

Ethiopia's Grand Renaissance Dam:

A Solution for Cooperation in the Nile Watershed or a Source of Conflict?

Written by:
Jamaal Haynes

Supervised by:
Dr. Perkins

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Foreword:

The distribution of water resources is a continuing conflict between riparian states. As states continue to pursue development, more water is needed to support growing populations, agriculture, and industrial facilities. With climate change, water will become increasingly scarce if governments cannot resolve the conflict of water resource distribution between riparian states. Although water is a renewable resource, its availability depends on the rate of extraction and exploitation. Water scarcity can be averted through cooperation between states and transboundary agreements that promotes equitable distribution and includes the signature of all riparian states.

This research paper focuses on the conflict of transboundary water resources. The conflict over water resources in the Nile Basin has limited development in some riparian states and encourages unilateralism. The paper promotes the Cooperative Framework Agreement as a solution for Nile water conflict between lower riparian and upper riparian states. The historic Nile Water Agreements has caused an imbalance between riparian states in the Nile watershed and prevents upper riparian states to their 'fair' share of water resources.

The paper explores Ethiopia's Grand Renaissance Dam being constructed on the Blue Nile Gorge and the political outcomes of Ethiopia claiming its right to sovereignty over national resources. Ethiopia is one of the world's poorest nations and the Grand Renaissance Dam allows Ethiopia an opportunity to advance its economy while offering a new legal framework to govern the Nile watershed. Ethiopia and several other riparian states promote multilateralism and hope the new Cooperative Framework Agreement will allow water use between riparian states to be more equitable.

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The Grand Renaissance Dam: A Solution for Cooperation in the Nile or A Source of Conflict?

Overview: This paper analyzes Ethiopia's Grand Renaissance Dam's impact on Nile water politics and the shift towards a multilateral framework for water governance. First, it outlines transboundary water laws and of history of Nile water governance. Second it analyzes the impact of Ethiopia's Grand Renaissance Dam on the Nile watershed discussing the benefits of multilateralism on the Nile and the consequences of unilateral development on the Nile basin. Ethiopia's Grand Renaissance Dam offers the Nile basin transboundary cooperation and expands possibility of integrating the economies of riparian states.

Introduction:

The Nile River is experiencing rapid growth. The river has two branches: The White Nile from East Africa and the Blue Nile, originating from Ethiopia (*see map p.16*). Upper riparian nations have begun to pursue hydraulic development without consent from all riparian states. Ethiopia's Grand Renaissance Dam is shifting geopolitics on the Nile and allowing upper riparian states an opportunity to develop. Egypt and Sudan are the only two Nile states with legitimate water rights and they are reluctant to establish a new legal framework all riparian states agree on. Egypt and Sudan were granted exclusive water rights to Nile water from the British known as the Nile Water Agreements. The 1929 Nile Water Agreements was first established between Egypt and Great Britain. After Egypt's independence, water laws were developed to protect economies in Europe. In 1959, the Nile Water Agreements were renegotiated with Sudan after their independence. Water laws were revised to allocate Sudan Nile water and allow development on the Nile in both states. The 1929 and 1959 Nile Water Agreements form a unilateral framework that has prevented upper riparian states from developing on the Nile. While Egypt and Sudan have been given access to Nile water for development, upper riparian states are expected to consult with Egypt and Sudan before pursuing any Nile water projects.

The Cooperative Framework Agreement was proposed by upper riparian states as a new framework that focuses on cooperation among riparian states. Although Egypt and Sudan reject the Cooperative Framework Agreement, Sudan has already conducted negotiations with Ethiopia to allow hydroelectric trade between the regions and improve monitoring of the dam. Egypt's resistance to the Cooperative Framework Agreement may increase tensions between Ethiopia and Egypt. Once the Grand Renaissance Dam is complete, Ethiopia will control the source of the Blue Nile, Lake Tana. If Egypt continues to hold on to the Nile Water Agreements after Ethiopia's Grand Renaissance Dam is complete, Egypt may retaliate under national security to protect their share of water. On the other hand, the Cooperative Framework Agreement grants riparian states the ability to cooperate on hydraulic development on the Nile.

This paper illuminates water conflict on the Nile caused by transboundary water laws, colonial treaties, sovereignty over resources, and economic development. Nations continue to dispute the distribution of Nile water. The construction of Ethiopia's Grand Renaissance Dam has shifted Nile water politics, encouraging more equitable rights between riparian states; few states wish to honor existing water laws that promote unilateralism and unequal distribution of water resources.

In the first chapter, *Transboundary Water Governance Principles and Theory*, outlines transboundary water laws adapted by states to govern shared water resources. These laws are meant to reduce conflict in watersheds that are shared by two or more riparian states. There are also laws that require upstream states not to jeopardize water for lower riparian states. Although laws are developed to minimize water conflict between riparian states, sovereign rights to resources and national interests play a significant role in water related decisions. Thus, water rights between riparian states may be unequal if a state's approach to water governance is unilateral.

Chapter two, *History of Nile Watershed Governance*, discusses Nile water use during colonialism and its influence on the Nile watershed. After colonialism, Britain made water agreements with Egypt and later Sudan. The Nile Water Agreements have caused conflict throughout the Nile. Now that Ethiopia has built the Grand Renaissance Dam and riparian states have signed the Cooperative Framework Agreement, Egypt is losing its control of the Nile. The

Grand Renaissance Dam is influencing change on the Nile basin, aiming to transition into a cooperative approach to govern the watershed.

Chapter three, *History, Funding, and Impacts of the Grand Renaissance Dam*, describes Ethiopian history with the international community and underdeveloped economy. The Grand Renaissance Dam provides Ethiopia an opportunity to enhance its water sector and strengthen relationships within the Nile community and internationally. Ethiopia continues to work with riparian states to reduce harm on the Nile and to maximize the potential the Grand Renaissance Dam.

Lastly, Chapter four, *Analysis: Changing Geopolitics of Nile Governance and Addressing Water Conflict on The Nile Watershed: Prospects for a Cooperative Framework for Equitable Distribution and Sustainable Development of Water Resources*, highlights the shift in water governance on the Nile River. Ethiopia's Grand Renaissance Dam has encouraged a new legal framework for Nile water governance and Egypt has lost its ability to leverage decision-making processes regarding Nile water distribution and exploitation. In the past, Egypt was able to invoke the Nile Water Agreements to limit water use for upper riparian states. The Cooperative Framework Agreement has changed Nile water politics, granting upper riparian states more water rights. Unilateralism has influenced Nile water conflict. Egypt's refusal to sign the Cooperative Framework Agreement is intensifying tension over the distribution and exploitation of Nile water. The Cooperative Framework Agreement is a multilateral framework that ensures riparian states work together to manage and protect Nile. Ethiopia strongly supports the Cooperative Framework Agreement and hopes the Grand Renaissance Dam can motivate riparian states to co-govern the Nile watershed.

Chapter 1 - Transboundary Water Governance Principles and Theory

There are several challenges related to governing international watersheds. Transboundary water laws are applied if water flows through two or more states. The Nile travels through ten nations Ethiopia, Rwanda, Burundi, Congo, Tanzania, Kenya, Uganda, Eritrea, Sudan, and Egypt (Swain p. 675). Although there are transboundary water laws to govern watersheds, the Nile River is governed differently in each state. Conca claims that gaps in international water laws limit participation, monitoring, and interconnectivity for international

rivers (104-5). In 2017, the populations of the Nile watershed states were recorded and published: Egypt: 97,041,072, Ethiopia: 105,350,020, Congo: 83,301,151, Tanzania: 53,950,935, Kenya: 47,615,739, Uganda: 39,570,125, Rwanda 11,491,346, Burundi: 11,466,756, Eritrea: 5,918,919, South Sudan: 13,026,129, Sudan: 37,345,935. For a total of 506,078,127 people living in the watershed (CIA 2016). With population growth in Nile watershed states, the demand for water will increase, influencing challenges for water management and security in the watershed (Swain 299-300). Shared resources contribute to interstate conflicts, over transboundary water rights between upper and lower riparian states. National and International frameworks were created to set principles for international water governance and to encourage cooperation and the equitable allocation of water resources (Conca 94-5). However, most nations have difficulty agreeing on the distribution of water.

Upstream and downstream states often dispute over water rights. Riparian rights refer to rights granted to landowners whose land borders waterways (Kimenyi & Mbaku 69). Under Roman law, upper riparian states are not permitted to increase or limit the natural flow of water and lower riparian nations could not obstruct the natural flow of water. However, altering water flows for agriculture was allowed. Roman law has strongly influenced common law in England and defined the relationship between land and water (Fisher 164-5). The riparian doctrine was eventually established by the British in the mid-19th century. The doctrine states that a riparian nation has a right to the “reasonable use of water” and the “right to the extraordinary use of water” if it does not interfere with the use or access of neighbouring states. As a general principle, any nation or landowner that a body of water flows through is required to adopt responsible water use (Fisher 170-1). The rule of natural flow states that riparian states are granted “the right to have water flow past the land undiminished in quantity or quality” (Kimenyi & Mbaku 69). In reality, there is generally not enough water to meet the demands of all riparian states. Cooperative principles in legal regimes allow states to achieve equitable and reasonable use of transboundary water resources (Kimenyi & Mbaku 69).

For water governance in the Nile watershed, transboundary water laws are an extension of colonial agreements and treaties established with African nations to maximize the economic potential for European countries (Kimenyi & Mbaku 1). Colonialism in Africa contributed to the

development of the Nile's water rights. During the Berlin Conference from 1884 to 1885, many European countries discussed ways to exploit Africa's resources and how to divide of land between colonizers. Under colonial rule, Britain had negotiating power over the Nile watershed. Legal regimes established at the time had no intention to promote equitable water use across the Nile, but rather to benefit the economies back in Europe (Kimenyi & Mbaku 25-28). For example, in order to maximize agricultural production, Britain focused its policies in Africa to secure water resources in Egypt. The American Civil War disrupted cotton production in the American South. Since Britain was unable to obtain cotton from America, policy in Egypt was established to secure water resources for cotton production. By 1864, Egypt became a one-crop economy, exporting its entire supply of cotton to Britain. To protect its investments, Britain had tendency to favor Egypt and Sudan in decision-making over the Nile watershed (Kimenyi & Mbaku 25-6). Water laws in the Nile were made to protect European economies without regard to their impact on upstream states.

Most Nile water treaties prevent upper riparian states' access to the Nile's water resources as a strategy to secure water for Egypt's agricultural and industrial production. Under colonial rule, on behalf of Africans, civil interests were negotiated by European governments. In Africa, Britain had sovereignty over Egypt, Kenya, Sudan, Tanzania, and Uganda. In 1902, Sir John Harrington was sent by the British government to Addis Ababa, Ethiopia to meet with emperor Menelik II and negotiate an Anglo-Ethiopian treaty. Ethiopia agreed to not pursue water projects on the Nile without Britain's approval (Kimenyi & Mbaku 30). Another component of the treaty was the negotiation of borders between Sudan, a British colony, and Ethiopia, a nation independent from colonial rule (Kimenyi & Mbaku 91-2). To keep peace with the British, Emperor Menelik II sought to protect Ethiopia by agreeing to not pursue water projects on the Blue Nile without consulting with the British (Collins 248). The 1902 treaty was never ratified between Britain and Ethiopia. Thus, it never became a law in either state (Kimenyi & Mbaku 94). More importantly, the English and Amharic version of the 1902 treaty create different interpretations of the use of the Nile's water. Ethiopians express that the 1902 treaty did not specify their right to utilize the Nile's water resources (Abebe 37). Article 3 of the treaty states that Ethiopia was "not to construct any water project on the Blue Nile that would *arrest* the flow of their waters into the Nile without an agreement with the British and Sudanese government". In

Amharic, the word *arrest* translates as *stop*. Therefore, Ethiopians argue that they are free to utilize water from the Blue Nile as long as it does not stop the flow of water to lower riparian states (Kimenyi & Mbaku 58).

Egypt was one of the first nations to utilize the Nile's water resources and claims a natural right to the Nile's water as a riparian state. Knobelsdorf states "for nearly 5000 years, Egypt has been the primary beneficiary of the Nile" (626). The river's seasonal flooding is essential for Egyptian agriculture and the growing population living along the river (Carlson 3). Egypt enforces the rights granted in the Nile Waters Agreements of 1929 and 1959 (Kimenyi & Mbaku 69). As noted, the Nile Waters Agreements were initially made to benefit European economies. There was never any intention to establish a participatory framework to effectively govern the Nile watershed (Kimenyi & Mbaku p. 50). After Egypt gained independence in 1922, existing colonial-era laws continued within the country to appease British investments in agriculture. Britain still relied on cotton exports from Egypt, and the legal regime already established would work to secure Britain's investments and Egypt's water rights (Knobelsdorf 626). In 1929, Great Britain granted Egypt exclusive water rights for the Nile, in a document known as The Nile Waters Agreement. Swain states "although the Nile Waters Agreements reached in 1929 consisted only of an exchange of notes between the British High Commission in Cairo and the Egyptian Government, it provided for the regulation of the river until the Nile Waters Agreements of 1959" (677). The 1929 Nile Waters Agreements was established to secure water resources for Britain's cotton investments in Egypt (Kimenyi & Mbaku 94). It allocated Egypt 48 billion cubic meters of water per year and granted British Sudan 4 billion cubic meters. Under the Agreements, upstream states were not granted any water rights and essentially were denied access to utilize the Nile's water resources. The enactment of the 1929 Nile Waters Agreements strengthened Egypt's political power and demanded all riparian states consult with Egypt before pursuing any water projects on the Nile (Knobelsdorf 628). Since the early 1950's, Ethiopians have argued that the 1929 treaty ignores the demand for water resources for upstream states and prevents cooperation throughout the watershed (Kimenyi & Mbaku 94).

In 1959, the Nile Waters Agreements was revised to grant Sudan some access to the Nile's water resources. To this day, the Nile Waters Agreements is the legal principle for water

allocation and governance in the Nile watershed (Knobelsdorf 628). The annual flow of the Nile is an estimated 79 billion cubic meters of water. The 1959 Nile Waters Agreements amended Egypt and Sudan's original water rights. Annually, Egypt is allocated 55.5 billion cubic meters of water and Sudan, 18.5 billion cubic meters (Carlson 8). Upstream states consider the 1929 Nile Waters Agreements an Anglo-Egyptian treaty and the 1959 Nile Waters Agreements a bilateral agreement between Egypt and Sudan. Upstream states express that they did not participate in the decision making of either Nile Waters Agreement and that they are not bound by either legal framework (Kimenyi & Mbaku 65). Only a few years after the 1959 Nile Waters Agreements, other upper riparian nations achieved independence, including Tanzania, Uganda, Rwanda, Kenya, and Burundi (Carlson 8). Knobelsdorf highlights that the national leaders of Ethiopia, Kenya, and Tanzania rejected the 1929 and 1959 Nile Waters Agreements and claimed these treaties were signed on their behalf without actual consultation. Secondly, the Agreements limit their ability to access water resources or pursue water projects on the Nile watershed that would support future demand. Post-colonial states such as Kenya, Uganda, and Tanzania seek new legal regimes in order to obtain water rights for development; however, there remains some speculation as to whether or not independent states are bound to legal regimes established by their predecessors (631). The *Vienna Convention on Succession of States in Respect of Treaties* states "a newly independent State is not bound to maintain in force, or to become a party to, any treaty by reason only of the fact that at the date of succession of States the treaty was in force in respect of the territory to which the succession of States relates" (Kimenyi & Mbaku 51). There is no general rule for state succession, causing nationalists to adapt theories of states succession into their legal regimes (Kimenyi & Mbaku 21). For upstream states, their independence allowed them an opportunity to set new laws in the Nile that reflect their interests.

Once a nation gains independence, there are two distinct theories that new legal regimes can adapt. First, nations can adapt the theory of universal succession, which describes a circumstance in which legal rights and obligations remain within a successor state. Under Roman law, legal rights and obligations were timeless, meaning in the event of death (or state succession), existing laws could not be changed by new regimes. Universal succession is expected to maintain stability in new states and prevent gaps in law that can be caused by new regimes, replacing old systems (Kimenyi & Mbaku p.48). The alternative theory for states is the

clean-slate theory. Under this circumstance, states demonstrate their sovereignty from successor states, establishing their own legal regime (Kimenyi & Mbaku p. 49). Most upstream states granted independence claim they are not bound to treaties signed by their predecessor (Carlson 8). A key reason most African countries reject the universal succession theory is because legal regimes reflect colonial-era laws that have no intentions of achieving peaceful coexistence. Secondly, colonial-era laws suppress Africans, exploit their resources, and benefit European economies (Kimenyi & Mbaku p. 49).

Upstream states assert two doctrines to strengthen their claim to the Nile's water resources. First is the Nyerere Doctrine established in 1962, which states treaty relationships will be maintained for a limited period during which the new State will decide which treaties, both bilateral and multi-lateral, it wishes to continue indefinitely and which to discontinue altogether (Kimenyi & Mbaku p. 22). The Harmon Doctrine prepared by in Judson Harmon in 1895, is the second doctrine upstream states claim grant them the sovereign right to utilize water resources. Under the Harmon Doctrine, sovereign states have exclusive and absolute jurisdiction over natural resources within their territory. Under international law, the Harmon Doctrine and Article 5 of the 1997 UN Watercourse Convention allow Ethiopia to utilize the Blue Nile's water resources in building the Grand Renaissance Dam (Abebe 37).

The 1997 UN Convention on the Law of Non-Navigational Uses of International Watercourses established global legal principles for the governance of international rivers. The framework was designed to allow watershed states to participate in decision-making, ensure equitable and reasonable use, and prevent significant harm to watersheds. Nations are expected to consult and exchange information regularly, resolve conflict, and protect the environment (Conca 96-7). Article 4 is important to Nile stakeholders because it states, "every watercourse State is entitled to participate in the negotiation of and to become a party to any watercourse agreement that applies to the entire watercourse, as well as to participate in any relevant consultation (Kimenyi & Mbaku p. 61). The core principles of the UN Watercourse Convention are demonstrated in Articles 5 and 7. Article 5 calls for reasonable and equitable use of water resources within jurisdictions and Article 7 states nations cannot cause significant harm to the watershed (Abebe 34). Article 5(2) states, "Watercourse States shall participate in the use,

development and protection of an international watercourse in an equitable and reasonable matter”. And Article 7(1) indicates that states are responsible to “take all appropriate measure to prevent the causing of significant harm to other watercourse States”. Articles of the UN Convention are meant to reinforce one another to help manage conflict between upper and lower riparian nations (Kimenyi & Mbaku p. 61). The UN Convention represents an international framework that demands cooperation between States (Conca 120).

Upper riparian states want equal participation in decision-making within the Nile watershed along, with access to water resources. In 1998 the Nile Basin Initiative (NBI) was formed and it encouraged Nile watershed states to participate in negotiations, regarding the Nile Waters Agreements (Knobelsdorf 643-4). In 1999, the Nile Basin Initiative was signed by all riparian states, except Eritrea, who was an observer at the time (Kimenyi & Mbaku 4). Swain highlights that “the NBI has developed a shared vision to achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources” (302). “The main objective of the initiative was to achieve sustainable socio-economic development through equitable utilization of and benefit from, the common Nile Basin water resources (Kimenyi & Mbaku 74).

The Nile Basin Initiative focuses on five objectives to improve water governance. “First, to develop the water resources of the basin in a sustainable and equitable way to ensure prosperity, security, and peace for all its peoples. Second, to ensure efficient management and the optimal use of the resources. Third, to ensure cooperation and joint action between the riparian countries, seeking win-win gains. Fourth, to target poverty eradication and promote economic integration. Lastly, to ensure that the program results in a move from planning to action” (Kimenyi & Mbaku 75). Knobelsdorf claims, “the NBI has provided the most promising framework for organization, development, and cooperation across riparian states and was formed by agreement between ministers of all ten Nile basin nations” (644). Although the NBI offers a cooperative approach to socio-economic development, its progress remains hindered.

Thus far, the Nile Basin Initiative has failed to resolve the disputes over riparian rights. Upper riparian states demand equitable shares in water resources. Meanwhile, the lower riparian

States, Egypt and Sudan, assert their existing water rights (Carlson 10) and reject any framework that opposes their Nile Waters Agreements water allocation rights (Kimenyi & Mbaku p. 65). Swain highlights that “the NBI represents a transitional arrangement until the member countries agree on a permanent legal and institutional framework for sustainable development of the Nile Basin” (302). Kimenyi & Mbaku claim, “the NBI is not designed to serve as a permanent solution to the region’s long-standing conflict over allocation of water resources. Instead, it functions as a temporary or transient framework for fostering dialogue, information exchange, and technology assistance as well as creating joint development initiatives in furtherance of transboundary goals” (75). Swain claims, “by failing to address the core issues and projecting a superficial cooperation involving a larger number of actors, the NBI is very likely to fail” (306). The major challenges that prevent cooperation in the Nile watershed are Egypt and Sudan’s Nile Waters Agreements and the negotiations for new water allocation rights between upper and lower riparian states.

The 2010 Cooperative Framework Agreement (CFA) is the newest legal framework developed for the Nile watershed. Upper riparian nations want to replace the Nile Waters Agreements with an up-to-date framework that enforces equitable and reasonable use of the Nile’s water resources between riparian states. Whereas the Nile Waters Agreements limits participation between riparian states and grants Egypt and Sudan primary access to the Nile’s water resources (Kimenyi & Mbaku p. 78), the Cooperative Framework Agreement offers an opportunity for new legal negotiations for governing the Nile watershed. Together, all riparian states are able to establish a new legal regime to govern the Nile watershed and monitor sustainable development (Cascão 262). Upper riparian states refer to the Nile Waters Agreements as a colonial-era treaty which hinders their ability to utilize the Nile’s water. The Cooperative Framework Agreement allows all riparian states sharing the Nile’s water to cooperate in decision-making to prevent significant harm to the watershed (Kimenyi & Mbaku 68). In 2010, Ethiopia, Burundi, Rwanda, Kenya, Uganda, and Tanzania signed the Cooperative Framework Agreement to obtain water rights. Meanwhile, Egypt and Sudan reject the Cooperative Framework Agreement, claiming the heritage of the Nile Waters Agreements (Carlson 10). Egypt and Sudan want the Cooperative Framework Agreement to include the Nile Waters Agreements. Secondly, they say the development of upper riparian states cannot affect

the current use or threaten the water security of Egypt or Sudan (Kimenyi & Mbaku 78). Cooperation between riparian states has the potential to improve water management for the entire watershed. Ethiopian reservoirs could improve water supply for lower riparian states and offer significant hydroelectric power for the region. More importantly, relationships between riparian states would improve with establishment of a formal agreement, promoting equity in the Nile watershed (Swain 306).

In order to validate and assert their claims to water rights, upstream states have begun water projects on the Nile. In 2011, Ethiopia announced its plan to construct a hydroelectric dam in the Blue Nile Gorge. The Grand Renaissance Dam will have the capacity to store 63 billion cubic meters of water and will be owned by the Ethiopian Electric Power Corporation. Costs for the project will accumulate to approximately US\$5 billion (Kimenyi & Mbaku 106-7). For Ethiopia, the Grand Renaissance Dam symbolizes their right to utilize the Nile's water resources. As one of the world's poorest countries, Ethiopia claims the Grand Renaissance Dam will create economic opportunities in the region, besides agriculture (Carlson 11). Once complete, 6000 megawatts of energy per year will be available for Ethiopians and other states on the watershed (Kimenyi & Mbaku 106). Some other benefits of the Grand Renaissance Dam include: better flood control, more water during low-rain seasons for lower riparian states, reduction of silt build-up down river, and preserving the life-span of dams built downstream (Carlson 11). Once complete, the dam will attract more economic investments within Ethiopia and essentially provide better well-being for Ethiopians. Ethiopia trusts that the Grand Renaissance Dam will strengthen their governance and independence within the international community (Abebe 32). The Ethiopian government believes that the Grand Renaissance Dam will become an image of national pride and a symbol of recent development (Chen et Swain 16).

To build the Grand Renaissance Dam, the greatest challenge is funding. Originally, Ethiopia was expecting to receive generous support from the World Bank and the international community, but this was denied because of the water rights conflict in the Nile watershed (Yimer 105). China, a new trading partner in the Nile watershed, has begun to invest in water projects in several riparian states, including Sudan, Uganda, Burundi, Congo, and Ethiopia (Cascão 260). China's willingness to financially invest in water projects is of benefit to upper riparian states.

China's reputation in the "global dams' industry" and funding for hydraulic infrastructure has significantly improved development prospects in Africa (Yimer 106). Ethiopia's Grand Renaissance Dam is one project that could not have been pursued without the aid of China's foreign investments in hydraulic infrastructure.

Egypt opposes the Grand Renaissance Dam and claims it violates the Nile Waters Agreements and interferes with Egypt's water use and plans for development (Abebe 36). Although upper riparian states wish to establish a secure cooperative framework to govern the Nile watershed sustainably, Egypt will not accept any agreement that does not absorb the existing water rights outlined in the Nile Waters Agreements (Kimenyi & Mbaku 125). Yimer highlights:

the Grand Renaissance Dam is a breakthrough in the history of the Nile hydro-politics which paved the way for equitable utilization of water resources among riparian states and indicates the historic power shift from Egypt to Ethiopia, a riparian state which contributes the lion's share of the river under discussion (106).

Water rights for the Nile watershed will continue to be disputed because of Egypt's Nile Waters Agreements and upper riparian claims to sovereignty over resources within their jurisdiction.

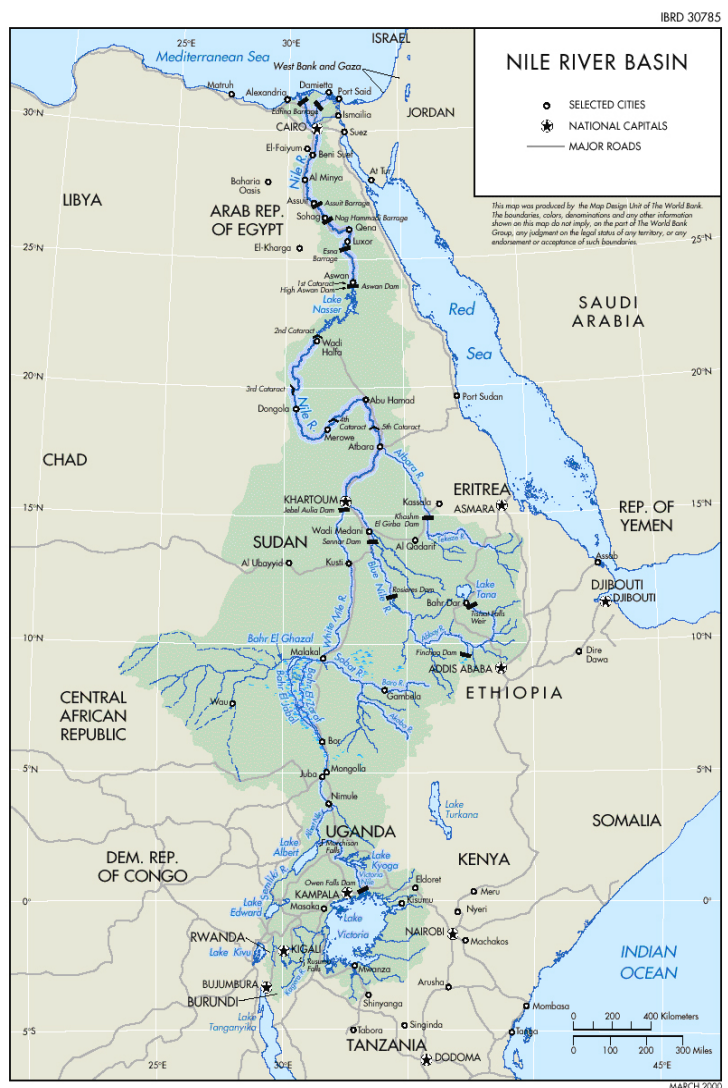
In Chapter Two, I discuss the history of water governance in the Nile watershed and the impact of the Nile Waters Agreements in more detail, including the construction and impact of Egypt's Aswan Dam, and the challenges in gaining water rights for upper riparian states. In this paper, the research questions are: *What are the challenges of transboundary water governance in the Nile Watershed? What principles are involved in the politics of Nile Basin riparian rights? And, what specific proposals might address the challenges posed by the Grand Renaissance Dam?* The methodologies I use to investigate the water conflicts between riparian states sharing the Nile watershed will include: secondary and tertiary research methods such as research reports, film documentaries, newspaper reports, and television broadcasting networks. I use both quantitative and qualitative data to analyze the conflict over the Grand Renaissance Dam. Using relevant transboundary water governance principles and theory I will demonstrate how the Nile Waters Agreements interacts with later treaties and agreements governing the Nile.

Chapter 2 - History of Nile Watershed Governance

The need to amend water governance in the Nile watershed remains a dispute between Egypt and Sudan's Nile Waters Agreements and upper riparian states' claiming sovereignty over resources within their jurisdiction. While upper riparian states demand a new legal regime in the Nile watershed that focuses on cooperation and equitable water use, Egypt refuses to forfeit its water rights granted by the Nile Waters Agreements. For any new framework to be effective, all riparian states will need to agree on regulations for the Nile watershed. The construction of the Grand Renaissance Dam is having a tremendous impact on Nile water politics. While Egypt continues to assert its water rights under the Nile Waters Agreements, Ethiopia has gained support from other riparian states who wish to adapt equitable principles into Nile water rights.

Figure 1: Nile Basin Map (World Bank 2000. *Nile River Basin*)

The Nile basin covers about 10 percent of the African continent (Kimenyi & Mbaku 6). From Ethiopia, the Blue Nile contributes about 85 percent of the Nile's water resources (Carlson 10). The White Nile's source is a group of springs in Burundi that flow through into Lake Victoria which borders Kenya,



Uganda, and Tanzania and provides 15 percent of the Nile's water flow. The Blue Nile and White Nile merge together in Sudan, forming the Nile River that then flows through Egypt (Kimenyi & Mbaku 6). The Nile is the world's second largest river by length and water flow (Roach 1). The complexity of the river and its water rights creates tension between riparian states sharing the watershed as Abebe states:

Given the length of the Nile and its tributaries, the Nile is an international watercourse creating potential water resources—and opportunities for serious conflict over the division of those resources—for Egypt and Sudan downstream, South Sudan, Eritrea, Rwanda, Burundi, and the Democratic Republic of Congo midstream, and Tanzania, Uganda, Kenya, and Ethiopia upstream (30).

Egypt's Hegemonic Reign on the Nile River

Through the British, Egypt gained control of the Nile's water resources and established relationships with the international community before several other riparian states. Cascão claims that currently, "Egypt is the clear hegemon on the Nile in terms of economic strength its economy is stronger, more diverse and further integrated in the global economy than those of other riparians" (248). The 1929 Nile Waters Agreements was the first legal framework used to govern the Nile basin. Ethiopians argue the 1929 Agreements was made between Britain and Egypt to protect British economic interests (Kimenyi & Mbaku 94). In the past, through the Nile Waters Agreements, Egypt demonstrated its asymmetric control of the Nile's water resources. Egypt gained the advantage of pursuing economic development before several upper riparian states. (Cascão 248). Once ahead, Egypt was able to secure its water rights and strategically prevent upper riparian states from utilizing Nile water resources.

Since Egypt was the first riparian state in the Nile to gain independence from Britain, their ability to utilize the Nile's water resources through treaties enriched Egypt's relationship with the international community (Cascão 248). The Nile Waters Agreements allowed Egypt to build the Aswan High Dam in 1971 and Sudan to build the Roseires Dam in 1966, both on the Nile River (Carlson 8). Secondly, during negotiations with other riparian states, Egypt has continued to impose their exclusive water rights written in the 1929 and 1959 Nile Waters

Agreements, granting them an advantage leveraging decision-making processes related to the Nile basin (Cascão 248). Swain highlights “the agreement did not include Ethiopia, and stipulated that no works were to be constructed on the Nile or its tributaries or the equatorial lakes, so far as they were under British jurisdiction, which would alter the flows entering Egypt without her prior approval” (677). In terms of water use, “Egypt is by far the main regional water user, withdrawing far higher levels of water from the basin than do its neighbours” (Cascão 247). Swain mentions that:

Without Lake Nasser, Egypt would undoubtedly have been in dire economic straits. Indeed, more than 55 million people are directly dependent on the reservoir’s capacity to carry 164 billion cubic metres of water, and its construction has brought significant increases in the welfare of the country due to the reliable supply of adequate water for irrigation, as well as municipal and industrial use (680).

Egypt is the last riparian state the Nile flows through before its waters are released to the Mediterranean Sea. The Nile is Egypt’s primary source for water and supplies the nation with about 96 percent of its freshwater supply. Due to Egypt’s arid climate, nearly the entire population lives within twelve miles of the Nile River (Abebe 31). The 1959 Nile Waters Agreements allowed Egypt to construct the Aswan High Dam and its reservoir, Lake Nasser, to exploit the Nile’s water resources. For Egypt, the dam has improved flood control and enhanced irrigation for agriculture and hydroelectric power in the region (Kimenyi & Mbaku 10). Irrigation in Egypt uses nearly 80 percent of the Nile’s annual flow. With population growth, agricultural and industrial production are intensifying, causing a greater demand for water resources in the region (Kimenyi & Mbaku 13). Following construction of the Aswan Dam, Egypt has pursued costly irrigation projects to transfer the Nile’s water further into the Sahara Desert, which may lead to a greater demand for water than the Nile Waters Agreements allow (Carlson 10).

Upper riparian states plan to pursue water projects on the Nile regardless of Egypt’s existing water rights. On numerous occasions, Ethiopia has expressed that the 1959 Nile Waters Agreements is not an effective treaty between all riparian states (Swain 680). Other riparian states also demand equitable and fair access to the Nile’s water resources (Kimenyi & Mbaku

74). A major challenge for the Nile watershed is establishing a new framework that all riparian states will agree to.

Currently, the Nile Waters Agreements represent the legal framework for water governance in the Nile. These Agreements do not promote peacekeeping and cooperation between riparian states for effective water governance. Secondly, the Nile Waters Agreements do not comply with international standards for transboundary rivers. Consequently, there is tension between riparian states because most do not have equitable water use rights. Swain highlights that “historically, Egypt has prevented upstream development to maintain its control over the Nile while pursuing its own, unilateral projects” (298). While other riparian states struggle to obtain water rights, Egypt, the lowest riparian state has been able to utilize the Nile’s water resources.

Although the Nile is a transboundary river, the Nile Waters Agreements do not promote equal distribution of water resources, nor do they distinguish water rights for upper riparian states. Internationally, water is considered a common-pool resource (Fisher 192). Common ownership essentially means that people or states have the right to use resources non-exclusively, encouraging a collective approach to ownership (Armstrong 153-4). To manage transboundary rivers more effectively, Conca highlights that a global river regime would establish a set of shared governance principles. Even before the UN Watercourses Convention was approved in 1997, principles of shared governance were well-known and advocated for from as early as the 1960’s. Naturally, riparian states should be looking to create shared governance principles for transboundary rivers (103). Under common property rights, resource rights are not lost through non-use nor are riparian states entitled to equal quantities of resources (Fisher 69). The Nile requires a global regime to ensure a multilateral approach is taken for water use and water projects constructed in the watershed.

Nile basin riparian rights should reflect international standards for transboundary rivers. Conca mentions that the principles of the UN’s Watercourses Convention “are essential to the protection of international rivers and watersheds without the participation of all states, without an exchange of information, or in the absence of some institutional means of resolving disputes”

(120). A shared governance approach can legitimize water use between riparian states, enhance environmental protection in the watershed, and reduce significant harm to lower riparian states (Conca 121). A new legal framework or global river regime to govern the Nile watershed could work to alleviate some challenges of transboundary water governance.

The ownership of the Nile's water resources has not been resolved by international water laws. In the 1999 Nile Basin Initiative, a proposal for equitable shares was recommended by upper riparian states, but has been unable to resolve the dispute between lower riparian and upper riparian states of the Nile River. Upper riparian states want fair shares to the Nile's water resources, while Egypt and Sudan want to hold their existing water rights (Carlson 9). The Cooperative Framework Agreement has the potential to become the international watercourse's legal regime for the Nile basin because it would enforce equitable and reasonable allocation of water resources (Kimenyi & Mbaku 84). The Cooperative Framework Agreement's intention is to "adopt of principles of international water law, such as the principle of equitable and reasonable utilization and the principle of no significant harm" in the Nile watershed (Cascão and Nicol 555). The Cooperative Framework Agreement promotes fair distribution of water resources between riparian states of the Nile watershed.

Despite Egypt and Sudan's indifference to the Cooperative Framework Agreement, Ethiopia is proceeding with the construction of the Grand Renaissance Dam (Abebe 33). Kimenyi & Mbaku claim that:

the CFA is considered an important step in securing water rights for all riparian states. Within such an institutional environment, upstream riparians can undertake the necessary investments to harness Nile River waters for national development such as the Grand Ethiopian Renaissance Dam (85).

The Cooperative Framework Agreement is a multilateral approach proposed by upper riparian states that can ensure sustainable water use in the Nile watershed and establish an international legal regime that fosters cooperation between all riparian states, thus averting challenges posed by water projects on the Nile.

Ethiopia and the Grand Renaissance Dam, backed by Chinese financing, are thus creating an opportunity for all riparian states to engage in establishing a new global river regime for the Nile watershed. Although the dam is an Ethiopian project, their determination to gain access to

the Nile's water resources has encouraged other riparian states without water rights to demand a regime that enacts equitable distribution of water resources.

In the next chapter, I analyze Ethiopia's growing political strength in the Nile watershed. The Grand Renaissance Dam has gained support from other riparian states with limited political and financial stability that want to utilize water resources for economic growth. For decades, Egypt has employed numerous strategies to weaken the economic development of upper riparian states to preserve its control over the Nile's water resources. With help from China, The Grand Renaissance Dam is changing Nile water politics and weakening Egypt's stronghold on the Nile's water resources.

Chapter 3 - History, Funding, and Impact of the Grand Renaissance Dam

In this chapter, I overview the history of Ethiopia's water rights and the construction of the Grand Renaissance Dam, including its funding and impacts on the Nile basin and the Nile Basin Initiative. While Ethiopia and several other upper riparian states support the construction of the Grand Renaissance Dam, Egypt and Sudan continue to honor the 1929 and 1959 Nile Water Agreements that grant them exclusive water rights. For Ethiopia and the other upper riparian states to develop economically, they need legitimate water rights. The Cooperative Framework Agreement and the construction of the Grand Renaissance Dam are creating an opportunity to establish a more cooperative legal regime for the Nile basin.

History of Ethiopia's Water Rights & Funding of the Grand Renaissance Dam

For over a century, Ethiopia has battled a series of invaders, limiting the state's ability to guide and advance its political, economic, and social welfare. Foreigners always sought to control the Blue Nile's water flow and to ultimately control the Nile's water resources. From 1875 to 1876, Egyptian ruler Khedive Ismail's military attacked Ethiopia. Egypt's objective was to obtain control of the Blue Nile River. Ethiopia withstood a number of defeats against enemies throughout the late 19th century until 1902 when the Anglo-Ethiopian treaty was struck (Kimenyi & Mbaku 92-3). Later, during the mid-1970's Egypt developed a covert destabilization policy to

weaken the political stability of upper riparian nations. Although Italy had some influence in Ethiopia, in 1896, the Battle of Adwa determined that Ethiopia would remain independent (Carlson 7). In other words, Ethiopia was never fully colonized, but there was European influence within the country for several years. During Ethiopia's war with Eritrea and Somalia, Egypt offered aid as a strategy to maintain control over the Nile. Egypt's strategy also included blocking financial aid from international and regional donors (Kagwanja 325). Egypt's political stability and relationship within the international community allows Egypt to undermine water rights for upper riparian states and limit their development. Thus, Egypt has been able to maximize its own use of water resources from the Nile.

Before construction of the Grand Renaissance Dam, Ethiopia consistently advocated for water rights to the Nile river. The 1959 Nile Waters Agreements only permits water access for Egypt and Sudan, leaving the remaining states without water rights. Under the Agreements, upper riparian states cannot interfere with Egypt and Sudan's annual water allotment (Kimenyi & Mbaku 105). Several East African states gained independence after the 1959 Nile Waters Agreements: Kenya (1963), Uganda (1962), Tanzania (1961), Rwanda (1962), Burundi (1962), making them ineligible to utilize the Nile's water resources as part of the 1959 Nile Waters Agreements (Carlson 8). The Nile Waters Agreements reflect colonial laws used to subordinate African states and restrict their development (Kimenyi & Mbaku 28-9). In 1963, Ethiopia requested 6 billion cubic meters of water from the Nile annually, but was unsuccessful because of political tension between Britain and East Africa's White Nile states who were newly independent (Swain 679-80). Displeased from being excluded from the 1959 Nile Waters Agreements, Ethiopia's Emperor Haile Selassie began planning for several dams on the Blue Nile and its tributaries, but he was overthrown in 1974, before achieving his goal of improving Ethiopia's water sector (Carlson 9).



Figure 2: Construction of Grand Renaissance Dam 2017 (CNN 2018. *Is Ethiopia Taking Control of the Nile?*)

Ethiopia is one of the world's poorest nations, suffering from poverty and economic instability. Ethiopia's workforce is primarily agricultural, resulting in low profits. Secondly, Ethiopia has leased millions of hectares of land to big investors in the last several years in an attempt to develop large-scale agriculture (Yildiz et al. 4). Ethiopia has leased land to India, Saudi Arabia, and China for irrigated water projects in the southern region while the remaining part of the country struggles to develop economically (Carlson 11). The Grand Renaissance Dam appears to be a promising option for Ethiopia's economy. Ethiopia is abundant in water resources, but only 3% of Ethiopia's hydroelectric potential has been developed (Kimenyi & Mbaku 106). In 2011, former Ethiopian Prime Minister Meles Zenwai announced plans to build a dam large enough to utilize the Blue Nile's water resources and allow Ethiopians better well-being (Carlson 9). On April 2, 2011, the Ethiopian prime minister, Meles Zenwai, began construction of the Grand Renaissance Dam (Kimenyi & Mbaku 106). "The dam is located in the Benishangul-Gumuz region of Ethiopia on the Blue Nile River at about forty kilometers east of the Republic of Sudan and it is owned by the Ethiopian Power Corporation" (Kimenyi & Mbaku 106). The government awarded the engineering, procurement, and construction contract, worth US \$4.7 billion, to the Italian Company Salini Costruttori (Kimenyi & Mbaku 106). The Grand

Renaissance Dam will increase Ethiopia's access to energy and allow it to export power to Kenya, Sudan, and Djibouti (Shay 1). "In August, Ethiopian Prime Minister Abiy Ahmed acknowledged that, having initially been expected to be completed by 2020, the dam would be delayed by several years" (Awadalla 1). "Under a new 2015-2020 development plan, Addis Ababa wants to raise power generation to 17,346 MW from a current capacity of just over 4,300 MW from hydropower, wind and geothermal sources and aims to become the continent's biggest power exporter" (Shay 1). Even Saudi Arabia is undergoing feasibility studies for an electric cable from the Grand Renaissance Dam. This energy will reduce Saudi Arabia's reliance on gas and oil and even offer energy to war-torn Yemen (Darby 1). The Grand Renaissance Dam will strengthen Ethiopia's development and offers cleaner energy than biofuels, which are commonly used throughout the watershed.

Initially, Ethiopia thought the World Bank and International Monetary Fund would financially support the Grand Renaissance Dam's construction; however, due to Ethiopia's political tensions with Egypt, some international organizations and nations have refused to participate in the construction of the Grand Renaissance Dam including the World Bank and International Monetary Fund (Kimenyi & Mbaku 111-2). The total cost of Ethiopia's Grand Renaissance Dam is US \$5 Billion (Lazarus 1). In support of the project, China provided Ethiopia with US \$1 billion to initiate the construction of transmission lines to connect the Grand Renaissance Dam with Addis Abba (Kimenyi & Mbaku 113). China's trade with Africa has grown significantly since 1990. Chinese exports have been taking advantage of low-cost labor and plan to supply African markets with more Chinese goods (Brautigam et al. 1).

Ethiopia is determined to complete the Grand Renaissance Dam and is open for sponsorship. Shay claims Ethiopia's official news agency reported that bonds issued by the government have collected nearly US \$1 billion in donations and from annual benefit festivities. Ethiopia has even embraced private investments from Ethiopian citizens, journalists, and foreign travelers (3). Lazarus claims that "the Grand Renaissance Dam was supposed to be finished in 2017, but due to delays, it is only two-thirds complete" (1).

Impact of Ethiopia's Grand Renaissance Dam on the Nile Basin

Although the dam will increase economic opportunity for Ethiopia, there are many environmental uncertainties associated with hydrological dams. Dams are known to have hydrological effects; they alter the morphology of ecosystems, reduce sediment flow, change erosion rates, and impact the physical and chemical properties of watersheds. Landscapes for both upper and lower riparian countries may become flooded or change because of the change in water flows (Conca 79). The Grand Renaissance Dam is in compliance with international hydrological dam standards (Carlson 10). Egypt's High Aswan Dam has already caused a number of environmental effects in the Nile Basin, including river bed erosion, salinization, and water logging (Swain 680). The development of the Grand Renaissance Dam and other hydraulic projects along the Nile watershed may put the entire river in a precarious state.

The Grand Renaissance Dam will have similarities to Egypt's Aswan High Dam. The Grand Renaissance Dam will allow Ethiopia the ability to develop storage facilities for excess water collected during rainy seasons which can be saved and released during water shortages (Lazarus 1). Secondly, the dam will allow Ethiopians to better manage floods and drought. Ethiopian foreign minister, Tedros Adhanom Ghebreyesus, claims the Grand Renaissance Dam is a "win-win" situation for the Nile watershed. The dam will follow the principles of equitable and reasonable utilization and encourage partnership between riparian states to minimize harm to the watershed (Kimenyi & Mbaku 114).

Ethiopia has worked to ensure that the Grand Renaissance Dam (GERD) will not significantly impact lower riparian states. All riparian states are encouraged to cooperate in the management of the Nile's water resources. "In May 2011, Egyptian Prime Minister Essam Sharaf visited Ethiopia, where he agreed to form a committee of Egyptian, Sudanese and Ethiopian experts to study the effects of the proposed Ethiopian Dam on the flow of Nile water to Sudan and Egypt" (Shay 3). The resulting Tripartite International Panel of Experts (IPoEs) concluded there would be no significant impact on water flows to Egypt and Sudan from the Grand Renaissance Dam (Kimenyi & Mbaku 108). Although Egypt and Sudan remain skeptical of the IPoEs conclusion, the true effects of the Grand Renaissance Dam may depend on the

willingness of all riparian states to cooperate on water management for the Nile Basin. Kimenyi & Mbaku highlight nine conclusions made by the Tripartite International Panel of Experts for the Ethiopian government:

First, the GERD project was being carried out in line with international design criteria and standards. Second, the dam would produce significant benefits for all three countries. Third, the project would not harm or interfere with the flow of water to the two downstream riparian countries. Fourth, it would significantly improve access to affordable energy sources to citizens of the region. Fifth, the new dam would solve the siltation problem in Sudan's and Egypt's dams and significantly enhance water flow. Sixth, the GERD would resolve the problem of seasonal flooding, which was common, especially in Sudan. Seventh, Ethiopia's new dam would significantly reduce loss of water through evaporation and improve the flow of water to, and cut down on the amount of sediment, reaching the Aswan High Dam in Egypt. Eighth, it would provide clean energy for the entire Nile River basin. Finally, the GERD would produce savings in water that would result in more water being available to all riparian states (116).

Other riparian states can also benefit from the Grand Renaissance Dam. Cascão and Nicol mention the Grand Renaissance Dam will have “multipurpose benefits to lower riparian states, including flood control, sediment management, water availability for irrigation, and improved navigation (554-5). Shay highlights that even Sudan is beginning to realize the economic benefits of the Grand Renaissance Dam for the Nile Basin:

Sudan, formerly an Egyptian ally, has aligned with Addis Ababa for the benefit from the project. Ethiopia will be selling electricity to its northern neighbor; a planned transmission line will connect the Ethiopian electrical grid to Khartoum. The dam project will also limit flooding of the Blue Nile in Sudan, allowing Sudan to expand its agriculture (7).

Ethiopia has no intentions of causing a water shortage for lower riparian states. Cascão and Nicol highlight that the Cooperative Framework Agreement demands that Ethiopia follows strict guidelines to protect lower riparian states from harm. The Cooperative Framework Agreement allows other riparian states to monitor the Grand Renaissance Dam to ensure reasonable and equitable water use (551). Also, Kimenyi & Mbaku highlight that “Ethiopia was bound by

agreements to consult both Egypt and Sudan before rerouting the waters of the Blue Nile as part of their project” (109). Ethiopia has a strong desire to unite riparian states under the Cooperative Framework Agreement to protect the Nile’s water resources rather than cause harm to lower riparian states.

One major concern of Egypt is the size of the lake behind the dam. The Ethiopian Electric Power Corporation will create a lake holding 60 billion cubic meters of water, just 40km east of Sudan (Kimenyi & Mbaku 106). Egypt and Sudan are fearful of water shortage and claim that the Grand Renaissance Dam may disrupt the water flow and harm agricultural irrigation (Kimenyi & Mbaku 107). Ethiopia has already begun to divert water from the Blue Nile. Shay mentions that:

in May 2013, Ethiopia began diverting the Blue Nile. Located 500 km north-west of the capital Addis Ababa and near the Sudan border, the dam will be the largest in Africa, 1800 m. long and 170 m high. It will create a lake 150 square kilometers in size, with an overall volume of 10 million cubic meters. Two power stations will be located on either bank of the river with an installed capacity of 6000 MW and 15,000 GW / h annual energy (2).

Shay claims “the diversion in itself didn't affect Egypt’s share of the Nile’s water, because the flow of the river was to be diverted and then returned to its original path a few km later, meaning that the amount of water reaching Egypt would be the same” (3). There is a conflict of interest over the reservoir between Egypt and Ethiopia which Shay highlights:

One of the main issues in debate is the time of filling the reservoir. Egypt and Sudan will be especially vulnerable to the time frame of filling the reservoir, which may take anywhere from five to 15 years. Addis Ababa originally wanted to fill the reservoir in three years which would have seen Egypt’s share of Nile water fall drastically. Egypt is pushing for a seven-year filling timetable. The shorter the time taken the quicker Ethiopia can begin producing electricity, but this will also mean an aggressive throttling of water flow downstream. Once the dam is filled the flow should stabilize downstream as it will reach a point where Ethiopia cannot contain it any longer (1-2).

Masr claims in 2018, the Tripartite committee recommended to fill the Grand Renaissance Dam within a four to seven-year timeframe. Originally, Ethiopia was pushing to fill the Grand Renaissance Dam's reservoir in three years and Egypt proposing a 12-year timeframe (1). Ethiopia has not yet determined how long it will take to fill the Grand Renaissance Dam reservoir, but wants to fill the reservoir as soon as possible without disrupting the water flow to lower riparian states.

The Nile Basin Initiative and the Grand Renaissance Dam

For decades Ethiopia has encouraged riparian states to foster cooperation in the Nile watershed. In 1990, through the Nile Basin Initiative, riparian states united to promote multilateralism within the Nile Basin. Ana Elisa Cascão and Alan Nicol mention that during the 1990s, the Nile Basin Initiative motivated nations to work together and establish new cooperative forms of management. Cascão claims this is the “first time in the Nile basin hydropolitical history that all upstream riparians assumed a unified position against downstream riparians” (256). The signing of the Cooperative Framework Agreement by upper riparian states encouraged Ethiopia's decision to build the Grand Renaissance Dam (552). Kimenyi & Mbaku claim “the Cooperative Framework Agreement is considered an important first step in securing water rights for all riparian states” (85). The goal of the Cooperative Framework Agreement was to establish basin-wide legal agreements and to minimize water conflict through a multilateral approach. Riparian states sharing the Nile are encouraged to collaborate or cooperate with other states on projects to manage the Nile responsibly (Cascão and Nicol 552). Since its enactment, Ethiopia remains a strong advocator of the Cooperative Framework Agreement and its key principles: equitable and reasonable water use between all riparian states (Kimenyi & Mbaku 83-89). The Grand Renaissance Dam offers the opportunity for Ethiopia to advance its economic development while shifting Nile water politics to a multilateral approach. Until recent years, Ethiopia's inability to utilize the Nile's water resources was affected by the country's political and financial instability and lack of an official strategy for the water sector (Cascão and Nicol 555). With the Grand Renaissance Dam, Ethiopia can begin to utilize its water resources and develop an economic development plan.

The Cooperative Framework Agreement represents a partnership between Nile riparian states. Although Egypt and Sudan reject the Cooperative Framework Agreement, Ethiopia, Kenya, Burundi, Rwanda, Uganda, and Tanzania are working together to expand their water sectors (Kimenyi & Mbaku 85). Egypt wants their existing water rights included in the Cooperative Framework Agreement; however, Egypt and Sudan's existing water rights are not equitable in allocation of water resources for upper riparian states (Kimenyi & Mbaku 86). Meanwhile, the Cooperative Framework Agreement is recognized by the majority of Nile basin states, all who share a common interest in managing the river's water resources cooperatively and gaining legitimate access to the Nile's water resources. These nations wish to abandon the 1959 Nile Waters Agreements and negotiate a new water agreement that governs the Nile reasonably and equitably (Carlson 10). Upper riparian states hope that Egypt and Sudan will eventually abandon the 1929 and 1959 Nile Waters Agreements, so all riparian states can work together under a new legal framework (Kimenyi & Mbaku 85).

In the next chapter, I will analyze the changing geopolitics of Nile governance. The current regime allows Egypt to reinforce its hegemony of the Nile River and existing water rights. Ethiopia's demand to engage in a new water agreement between all riparian states is motivating other states to establish water rights to the Nile's water resources. Without cooperation in the Nile watershed, the Grand Renaissance Dam may trouble lower riparian states that do not work with Ethiopia to strategize a water management plan.

Chapter 4 - Analysis: Changing Geopolitics of Nile Governance and Addressing Water Conflict in The Nile Watershed: Prospects for a Cooperative Framework for Equitable Distribution and Sustainable Development of Water Resources

In this chapter, I analyze the changing geopolitics of water governance in the Nile. As noted in chapter two, Egypt depends on the Nile's water resources and fears that Ethiopia's development on the Blue Nile may lead to a water shortage in the Nile basin. Allegedly, Egypt has conspired against Ethiopia's Grand Renaissance Dam and the establishment of any new legal framework for the Nile basin (Carlson 1). Kimenyi and Mbaku mention that for several years, Egypt has used its position to "prevent the development and adoption of any legal framework that, in their opinion, would threaten the rights granted them by the Nile Waters Agreements" (65). In the mid-1970's Egypt developed a covert destabilization policy to weaken the political stability of upper riparian nations. During Ethiopia's war with Eritrea and Somalia, Egypt offered aid as a strategy to maintain control the Nile. Egypt's strategy also included blocking financial aid from international and regional donors (Kagwanja 325). In 2012, allegations were made by newspapers, claiming that Egypt and Sudan discussed plans to build an airstrip that would later be used for a mission to sabotage Ethiopia's dam (Carlson 1-2). Cascão claims that "Egypt has promoted a set of mainstream ideas favorable to its position. Simultaneously it has discarded any alternative sets of ideas, such as upstream water resource development. This self-reproducing Egyptian narrative has been, historically, a determining factor in the regional hydropolitical relations" (248). Egypt's water rights are supported by most western countries and international institutions. For example, Egypt's relationship with the US and World Bank is limiting Ethiopia's funding from most of the international community (Abebe 43). Egypt has taken advantage of its political power to block funding for upstream water projects.

Secondly, this chapter, also addresses the benefits of the Cooperative Framework Agreement for the Nile watershed. Ethiopia's Grand Renaissance Dam is nearly complete and continues to shift Nile water politics. While Egypt and Sudan have not signed the Cooperative Framework Agreement, the six upper riparian states (Ethiopia, Kenya, Uganda, Burundi,

Tanzania, and South Sudan) have begun to pursue hydraulic infrastructure following its terms. The debate on Nile water governance using either the Nile Waters Agreements or the Cooperative Framework Agreement is conflicting with multilateral development in the watershed. Ethiopia's Grand Renaissance Dam has helped encourage equitable and reasonable water use under the Cooperative Framework Agreement; however, Egypt's resistance to the Grand Renaissance Dam and Cooperative Framework Agreement is preventing multilateralism along the Nile basin. Ethiopia's Grand Renaissance Dam and the Cooperative Framework Agreement offer an opportunity for riparian states to establish a new legal framework to govern the Nile basin. The Nile Water Agreements has encouraged unilateralism along the basin and limited water use for riparian states. More importantly, Kimenyi & Mbaku claim the Nile Waters Agreements does not address the effects of climate change and that a regional approach to water governance allows mitigation and adaptation programs to be integrated into national policies and basin-wide initiatives (19). Under the Cooperative Framework Agreement, several riparian states wish to adapt a multilateral approach to govern the Nile River and improve well-being along the watershed.

Egypt frames water as a matter of national security, allowing Egyptians to convince their allies that the development of any hydrologic infrastructure on the Nile in upper riparian states threatens Egypt's water supply. Since the 1970's, the Egyptian government objective has been to protect their share of the Nile's water resources. Egypt is the last riparian state to receive water from the Nile, and continuously highlights their dependency on Nile water, making it difficult for riparian states to negotiate new water laws (Cascão 248). Egypt considers the Grand Renaissance Dam a threat to national security because it jeopardizes their water security in the Nile and control of the Nile's water resource (Carlson 1). Egypt has legitimate access to the majority of the Nile's water resources and considers the Nile Water Agreements valid between all riparian states (Kimenyi & Mbaku 65). Egypt considers the Grand Renaissance Dam a political strategy that enables Ethiopia to control the Blue Nile's water flow to lower riparian states (Chen & Swain 12). However, Ethiopia and several other upper riparian states strongly contest the 1959 Nile Waters Agreements which only grants Egypt and Sudan water rights. Several upper riparian states have no water rights, limiting their access to water resources and ability to develop hydraulic infrastructure. As a result, after independence, Tanzania established the Nyerere

Doctrine which allows new independent states to abandon British treaties (Carlson 8). Now that Ethiopia is receiving funding from investors and the international community (Shay 3), Egypt will have greater difficulty protecting its water rights unless all riparian nations can negotiate new terms within the Nile Basin Initiative.

Sudan's Changing Relations

In 1985, the relationship between Egypt and Sudan began to diminish once Egypt opposed revising the 1959 Nile Waters Agreements to increase Sudan's share of water (Swain 685). Thus, Ethiopia's quest to develop hydraulic infrastructure on the Blue Nile became of interest to the Sudanese government.

Sudan's interest towards Ethiopia's Grand Renaissance Dam has caused their relationship with Egypt to suffer. While Egypt continues to oppose the Grand Renaissance Dam and claims the dam will threaten their water supply, Shay highlights that on August 17, 2017, Sudan's president Omar al-Bashir confirmed Ethiopia's Grand Renaissance Dam meets Sudan's expectations and that it would not impact water supplies to lower riparian states (7). While in the past Sudan has supported Egypt in protecting their historic water rights, the Grand Renaissance Dam has created a tense relationship. Sudan now supports the Grand Renaissance Dam and is working with Ethiopia to ensure its success (Shay 7). With Sudan in support of the Grand Renaissance Dam, Egypt's ability to invoke the Nile Water Agreements is diminishing slowly. Ethiopia has now become a key decision-maker in Nile watershed governance.

Recently, Sudan has begun strengthening its relationship with Ethiopia to protect its own interests. Sudan fully supports Ethiopia's plan to fill the dam and has shown their willingness to begin work. Sudan wants to establish a joint declaration to ensure Ethiopia commits to operation rules and filling the Grand Renaissance Dam within a specified timeframe of four-to-seven years (Masr 1). Shay claims that Sudan's participation in the construction of the Grand Renaissance Dam is to assure that Ethiopia's dam is safe to operate. If the dam were to collapse, Khartoum, the capitol of Sudan may suffer from severe flooding (6). The Grand Renaissance Dam will allow Sudan to purchase electricity from Ethiopia and expand Sudan's agriculture because the dam will "limit flooding of the Blue Nile in Sudan" (Shay 7). Chen and Swain mention that the political instability in post-Mubarak Egypt has weakened its position and ability to leverage

decision-making within the international community. While Egypt is under a new regime, Ethiopia and Sudan have taken the opportunity to gain investments and technical support to develop hydraulic infrastructure. The Grand Renaissance Dam was announced during the Egyptian revolution of 2011 (16). Construction of the Grand Renaissance Dam has awoken Sudan to the importance of cooperation in the Nile basin. Shay highlights that:

The Grand Ethiopian Renaissance Dam (GERD) is located in the Benishangul-Gumuz Region of Ethiopia, only 40 km east of the country's border with Sudan. 77% of Sudan's water sources come from the Rivers Nile, Gash, Parka, and Azoum, all of which begin outside its borders. Sudan suffers from a scarcity of water resources and this scarcity is increasing year by year. Sudan's total water resources are now estimated at 30 billion cubic meters. 20.5 billion of the resources are estimated to come from the River Nile and its tributaries, 5.5 billion from seasonal rivers valleys and 4 billion from groundwater sources. Sudan's estimated water requirement in the period 2012 - 2027 is approximately 33 billion cubic meters. This 3 billion deficit highlights the growing demand for water in that period (6).

For several years, Egypt and Sudan maintained an alliance, allowing them to control the Nile's water resources. Shay claims that "Sudan had initially been supportive of Egyptian concerns over the impact of the dam on the flow of the Nile but changed its position in 2015. President Al-Bashir said in a TV interview in December 2015 that the dam has become a reality and that it required the cooperation of all parties to ensure its success" (6). Sudan is interested in the benefits of the Grand Renaissance Dam. For one, Sudan is disappointed with its existing water rights. The 1929 Nile Waters Agreements was revised in 1959 after Sudan gained independence from Britain (Carlson 8). Swain claims that:

More recently, Sudan has demanded modifications to the 1959 agreement in order to increase its share, though strong Egyptian opposition has stalled any efforts to revise it. Throughout the 1990s, Sudanese officials have repeatedly used threats of withholding Nile waters from Egypt in order to buttress their claims (Swain 296).

Ethiopia's Rise to Power

Ethiopia wants sovereignty over national resources. Ethiopia's economic growth and development demands more clean reliable sources of energy. Most Ethiopians currently rely on biofuel and rain-fed agriculture (Swain 11). More importantly, Ethiopia wants all riparian states to participate in equitable and reasonable distribution of Nile water resources (Kimenyi & Mbaku 85-6). Cooperation in the Nile watershed will allow riparian states to facilitate the sharing of resources. The watershed is shared by several states. If one state ignores regulations governing the Nile watershed, there could be devastating consequences for other states that rely on the Nile's water resources. Several upper riparian states are beginning to expand their water sectors (Cascão 264). While Egypt remains reluctant to sign the Cooperative Framework Agreement, Ethiopia continues to manifest its vision of a new legal framework in the Nile watershed with the Grand Renaissance Dam.

The Grand Renaissance Dam is shifting the geopolitics of the Nile basin because once complete, Ethiopia will gain physical control of the Blue Nile's water flow, amounting to nearly 80 percent of the Nile's water flow (Carlson 2). With regard to Ethiopia's determination to develop hydraulic infrastructure, Kimenyi & Mbaku highlight that:

over the years, the Ethiopian government has expressed an interest in building a dam on Lake Tana, the source of the Blue Nile. Feasibility studies of building a dam at the source of the Blue Nile were conducted, including one that was carried out by J. G. White Engineering of New York in the 1920s. More recently, studies sponsored by the government of Ethiopia and other parties have determined that the terrain of the Blue Nile is particularly suitable for the building of dams to generate electricity that could meet the power needs not just of Ethiopia but also of other communities in the Nile River basin and even the Arabian Peninsula (95).

Kimenyi & Mbaku highlight that from "as early as the 1950s, Ethiopia had asserted and reserved, then and in future, the right to utilize the waters of the Blue Nile without recognizing any limitations on its freedom of action" (94). The 1959 Nile Waters Agreements included revisions to grant Sudan water rights. Ethiopia was excluded from negotiations. As a result, Ethiopia's Emperor Haile Selassie begun planning the development of several dams on the Blue

Nile (Carlson 9). In order for Ethiopia to achieve economic growth, Ethiopia depends on the ability to utilize its water resources without Egypt's permission or adhering to water agreements that impede Ethiopia's national interests.

The Grand Renaissance Dam symbolizes change in the Nile Basin. Once complete, Ethiopia will be able utilize its water resources, improve the nation's economic well-being, and promote equitable water use in the Nile basin. Cascão and Nicol states that:

the Grand Renaissance Dam is symbolic of a relative power shift within the basin towards upstream states, where greater demands for energy resources and the achievement of food security drive decision-making processes (569).

Ethiopia is claiming sovereignty over national resources allowing them to utilize the Blue Nile's water resources and reach new trade agreements with Nile riparian states that benefit the entire basin (Swain 16). Ethiopia has successfully negotiated hydroelectric trade agreements with two East African countries, Kenya and Sudan (Cascão and Nicol 557). Cascão and Nicol claim that "the Grand Renaissance Dam has helped Ethiopia become a major regional economic actor in the East and Horn of Africa regions" (557).

With the Grand Renaissance Dam under construction, Egypt is losing authority over the Nile's water resources. The Grand Renaissance Dam will be the largest hydro-powered dam in Africa (Carlson 1). Cascão and Nicol highlight several achievements of the Grand Renaissance Dam:

GERD is a milestone in the Eastern Nile landscape, and from several perspectives: in hydropolitical terms, but also in terms of regime change over the management of the shared water resources, the dynamics of water utilization and management, economics and incentives for regional economic integration approaches, and more generalized awareness that water cooperation is more essential than ever (551).

Ethiopia shares a common interest in the equitable and reasonable use of the Nile's water resources with several riparian states that do not have legitimate water rights (Kimenyi & Mbaku 86-7). Cascão and Nicol claim that:

the new cooperation process initiated in the mid-1990s would bring a novel approach to promote transboundary cooperation in the hydrologically complex Nile Basin with two parallel tracks: a technical track, with the Nile Basin Initiative as a transitional cooperative arrangement; and a political track, driving negotiations for a Cooperative Framework Agreement, which would promote the establishment of a functioning basin-wide framework for legal and institutional arrangements (552-3).

The Cooperative Framework Agreement initiated cooperation in the Nile watershed between several riparian states (Shay 3). Although Egypt continues to oppose the Cooperative Framework Agreement, Ethiopia ratified the new legal framework in 2013 and continues construction of the Grand Renaissance Dam (Kimenyi & Mbaku 84). Egypt can no longer expect its historic water rights to be acknowledged from within the Nile community. Upper riparian states cannot develop to their full potential under the Nile Water Agreements because Egypt has repeatedly prevented them from obtaining legitimate water rights and support from the international community.

Former Prime Minister Meles Zenawi is responsible for putting Ethiopia's goals into effect and strengthening the nation's political stability (Cascão and Nicol 557). Meles Zenawi began plans for the Grand Renaissance Dam to strengthen Ethiopia's economic stability (Carlson 10). Kimenyi & Mbaku mention that Zenawi considered the Nile River an "umbilical cord connecting two great nations and its management should be based on cooperation, not threats" (109). In the past, Egypt has prevented financial support for the development of upstream water projects to protect its water supply. Carlson mentions that originally Ethiopia expected financial support from the World Bank; however, Egypt's concerns are hindering Ethiopia's ability to obtain funding from the international community (11). As a result, Ethiopia has relied on support from the African Development Bank, regional banks, and foreign investors to help fund their water projects. China is a key contributor for the Grand Renaissance Dam project and has become a crucial trading partner for Ethiopia (Yimer 106). From 2006 to 2017, Ethiopia's gross domestic product raised to 10.3% a year from 5.4%. Ethiopia mostly exports agriculture and is working to reduce its poverty rate by investing in social services and improving government (World Bank 2018). Chen & Swain highlight that "the emergence of China as a superpower in Africa has further shifted the situation in Ethiopia's favor, and many Chinese firms are already involved in helping Ethiopia to harness its hydropower" (16). Cascão and Nicol highlight that

“new economic and trade partnerships with China, and substantial economic growth have transformed Ethiopia into a country with increasing demand for new infrastructure and food and energy resources” (557). Ethiopia’s relationship with China allows Ethiopia the ability to utilize their water resources and strengthen their economy simultaneously. Thanks to Meles Zenawi’s strong leadership, Ethiopia’s Grand Renaissance Dam has helped Ethiopia and other riparian states pursue a new legal framework to govern the Nile basin.

Ethiopia’s plan to build the Grand Renaissance Dam without the support of Egypt pressures Egypt into abandoning the Nile Waters Agreements in order to protect its national interests towards water security. Egypt can no longer expect its historic water rights to be accepted by Nile riparian states. Egypt cannot protect its water supply without adapting the Cooperative Framework Agreement. Several riparian states want principles of reasonable and equitable water use. Next, I address Nile water conflicts and the prospect for a Cooperative Framework that supports equitable distribution and sustainable development of Water Resources in the Nile watershed. Multilateralism for Nile watershed governance will help ensure development in the Nile watershed is sustainable

Consequence of Unilateral Development on the Nile River

Tensions over the Nile’s water may escalate as upper riparian states economically develop. The Nile Basin Initiative offers an opportunity for nations to cooperate and govern the Nile watershed responsibly. Under the Cooperative Framework Agreement (CFA), most nations are hoping to achieve legal negotiations for the Nile watershed, but reaching a consensus between Nile watershed countries has proven difficult (Cascão 262). Kimenyi & Mbaku highlight that Article 14(b) of the Cooperative Framework Agreement remains a conflict between riparian states. Egypt and Sudan want their existing rights included in the Cooperative Framework Agreement, whereas the remaining states agree that the Nile’s water resources can be protected through cooperation. Article 14(b) allows more fairness and equity in the exploitation of Nile water resources (125). Article 14(b) states that “in the spirit of cooperation, states agree not to significantly affect water security of any other Nile Basin state” (Kimenyi & Mbaku 125).

Cooperation between riparian nations can strengthen transboundary governance and help monitor equitable distribution and utilization for the Nile watershed.

Although upper riparian states have begun to cooperate to mandate a new legal framework to govern the Nile watershed, Egypt continues to honor its historic water rights. Egypt has lost some political and economic stability since its 2011 revolution and has had more of a challenge invoking its historic water rights within the Nile community (Kimenyi & Mbaku 116-7). While Sudan acknowledges its water rights under the 1959 Nile Waters Agreements, it continues to express its interest in the Grand Renaissance Dam and openness to a new legal framework (Shay 7). South Sudan clearly states it does not recognize the 1959 Nile Waters Agreements. After separating from Sudan in 2011, South Sudan claims to oppose the Nile Water Agreements and looks forward to the Cooperative Framework Agreement (Kimenyi & Mbaku 87). With growing support of the Cooperative Framework Agreement, Egypt may soon realize its best option is to adopt the new framework to protect its fair use of the Nile's water resources. Otherwise, as nations pursue development under the Cooperative Framework Agreement, Egypt's access to the Nile's water may become threatened and the entire watershed may be put at risk. Egypt is concerned that Ethiopia's reservoir and the demand of water needed to power the Grand Renaissance Dam will reduce water flow to lower riparian states (Cascão and Nicol 507). Kimenyi and Mbaku highlight that the Grand Renaissance Dam is being built to produce electricity. The water collected will be stored to ensure water is available to produce electricity during dry seasons (107).

Egypt's refusal to cooperate with Nile riparian states to establish a new legal framework the focuses on equitable distribution of water resources may increase conflict in the Nile basin. Furthermore, it may threaten Egypt's access to water and the future of the Nile river. Cascão claims that:

the choices implicitly offered by Ethiopia to the downstream neighbours appear to be: (a) the achievement of a multilateral agreement which would grant Ethiopia specific volumetric allocations; or (b) the development of unilateral infrastructures with or without downstream consent (256).

If the Cooperative Framework Agreement becomes legislation without all riparian states signing

the agreement, two legal regimes will exist in the Nile watershed, the Nile Waters Agreements and the Cooperative Framework Agreement (Kimenyi & Mbaku 126). This will result in unilateral development on the Nile and lead to greater conflict between riparian states (Cascão 264). Kimenyi & Mbaku claim that “without the participation of Egypt and Sudan, the CFA would simply be a unilateral action on the part of the upstream riparian states and would certainly not bind the downstream riparian states” (87). Under the Cooperative Framework Agreement (CFA), upper riparian states in the Nile are hoping to establish legislation that is equitable for all states, however, reaching a consensus between Nile watershed countries has proven difficult (Cascão 262). The new framework will strengthen relationships within the Nile community and enforce a collaborative approach to decision-making and water governance (Carlson 9-10). Although the Cooperative Framework Agreement has gained support between several Nile watershed states and the international community, Egypt will not forfeit its existing water rights established in the Nile Waters Agreements. Egypt’s hesitancy to accept a cooperative framework promotes unilateral development on the Nile watershed opposed to multilateralism which promotes an alliance between Nile watershed states.

Gains of Multilateralism on the Nile Basin

A multilateral framework to govern the Nile river would alleviate tension over distribution and exploitation of the Nile’s water resources. The Cooperative Framework Agreement mandates reasonable and equitable use of the Nile’s water resources between all riparian states. Secondly, the Cooperative Framework Agreement demands all riparian states cooperate on the development of hydraulic infrastructure in the Nile watershed (Kimenyi & Mbaku 128). The Cooperative Framework Agreement was established by the Nile Basin Initiative to reduce conflict over water resources between riparian states. Ethiopia, Burundi, Tanzania, Rwanda, Kenya, and Uganda were the first six riparian states to sign the Cooperative Framework Agreement in 2010 (Carlson 10). The Cooperative Framework Agreement’s goal is “to promote the establishment of a functioning basin-wide framework for legal and institutional arrangements” (Cascão and Nicol 553). The Cooperative Framework Agreement reflects the ideas of upper riparian states without water rights that want the distribution of the Nile’s water resources to be more equitable (Carlson 10).

The principle of equitable utilization ensures all reasonable measures to prevent harm in an international drainage basin. Each state is responsible for abating water pollution and limiting water use to protect co-basin states (Fisher 119). Multilateral governance in the Nile can strengthen protection of the Nile's water by mandating principles of equitable and reasonable water use into legislation. Together, Ethiopia's Grand Renaissance Dam and the Cooperative Framework are influencing riparian states to participate in multilateral water governance. Kagwanja claims that "exploiting the Nile's resources requires new and imaginative approaches by the ten riparian states" (334). Riparian states can benefit from a regional legal framework that improves relationships between states. Through the Nile Basin Initiative, a regional framework would prevent unilateral development on the Nile and reinforce policy to minimize conflict within the Nile community (Cascão and Nicol 568). The Grand Renaissance Dam and the Cooperative Framework Agreement allows all states in the Nile community to consult with each other about the exploitation of Nile water resources.

In 2018, Egypt withdrew from a verbal agreement made between Egypt, Ethiopia, and Sudan to fill the Grand Renaissance Dam within a four-to-seven-year time frame. Egypt wants a twelve-year timeframe to Ethiopia's reservoir (Masr 1). Egypt's reluctance to participate in a multilateral water governance framework such as the Cooperative Framework Agreement will cause riparian states to compete for Nile water. Furthermore, it prevents Egypt from exploring the potential benefits of the Grand Renaissance Dam and a new legal regime for the Nile community. Kimenyi & Mbaku highlight that:

given the fact that six countries, all upstream riparian states have already signed the accord, it is possible that if the legislature of the six countries ratify the CFA and deposit it with the African Union, the agreement will enter into force within a few months (87).

Although Egypt opposes a cooperative strategy to govern the Nile, as more riparian states begin to mandate the Cooperative Framework Agreement, it becomes more likely that the African Union and the international community will accept the Cooperative Framework Agreement as the legal framework for Nile water governance.

Throughout construction of the Grand Renaissance Dam, both Egypt and Sudan have participated in negotiations with Ethiopia over Nile water use. Cascão and Nicol highlight that

Ethiopia's approach to the construction of the Grand Renaissance Dam proves that riparian states can cooperate and establish multilateral arrangements. Multilateral planning can help prevent avoidable transaction costs and enhance impact assessments for future projects (568). Egypt is very aware that hydraulic infrastructure development in upstream states will continue. Cooperation allows nations to engage in benefit-sharing which can resolve conflict over water allocation through co-management (Tawfik 575). Cascão and Nicol claim that Ethiopia's Grand Renaissance Dam is influencing "a more realistic debate on the shape and direction of future co-development of the Nile waters" (567). The Declaration of Principles is a legal political arrangement that demonstrates Egypt's willingness to negotiate (Cascão and Nicol 567). Shay mentions that in 2015, Egypt, Ethiopia, and Sudan signed the Declaration of Principles to ensure no harm would be done to each other. The treaty's intention is to safeguard water exploitation between the three riparian states. Essentially the Declaration of Principles approves the Grand Renaissance Dam as long as it does not conflict with access to water in Sudan and Egypt (4). Eventually, Egypt's participation in negotiations involving the Grand Renaissance Dam and exploitation of Nile water may soon lead to reasonable and equitable rights agreed on by all riparian states.

Ethiopia remains a strong advocator for the Cooperative Framework Agreement and understands the importance of cooperating with all riparian states to effectively govern the Nile's water. Tawfik highlights that "Ethiopia considers the Grand Renaissance Dam to be a 'joint ownership' since its benefits extend to other Eastern Nile countries" (576). Carlson claims the Grand Renaissance Dam:

will be a source of hydroelectric power for the entire region and will manage flood control at a critical juncture where the Nile Gorge descends from the Ethiopian highlands to the Sahel, thus reducing risk of flooding and siltation, extending the life of the dams below stream (12).

An integrated approach to transboundary water governance in the Nile basin will facilitate legislation and improve institutional and political arrangements that monitor and protect the watershed (Kagwanja 334). Kimenyi and Mbaku claim that "the main goal of the CFA is to "balance upper and lower riparian interests and end the long-standing conflict between the two parties providing the basin with an inclusive legal governance mechanism (126). Cascão and

Nicol claim that “completion of the Grand Renaissance Dam and emerging relationships between Ethiopia, Egypt, and Sudan are likely to shape the future of transboundary cooperation in the basin (566). Thus, a multilateral framework allows riparian states to co-govern the watershed to reduce conflict and safeguard the Nile’s water resources.

It is important for all riparian states in the Nile to engage in cooperative water management and establish a legal framework to govern the entire Nile region. Cooperation between riparian nations can strengthen transboundary governance and help monitor equitable distribution along the Nile watershed. The Nile Basin Initiative has helped to unify several upper riparian states who share an interest in the equitable and reasonable use of the Nile’s water resources. The Cooperative Framework Agreement (CFA) offers a new opportunity to govern the Nile watershed that grants equal rights to each riparian state. While the main source of the Nile, the Blue Nile, is in Ethiopia, the Cooperative Framework Agreement works to ensure that any state’s water consumption does not threaten other riparian states or the Nile watershed. Each riparian state is granted the opportunity to cooperate and govern the Nile watershed responsibly. If all riparian states cannot reach a consensus on a legal framework to govern the Nile’s water resources, tension over the Nile’s water will continue to escalate as upper riparian states economically develop, threatening the Nile’s water resources and environment. Once all riparian states agree to practice equity on the watershed a multilateral framework can be administered to govern the Nile’s water effectively.

Chapter 5: Conclusion: What’s Happening Now?

Ethiopia’s Grand Renaissance Dam continues to build momentum for upper riparian states. The Cooperative Framework Agreement has the potential to become ratified by the African Union and adopted as the new legal regime to govern Nile water exploitation even without Egypt’s approval. Egypt’s 1929 and 1959 Nile Water Agreements promotes unilateralism along the Nile and prevents development in upper riparian states. Even Sudan, which was granted water rights in 1959, recognizes the benefit of the Grand Renaissance Dam and a multilateral framework for the Nile basin. Although Sudan has not signed the Cooperative

Framework Agreement, Ethiopia and Sudan continue to negotiate guidelines to manage the Grand Renaissance Dam. Sudan may eventually sign the Cooperative Framework Agreement, but for now is primarily interested in the economic benefits the Grand Renaissance Dam has to offer such as hydroelectricity and flood control (Shay 6-7). The Cooperative Framework Agreement offers all Nile riparian states an opportunity to use Nile water more equitably than the 1929 and 1959 Nile Waters Agreements.

Once complete, The Grand Renaissance Dam will allow Ethiopia to control the majority of the Nile's water flow. Secondly, the Grand Renaissance Dam is expected to help foster cooperation along the watershed, advance development for upper riparian states, and boost regional trade. Ethiopia plans to trade hydroelectricity at affordable rates with riparian states, improve agriculture, and reduce flooding along the watershed (Darby 1). The Grand Renaissance Dam is expected to improve the water flow to lower riparian states and store water within its reservoir to minimize drought during low rain seasons.

In support of their determination to develop hydraulic infrastructure on the Nile, Ethiopia and several other riparian states have gained support from a major influencer within the international community. China's presence as a foreign investor in Africa has allowed upper riparian states in the Nile an opportunity to develop and gain political stability. On numerous occasions, Egypt manipulated the international community to prevent funding for hydraulic development upstream. China's investment has allowed upper riparian states to pursue development and leverage for a new legal framework for the Nile basin.

Ethiopia promises to adhere to principles of reasonable and equitable use outlined in the Cooperative Framework Agreement. Ethiopia continues to promote the Cooperative Framework Agreement as a solution to defuse water conflict on the Nile basin. The Cooperative Framework Agreement enforces equity and fairness of water use in the watershed and forces riparian states to collaborate for Nile water projects. Overall, the Grand Renaissance Dam and Cooperative Framework Agreement are shifting Nile water politics, averting authority from Egypt to upper riparian states which seek cooperation to protect the Nile basin.

Egypt remains fearful that as upper riparian states develop their demand for water resources, Egypt could face water scarcity. However, instead of collaborating with riparian states to resolve water conflicts and establish a new legal framework that all riparian states accept, Egypt demands upper riparian states honor the Nile Water Agreements, a treaty that has stunted their growth for nearly a century. Egypt can no longer expect to invoke their historic water rights with the same authority during meetings within the Nile Basin Initiative or international community. Upper riparian states have already pursued hydraulic development on the Nile and want Egypt to fully participate on Nile water governance.

A multilateral approach to transboundary water governance is a viable option for the Nile River. The Cooperative Framework Agreement is the first collaborative framework established by Nile riparian states hoping to establish a new regime in the Nile basin. With riparian states working together, water shortage can be averted as riparian states continue to develop. Economic and population growth will demand more water resources and a viable solution for the Nile region is to adapt a multilateral framework to minimize risk on the watershed. Ethiopia's Grand Renaissance Dam and the Cooperative Framework Agreement has allowed upper riparian states an opportunity to utilize their water resources without Egypt's permission. Although the Grand Renaissance Dam essentially grants Ethiopia physical control of the Blue Nile's water, Ethiopia strongly desires to co-manage the dam with all riparian states sharing the Nile (Cascão and Nicol 562).

If Egypt decides not to sign the Cooperative Framework Agreement and continues to follow only the Nile Water Agreements, tension in the Nile may rapidly escalate. Once construction of the Grand Renaissance Dam is complete, Ethiopia will begin to fill its reservoir. In this case, for national security reasons, Egypt may retaliate against Ethiopia, escalating water conflict throughout the region and potentially derailing progress made towards a multilateral framework in the Nile watershed. If on the other hand, the riparian states agree to enact the Cooperative Framework Agreement, this could make much fairer and more sustainable use of the Nile's huge water resources.

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