq al-Mahdi indicated a "significant mobilisation of global opinion. . . to prevent Ethiopia from moving ahead with destabilising the security of its significant neighbours."¹⁷⁹

Scientific models suggest that cooperative management schemes minimize the projected "trade-off between the increase in electricity production and decrease in returns from irrigation in the wider basin area."¹⁸⁰ Estimates vary greatly as to the time needed to fill the reservoir, with a recent study suggesting eight to nine years for filling while retaining twenty percent of the Nile's annual flow.¹⁸¹ Egypt's circumspect position maintains that the dam should be filled over a period of 12 to 21 years, with agreements in place about water management and release during future droughts.¹⁸² Egypt and Sudan desired a trilateral agreement on these two issues before filling commenced.¹⁸³ Sudan has recently pressed Ethiopia to elevate the role of the United States and European Union from observers to mediators of the dispute.¹⁸⁴ Ethiopia rejected the prospect of postponement, as well as the attempt to internationalize the negotiations, opting instead to confine the discussions to the African Union.¹⁸⁵ Sudan and Egypt have fruitlessly asserted the need to put into place a binding agreement before disagreements over fill and release issues materialize over water flow and drought periods.¹⁸⁶

Sudan previously supported Ethiopia's project, envisioning it as a source of flood control and cheap and much needed electric energy.¹⁸⁷ If managed cooperatively, GERD promises energy and water rewards for each of the riparian

Challenge to Egyptian Hegemony in the Nile River Basin: The Case of the Grand Ethiopian Renaissance Dam, 21 GEOPOL 969 (2016) (describing Ethiopia's GERD development as a "counterhegemonic power play"); Ana Elisa Cascão, *Ethiopia-Challenges to Egyptian Hegemony in the Nile Basin*, 10 WATER POL. 13 (2008) (arguing that non-hegemonic riparians on the Nile have the ability to contest hydro-political configurations).

179. *Sudan Rules Out Armed Action over Ethiopia's GERD*, AHARAMONLINE (Apr. 8, 2021), <https://english.ahram.org.eg/NewsContent/2/10/408810/World/Africa/Sudan-rules-out-armed-action-over-Ethiopia-GERD.aspx> [<https://perma.cc/GBM9-4G3M>].

180. Kenny, *supra* note 156.

181. ABTEW & DESSU, *supra* note 65, at 106, 110 (noting "diverse conclusions" about the time needed to fill the reservoir and suggesting approximately eight to nine years).

182. Kenny, *supra* note 156.

183. *Ethiopia to Go On Filling Nile Mega-Dam Despite Impasse: Minister*, PHYS. ORG (Apr. 7, 2021), <https://phys.org/pdf537010105.pdf> [<https://perma.cc/B232-M5X2>].

184. *See Abbas, supra* note 159, at 3:22 (expressing Sudan's interest in elevating the observers and adding United Nations representatives to the negotiations under the aegis of the African Union).

185. Abdel Latif Wahba, *Ethiopia Asks UN to Urge Egypt, Sudan to Resume Nile Dam Talks*, BLOOMBERG (Apr. 19, 2021, 6:15 PM), <https://www.bloomberg.com/news/articles/2021-04-19/ethiopia-asks-un-to-urge-egypt-sudan-to-resume-nile-dam-talks> [<https://perma.cc/F42P-HGVH>].

186. *See Abbas, supra* note 159, at 10:56 (expressing Sudan's view of a need for a binding agreement on data and information exchange).

187. *See id.*, at 13:59 (explaining Sudan's change in position).

neighbors on the Blue Nile.¹⁸⁸ It may also serve as a catalyst for regional integration across the basin.¹⁸⁹ However, Sudan's support has shifted from "being broadly welcoming to being suspicious and belligerent" due to the overthrow of President Omar Bashir's autocratic rule and the "increasing influence of the military" in Sudan's transitional government.¹⁹⁰

Sudan's newly operating military junta reviews with unease the consequences of GERD and its proximity to Sudan's Roseires Dam on the Blue Nile, which is one-tenth the size of GERD.¹⁹¹ Moreover, Sudan's transitional government deployed troops in December 2020 along the disputed but agriculturally fertile border region of the 250 kilometer square al-Fashaqa triangle.¹⁹² This area forms part of Ethiopia's and Sudan's 1600 kilometer common border.¹⁹³ This move reignited a border dispute with Ethiopia dating from the beginning of the Anglo-Egyptian condominium rule over eastern Sudan (1898-1956).¹⁹⁴ However, this stretch was never demarcated with certainty by a series of treaties with British and Italian colonial powers.¹⁹⁵ The disputed delimitation line that materialized in

188. See *The Grand Ethiopian Renaissance Dam (GERD): A Catalyst for Cooperation on the Nile*, WATER INT'L (Dec. 2016), https://www.iwra.org/wp-content/uploads/2017/03/PB_N5_web.pdf [<https://perma.cc/E7VH-EWMB>] (noting GERD's potential benefits beyond energy production across the basin).

189. See Ana Elisa Cascão & Alan Nicol, *GERD: New Norms of Cooperation in the Nile Basin?*, 41 WATER INT'L 550 (2016) (discussing how GERD "can represent a constructive step towards wider institutional transboundary cooperation").

190. *Gerd: Sudan Talks Tough With Ethiopia over River Nile Dam*, BBC NEWS (Apr. 22, 2021), <https://www.bbc.com/news/world-africa-56799672> [<https://perma.cc/BK3U-D4US>]. But see *Abbas*, *supra* note 159, at 13:59 (disputing Sudan's change in support for GERD due to the Sudanese junta's realignment with the politics of Egypt's authoritarian government). In early March 2021, Egypt and Sudan signed an "unprecedented" military cooperation agreement. See *Egypt, Sudan Sign Military Cooperation Agreement*, EGYPT INDEP. (Mar. 2, 2021), <https://egyptindependent.com/egypt-sudan-sign-military-cooperation-agreement/> [<https://perma.cc/4YVH-GDHL>]. Egyptian forces joined Sudanese troops to stage "Guardians of the Nile" military exercises in May 2021. See Noha Elhennawy, *Egypt, Sudan to Hold Joint Drill Amid Ethiopia Nile Dispute*, AP NEWS (May 21, 2021), <https://apnews.com/article/ethiopia-sudan-africa-middle-east-egypt-41c42e2e5a13ac30f2e622076fac2630> [<https://perma.cc/4GRB-32SK>].

191. See *Abbas*, *supra* note 159, at 15:22.

192. *El-Fashaga-14°N 36°E*, GLOBALSECURITY.ORG, <https://www.globalsecurity.org/military/world/war/fashaga.htm> [<https://perma.cc/6U5Z-VBSQ>]; see generally Alex de Waal, *Viewpoint: Why Ethiopia and Sudan have Fallen Out Over Al-Fashaga*, BBC NEWS (Jan. 3, 2021), <https://www.bbc.com/news/world-africa-55476831> [<https://perma.cc/4DNL-LF3A>].

193. Mulatu Wubneh, *This Land Is My Land: The Ethio-Sudan Boundary and the Need to Rectify Arbitrary Colonial Boundaries*, 33 J. CONTEMP. AFR. STUD. 441 (2015).

194. *Id.* at 441-42 (tracing the Ethio-Sudan boundary dispute to the period of Egyptian-British condominium rule over Sudan and a 1902 treaty concluded with no representation from Ethiopia).

195. See Inside Story Al Jazeera, *What's Reigniting a Border Dispute Between Ethiopia & Sudan?* YOUTUBE at 3:59 (Jan. 15, 2021), <https://www.youtube.com/watch?v=E5-WGUD88XM> (presenting the view of border indeterminacy by Research Professor Alex De Waal). The eventual

1903, the “single-hande[d]” creation of Britain’s Major Charles Gwynn, has been the source of “on-and-off tensions between Sudan and Ethiopia” for decades.¹⁹⁶ Ethiopia alleged that while preoccupied with a rebellion in Tigray province to Al-Fashaqa’s immediate east,¹⁹⁷ Sudanese troops launched a campaign to retake the Al-Fashaqa region from Ethiopian militias that had occupied the region for 25 years.¹⁹⁸ Eritrean forces, embroiled in enmity over a poorly drawn Italian borderland stretch separating Tigray province,¹⁹⁹ allied with the Ethiopian government to combat the mutually reviled resistance movement in Tigray. These aggregated ethnic tensions, compounded by incomplete and ill-conceived colonial line-drawing, have, again, propelled the Horn of Africa into a major humanitarian crisis.²⁰⁰ Ethiopia’s multi-front foreign policy engagements now implicate and compromise the GERD project, allowing “Egypt a chance to reshuffle its negotiation cards and gain international and African support” against the pace of the mega-dam completion.²⁰¹

architect of the border demarcation, British Major Charles Gwynn, later admitted the problem of demarcating this frontier was due to the lack of means for making border reconnaissance trips, supply shortages, the region’s backwardness, and the unwillingness of the Ethiopians to employ Europeans to represent Ethiopia in the demarcation process. Dr. Wondwosen Teshome, *Colonial Boundaries of Africa: The Case of Ethiopia’s Boundary with Sudan*, 9 EGE ACAD. REV. 337, 346 (2009) (quoting, in part, border architect Major Charles Gwynn).

196. Teshome, *supra* note 195, at 350-51.

197. Inside Story Al Jazeera, *supra* note 195, at 2:15 (translating comments by Ethiopian Foreign Ministry spokesman, Dina Mufti).

198. A 1995 agreement between Ethiopia and Sudan demilitarized the Al-Fashaqa border area, only to result in confrontations between militias led by the Sudanese Popular Defense Forces and the Ethiopian Amhara militia’s Shifta brigade. See Fulvio Beltrami, *Ethiopia: What are the Sudanese Troops doing in Berkat Norain and Al-Fushaqa?*, L’INDRO (Dec. 9, 2020), <https://lindro.it/ethiopia-what-are-the-sudanese-troops-doing-in-berkat-norain-and-al-fushaqa/> [<https://perma.cc/J7LD-LBD5>].

199. The frontier was purportedly demarcated by the Treaty of Addis Ababa between Ethiopia and Italy. See Treaty of Peace Between Ethiopia and Italy, Signed at Addis Ababa, Eth.-It., Oct. 26, 1896, 183 Consol. T.S. 423. However, a border incident around Badme, Eritrea, sparked the 1998-2000 war, killing tens of thousands of civilians. See Tesfalem Araia, *Remembering Eritrea-Ethiopia Border War: Africa’s Unfinished Conflict*, BBC (May 6, 2018), <https://www.bbc.com/news/world-africa-44004212> [<https://perma.cc/PFA9-YCCG>]. Fighting broke out again in 2020, this time purportedly with Eritrean forces. See ‘Slaughtered like chickens’: Eritrea Heavily Involved in Tigray Conflict, *Say Eyewitnesses*, GUARDIAN (Dec. 21, 2020), <https://www.theguardian.com/global-development/2020/dec/21/slaughtered-like-chickens-eritrea-heavily-involved-in-tigray-conflict-say-eyewitnesses> [<https://perma.cc/D9TH-Q3FE>].

200. See Declan Walsh & Abdi Latif Dahir, *Why Is Ethiopia At War With Itself?* N.Y. TIMES (Sept. 17, 2021), <https://www.nytimes.com/2020/11/05/world/africa/ethiopia-tigray-conflict-explained.html> [<https://perma.cc/4WYM-FLBH>] (estimating more than five million Tigrayans in need of urgent assistance, 1.7 million people displaced, and impending famine).

201. See George Mikhail, *Ethiopian Armed Conflict May Affect Nile Dam Dispute*, AL-MONITOR (Nov. 18, 2020), <https://www.al-monitor.com/originals/2020/11/ethiopia-tigray-conflict->

III. THE BIRTH OF NILE HYDRO-EGOISM

With hundreds of international river basins covering about half of the earth's land surface,²⁰² hydro-political security practices range from integrated and cooperative expressions of hydrosolidarity to contested and fragmented forms of hydro-hegemony and hydro-egoism.²⁰³ The term 'hegemony' traces to the Italian critical Marxist theorist, Antonio Gramsci (1891-1937).²⁰⁴ Contrary to Marx's materialistic and deterministic construction of history,²⁰⁵ Gramsci emphasized the importance of politics, ideology, and law as dynamic, subtle hegemonic forces.²⁰⁶ He wrote "the supremacy of a social group manifests itself" in terms of domination and intellectual and moral leadership that may influence "kindred and allied groups."²⁰⁷ Mark Zeitoun and Jeroen Warner adapted the idea to transboundary water frameworks,²⁰⁸ concluding that water conflicts cover a range of power relations but that a hydro-hegemon establishes the form of riparian relations.²⁰⁹ This form may result in a "positive/leadership" management and sharing or a "negative/dominative" exploitation or control of water resources.²¹⁰ As an analytical tool, the concept of hydro-hegemony has been explored in relation to Southeast Anatolia and Turkey's control of the headwaters of the Tigris and Euphrates rivers,²¹¹ China's dominant position vis-à-vis the Mekong

impact-gerd-talks-egypt-sudan.html [https://perma.cc/XN4W-QA3C] (quoting Abbas Sharaky, Professor of Geology and Water Resources, University of Cairo).

202. Melissa McCracken & Aaron T. Wolf, *Updating the Register of International River Basins of the World*, 35 INT'L J. WATER RESOURCES DEV. 1, 3 (2019) (mapping 310 basins covering 47.1 percent of the world's land surface).

203. Patricia Wouters et. al, *Water Security, Hydrosolidarity, and International Law: A River Runs Through It* . . . , 19, Y.B. INT'L ENVTL. L. 97, 127 n.182 (2009) (discussing Malin Falkenmark's introduction of the term hydro-solidarity and contrasting it with its philosophical opposite, hydro-egoism).

204. See generally ANTONIO GRAMSCI, SELECTIONS FROM THE PRISON NOTEBOOKS (Quintin Hoare & Geoffrey Nowell Smith eds. and trans., 1971) (elaborating on the complexity of power through the development of the idea of hegemony).

205. See generally KARL MARX, THE GERMAN IDEOLOGY (1832) (detailing the materialist conception of history); see also KARL MARX, THE EIGHTEENTH BRUMAIRE OF LOUIS BONAPARTE (1852) (famously asserting: "Men make their own history, but they do not make it as they please").

206. GRAMSCI, *supra* note 204, at 215-16 (discussing the "multitude of . . . [state activities] . . . which form the apparatus of the political and cultural hegemony of the ruling classes.").

207. *Id.* at 87.

208. See generally Mark Zeitoun & Jeroen Warner, *Hydro-Hegemony—A Framework for Analysis of Trans-Boundary Water Conflicts*, 8 WATER POL'Y 435 (2006) (introducing Gramscian hegemonic theory to water politics).

209. *Id.* at 455.

210. *Id.*

211. See generally Jeroen Warner, *Contested Hydrohegemony: Hydraulic Control and Security in Turkey*, 1 WATER ALTERNATIVES 271 (2008).

River,²¹² and Israel's asserted authority over the Jordan River.²¹³ Notable to Egypt,²¹⁴ the United Nations Educational, Scientific and Cultural Organization (UNESCO)'s World Heritage Committee inscribed Kenya's Lake Turkana on its list of endangered sites due, in part, to the "disruptive effect of Ethiopia's Gibe III dam on the flow and ecosystem of [the lake]."²¹⁵ Hydro-hegemony informs the contested sovereignties over some of the largest international water systems, such as the massive Indus River basin and the Brahmaputra-Ganges system (involving China, India, Pakistan, and Bangladesh),²¹⁶ as well as the world's smallest and shortest transboundary water dispute between Bolivia and Chile over the Silala/Siloli.²¹⁷

Hydro-egoism represents the control of a riparian resource to the exclusion of downstream riparian interests, as most notoriously represented by the Harmon Doctrine.²¹⁸ Named after the 1895 United States attorney general, this discredited doctrine attempted to justify the use of multiple irrigation trenches dug by Colorado and New Mexico farmers on the upper Rio Grande and its affluents. This draw caused the river to run dry in Mexico.²¹⁹ According to Harmon's hydro-egoistic reasoning, "[t]he fact that there is not enough water in the Rio Grande for the use of the inhabitants of both countries for irrigation purposes does not give Mexico the right to subject the United States to the burden of arresting its development."²²⁰

212. See generally Hongzhou Zhang & Mingjiang Li, *A Process-Based Framework to Examine China's Approach to Transboundary Water Management*, 34 INT'L J. WATER RESOURCES DEV. 705 (2018); see generally BEN BOER ET AL., *THE MEKONG: A SOCIO-LEGAL APPROACH TO RIVER BASIN DEVELOPMENT* (2015); see generally Sebastian Biba, *China's Hydro-Hegemony in the Mekong Region: Room for Improvement*, in *THE POLITICAL ECONOMY OF HYDROPOWER IN SOUTHWEST CHINA AND BEYOND* 215 (Jean-François Rousseau & Sabrina Habich-Sobieggala eds., 2021).

213. See generally Yousef Abd-Alraheem Irshaid, *Consequences of the Israeli Hydro-Hegemony on the Jordanian Water Security*, 6 REV. ECON. & POL. SCI. 252 (2021).

214. Amb. Motaz Zahran, *Only Washington Can Save the Renaissance Dam Negotiations Now*, FOREIGN POL'Y (Apr. 29, 2021), <https://foreignpolicy.com/2021/04/29/gerd-renaissance-dam-negotiations-biden-ethiopia-egypt/> [<https://perma.cc/KE73-L56F>] (claiming unilateral actions regarding Lake Turkana and elsewhere evidence the GERD project as a real, not hypothetical, threat to Egypt).

215. World Heritage Convention, *Lake Turkana National Parks (Kenya) Inscribed on List of World Heritage in Danger*, UNESCO (June 28, 2018), <http://whc.unesco.org/en/news/1842> [<https://perma.cc/4C9T-ETQE>].

216. See generally Christopher R. Rossi, *Blood, Water, and the Indus Waters Treaty*, 29 MINN. J. INT'L. LAW, 103 (2020).

217. See generally Christopher R. Rossi, *The Transboundary Dispute Over the Waters of the Silala/Siloli: Legal Vandalism and Goffmanian Metaphor*, 53 STAN. J. INT'L. L. 55 (2017).

218. *Id.* at 77-79 (discussing the absolutist and discredited 1895 doctrine articulated by U.S. Attorney General Judson Hudson Harmon).

219. *Id.* at 78.

220. *Id.*

Hydro-egoism has been paradigmatically identified as likely to lead to violence when a series of conditions are met: the downstream country is highly dependent on the water; the upstream country is able to restrict the flow; history of antagonism between the two exists, where the downstream country is in a much stronger military position than the upstream country.²²¹ Such conditions describe Egypt's modern historical relationship with Ethiopia.²²² However, a colonial form of hydro-egoism set the stage for Nile River water management today. Agreements among colonial powers, mostly securing British colonial rule over most of the Nile,²²³ established the basis for modern riparian law in the region.²²⁴ Foreshadowing yet inverting the Harmon Doctrine, these agreements dismissed the interests of upper riparians.²²⁵ British Nile imperialism had the hydrological aim of controlling the Nile upstream,²²⁶ and the aim was to police the Nile, influence Egypt, support Britain's textile industry,²²⁷ and secure control over the Suez Canal.²²⁸ Britain attempted to achieve this hegemony through an uncommon but not unheard of condominium agreement with Egypt over Sudan.²²⁹ However, this agreement only nominally involved Egypt and employed

221. See Cătălin Badea, *Water Conflicts: The Case of the Nile River and the Grand Ethiopian Renaissance Dam*, 65 *STUDIA UBB. EUROPAEA* 179, 184 (2020) (referencing the research of Val Percival and Thomas Homer-Dixon).

222. See Jeroen Warner & Neda Zawahri, *Hegemony and Asymmetry: Multiple-Chessboard Games on Transboundary Rivers*, 12 *INT'L ENVIRON AGREEMENTS* 215, 217 (2012) (citing Egypt as an example of a downstream riparian tending to use military power to gain more control of water).

223. See Emmanuel B. Kasimbazi, *The Complexities Of Developing a Transboundary Water Resources Management Agreement: Experiences from the Nile Basin*, in *WATER AND THE LAW: TOWARDS SUSTAINABILITY* 85, 85 (Michael Kidd et al. eds., 2014) (tracing the root of the problem to British colonial rule over most of the Nile).

224. See generally Emmanuel B. Kasimbazi, *The Impact of Colonial Agreements on the Regulation of the Waters of the River Nile*, 35 *WATER INT'L* 718 (2010).

225. The Harmon Doctrine attempted to dismiss the interests of the lower riparian, Mexico.

226. See Harald G. Marcus, *Ethio-British Negotiations Concerning the Western Border with Sudan, 1896-1902*, 4 *J. AFR. HIST.* 81 (1963) (noting the decision in 1889 by Lord Salisbury to "retain control over the entire Nile basin" and to support Italian colonial ambitions in Ethiopia to help parry Britain's main rival in the Nile Valley, France, and to contain Ethiopia Emperor Menelik II's expansion intentions); see also Protocol between Great Britain and Italy for the demarcation of their respective spheres of influence in Eastern Africa from the river Juba to the Blue Nile (Apr. 15, 1891), in 2 *EDWARD HERTSLET, MAP OF AFRICA BY TREATY* (No. 135) 667 (2d rev. 1896) (demarcating Italian colonial interests in Abyssinia to the Red Sea from British Nile interests).

227. See DUNSTON, *supra* note 43.

228. See generally M.W. DALY, *EMPIRE ON THE NILE: THE ANGLO-EGYPTIAN SUDAN, 1898-1934* (1986); see generally M.W. DALY, *IMPERIAL SUDAN: THE ANGLO-EGYPTIAN CONDOMINIUM, 1934-1956* (2003); see also Terje Tvedt, *Hydrology and Empire: the Nile, Water Imperialism, and the Partition of Africa*, 39 *J. IMPERIAL & COMMONWEALTH HIST.* 173, 174 (2011).

229. Agreement between Her Britannic Majesty's Government and the Government of His Highness the Khedive of Egypt, Relative to the Future Administration of the Soudan, U.K.-Egypt,

Egyptian and Sudanese administrators as low-to-mid-level functionaries.²³⁰ Between 1899 and 1954, Sudan's administration mostly derived from 400 British provincial governors (*mudirs*), district commissioners (*mufatishiin*), and Sandhurst military officers populating the Sudan Political Service.²³¹ Ironically, many divisive disputes about Nile waters today derive from international law's corrupted importation of a shared sovereignty arrangement for Sudan, which was designed to treat the Nile system holistically—the same solution to which international law attempts to resurrect in the form of the stalled Cooperative Framework Agreement (CFA).

A. *The Cooperative Framework Agreement*

The CFA is the product of a thirteen-year multilateral negotiation process involving all the Nile Basin countries except Eritrea, which opted not to join the process.²³² The process involved the creation of a panel of experts in January 1997, the promulgation of a draft agreement in 2001, committee and ministerial negotiations and resubmissions to achieve joint agreement,²³³ and a final document, which was opened for signature on May 14, 2010.²³⁴ The agreement's

Jan. 19, 1899, 91 BRITISH FOREIGN STATE PAPERS 19 (establishing in art. III: “The supreme military and civil command in the Soudan shall be vested in one officer, termed the 'Governor-General of the Soudan.' He shall be appointed by Khedivial Decree on the recommendation of Her Britannic Majesty's Government, and shall be removed only by Khedivial Decree, with the consent of Her Britannic Majesty's Government.”). For other notable examples of condominium arrangements in international law, see Christopher R. Rossi, *Jura Novit Curia? Condominium in the Gulf of Fonseca and the “Local Illusion” of a Pluri-State Bay*, 37 HOUS. J. INT'L L. 793, 796-99 (2015).

230. See generally Robert Rinehart, *Historical Setting*, in SUDAN: A COUNTRY STUDY 1, 36 (Harold D. Nelson ed., 1982) (noting the “gradual incorporation” of Egyptian and Sudanese administrators into “lower level positions”). See also Gabriel Warburg, *The Wingate Literature Revisited: The Sudan as Seen by Members of the Sudan Political Service during the Condominium: 1899-1956*, 41 MIDDLE EASTERN STUD. 373, 374 (2005) (detailing British observations about Sudanese enmity against the Egyptians and their colonial designs in the Nile Valley).

231. See M.W. DALY, IMPERIAL SUDAN: THE ANGLO-EGYPTIAN CONDOMINIUM, 1934-1956 1-5 (2003) (detailing Britain's dominance and Egypt's nominal condominium partnership, including its “distinctly military character”); see also Anthony Kirk-Greene, *The Sudan Political Service, in BRITAIN'S IMPERIAL ADMINISTRATORS, 1858-1966*, 164 (Anthony Kirk-Greene ed., 2000) (noting rarely did Britain's administrative force exceed 125 officials on the ground to administer a territory four times the size of Texas, and never exceeding 400 officers in the whole 56 years of the Service's existence.).

232. See Kimenyi & Mbaku, *supra* note 100 (noting Eritrea's refusal to sign the CFA).

233. *Cooperative Framework Agreement*, NILE BASIN INITIATIVE, <https://nilebasin.org/nbi/cooperative-framework-agreement> [<https://perma.cc/K6YS-GJEJ>].

234. Agreement on the Nile River Basin Cooperative Framework, May 14, 2010, <https://nilebasin.org/images/docs/CFA%20-%20English%20%20French%20Version.pdf> [<https://perma.cc/ATF7-ASCJ>] [hereinafter *Cooperative Framework*].

general principles clause reinforces established customary and conventional laws relating to riparian relations.²³⁵

Most important, the very undertaking reinforced the understanding that harmonious utilization of the waters is the *sine qua non* of holistic coordination of this water resource. This idea finds direct expression in the CFA's 'community of interest' clause in Article 3,²³⁶ which limits a state's sovereignty by recognizing the similar rights of other states and the positive duty to "render active cooperation in the rational development and utilization of the shared water resources."²³⁷ The CFA follows other cooperative African frameworks to manage water resources, including the Volta River Authority (established in 1961, involving mostly Ghana but linking to the national electricity grids of Cote d'Ivoire, Togo, Benin, Burkina Faso, and serving as part of the West Africa Power Pool),²³⁸ the Lake Chad Basin Commission (established in 1964, involving Cameroon, Niger, Nigeria, Chad, Central African Republic (post-1996), and Libya (post-2008)),²³⁹ the Zambezi River Authority (passed in 1987, involving Zambia and Zimbabwe),²⁴⁰ the Niger Basin Authority (renamed in 1980, involving Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Guinea, Mali, Niger, Nigeria, and Chad),²⁴¹ the Regional Rusumo Falls Hydroelectric Project on the Kagera River (established in 2012, involving Burundi, Rwanda, and Tanzania),²⁴² and the highly regarded Senegal River Basin Development Organization (*Organisation pour la mise en valeur du fleuve Senegal*, created in 1972).²⁴³

The CFA's object would be to establish a permanent river basin commission

235. *See id.* at art. 3 (affirming principles of cooperation, sustainable development, subsidiarity (implementing protections "at the lowest appropriate level"), equitable and reasonable utilization, prevention of significant harm, the right to use water within signatories' territory, protection and conservation, information exchange, community of interest, data and information exchange, environmental impact, peaceful resolution of disputes, integrated and holistic management, water's social and economic value, and water security.)

236. *Id.* at art. 3(9).

237. Alebachew, *supra* note 139, at 76-77.

238. *Profile of VRA*, VOLTA RIVER AUTH., https://www.vra.com/about_us/profile.php [<https://perma.cc/74W6-KUYB>].

239. LAKE CHAD BASIN COMMISSION, <https://cbt.org/> [<https://perma.cc/KHK8-WCSZ>].

240. *About Us*, ZAMBEZI RIVER AUTH., <http://www.zambezi.org/> [<https://perma.cc/95UX-Y63G>].

241. *Missions et Objectifs*, AUTORITE DU BASSIN DU NIGER (Aug. 18, 2011), http://www.abn.ne/index.php?option=com_content&view=frontpage&lang=en [<https://perma.cc/PL9A-7QF8>].

242. *Regional Rusumo Falls Hydroelectric Project*, NILE BASIN INITIATIVE, <https://www.rusumoproject.org/index.php/en/> [<https://perma.cc/V22E-HFPR>].

243. Kabine Komara, *Setting the Example for Cooperative Management of Transboundary Water Resources in West Africa*, WORLD BANK BLOGS (June 27, 2014), <https://blogs.worldbank.org/nasikiliza/setting-example-cooperative-management-transboundary-water-resources-west-africa> [<https://perma.cc/5RLK-GREJ>] (referring to the organization as a "dynamic," fully supported and financially stable).

to replace the transitional mechanism of the NBI.²⁴⁴ This commission “would be vested with legal personality” to “ensure that national development projects are coordinated with basin-wide development to achieve optimal use of the Basin’s resources.”²⁴⁵ However, Egypt and Sudan refuse to sign the agreement,²⁴⁶ and this impasse has locked Nile water governance issues between the two-track transitional cooperative mechanism of the NBI and the multilateral successor arrangement the CFA purports to secure.²⁴⁷ The failure to ratify the CFA has “widen[ed] the rift between the two lower riparians and the upper riparians.”²⁴⁸ Their refusal rejects the framework’s “political and counter-hegemonic value,”²⁴⁹ as expressed by the CFA’s incorporation of a new, quasi-legal idiom—“water security.”²⁵⁰

B. The Meaning of Water Security

The agreement’s “water security” provision “obliquely” upends the 1929 and 1959 agreements that apportion the volumetric water allocation to Egypt and Sudan alone and serves as the basis of Egypt’s claim of acquired rights.²⁵¹ The wording of CFA’s Article 14(b) holds that Nile Basin States agree, in a spirit of cooperation “not to significantly affect the water security of any other Nile Basin States.”²⁵² Egypt and Sudan proposed the alternative language that Nile Basin States agree “not to significantly affect the water security and current uses and rights of any other Nile Basin State.”²⁵³

244. *Cooperative Framework*, *supra* note 234, at art. 31 (detailing the institutional structure of the Nile River Basin Commission).

245. *Cooperative Framework*, *supra* note 234.

246. Salman, *The Nile River Basin*, *supra* note 52, at 393. Burundi, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda have signed the CFA; Egypt and Sudan refuse to sign; Democratic Republic of Congo, Eritrea, and South Sudan “have not taken any action or indicated their stance.”

247. See Ana Elisa Cascão, *Nile Basin: Toward a New Era of Regional Cooperation*, *CAIRO REV. GLOBAL AFF.* (Apr. 30, 2018), <https://www.thecaireview.com/global-forum/nile-basin-toward-a-new-era-of-regional-cooperation/> [<https://perma.cc/Z67Q-PLRM>] (referring to the current cooperative Nile basin process as a two-track approach).

248. Salman, *The Nile River Basin*, *supra* note 52, at 385; the water security provision also implicates the 1902 treaty. See Stephen C. McCaffrey, *Water Scarcity and Security Issues in the Middle East*, 108 *AM. SOC’Y INT’L L. PROC.* 297 (2014).

249. Abadir M. Ibrahim, *The Nile Basin Cooperative Framework Agreement: The Beginning of the End of Egyptian Hydro-Political Hegemony*, 18 *MO. ENVTL. L. & POL’Y REV.* 282, 284 (2011).

250. Dereje Zeleke Mekonnen, *The Nile Basin Cooperative Framework Agreement Negotiations and the Adoption of a ‘Water Security’ Paradigm: Flight into Obscurity or a Logical Cul-de-sac?*, 21 *EUR. J. INT’L L.* 421, 422 (2010).

251. Alan Nicol & Ana Elisa Cascão, *Against the Flow—New Power Dynamics and Upstream Mobilization in the Nile Basin*, 38 *REV. AFR. POL. ECON.* 317, 318 (2011).

252. See *Cooperative Framework*, *supra* note 234 at Annex 1.

253. Kimenyi & Mbaku, *supra* note 100.

Discursive interpretations of the CFA's usage of the term "water security" underscore the sensitivity of the political stakes. Egyptian agronomist Youssef Hamada referred to the phrase as a "cunning interpolation" and a "treacherous, nonlegal concept."²⁵⁴ Ethiopian international water law expert Dereje Zeleke Mekonnen noted its intent of achieving compromise but claimed the phrase was legally elastic, amorphous, and incapable of achieving a productive solution.²⁵⁵ University of Khartoum law professor and World Bank water law advisor Salman M.A. Salman regarded it as a political rather than a legal concept, noting that the term finds no expression in the Watercourses Convention.²⁵⁶ However, he regarded the discursive controversy as overblown, holding that "the whole section of the CFA on water security is no longer needed, given that the CFA includes the same provisions of the [Watercourses Convention] on equitable and reasonable utilization, as well as on the obligation not to cause significant harm."²⁵⁷

The idiom, legal or political, implies reciprocity, good neighborliness, and the avoidance of unreasonable injury to others (*sic utero tuo ut alienum non laedas*). While data suggest a tendency of downstream support and upstream ambivalence towards the Watercourses Convention,²⁵⁸ adverse effects on all parties arise absent a consideration of reciprocity.²⁵⁹ The underexplored prospect of downstream riparians harming upstream riparians by foreclosing future use through assertions of priority based on prior use cannot be ignored.²⁶⁰ Construing the problematic term as a simple assault against Egyptian interests obscures the rejection of the absolutist territorial sovereignty extension to transboundary water system. More than the rejection of the Harmon Doctrine, customary practice has imposed good faith obligations on upstream states "to take into account the different interests at stake, to strive to give them all satisfactions compatible with the pursuit of its own interests, and to demonstrate . . . [a] real solicitude to reconcile the interests of the other riparians with its own."²⁶¹

254. HAMADA, *supra* note 93, at 114. See also Dereje Zeleke Mekonnen, *The Quest for Equitable Resolution of the Nile Waters Dispute: Wandering in the Wilderness?*, 7 INT'L J. ETHIOPIAN STUD. 77 (2013).

255. Mekonnen, *The Nile Basin Cooperative Framework Agreement Negotiations*, *supra* note 250, at 422.

256. Salman, *The Nile River Basin*, *supra* note 52, at 396 (noting "this is not a legal concept—merely a political pronouncement").

257. *Id.*

258. Yong Zhong et al., *Rivers and Reciprocity: Perceptions and Policy on International Watercourses*, 18 WATER POL'Y 803, 810 (2016) (analyzing information derived from the Food and Agriculture Organization's Aquastat database).

259. See *id.* at 821.

260. See Salman, *The Nile River Basin*, *supra* note 52, at 397 (contesting the common one-way view that only upstream riparians can harm downstream riparians).

261. *Affaire du Lac Lanoux (France v. Spain)* (1957) 12 R.I.A.A. 281, 315 ("Le Tribunal est d'avis que l'Etat d'amont a, d'après les règles de la bonne foi, l'obligation de prendre en considération les différents intérêts en présence, de chercher à leur donner toutes les satisfactions compatibles avec la poursuite de ses propres intérêts et de montrer qu'il a, à ce sujet, un souci réel

C. Endogenous Hegemony

Behind this idiomatic debate about water security are the workings of international law's endogenous forces, which continue to structure possibilities and prod the parties along the cooperative pathway they seemingly disavow. The Agreement on Declaration of Principles recognized the mutual benefit of cooperation and the significance of the Nile as a "source of livelihood" for the peoples of Egypt, Ethiopia, and Sudan.²⁶² This treaty impliedly negated the hegemonic claims to the Nile asserted by the colonial agreements, rendering them and their totalizing assertions favoring British and Egyptian nineteenth and twentieth century interests as anachronistic and fanciful as Portugal's and Spain's fifteenth century agreement to divide the world's oceans and new-found lands as between the two (the Treaty of Tordesillas).²⁶³

Nine months later, Egypt, Ethiopia, and Sudan promulgated the Khartoum document,²⁶⁴ which impaneled two French studies intended to establish a joint approach to the joint management of the regional water supply. Although forestalled by politics, the Khartoum document nevertheless forwarded an evolving shared vision program for the Nile, which has identified four sectoral projects (environmental management, power sales and transfers, irrigation, and planning and management) that pre-dated the NBI,²⁶⁵ and has been extended by

de concilier les intérêts de l'autre riverain avec les siens propres.")

262. See UN WATERCOURSES CONVENTION, *supra* note 166 (quoting the Agreement on Declaration of Principles' Preamble and referencing art. I (principle of cooperation)).

263. Treaty Between Spain and Portugal Concluded at Tordesillas, Spain-Port., June 7, 1494, https://avalon.law.yale.edu/15th_century/mod001.asp [<https://perma.cc/BEX3-4TQK>]. The agreement established a divisional meridian line 370 leagues west of the Cape Verde islands and was based on Alexander VI's fourth papal bull, *Dudum siquidem* (1493). See Christopher R. Rossi, *Treaty of Tordesillas Syndrome: Sovereignty ad Absurdum and the South China Sea Arbitration*, 50 CORNELL INT'L L.J. 231, 268 and accompanying notes (2017).

264. The 4th Tripartite Meeting of the Ministers of Foreign and Water Affairs of Egypt, Ethiopia and Sudan on the Grand Ethiopian Renaissance Dam Project (GERDP), Egypt-Eth.-Sudan, Dec. 27-28, 2015, https://www.internationalwaterlaw.org/documents/regionaldocs/Khartoum_Document_29_Dec_2015.pdf (Khartoum Declaration).

265. See Jane Baitwa, *A Shared Vision for the Nile Basin*, WATER POWER & DAM CONSTRUCTION (June 12, 2014), <https://www.waterpowermagazine.com/features/featurea-shared-vision-for-the-nile-basin-4291594/> (commencing with the 1967 Hydromet project and the establishment of the 1993 Technical Cooperation Committee for the Promotion of Development and Environmental Protection of the basin (TECCONILE)). See also *Cooperation on the Nile—Bringing Down the Glass Wall*, WORLD BANK GRP. (May 2015), <https://documents1.worldbank.org/curated/en/526131468000905474/pdf/102251-BRI-P092334-PUBLIC-ADD-SERIES-Box394828B-Brief-5-Cooperation-on-the-Nile.pdf> [<https://perma.cc/D6LA-TFZ3>] (noting the 1983 Undugu ("Brotherhood") initiative, "show[ing] that countries were starting to look at options for working together for development based on a shared use of the Nile.").

NBI subsidiary action programs,²⁶⁶ which were designed to build confidence, improve institutional and technical capacity and create investment opportunities.²⁶⁷

Egypt further petitioned the World Bank to serve as a technical mediator and help to facilitate negotiations as it did to establish the NBI and the CFA.²⁶⁸ Gulf powers such as Saudi Arabia, the United Arab Emirates, and Qatar, as well as Turkey, have wielded financial influence along the Nile, primarily as a return on cross-cutting security interests,²⁶⁹ as have the financial contributions of the Nile Basin Trust Fund and the Cooperation for International Waters in Africa Trust Fund (CIWA).²⁷⁰ It is expected that the establishment of the Nile Basin Commission under the CFA will introduce a “new phase” of financial mobilization for Nile riparian management because of the consolidation under an organization with a “fully-fledged legal status . . . able to mobilize and manage its own funds.”²⁷¹

Egypt and Ethiopia continue to hedge against future contingencies. Ethiopia refuses to guarantee “any set amount of water to downstream countries”²⁷² and Egypt refuses to quantify its current water use.²⁷³ While the internationalization of GERD questions now involve the UN Security Council,²⁷⁴ the World Bank, the

266. NBI subsidiary action programs have involved local actions to increase power interconnection, food security, and watershed management. See *Benefit Sharing Opportunities in the Nile Basin*, NILE BASIN INITIATIVE 9, https://unece.org/fileadmin/DAM/env/documents/2018/WAT/02Feb_06-07_BenefitsWS_Geneva/2.3_NBI_Ntabana.pdf [<https://perma.cc/P53W-WG62>]. See also Cascão, *supra* note 142, at 235 (presenting the structure of the shared vision programs and subsidiary action programs).

267. Cascão & Nicol, in *THE GRAND ETHIOPIAN RENAISSANCE DAM AND THE NILE BASIN*, *supra* note 142, at 236.

268. Salman, *The Nile River Basin*, *supra* note 52, at 392.

269. See *Bridging the Gap*, *supra* note 33, at 26.

270. See *Nile Basin Donors Stunned by Ethiopia’s Unilateral Move*, *supra* note 137.

271. Cascão & Nicol, in *THE GRAND ETHIOPIAN RENAISSANCE DAM AND THE NILE BASIN*, *supra* note 142, at 241-42.

272. *Roundtable: Keeping the Peace in the Nile Basin*, *supra* note 154.

273. See Salman, *The Nile River Basin*, *supra* note 52, at 391.

274. See *Arab States Call on U.N. Security Council to Meet Over Ethiopian Dam*, REUTERS (June 16, 2021), <https://www.reuters.com/world/middle-east/arab-states-call-un-security-council-meet-over-ethiopian-dam-2021-06-15/> (reporting on the Arab League’s request of the Security Council) (last visited July 29, 2022); *Sudan Asks U.N. Security Council to Meet over Ethiopia’s Blue Nile Dam*, REUTERS (June 22, 2021), <https://www.reuters.com/business/environment/sudan-asks-un-security-council-meet-over-ethiopia-blue-nile-dam-2021-06-22/> (reporting on Sudan’s request that the Security Council hold GERD talks “as soon as possible”) (last visited July 29, 2022); *Ethiopia rejects UN Security Council Mediation in GERD crisis*, EGYPT INDEP. (June 25, 2021), <https://egyptindependent.com/ethiopia-rejects-un-security-council-mediation-in-gerd-crisis/> [<https://perma.cc/J6HV-BQ6T>] (reporting on the Ethiopian Foreign Ministry’s tweet rejecting Egypt and Sudan’s attempt to involve the Security Council in the GERD issue).

African Union, the European Union, Gulf states, China²⁷⁵ and Russia,²⁷⁶ there remains the fundamental understanding that the Blue Nile presents a lock and key relationship between the two protagonists, Egypt and Ethiopia. The temptation to frame GERD as an international security issue rather than a water issue forces a false dichotomy between the two. The joint appearance of the two countries' leaders at the Ittihadiya Palace in Cairo in 2018 attempted to affirm the intertwined relationship by stressing the need to cooperate on water issues while mindful of the historical costs of conspiring against each other politically.²⁷⁷

As Egypt cycles through “the five stages of grief” presented “to arrive at a place of [GERD] acceptance,”²⁷⁸ Ethiopia, too, must come to recognize the underacknowledged *fait accompli* of endogenous international law. Six countries have signed the CFA, with ratification likely should Ethiopia and Egypt come to the table. The benefits of cooperation, provided for by structures of international law that allow for data collection and technical interpretation, remain the single pathway forward. International law's assemblage of independent and neutral parties aligns to assist in the establishment of the CFA because management of this basin and the holistic perspectives involved admit of no hegemonic solution or singular course of state action.

The risks of non-cooperation crowd out a significant amount of international organizational involvement and financial support absent a foundation of cooperation among Egypt, Ethiopia, and Sudan. The legal squabble over the meaning of “water security” obscures the more intricate calibrations of management that can only come about through cooperation, conciliation, and discussion. Only casuistry supports the position that water security is a meaningless shibboleth. If definition of the idiom fails due to Egypt's demand that no agreement can alter its current use (which it obliquely quantifies), or due to Sudan's demand for its rights established under the 1959 agreement (which it has never fully claimed), or due to Ethiopia's unwillingness to submit to third party review, water security will remain the primordial impediment to cooperation.

275. See Lawson, *supra* note 79, 183-84, 266, and 267.

276. See, e.g., Ahmed Gomaa, *Egypt Turns to Russia for Help with Desalination Plants Amid Nile Dam Crisis*, AL-MONITOR (Feb. 19, 2021), <https://www.al-monitor.com/originals/2021/02/egypt-russia-water-crisis-desalination-plants-nile-dam-talks.html> [<https://perma.cc/HS2M-UVQJ>] (noting Egypt's negotiations with the Russian Rusnano Group to build new desalination plants); *Egypt, Ethiopia Leaders Discuss Nile Dam in Russia*, ALARABIYA NEWS (Oct. 24, 2019), <https://english.alarabiya.net/business/economy/2019/10/24/Egypt-Ethiopia-leaders-discuss-Nile-dam-in-Russia> [<https://perma.cc/6ACU-B6UK>] (reporting on Russian President Vladimir Putin's offer to broker discussions on GERD).

277. See Mohamed Abdel Maguid, *We Will Not Cause Any Harm to Egypt's Water: Ethiopian PM*, EGYPT TODAY (June 10, 2018), <https://www.egypttoday.com/Article/1/51898/We-will-not-cause-any-harm-to-Egypt-s-water> [<https://perma.cc/PJ6H-PL6A>] (quoting both countries' presidents pledges to build confidence and cooperation to preserve water share on the Nile).

278. *Roundtable: Keeping the Peace in the Nile Basin*, *supra* note 154 (comment by Frezer Getache Haile).

Endogenous international law's underacknowledged *fait accompli* is found in the grey area falling between scenarios of complete hydro political cooperation on the one hand and hydro-egoism on the other.²⁷⁹ Areas of partial cooperation have long represented a riparian course of dealing that is likely to extend into the future,²⁸⁰ or result in the perpetuation of a two-track approach, where some riparians will move toward ratifying the CFA and others "may opt for the status of observers" while remaining outside the system or joining at a later time.²⁸¹

Interpreting this grey area, Salman M.A. Salman has suggested that Egypt and Ethiopia are cautiously inclining toward "inevitable cooperation."²⁸² He recommended de-emphasizing the problematic idiom of water security, accentuating confidence building provisions involving notification, and recognizing the benefit-sharing rewards.²⁸³ GERD's installed turbine capacity is more than two times that of the Aswan High Dam and Ethiopia is projected to trade fifteen percent of its yearly electricity generation in the Eastern African Power Pool, which will benefit Egypt, Sudan, and the other EAPP countries—Rwanda, Djibouti, Tanzania, Kenya, Burundi, and Uganda.²⁸⁴ Revenues from hydropower exported to the Eastern Africa Power Pool and the priority accorded to Egypt and Sudan per the 2015 Declaration can alleviate Ethiopia's debt burden, foreign currency shortage, and high dependency on oil imports.²⁸⁵ The potentials for the endogenous hegemonic workings of communication, information exchange, consultation, and management persist and are put at greater risk not by problematizing the idiom of water security, but by the shifting alliances that have formed in the interstitial border regions of Tigray's Al-Fashaqa province. These alliances, which have precipitated a humanitarian disaster and potential regional conflict, have isolated Ethiopia, forged a complicated alliance between Egypt, Sudan, and the continent's most repressive government, Eritrea, and threaten to undermine the hydro-diplomacy incrementally stumbling toward Nile riparian cooperation.

279. Cascão & Nicol, *in* THE GRAND ETHIOPIAN RENAISSANCE DAM AND THE NILE BASIN, *supra* note 142, at 250.

280. *Id.* (noting cooperative bilateral and trilateral transboundary water management schemes implemented by the Lake Victoria Basin Commission and the power-transmission projects in the Eastern Nile basin).

281. *Id.* at 247.

282. Salman, *The Nile River Basin*, *supra* note 52, at 397.

283. *See id.*

284. Hisham Eldardiry & Faisal Hossain, *Evaluating the Hydropower Potential of the Grand Ethiopian Renaissance Dam*, 13 J. RENEWABLE & SUSTAINABLE ENERGY 1 (2021).

285. *See Ethiopia Oil*, WORLDOMETER (2016), <https://www.worldometers.info/oil/ethiopia-oil/> [<https://perma.cc/HL7U-TTPK>] (noting Ethiopia's 2016 proven oil reserves (of 428,000 barrels) and its oil consumption (of 27,010,000) barrels) registers the country as "highly dependent" on oil imports); Addisu Lashitew & Haim Kassa, *Ethiopia's Blue Nile Dam Does Not Have to be a Cause of Regional Destabilization*, AFR. BUS. (May 19, 2020), <https://african.business/2020/05/economy/ethiopias-blue-nile-dam-is-an-opportunity-for-regional-collaboration/> [<https://perma.cc/GH3U-SKAT>] (noting regional and national economic gains to GERD trade).

IV. CONCLUSION

Regional political and security interests, historical claims of hegemony if not dominium, and colonial legacies relating to hydro-egoism inform discussions about Ethiopia's construction of GERD. Evidence of unilateral decision-making permeates debates about the current construction and filling of the dam and the existentially more problematic future regulation of the reservoir (and the trade-off between upstream power generation and downstream agricultural and municipal water uses) during extended periods of drought, which scientists claim climate change will exacerbate.

Common descriptions of riverine relations on the Blue Nile point toward the diplomatic impasse between Egypt and Ethiopia as the major impediment forestalling the implementation of the CFA. This implacable relationship suggests that international law's contribution toward ending the worsening water shortage problem of the Nile basin spins in a riparian whirlpool that forestalls the creation of a permanent river basin commission and entangles meaningful discussion of water security in the embankment reeds of a debate of the term's idiomatic legal significance.

While peripheral politics affecting Horn of Africa relations in Tigray province threaten to further derail Blue Nile management discussions, international law's significance in resolving this dispute has been demonstrated by the endogenous hegemonic tracks that link the processual influences of the transitional NBI mechanism with the foundation for a permanent Nile basin commission. The pillars of communication, information and scientific data exchange, consultation and equitable utilization contribute material and ideational supports for water management issues schemes across Africa, including the Nile basin. Although caught between the two tracks of the transitional NBI mechanisms and the permanent Nile basin commission, the social relations of riparians quietly embrace the parameters of international law's endogenous hegemonic influences, as related to the regulative processual norms that constrain and enable transboundary water relations, and the constitutive agencies and managerial actors that riparian countries are cycling toward accepting in the face of increasingly problematic projections of water shortages along the mightiest river of them all.