

Hydro-Politics in the Eastern Nile Basin: The Grand Ethiopian Renaissance Dam's Influence and Regional Dynamics

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Abstract

The aim of the study is to analyze the hydro-political dynamics in the Eastern Nile Basin, including the Grand Ethiopian Renaissance Dam (GERD) and the implications for regional cooperation and conflict. It aims to examine the views of the three countries, Ethiopia, Sudan and Egypt, on the issue of water rights, resource management and the socio-economic and environmental impacts of the dam. To achieve this goal, the study employed a qualitative case study design, in which both primary and secondary sources were used and analyzed thematically. The results show that while the GERD offers significant opportunities for regional economic growth and energy security, it also exacerbates diplomatic tensions and challenges existing water sharing agreements. The findings show that the Grand Ethiopian Renaissance Dam (GERD) is challenging Egypt's long-standing and rigid stance on the Nile and forcing the country to discuss how to manage the river's resources. Although Sudan initially recognized the construction of the dam, its position remained inconsistent due to various factors. These include the historic water-sharing agreement with Egypt, concerns about potential negative impacts and the prospect of affordable hydroelectricity from the project. In contrast, Egypt has come out strongly against the GERD project, arguing that it violates its historic rights over the Nile. As a result, tensions have escalated between Ethiopia and the downstream countries of the Nile basin. Based on the findings, the study proposes improving regional cooperation through institutionalized dialogue, an equitable framework for water sharing and confidence-building measures to defuse conflicts.

Keywords: Hydro-politics, GERD, Nile Basin, Water Governance, Trans-boundary Water Management

1. Introduction

Trans-boundary rivers offer the countries that share these waterways a potential that can lead to cooperation or conflict (Tian et al., 2020; Wahid et al., 2017). The Nile Basin drains an area of about 3.3 million km² and covers about ten percent of Africa's land area and 2.3 % of the world's land area. The Nile stretches over 6,800 kilometers from Burundi and Ethiopia along the Central African lines to the Mediterranean Sea (Alebachew, 2014; Luzi, 2008). Ethiopia contributes 86% of the Nile's water and the catchment area extends over 3.3 million km², covering 11 countries: Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Eritrea, Kenya, Rwanda, Sudan, South Sudan, Tanzania and Uganda (Kehl, 2017). The region is also characterized by a variety of environmental challenges, such as volatile climate patterns, food insecurity, environmental degradation and water scarcity, increasing

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population pressure and rampant poverty in the basin states. The use of water resources is therefore more important today than ever before (Cascão, 2019).

Historically, the management of the Nile's resources has often been characterized by hegemony rather than cooperation. Egypt has always had sovereignty over the river's waters and has used hydro-hegemony to protect its interests (Merid, 2016). This supremacy has been underpinned by colonial-era agreements, notably the Nile Water Treaties of 1929 and agreements on the use of the Nile waters signed during the colonial era involving all riparian states, which granted Egypt and Sudan preferential water rights, while Ethiopia cannot use the water as it sees fit (Ashebir, 2009). Such agreements have often led to unequal access to the Nile resources and created tensions between Egypt, Sudan and Ethiopia. The tensions are historically rooted, as demonstrated by wars such as the Battle of Gura in the late 19th century, which illustrate the ongoing enmity between the riparian states (Chekol, 2018).

However, unilateral development of the water would lead to tensions and disputes in the region, a region that has always been a center of controversy. Since February 1999, the Nile riparian states have been engaged in serious negotiations on a cooperative framework agreement under the auspices of the Nile Basin Initiative. Although the Nile Basin riparian states agree in principle on water sharing, the question of how the water should be shared has remained very complicated and controversial (Ashebir, 2009). Egypt and Sudan reject the CFA on the grounds of water security. Egypt and Sudan demand that the status quo be maintained by claiming 'historical rights' to the Nile waters, which were established and upheld by the 1929 and 1959 agreements and which exclude all states in the basin (UNDP, 2010).

In addition to the dispute over the CFA, further tensions arose in 2011 when Ethiopia announced its plans to build the Grand Ethiopian Renaissance Dam (GERD) (Beyene, 2023a). The political dynamics on the Nile are undergoing a profound change due to new events. The commencement of the GERD in 2011 marks a fundamental evolutionary point in the governance of the Nile Basin. Once completed, the GERD will be the largest hydropower plant in Africa and a central element in Ethiopia's drive to gain more control over the Nile Basin (Tesfa, 2013). The GERD would cause a regional power shift from the lower riparian

states particularly Ethiopia. The construction of the GERD poses a direct challenge to the long-standing Egyptian hydro-hegemony and raises important questions about the future management of the Nile waters (Beyene, 2023a).

The construction of the GERD has further exacerbated disputes between Egypt, Ethiopia and Sudan, raising concerns about water allocation, water quantity, water quality and the safety of the dam. Ethiopia argues that the principle of equitable and reasonable utilization will be respected by Ethiopia without causing significant harm to Egypt and Sudan, and that the dam holds promise for regional development (Beyene, 2023b). Despite Ethiopia's claims, Egypt and Sudan see the GERD as a threat to their water supply and Egypt in particular sees it as a direct threat to its historical water share secured through colonial-era agreements (Endaylalu, 2022; Tesema, 2019). Sudan's positioning between the two countries is further complicated by historical water treaties, regional power struggles and geopolitical interventions, escalating tensions and raising fears of a prolonged diplomatic stalemate or potential conflict (Abteu & Dessu, 2019; Ejigu, 2016).

Several years of diplomatic efforts have not yet led to a binding or comprehensive GERD agreement between the riparian states. The lack of a consensus-based framework for the equitable sharing of water between the regions leads to political tensions and increases the likelihood of regional instability. The legal framework of the 1959 Nile Water Agreement dates back to a bygone era, as it no longer takes into account the perspectives of all parties involved, especially the upstream states. The deadlocked situation shows that cooperation in water management must protect both regional stability and national interests.

The specific problem addressed by this study is the lack of an integrated and mutually acceptable approach to the use of the Nile waters, particularly in relation to the GERD. The aim of the study is to analyse the key factors that have led to hydro-political conflicts in the Eastern Nile Basin in order to contribute to policies that can promote dialogue, cooperation and equitable resource use between the countries of the Nile Basin.

2. Theoretical Framework

This study is based on two theoretical perspectives — realism and liberal institutionalism— - both of which offer valuable insights into the dynamics of conflict and cooperation in the

eastern Nile basin. These theories help to explain the motivations of states and the role of institutions in the management of shared water resources.

2.1. Realism

The primary manifestation of realism shows that states behave in ways that expand their own power and ensure security while operating in a system that has no central authority (Baranyai & Baranyai, 2020). The Eastern Nile Basin requires this perspective as water resources are limited there and control of water supply determines national security affairs. The model shows that more powerful states, including Egypt, seek to gain control over weak states, especially Ethiopia, to protect their strategic objectives. As a result, competition between Nile riparian states is highly likely to lead to conflict and possibly war. These authors argue that both the outcome of water conflicts and the formation of a water regime in the Nile basin will ultimately be determined by the regional distribution of power. In this case, Egypt is generally seen as a country with greater relative power and therefore able to impose its will on the region, either by taking the lead to create a water regime acceptable to all members of the Nile system, or by preventing the formation of a water regime that contradicts its own perception and definition of national interest. Realism shows how states aggressively pursue self-interest by using limited cooperative power dynamics in their dispute over the GERD project (Yohannes, 2009).

2.2. Liberal Institutionalism

According to liberal institutionalists, states cooperate through international institutions, which serve as essential elements for the development of partnerships between nations. Institutions help states to reduce their risk of conflict by enabling communication with better information clarity while building trust between states (Monteleone & Oksamytna, 2020). The Nile Basin Initiative (NBI) and the Cooperative Framework Agreement (CFA) act as institutions to promote equitable resource management in the basin (Yohannes, 2009). Despite their establishment, these institutions face problems in effective cooperation as mistrust remains high and national interests compete with each other. According to liberal institutionalism, strong institutions and increased cooperation allow overcoming problems that affect cooperation across the basin. These institutions should develop modes of dialogue along with conflict resolution processes to create platforms to address contentious issues related to GERD. Security priorities related to Egypt's national security commitments remain an obstacle to successful regional cooperation.

The interplay of realism and liberal institutionalism provides one of the most system-oriented and comprehensive frameworks for understanding the intricate details of cooperation and conflict in the Eastern Nile Basin. Realism analyzes competition and power relations between states, while liberal institutionalism focuses on the ability of institutions to promote cooperation and resolve conflict. These two theories in themselves analyze the GERD problem in a complex, divergent way and also help to understand the problems and opportunities of riparian states in terms of effective water resources management.

3. Research Methodology

The research examines the geographical areas of the states along the eastern Nile, assessing the current construction phase of the Grand Ethiopian Renaissance Dam (GERD). The construction site of the GERD project is located in Ethiopian territory bordering Sudan. The GERD acts as a major African hydropower project that influences regional hydro-political relations between the riparian states through changes in their co-operative and adversarial dynamics.

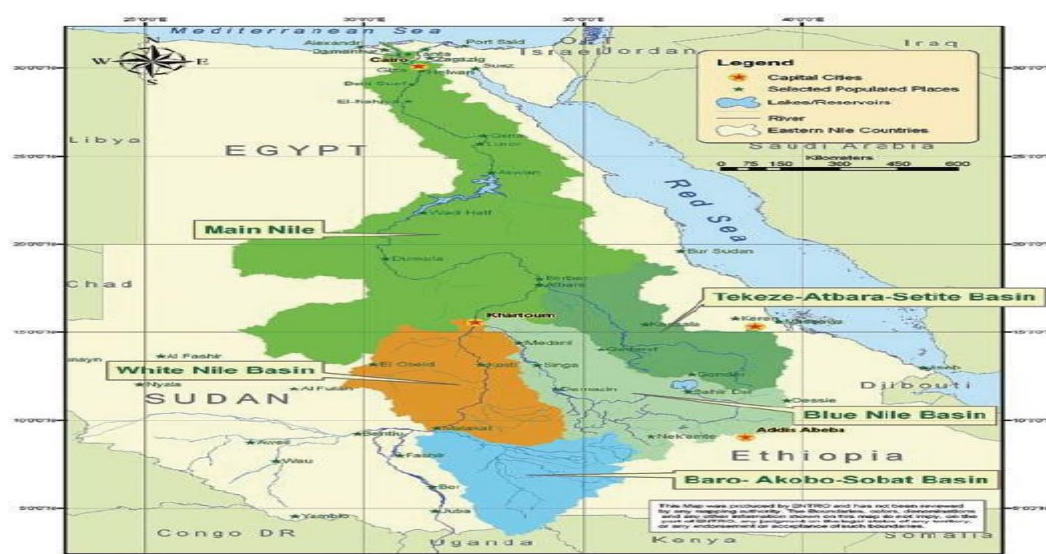


Figure1: The Eastern Nile River Basin and its sub-basin

Source (Cascão, 2009b, p. 18) Blackmore, Whittington 2008 p.4.

Due to the complicated hydro-political systems within the eastern Nile basin, a qualitative research method is applied in the study. The research method of qualitative studies proves to be suitable for the investigation of complicated phenomena and the discovery of essential components that lead to political, social and economic (Baxter, 2008). Qualitative research methods allow researchers to examine the intricate interstate relations of the GERD project by thoroughly analysing both the cooperative and conflictual dynamics between the riparian states.

Both descriptive and explanatory research techniques were used. An explanatory case study design was used for the study because it provides optimal results for the detailed investigation of specific topics. The case study research approach leads to a deep understanding of the ways in which the GERD shapes regional relations, while allowing for an in-depth analysis of the political, social, economic and environmental elements in the area. Through explanatory research, the researchers determine what factors shape hydro-political relations in the basin after observing how the construction of the dam creates dynamics of cooperation and confrontation.

This study uses both primary and secondary data sources to facilitate the data collection process. The primary data source is media coverage and purchased contracts related to GERD. These materials provide pertinent information on the political and diplomatic activities of the littoral states in real time. The media report on the most important events as well as on the negotiations and actions of the public and politicians. Treaties, memoranda and other official agreements also document the official positions of the states involved. These primary materials make it possible to understand the positions of the key informants and the resulting ongoing diplomatic activities regarding the GERD. On the other hand, secondary sources were used to provide context and support for the primary data. These sources include an extensive reading of books, journals, articles, publications, academic literature, media reports (newspapers, online news, blogs, etc.) and historical documents (agreements, treaties, declarations, etc.) as well as other unpublished materials such as policy papers and white papers. In addition to primary data, secondary data also helped in understanding the politics, hydrology and legal issues of the Eastern Nile Basin. These materials underpinned the theoretical framework that was established for the study and facilitated comparison with several

Data analysis is about bringing order, structure and meaning to the collected data. It is an activity that runs through all phases of a study. The choice of possible analyzes depends on the type of data. In this study, qualitative techniques were used to analyze the data. Richie et al. (2003) define qualitative data analysis as working with the data, organizing it, breaking it down into manageable units, coding it, synthesizing it and looking for patterns. The aim of analyzing qualitative data is to discover patterns, concepts, themes and meanings. The data collected through in-depth interviews, focus group discussions and document review are analyzed using thematic analysis. The data collected through these methods were grouped

into categories and themes and analyzed together with the existing literature and documents. The technique used to analyze data from secondary sources is document analysis. After all the data was collected, it was analyzed qualitatively, the various arguments and views were put into a statement form and interpreted credibly.

4. Results and Discussion

4.1.Introduction

This section is devoted to the analysis and interpretation of data derived from both primary and secondary sources. The main objective of this study is to investigate the dynamic changes in the relations between the riparian states of the Eastern Nile Basin observed after the announcement of the GERD. The hydropolitical changes in the Eastern Nile Basin riparian states are highlighted by the growing need of the upstream states to utilize the shared water resources and implement the principle of 'fair and equitable sharing'. The endorsement of the CFA by the upstream states, the overthrow of President Mubarak by a military coup on February 11, 2011, the announcement of the 6450 MW GERD project in April 2011, the independence of South Sudan in July 2011 and the signing of the DOP between Ethiopia, Sudan and Egypt in Khartoum in 2015 have significantly influenced the hydropolitical changes in the riparian relations of the Eastern Nile Basin. Among other things, the effects of the GERD on the riparian relations of the states of the Eastern Nile Basin are at the center of the discussion.

4.2. Dynamics of Cooperation in inter-riparian Relation of Eastern Nile Basin

In all shared water resources, a single party wants to dominate the use of the available resources. Therefore, contracts and codified agreements can be signed either to challenge this dominance or to reinforce existing dominance (Meshesha, 2023). The nature and objectives of treaties and codified agreements determine the nature of riparian relations in the basin. Non-cooperative agreements or bilateral treaties in multilateral resources will not lead to cooperation but will become the center of controversy. Treaties are agreements that engage stakeholders in round-table discussions on the sharing and management of shared resources (Muchie, 2021). Such a consensus or contract is a prerequisite for collaboration. The use and management of shared resources requires constant communication with the parties concerned to minimize conflicts and disagreements. The creation of South Sudan paves the way for another player and exacerbates Nile politics, which would lead to a forceful adjustment and

shift in the balance of power in the basin (Wuhibegzier, 2020). This is the other trigger that invalidated the 1959 Nile Basin Agreement between Egypt and Sudan.

4.2.1. Dynamics of Treaties and codified agreements in Eastern Nile

The Anglo-Italian Protocol of 1881 - Italy and Britain represented the Nile Basin states that deserved Britain's sphere of influence in the Eastern Nile without taking into account the interests of the riparian states (Apondi, 2002). This shows that no riparian was involved in the agreement, but that it was a colonialist agreement. The Anglo-Ethiopian Treaty of 1902 gave Ethiopia the right to use the Nile water in the Amharic version, while the English version prohibited Ethiopia from building dams in the Nile basin (Basin, 2014). Following the Anglo-Ethiopian Treaty of 1902, the 1906 Tripartite Treaty between France, Italy and Britain recognized Egyptian supremacy without taking into account Ethiopia, which has the largest share of this river basin.

The Anglo-Egyptian Nile Water Treaty of 1929 stipulated that no riparian country could attempt to dam the Nile for any purpose that would affect Egypt's water needs. Like the previous Nile treaties, this treaty blindly favored the lower riparian states of the Nile basin (Alemayehu, 2024). No sovereign riparian states of the Eastern Nile Basin were involved in the Anglo-Egyptian treaty; rather, the colonizers signed the treaty solely on behalf of their colonies. Therefore, these treaties, which were concluded exclusively, should have no influence on the current relations of the riparian states of the Eastern Nile Basin (Alemayehu, 2024; Kasimbazi, 2010).

The distribution of the Eastern Nile's water resources was limited to Egypt and Sudan under the 1959 Nile Convention (Quartz Africa, July 31, 2020). Egyptian dominance over the water of the Nile basin has not only been exercised by Egypt, but superpowers such as the US and the UK have also influenced the hydro-politics of this river basin (Wuhibegzier, 2020).

Egypt and Sudan claim a "historical right" over the river, guaranteed by a 1959 treaty (5 Aug 2020 Aljazeera News/Africa). But this agreement was unique in that the lower riparian states agreed to use the water resources of the East Nile without involving the upper riparian states. Unless all parties are involved in the process of the agreement, it is difficult to implement and make this agreement effective in the whole basin. Ethiopia said it should not be bound by the

partial agreement and started building the dam at the beginning of the Arab Spring in March 2011 without consulting Egypt (BBC News June 13, 2020).

Even though Egypt and Sudan keep trying to apply the 1959 bilateral treaty in the 21st century, the creation of South Sudan in 2011 has prompted them to renegotiate this treaty (Wuhibegzer, 2020). The renegotiation of the 1959 Egyptian-Sudanese agreement has long been a problem for Ethiopia and other riparian states of the Eastern Nile Basin, as they were excluded from the use of water resources. In Ethiopia, the increase in population coupled with the need for energy to fight poverty is the trigger for the construction of the GERD in the Eastern Nile Basin on its territory (Mulat & Moges, 2014). To this end, the country has taken the necessary steps to negotiate and sign new agreements on the use and management of the Eastern Nile's water resources. Basin-wide agreements serve as instruments to minimize conflicts and promote cooperation between riparian states in trans-boundary river basins. The Eastern Nile basin is one of the prominent international river basins that raises topical hydro-political issues by attempting to establish institutions such as NBI, CFA and DOP to share the available water resources in an "equitable and reasonable" manner.

4.3. Power Hegemony of Egypt in Eastern Nile

Hydro-hegemony is the exercise of power by a single neighboring state over others, either by coercion or by law. Hydro-hegemony helps the hegemonic littoral states to assert their interests over others. The type of hegemony varies according to the different positions or commitments of the riparian states. From its superior position of power, hydro-hegemony can enforce either a "negative" form of hydro-hegemony or a positive form of hydro-hegemony, either to its own advantage or to the advantage of the states in the entire basin (Zeitoun & Allan, 2008).

Table 1 Hegemony as a trigger of conflict or cooperation

Power asymmetry and hegemony are two sides of the same coin. "Power determines who has hegemony" and hegemony allows for a better understanding of asymmetric power interactions (Zeitoun & Allan, 2008). Asymmetric use with an asymmetric contribution to the water sources of trans-boundary water resources can trigger conflict, while symmetric use with a symmetric contribution to the water sources of trans-boundary rivers helps to realize cooperation. The asymmetric use of shared resources usually results in hegemonic power.

Form of Hegemony	Control Strategies	Form of Interaction	Potential distribution of water	Form of conflict
Positive	Integration	Cooperative	Equitable	Cooperation
Negative	Disintegration	Dispute	Inequitable	Conflict

Source: (Zeitoun and Warner, 2006).

As indicated in Table1 above, the fair and equitable sharing of common resources helps riparian states to cooperate, while the unfair use of common resources promotes coexistence. The Egyptian president was quoted as saying that “Egypt would take all necessary measures to protect its rights to the Nile waters” (BBC News, 13 Jan 2020). Therefore, Egypt's dependence on the unjust treaties of 1929 and 1959 in enforcing its supremacy over the Nile waters is the main trigger for conflict in the basin. Egyptian hegemonic influence is challenged by the reluctance of upstream states to invoke the principle of ‘no significant harm’, especially in the construction of the GERD.

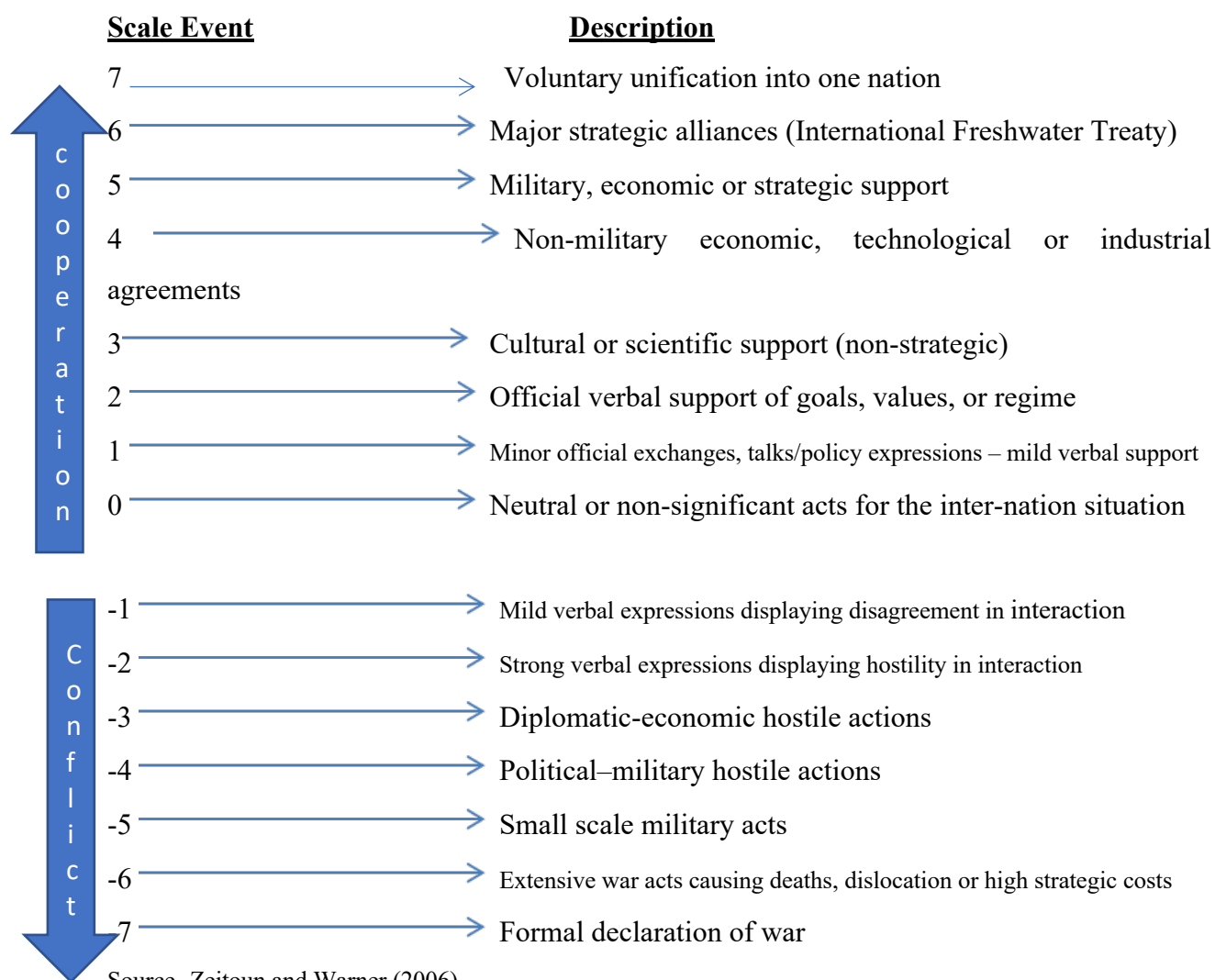
The nature of hydro-hegemony could determine conflicts and cooperation between the riparian states. Ethiopia’s counter-hegemony strategies - ‘fair and equitable share’ - help trigger basin cooperation or positive counter-hegemony. Ethiopia needs the construction of the GERD to ensure electricity supply for more than half of its population and to fight poverty by selling electricity to neighboring countries (BBC News, July 16, 2020). As the construction of the GERD is based on the principle of "no significant harm", its impact will help the neighboring countries to cooperate further. Apart from its concerns about the quality of GERD's construction, Sudan has recognized that the dam will have multidimensional benefits for its people (ibid., 16 July 2020). Even if the GERD seems to lead to serious tensions between Egypt, Ethiopia and Sudan, a ‘water war’ is very unlikely. Rather, it paves the way for more cooperation between all countries that depend on the Nile (Quartz news, July 31, 2020). Conflict is rarely possible if the hegemonic state is willing to share water resources with all riparian states.

4.4. Conflict Intensity in Riparian states of Eastern Nile Basin

Hydro-political conflicts may arise due to a lack of communal resources or they may seek to control water resources for other goals. When water is abundant, one riparian may seek control of water flows for hydropower utilization, while another may seek control for flood management and water internal affairs (Tesfaye, 2014). The water resources of the Eastern Nile are abundant to meet the water needs of the riparian states. In certain cases, control over

the resource may be relinquished to achieve politically unifying non-water objectives. Egypt wants to realize its status quo over the basin by referring to the 1929 and 1959 agreements, while Ethiopia wants to lift itself out of poverty through the principle of ‘no significant harm’. Control over shared water resources can either be shared, consolidated in favor of the stronger riparian, or disputed (Zeitoun & Warner, 2006).

Diagram1 Water Event Intensity Scale in Tran-boundary Rivers



The above scale of water intensity and the description of the event show that where there is an increasing or continuous diplomatic exchange between or among the riparian states of a particular transboundary river, cooperation can be intensified and conflict would decrease. In line with the above description of the events and situation of the Eastern Nile in the GERD issue, the riparian states have continuously held official meetings in the context of the cooperation-conflict. These meetings paved the way for the signing of the DOP in 2015 to

build trust and clarify misunderstandings on the GERD issue between the parties concerned. Ethiopia's position on the use of this shared water resource as a dominant contributor is becoming increasingly interesting for hydro-political analysts and the media.

Even though Egypt has announced that the GERD will negatively affect its dams and water needs, the continuous official meetings between Egypt, Ethiopia and Sudan will ease its fears by building trust among them. In addition, the hydropower sharing agreements between the middle and upstream states, especially Sudan, show that the project is necessary to reduce silt and seasonal flooding that the basin reaches the maximum intensity of positive events in the Eastern Nile waters (Mulat & Moges, 2014; Taye et al., 2016). The position of upstream states using NBI on the issue of "fair and equitable share" of the Nile waters does not deviate much from Egypt's rigid position on the GERD issue (-1) and the mild verbal expressions show disagreement in describing interaction events.

According to the above water event intensity scale the Eastern Nile riparian states has an experience of signing CFA to apply equitable and reasonable share, trilateral treaties to manage GERD issues official verbal support of goals, power sharing agreements, minor official exchanges-mild verbal support (Beyene, 2023b). In contrary, mild verbal expressions displaying disagreements in interactions are becoming observed following the July 2020 first round filling of GERD. Whether or not the conflict will manifest itself overtly, the negative or dominative form of hydro-hegemony in a certain degree of conflict may be inevitable (Zeitoun & Warner, 2006). Conflict is inevitable and somewhat necessary ingredient to trigger in to cooperation through setting agendas. The disagreements which have been manifested on the use of Eastern Nile water resource helped the basin states to meet continuously and dealing on those controversial issues (Beyene, 2023a). These continuous meetings and discussions triggered parties for cooperation. Even GERD seem became center for controversies, it recombining new cooperative agendas and new hope of cooperation in Eastern Nile.

4.5. Threats of Cooperation in Eastern Nile Basin

Mistrust between the parties hinders cooperation between the parties. Egypt fears that the GERD could lead to water shortages, while Sudan is concerned about the safety of the dam (Aljazeera News, 5 Aug 2020). Egypt was quick to intervene to get Khartoum on its side when trilateral negotiations on the Nile Dam failed over Addis Ababa's instance to fill the

dam. Prime Minister Abiy Ahmed told parliament that Ethiopia was tired of pleading with Egypt and Sudan over the completion of the Nile Dam (Ethiopian Embassy, London June 13, 2020). While Egypt wants to assert its historical supremacy, which completely excludes the neighboring states. Although Ethiopia's bargaining power has been successful by setting the agenda on the GERD issue, Egypt has pulled the US to its side by using its diplomatic efficiency. The US came out in favor of Egypt and urged Ethiopia to extend the GERD filling time before an agreement is reached with Egypt and Sudan (Aljazeera 03 May 2020). This is the turning point that reveals the US support for the construction of the dam. Because the US did not say that Ethiopia should stop the damming of the Nile, but commented on the filing strategies for the dam. Then Trump hinted that Egypt would eventually bomb the dam if no agreement is reached on controlling its operation and water (Aljazeera, October 24, 2020). It is a common political discourse of superpowers taking a controversial position. The US has had strategic relations with both Egypt and Ethiopia for many years. It is a common practice in the political discourse of superpowers not to lose both parties in international relations. This is what happened in the US political discourse on the GERD issue. The X-President said that if Ethiopia did not stop the construction of the dam before Egypt's approval, his country would stop loans and aid to Ethiopia. The US is also providing military assets to maintain its strategic military alliance and help Ethiopia strengthen its internal stability in November 2020 (Wuhibegzer, 2020).

Trump's speech resulted from Ethiopia's weakness to agree to a third party intervention, which violated the earlier trilateral agreement of "no third party intervention" in the discussion on the GERD issue (ibid). Apart from the US diplomatic support shown on the GERD issue, Ethiopia has lost its early supporters of the dam due to its diplomatic weaknesses. Egypt and Sudan are downstream and fear that the large dam will severely restrict their access to water (Aljazeera, July 16, 2020). As this dam is a hydropower dam, it has no or less negative impact on the water needs of the downstream states. These misunderstandings or threats can only be reduced through skillful diplomacy by Ethiopia.

Ethiopia is the only upstream state in an international river basin that calls on the other riparian states of the lower river basin to share the available common water resources in an equitable and reasonable manner (Abawari, 2011). In contrast, Turkey on the Euphrates-Tigris, Israel on the Jordan River and Laos on the Mekong River Basin are upstream states that are not guided by the generally accepted principle of 'just and reasonable sharing' of

their respective resources. Turkey's GAP project aims to divert the natural course of the Euphrates and Tigris rivers by exercising the principle of 'absolute territorial sovereignty'. While Ethiopia is building the GERD hydropower project on the principle of 'no significant damage', this shows the cooperative nature of the country and its hospitality towards the downstream states. Therefore, Ethiopia's cooperative attitude has led to the Eastern Nile Basin having more hope for cooperation on the one hand and becoming the center of cooperation on the other (Sintayehu, 2020).

Even Ethiopia sees GERD as crucial for its economic growth and as a vital source of energy. Egypt and Sudan fear that the dam will severely restrict their access to water (BBC new Africa, July 22, 2020). Therefore, Egypt fears that the dam will threaten its status quo in the river basin by strengthening Ethiopia's economic power. Therefore, Ethiopia has encouraged the Nile Basin states in general and the Eastern Nile in particular to ensure the effectiveness of the NBI and the CFA through the principle of fair and equitable sharing. Article 4(1) of the CFA states that "The Nile Basin States shall utilize the water resources of the Nile Basin within their respective territories in an equitable and reasonable manner.

4.6. The Impact of GERD on the Inter-riparian Relation of Eastern Nile Basin States

What role does the GERD play in shaping future relations between the riparian of the Eastern Nile Basin?

Africa's largest hydropower plant under construction in Ethiopia was announced in April 2011 near the border between Ethiopia and Sudan and is influencing hydro-political changes in the Eastern Nile Basin (Taddele, 2020). Following the announcement of GERD, Egypt sent its public diplomatic group to Ethiopia, which was not usual for Egypt to be willing to act on the Nile issue (Mulat & Moges, 2014). Immediately, Sudan announced that the GERD project will be of particular benefit to it and its government is willing to support Ethiopia in building this project. Ethiopia has only harnessed 10% of its hydropower potential, leaving only 25% of its population with access to electricity (Quartz News July 31, 2020). The GERD will help the country increase the number of electricity consumers and improve energy supply to enable industrial development that will help fight poverty in the country. Ethiopia therefore sees the dam as a matter of its economic success. Moreover, Egypt is seriously concerned about the loss of historical control over the Nile water, while Sudan supports the GERD to buy cheap hydroelectricity (Abteu & Dessu, 2019; Tesfa, 2013).

Accordingly, the GERD plays a crucial role in persuading the states of the Eastern Nile Basin to realize their conflicting interests. Therefore, the GERD project opens a new agenda for the relations of the Eastern Nile riparian states by encouraging them to engage in round table discussions. The fundamental changes and the reasons for the changes in the Nile Basin are due to the GERD project of the riparian states. In 2015, Ethiopia, Sudan and Egypt signed an agreement on a Declaration of Principles on GERD in Khartoum (Mekonnen, 2017). This dynamic change is achieved through the ideational power of Ethiopia in setting a new agenda that led Sudan, Egypt and Ethiopia to sign a Declaration of Principles (DOP). The DOP affirms that cooperation is an important mechanism to resolve disputes and develop security and trust between Egypt, Sudan and Ethiopia on the GERD issue (Zelege, 2017). This declaration emphasizes the principles of cooperation by promoting common understanding, mutual benefits, achieving win-win solutions, implementing international water laws and understanding the different aspects of the riparian countries' water needs. This declaration supports Ethiopia's plan to extend the benefits of the GERD to the entire region by providing a reliable energy supply that would promote economic development and integration of the riparian countries. It is the first time that Egypt has signed the principles that allow upstream states to utilize the Nile waters.

In addition, the riparian states were seized in July 2020 when the dam was filled, highlighting their conflicting interests and becoming the center of controversy in the river basin. BBC NEWS, Nairobi, Africa The Egyptian president was quoted as saying that "Egypt would take all necessary measures to protect its rights to the Nile waters", while the Ethiopian prime minister declared that "no force" could stop Ethiopia from building the dam (BBC, January 13, 2020). Egypt fears that the GERD will allow Ethiopia to control the flow of Africa's longest river. Hydropower plants do not consume water, but the time period Ethiopia determines to fill the dam can determine the impact on the water flow downstream. The period Ethiopia determined for the first round of filling the GERD was the rainy and flooding season which will not have any negative impact on the downstream riparian states. The planned GERD and any other hydropower project on the river could be seen as integrative factors and effectively enhance opportunities for geopolitical interdependence (Aljazeera News, May 03, 2020).

Apart from Sudan's and Egypt's threats to the GERD, the dam will help them save their expenses on mud prevention and reduce the floods that cause property damage in these

countries every year. An agreed annual release of the GERD shows a higher level of coordination leading to higher benefits and lower risks downstream (Kevin G, et al.2016). Despite the fact that Egypt threatens the impact of the dam on its dominance of the Eastern Nile, the country's willingness to negotiate sharing demonstrates the role of the GERD as a trigger for basin cooperation. Following the announcement of the dam, the attitude of many Sudanese hydro-political analysts and politicians indicated a positive expectation towards the dam. Former Sudanese President Albeshir said that his country would provide the necessary support for the success of the dam construction in order to help Sudan improve the flow of water in summer and increase the overall amount of water available to his country. This makes the dam a turning point that will reshape the stagnant relationship or interaction between the two countries. Therefore, the dam plays a crucial role in triggering cooperation between the riparian states of the Eastern Nile Basin on the one hand and becoming the center of controversy on the other.

5. Conclusion and Recommendations

Since there are no generally recognized international water laws governing relations between riparian in trans-boundary river basins, water in international river basins is controversial. The Nile is one of the international rivers shared by 12 riparian states. Throughout history, Egypt has dominated the water resources of the Eastern Nile River Basin. The historical treaties signed between the colonizers and the downstream states highlighted Egypt's dominant use of the river. Treaties or agreements concluded before the 1990s have negatively affected relations between the riparian states of the Eastern Nile Basin. As a result, the downstream states are resisting the controversial historical agreements of 1929 and 1959, which excluded Ethiopia, the largest contributor of water resources.

Asymmetric use with asymmetric contribution to the water sources of trans-boundary water resources can lead to conflict, while symmetric use with symmetric contribution to the water sources of trans-boundary rivers helps to realize cooperation. Hegemonic power usually stems from the asymmetric use of shared resources. Notable factors for the dynamic shift in riparian relations in the Eastern Nile Basin include the 1993 bilateral agreement between Ethiopia and Egypt, the establishment of the NBI in 1999, the uprising against the regime of Hosni Mubarak in Egypt in 2010, the signing of the CFA by the upstream states, the announcement of the GERD in April 2011 and the independence of South Sudan in June 2011. The entry into force of the CFA, with the idea of a 'fair and equitable share' of the

Nile, favors upstream states in the use of their shared water resources, which becomes a crucial challenge to Egypt's decades-long hegemonic influence in the basin. South Sudan is the most strategic riparian state influencing the dynamics of riparian relations by stimulating the renegotiation of historical agreements in the Nile Basin. South Sudan's internal instability and Egypt's strategy of using South Sudan as a bridle horse to influence its participation in the talks to realize equitable utilization are critical factors in South Sudan's weak position on Nile issues.

The increase in population, rising unemployment and the need to fight poverty are prompting Ethiopia to build dams in its territory. As a result, Ethiopia has begun construction of Africa's largest dam near the border between Ethiopia and Sudan, based on the principle that other neighboring countries must not suffer any significant damage. This dam will also help Ethiopia to strengthen its economic capacity to build other dams for irrigated agriculture. Since Ethiopia is building the dam on the principle of 'no significant harm', it will open up new opportunities for economic cooperation by providing cheap energy to neighbouring countries. Even though the dam will bring enormous benefits to Sudan, such as access to cheap electricity, reducing the risk of seasonal flooding, protecting the dam from silting up and promoting economic cooperation with Ethiopia, the country is still undecided on the GERD issue.

As long as no positive form of hegemony develops through integration and equality, it is difficult to achieve cooperation between the riparian states of the eastern Nile basin. Egypt's negative form of hegemony is characterized by disputes with unequal distribution of water resources. Therefore, Ethiopia's counter-hegemony strategy of reasonable and equitable sharing of the Eastern Nile Basin in the construction of the GERD is cooperative and the rigid position of the downstream state that denies the interests of the upstream states without considering the interests of all stakeholders is not cooperative.

The realization of liberal institutionalism to strengthen basin-wide cooperation helps the riparian states, while the realist position causes mistrust and siege mentality among them. The GERD with its liberal institutionalism influences the riparian states with the principle of "fair and equitable share", while Egypt and Sudan, bound by colonial treaties, try to jeopardize the cooperative use of the Eastern Nile water resources.

The following scenarios are constructed on the basis of this study;

- If Egypt and Sudan realize that the old treaties are no longer valid and Ethiopia strengthens its strategies to connect the riparian states to the hydropower grid, GERD becomes the basis for cooperation.
- Until a fair and equitable share is realized, there will continue to be ‘no peace and no war’ in the basin.
- If the current contradictions over the management and filling of the GERD are not negotiated, war will ensue.

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