



Potential Sustainable Benefit Sharing of Nile Water Resources: Implications on Kenya's National Interests

Paul Odhiambo

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Kenya Institute for Public Policy
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Abstract

The River Nile basin is crucial for the development of riparian states due to its endowed water resources and potential for irrigation and food production, hydropower generation, tourism, transportation, and other uses. However, the allocation of water resources has been skewed towards the downstream countries due to the 1929 and 1959 Nile treaties. The overall objective of this study is to explore the potential for sustainable benefit sharing mechanisms of Nile water resources and its implications on Kenya's national interests in the basin. The findings from the analysis show that upstream riparian countries are cognizant of their increased strategic bargaining power and influence in developing common positions on the Nile negotiations. Under the Nile Basin Initiative (NBI) framework, the Nile basin is progressively developing governance institutions such as institutional capacity for water resource management and development, stakeholder participation, information sharing, dialogue, mechanisms to address emerging issues such as climate change and degradation of wetlands and watersheds. However, other features of governance such as basin organization commission, water allocation regulation, water quality and water quantity regulatory framework, dispute resolution mechanisms and enforcement mechanisms are yet to take root due to lack of inclusive and comprehensive basin-wide legal framework. The findings also show that the NBI has mainstreamed benefit sharing concept in its projects and programmes to demonstrate potential benefits to the Nile, such as conservation of the river's ecosystem; economic benefits from the Nile such as hydropower generation, increased irrigation for food security, water resource management and development for water security; and benefits beyond the river including regional trade and investment in the context of regional integration. The upstream riparian countries should use their increased bargaining power not only in negotiations with their downstream counterparts, but also in supporting and championing major hydraulic projects that could be a game changer in hydropower generation, food security, and water security. There is a need to restart dialogue and build consensus across the upstream/downstream divide so that outstanding issues including Cooperative Framework Agreement (CFA) could be operationalized. Building consensus and successful negotiations will enable all Nile basin countries to sign and ratify the CFA. The NBI, member states and other stakeholders should ensure that transboundary management and governance indicators are streamlined in the programmes and activities of the basin as the riparian states work towards the operationalization of the CFA. Development of a strategic Nile basin policy could be critical for Kenya in enhancing its national interests accruing from benefit sharing in environmental preservation of the Nile's ecosystems, economic benefits from the Nile through optimizing water resource management and development, hydropower generation, increased irrigated agriculture for food security and exploiting opportunities that accrue from regional integration and cooperation for the promotion of regional trade and investment.

Abbreviations and Acronyms

ADB	African Development Bank
ASALs	Arid and Semi-Arid Lands
BCM	Billion Cubic Metres
CFA	Cooperative Framework Agreement
DRC	Democratic Republic of the Congo
EAC	East African Community
GERD	Grand Ethiopian Renaissance Dam
NBI	Nile Basin Initiative
NRBAP	Nile River Basin Action Plan
RBO	River Basin Organization
SADC	Southern Africa Development Community
TECCONILE	Technical Cooperation Commission for the Promotion and Development of the Nile
TFDD	Transboundary Freshwater Dispute Database
UNDP	United Nations Development Programme (UNDP)
WMO	World Meteorological Organization

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1. Introduction

Benefit sharing of water resources in shared river basins is increasingly recognized as critical in meeting present and future water demands. The current world's estimated 286 transboundary river basins span over 150 countries, supporting socio-economic well-being of more than 40 per cent of the global population (World Bank, 2018; United Nations Environmental Programme, 2016). The concept of benefit sharing refers to a strategy to facilitate cooperation on transboundary water resources with an aim to share benefits arising from water development and use (Jalilov, 2015). Benefit sharing approach, viewed as a positive sum game, focuses on the potential benefits of a resource rather than its limited quantities (Soliev and Theesfeld, 2020). Cooperation and inclusive collaboration on international rivers are crucial for the better management of ecosystems, thus underpinning other potential benefits (Sadoff and Grey, 2002). In addition, benefit sharing is a strategy to prevent conflicts by focusing on the sharing of the benefits from a transboundary river than the sharing of water itself (Hensengerth et al., 2012). Thus, benefit sharing leads to a shift from the volumetric allocation of water to the allocation of the benefits gained from the use of the river.

Managing the complexities of transboundary water governance and collaboration in benefit sharing are critical for equitable and reasonable utilization of water resources by basin States. While the need for sustainable development and equitable and reasonable use of the shared water resources could create necessary conditions for cooperation, many transboundary river basins are neither covered by agreements between riparian countries nor have comprehensive joint institutional structures to anchor their joint management (Salman, 2015). Moreover, a few international water agreements negotiated by riparian countries deal with volumetric water allocations (Wolf and Hamner, 2000). Decrease in renewable freshwater resources, high water demands from increased population and irrigation expansion, and impacts of climate change could escalate hydro-political tensions among countries sharing transboundary river basins (Woldeyohannes et al., 2017; Swain, 2011). With increasing pressure on the world's water resources, establishment of effective governance of transboundary river basins is imperative not only for fostering cooperation and prevention of conflicts over water resources but also for providing institutional frameworks to ensure that riparian States meet their energy, food security, and other development needs.

The Nile is characterized by uneven distribution of water resources, climate variability and diversity, high potential evapotranspiration, and high variability to droughts (Onencan and de Walle, 2018). Surface water is unevenly distributed in the Nile basin as the upstream riparian countries are relatively water endowed while the downstream countries have scarce water supply (Swain, 2011; El-Fadel, 2003). The asymmetrical control of the Nile by Egypt and Sudan is explained by the 1929 and 1959 Nile treaties that allocated water resources between the two countries with Egypt having exclusive rights, which has afforded it a position of hydro-hegemony in the basin (Cascao, 2009). The monopoly over the Nile water resources by the downstream countries is seen as a source of regional tensions in the basin as the upstream countries challenge the legitimacy of the Nile treaties

(Di Nunzio, 2013). Increasingly, the upstream countries are willing to develop the Nile water resources to meet their development needs.

Increasingly, several upstream countries are focusing on the potential of the Nile water to boost their agricultural production and realize their development agenda (Kagwanja, 2007). The establishment of the Nile Basin Initiative (NBI) in February 1999 was a milestone to promote an inclusive basin-wide platform for all riparian States to deliberate on joint management and development of the shared water resources (Nile Basin Initiative, 2019). The NBI member States agreed on dual cooperation tracks, namely technical track and political track. The technical track (Nile Basin Initiative) focuses on providing a cooperation platform to promote dialogue; advancing transboundary investments, and supporting efficient, sustainable management and optimal utilization of Nile water resources. On the other hand, the political track entails the establishment of a permanent legal and institutional setup for Nile cooperation with a Comprehensive Framework Agreement (CFA) as the focus (NBI, 2019). Though the CFA is expected to provide a permanent legal and institutional basis for Nile cooperation, negotiations stalled in 2010 due to disagreement between upstream and downstream countries over certain provisions of the draft agreement.

Kenya's national interests in the Nile basin are underpinned by the country's national objective to exploit Nile water resources to guarantee its food production and security, and other development needs; environmental conservation for sustainable development; and to secure regional markets (Adar, 2007; Kagwanja, 2007). As a water-scarce country with a renewable fresh water per capita of 647m³, demand for water is increasingly a major challenge for Kenya as arid and semi-arid lands (ASALs) cover 89 per cent of the country's land area and is home to over 14 million people (Republic of Kenya, 2007; Republic of Kenya, 2012). While agriculture plays a critical role in the country's economy, Kenya is largely dependent on rain-fed agriculture. Irrigated agriculture will be crucial as much of the country experiences reduced annual precipitation. Kenya's environmental diplomacy underscores the country's enormous stake in the sustainable management of national and regional natural resources and commitment to confront contemporary environment challenges such as climate change (Republic of Kenya, 2014;). Therefore, effective management of shared environmental resources such as the Nile requires regional and international cooperation (Republic of Kenya, 2013). As one of the cornerstones of Kenya's foreign policy, regional integration aims at enhancing access to regional markets, including the Nile basin, for its exports.

The 1929 and 1959 Nile treaties have had direct implications on Kenya's national interests as the country has been adversely affected by several provisions of the treaties (Adar, 2007). However, Kenya has made considerable contribution to NBI programmes, including signing the CFA in 2010. The NBI is an important platform for engagement, consultation, and deliberation on collective conservation and utilization of the shared Nile basin water resources that could be a critical foundation for the establishment of a benefit sharing regime in the Nile basin. Despite concerted efforts to realize a shared vision for all basin countries under the

NBI framework, competing interests, unilateral actions, and the two Nile treaties pose obstacles to the establishment of a comprehensive institutional framework.

Besides the Nile basin, Kenya shares transboundary rivers and lakes basins with neighbouring countries. Some of the shared basins include Dawa (Daua) River (Kenya, Ethiopia, and Somalia); Sio-Malaba-Malakisi basin (Kenya and Uganda); and Lake Turkana basin (Kenya and Ethiopia). In addition, Kenya and Tanzania share the Lake Jipe and Mara River. This study could provide policy alternatives critical for the achievement of SDG 6 (clean water and sanitation), especially target 6.5 that calls for the implementation of integrated water resources management at all levels, including transboundary cooperation. Therefore, it is in Kenya's interest that a comprehensive legal and institutional framework and a more sustainable benefit sharing arrangement are established for the common prosperity of the basin countries. This study aims to explore potential sustainable benefit sharing of the Nile River water resources and its implications on Kenya's national interests in the basin.

The overall objective of the study is to explore the potential sustainable benefit sharing of Nile water resources and its implications on Kenya's national interests. More specifically, the study analyzes the power asymmetry in the Nile basin and its implications on riparian countries' equitable access to the shared water resources; assesses transboundary management and governance of Nile basin under the 1929 and 1959 Nile treaties; and the proposed 2010 Comprehensive Framework Agreement; and reviews potential benefit-sharing mechanisms in the Nile basin and its implications on Kenya's national interests.

The rest of the paper is organized as follows: Section 2 analysis the River Nile basin including the agreements since 1929, Section 3 details the methodology used for analysis while Section 4 provides the results from the analysis. Section 5 presents the conclusion and policy recommendations.

2. Transboundary River Basins in Africa

Africa's freshwater resources are estimated to be nearly 9.0 per cent of the world's total (UNESCO, 2021). The continent has one-third of the world's major international river basins, with catchment areas greater than 100,000 km² (Africa Water Vision, 2000). Due to physical and climatic conditions, the water resources are unevenly distributed across the continent, with most of water-rich countries situated in Central and Western Africa sub-regions, holding 54.0 per cent of Africa's total water resources while 27 most water-scarce countries have only 7.0 per cent. While headwater regions with abundant precipitation contribute significantly to the volume of water resources in the continent's transboundary river basins, the contribution of regions with low precipitation is relatively little compared with the overall volume of water resources available in their respective basins (Wirkus and Boge, 2006). Two-thirds of Africa is characterized by arid and semi-arid climatic conditions, making it the second driest continent after Australia (UNESCO, 2021). Consequently, about half of the continent faces water stress, and it is predicted that the situation could worsen by 2040.

There are about 80 international river and lake basins in Africa (AUDA-NEPAD, 2020). Out of the 63 transboundary river basins in the continent, only 20 have international agreements (Wirkus and Boge, 2006). Sixteen (16) river basins have institutionalized forums for coordinating their cooperative transboundary management of water resources. Some of the major transboundary river basins in Africa include the Nile, Congo, Zambezi, Niger, Senegal, Juba-Shabelle, Limpopo, Okavango, Orange, and Volta. Due to growing water scarcity, shrinking of some water bodies and encroachment of desertification, enhanced partnership and hydro-solidarity between countries that share transboundary water basins could be crucial in fostering cooperation in the development and management of international water basins in Africa. It is notable that transboundary water management has made considerable progress in the Southern Africa Development Community (SADC) region (Wirkus and Boge, 2006). While SADC provides an overarching political framework conducive for transboundary cooperation, South Africa has pursued cooperative and pro-integration cause despite being a predominant regional power.

2.1 Features of River Nile

The Nile is one of the largest river basins in the world with an area equivalent to 10 per cent of the African continent or about 3,176,541 million km² and contains ten major sub-basins (FAO, 2020; Kameri-Mbote, 2005). The Nile is presumably the longest river in the world at 6,695 km and a navigable length of 4,149 km. Two broad sub-systems of the Nile basin are the Eastern Nile sub-system and the Equatorial Nile sub-system (Abebe, 2014). The Eastern Nile sub-system consists of the Blue Nile, which begins from Lake Tana in Ethiopia, with about 85 per cent of the total annual discharge to the Nile. The Equatorial Nile sub-system originates from Lake Victoria, with about 15 per cent of the total annual discharge of the basin. The Nile basin is shared by eleven countries, namely Burundi, Democratic

Republic of the Congo (DRC), Egypt, Eritrea, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania, and Uganda and is home to approximately 291 million people (Nile Basin Initiative, 2020).

Almost the entire territories of Uganda (98%) and South Sudan (96.3%) fall within the Nile basin. Similarly, vast territories of Rwanda (75.5%) and Sudan (74.9%) fall within the basin. Whereas a third of Egypt and Ethiopia are within the basin, Kenya and Tanzania have only small portions of their territories within the basin as shown in Table 2.1. Approximately 44 per cent of the Nile basin is in Sudan. However, only 1.6 per cent of the Nile River Basin falls in Kenya. Egypt is the largest user of Nile water resources at 68.4 per cent, followed by Sudan at 26.9 per cent. Kenya's withdrawal stands at 3.2 per cent. Internal renewable water supply is highest in the DRC at 900 km³ and lowest in Egypt at 1.8 km³. Due to its dependence on the Nile, Egypt's water withdrawal is the highest at 68.4 km³ while Rwanda records the lowest water withdrawal from the Nile at 0.2 km³.

Table 2.1: Salient features of Nile riparian countries

Country	Total area (km ²)	Area in the basin (km ²)	% of country area in Nile basin	% of the total Nile basin area	Internal renewable water supply (km ³)	Withdrawal (km ³)
Burundi	27,834	13,260	47.6	0.4	10.0	0.3
DRC	2,345,409	22,143	0.9	0.7	900.0	0.6
Egypt	1,010,408	326,751	32.6	9.7	1.8	68.4
Eritrea	117,600	24,921	20.5	0.8	2.8	0.4
Ethiopia	1,104,300	365,117	32.4	11.4	122.0	5.6
Kenya	591,971	46,229	7.9	1.6	20.7	3.2
Rwanda	26,338	19,876	75.5	0.7	9.5	0.2
South Sudan	619,745	620,626	96.3	19.5	26.0	0.7
Sudan	1,886,068	1,396,230	74.9	44.0	4.0	26.9
Tanzania	947,303	84,200	8.9	3.7	84.0	5.2
Uganda	341,038	231,366	98.0	7.6	39.0	0.6

Source: FAO Aquastat (2017)

Agriculture is the single-largest water consumer in the Nile basin (Nile Basin Initiative, 2020). The total area under irrigated agriculture in the Nile basin is estimated at 5.4 million hectares, with over 97 per cent of the area found in Egypt and Sudan (Merem et al., 2020). An estimated 80.36 per cent of actual withdrawal for the irrigation water abstraction occurs in Egypt while Sudan uses 16.93 per cent of the irrigation water as shown in Table 2.2. Only 3.0 per cent of irrigation water occurs in the rest of Nile riparian countries, with Kenya's actual withdrawal for irrigation estimated at 0.37 per cent. Continued expansion

of hydraulic infrastructure and environmental and climatic change are likely to have ramification on the sharing of the Nile water resources among the riparian countries.

Table 2.2: Water withdrawal for irrigation in the Nile basin (million cm³)

Country	Withdrawal requirement	Percentage	Actual withdrawal	Percentage
Burundi	28.9	0.03	28.7	0.03
DRC	0.0	0.00	0.0	0.0
Egypt	66,551.5	79.84	66,054.0	80.36
Ethiopia	2,018.2	2.42	1,500.9	1.82
Kenya	367.4	0.44	307.5	0.37
Rwanda	58.6	0.07	57.4	0.06
Sudan	13,959.8	16.74	13,921.6	16.93
Tanzania	102.2	0.12	63.4	0.07
Uganda	260.4	0.32	260.3	0.32
Total	83,350.4	100	82,197.0	100

Source: Merem et al. (2020)

The Nile basin is characterized by high climatic diversity and hydrological variability; high evapotranspiration rates; rainfall is characterized by highly uneven seasonal and spatial distribution; and asymmetry in both flow and actual utilization by the riparian countries as a disproportionate portion of water is appropriated by the downstream riparian countries (Mekonnen, 2013). The quest for setting up a comprehensive legal and institutional framework for the Nile basin has faced various obstacles, including power asymmetries between upstream and downstream countries; unilateral project development at national levels, inter-state competition, mutual suspicion and mistrust among riparian States; bilateral and sub-basin agreements with exclusive focus on technical cooperation; competing interests of Nile basin States; increasing demand of water resources; and the persistence of downstream countries that the 1929 and 1959 treaties should bind all riparian States (Nile Basin Initiative, 2019; Swain, 2011; Mekonnen, 2010; Bulto, 2010). While the significance of a comprehensive basin-wide agreement is critical for equitable distribution of water resources and effective management of the Nile basin, the riparian countries are yet to set up an inclusive transboundary governance system that serves their common interests.

The Nile basin is increasingly under pressure due to rapid population growth, expansion of irrigated agriculture and hydropower generation projects, climate change and river pollution. Currently, about 5.5 million hectares of land in the Nile basin is irrigated, with future intent to add more 4.9 million hectares (Merem et al., 2020; Mulat and Moges, 2020). Greater frequency of droughts in the waterhead regions of the Nile has prompted upstream countries to explore

construction of multipurpose dams to expand irrigated agriculture to meet their growing food demands and boost their economic development (Mulat and Moges, 2020). However, the competition for water resources and increased water scarcity in the Nile basin could limit irrigation and food production; undermine hygiene and sanitation needs; and impede hydropower production and industrial development (Merem et al., 2020).

Continued exclusive utilization and exploitation of water resources by downstream countries and attempts by upstream countries to claim their share of the Nile water resources have led to hydro-political tensions in the basin (Swain, 2011). Further, concerns over the potential impact of climate change on the Nile basin underscore the need for improved transboundary cooperation. Such developments call for an urgency to establish design institutions and legal framework that will not only guarantee adaptive management but also reasonable and equitable benefit-sharing.

The Nile Agreements of 1929 and 1959

The agreement between Egypt and Anglo Egyptian Sudan of 7th May 1929 and the Nile Waters Agreement between Egypt and Sudan in 1959 have shaped the management and sharing of Nile water resources in the past decades.

The Exchange of Notes between the United Kingdom and the Egyptian Government regarding the use of the Waters of the River Nile for Irrigation Purposes (the 1929 Nile Treaty) is perceived as the dominating feature of legal relationships concerning the distribution and utilization of the Nile River water resources (Okoth-Owiro, 2004). The Treaty's main purpose was to guarantee and facilitate an increase in the volume of water reaching Egypt from the upstream territories. Though the Treaty has only five articles, the 1925 Nile Commission Report is considered as an integral part of the agreement. The key features of the 1929 Nile Treaty are as follows:

- (i) No irrigation or power works or measures are to be constructed or taken on the River Nile or its branches, or on the lakes from which it flows in the Sudan, or in countries under the British administration, which would, in such a manner as to entail prejudice to the interests of Egypt, either reduce the quantities of water arriving in Egypt or modify the date of its arrival, or lower its level.
- (ii) In case the Egyptian Government decides to construct in Sudan any works on the Nile and its branches, or to take any measure with a view to increasing the water supply for the benefit of Egypt, they will agree beforehand with the local authorities on the measures to be taken to safeguard local interests.
- (iii) It is recognized that during operations here contemplated, uncertainty may still arise from time to time either as to the correct interpretation of a question of principle or as to technical or administrative details. Every question of this kind will be approached in a spirit of mutual faith. In the event the two governments find themselves unable to settle, the matter

shall be referred to an independent body with the view of arbitration.

- (iv) United Kingdom's recognition of Egypt's natural and historical rights in the waters of River Nile.
- (v) Egypt reserves the right to monitor the Nile flow in the upstream countries.
- (vi) The flow of the Nile during January to July (dry season) would be reserved to Egypt.
- (vii) Egypt assumed the right to undertake projects related to the Nile River without the consent of upstream countries.
- (viii) Egypt assumed the right to veto any construction projects that would affect her interest adversely.
- (ix) Egypt and Sudan will utilize 48 bm^3 and 4 bm^3 of the Nile flow per year, respectively.

The Agreement between the United Arab Republic (now Egypt) and Republic of Sudan for the Full Utilization of the Nile Waters (the 1959 Nile Treaty) signalled the cooperation between the two countries regarding the sharing of River Nile waters, laying a foundation for duality while excluding upstream countries (Deng, 2007). In other words, the two downstream countries were to adopt a united position on the claims of upstream riparian States. The Treaty also governs the control of certain hydro projects concerning the Nile. The key features of the 1959 Nile Treaty are as follows:

- (i) Egypt and Sudan agreed on the average annual Nile flow of 84 bm^3 , measured at Aswan High Dam in Egypt.
- (ii) The annual loss due to evaporation and other factors were agreed to be about 10 bm^3 . This quantity would be deducted before the actual water share is divided between Egypt and Sudan.
- (iii) The agreed shares were 55.5 bm^3 and 18.5 bm^3 for Egypt and Sudan, respectively.
- (iv) Sudan would construct projects that would enhance the Nile flow by preventing evaporation losses in Sudd swamps of the White Nile (southern Sudan). The cost of saving water in the Sudd to be shared equally between the two countries.
- (v) The Agreement granted Egypt the right to construct the Aswan High Dam that could store the entire annual Nile flow. Similarly, the Agreement granted Sudan the right to construct the Roseires Dam on the Blue Nile and to develop other irrigation and hydroelectric power generation projects.
- (vi) Egypt and Sudan decided to handle claims over the Nile by other riparian States by removing any amount that the countries may be entitled to in equal parts from both Egypt's and Sudan's shares.
- (vii) A Permanent Joint Technical Commission to be established to secure the technical cooperation between the two countries.

The review of the 1929 and 1959 Nile treaties and related literature shows that the agreements have been in favour of the downstream Egypt and Sudan. The 1929 Treaty recognizes Egypt's natural and historical 'rights', hence it could veto any construction project that would affect its interests adversely. Egypt also reserves the right to monitor the Nile flow in the upstream countries. During the dry season (January–July) each year, the water is reserved for Egypt (Okidi, 1982). In case the two countries fail to resolve a dispute, it could be referred to a third party. Egypt and Sudan are allocated 48 bm^3 and 4 bm^3 of the Nile flow per year, respectively. The 1959 Nile Agreement increased the annual allocation of Egypt and Sudan to 55.5 bm^3 and 18.5 bm^3 , respectively. Other issues in the Treaty include the right for Egypt and Sudan to construct the Aswan High Dam and Roseires Dam in their respective jurisdictions. The treaties seem to focus more on the extraction of Nile water resources without putting measures to address emerging issues with the two downstream countries never including clauses that would allow for future negotiations with upstream countries.

Cooperative Framework Agreement (CFA)

The establishment of the NBI in February 1999 was a major milestone in laying ground for collective management and development of the Nile basin shared water and related resources to achieve sustainable socio-economic development. The Nile basin cooperation process has two tracks – the political track and NBI technical programme. While NBI has provided a common platform for dialogue, confidence building, and nurturing mutual trust among riparian States and has laid a strong foundation for technical cooperation in various projects in the Nile basin, delays in signing and ratification of the CFA have hampered the operationalization of various institutions envisioned in the Agreement.

The political track is pursued by the member States outside the framework of the NBI undertaken by country negotiating teams. The political track aims at concluding and ratifying the CFA, which would eventually pave way for transitioning NBI into a permanent river basin organization known as the Nile River Basin Commission. The CFA would enter into force on the sixtieth day following the date of deposit of the sixth instrument of ratification or accession with the African Union. As of 25th September 2023, Ethiopia, Rwanda, Uganda, Tanzania and Burundi had ratified the CFA. Nonetheless, the entry into force of the CFA was realized on 13th October 2024 after South Sudan acceded to the Agreement on 1st August 2024 and subsequently depositing the accession instrument with the African Union Commission on 14th August 2024. During the negotiations of the CFA, the upstream riparian States wanted the new agreement to supersede any previous agreements while downstream riparian States wanted the CFA to explicitly recognize all previous agreements (Ibrahim, 2011).

Table 2.3: Signing and ratification of the Cooperative Framework Agreement

	Participant/ country	Date of Signing	Date of Ratification	Date of Deposition with African Union Commission
1.	Burundi	28 th Feb 2011	25 th Sept 2023	19 th October 2023
2.	DRC	-	-	-
3.	Egypt	-	-	-
4.	Ethiopia	14 th May 2010	13 th June 2013	2 nd September 2013
5.	Kenya	19 th May 2010	-	-
6.	Rwanda	14 th May 2010	21 st May 2014	26 th May 2014
7.	South Sudan	1 st August 2024 (accedes to the CFA)	14 th August 2024	
8.	Sudan	-	-	-
9.	Tanzania	14 th May 2010	23 rd May 2016	28 th June 2016
10.	Uganda	14 th May 2010	15 th August 2019	8 th October 2019

Source: Nile Basin Initiative, Issue Paper 1, 2024

The draft CFA outlines principles, rights and obligations for cooperative management and development of the Nile basin water resources. The Treaty intends to establish a framework to promote integrated management, sustainable development, and harmonious utilization of the water resources of the basin, conservation, and protection for the benefit of present and future generations. The CFA aims at transforming the Nile basin from unilateralism and competition into one governed by a permanent legal and institutional framework agreed upon by all Nile basin countries (Mekonnen, 2010). The CFA highlights the use, development, protection, conservation and management of the Nile basin and its resources (Article 1). The CFA envisages the establishment of a permanent institutional mechanism, the Nile River Basin Commission (NRBC). The Commission would serve to promote and facilitate the implementation of the CFA and to facilitate cooperation among the Nile basin countries in the conservation, management and development of the Nile River basin and its waters.

The Nile River basin shall be protected, used, conserved and developed in accordance with the principles of cooperation between the Nile riparian countries on the basis of sovereign equality, territorial integrity, mutual benefit; sustainable development; subsidiarity whereby development and protection of the Nile basin water resources is planned and implemented at the lowest appropriate level; equitable and reasonable utilization of the waters of the Nile River system; preventing significant harm to other riparian States; taking responsibility individually or jointly for the protection and conservation of the Nile basin; Nile basin countries to exchange information on planned measures through the Nile River Basin Commission; community of interest of the Nile basin States on the Nile River system; regular and reciprocal exchange the information; environmental

impact assessment and audit; peaceful resolution of disputes; that fresh water is finite and vulnerable resource; that water as a natural resource has social and economic value; and water security for all Nile basin States. Articles 4-14 of the CFA expound on the general principles.

The most contentious issue in the draft CFA is Article 14 that stipulates that “Nile Basin States recognize the vital importance of water security to each of them. The States also recognize that the cooperation, management and development of waters of the Nile River System will facilitate achievement of water security and other benefits.” The article was rejected by Egyptian and Sudanese negotiators as they feared that the coming into force of CFA would drastically reduce their water supply as upstream riparian countries undertake and expand their hydraulic infrastructure development projects in the basin (Kieyah and Kang’ethe, 2012).

The CFA outlines institutional structure and respective purpose and objectives of the institutions. The key institutions include Nile River Basin Commission (Articles 15-17), Conference of Heads of State and Government (Articles 20-21), Council of Ministers (Articles 22-24), Technical Advisory Committee (Articles 25-26), Sectoral Advisory Committees (Articles 27-28), the Secretariat (Articles 29-30), National Nile Focal Point Institutions (Article 33). Article 31 caters for the transition from NBI to Nile River Basin Commission upon the entry into force of the CFA.

The CFA intends to promote integrated management, sustainable development, and harmonious utilization of the Nile water resources. The envisaged treaty prioritizes the conservation and protection of the environment of the Nile basin. The finalization and the subsequent implementation of the process requires the upstream and downstream countries to reach amicable solutions to outstanding issues.

3. Methodology and Data

3.1 Methodology

The study uses a systematic integrated literature review, which involves content analysis of past research on the Nile basin power relations between upstream and downstream countries, transboundary governance of the Nile, and its implications on Kenya's national interests in the basin. International water relations are deemed complex as policies pursued to remedy water scarcity consider the role of power among riparian countries in transboundary river basins (Zeitoun and Allan, 2008; Zeitoun and Warner, 2006). Institutions including treaties, river basin organizations, water allocation mechanisms, and dispute mechanisms play a significant role in transboundary water management and governance; and in the establishment of a sustainable benefit-sharing regime.

Objective 1: Power asymmetry in the Nile basin

The role of power relations in the hydro-political transboundary relations cannot be gainsaid as power and power asymmetries are central in understanding how and why hegemonic control is gained and maintained in transboundary river basin (Hussein and Grandi, 2017). Dimensions of power under consideration include material, bargaining and ideational and geographical (Atwan, 2018). Material power comprises military power, economic power, technology, and international political support. Bargaining power refers to the capacity of a state to control the rules of the game and set agendas of transboundary water interaction. Ideational power refers to the capacity of a State to impose and legitimize specific narratives or discourses in a transboundary water basin. Lastly, geographical position of a State in a transboundary water basin is the natural source of power that usually favours upstream States.

Power relations between riparian countries largely determine the degree of control over water resources that each riparian State uses (Zeitoun and Warner, 2006). In this objective, hydro-hegemony and counter-hegemony frameworks are used to analyze how existing power asymmetries in the Nile basin undermine equitable outcomes and strategies of the Nile non-hegemonic States attempt to transform inequitable order in the basin.

Riparian interactions over transboundary water resources can be characterized by cooperation or competition. Riparian relations are stable when all riparian countries in a transboundary basin share control over water resources anchored on a negotiated water-sharing agreement perceived positively by the basin countries (Zeitoun and Warner, 2006). The cooperative interaction is likely to lead to a positive/leadership form of hydro-hegemony in which the hegemon takes a leading position to provide benefits to co-riparian States and share water resources more equitably (Hayat et al., 2022). On the other hand, a powerful riparian country might seek to consolidate maximum control of water resources through strategies including resource capture, containment and integration and using various tactics such as coercion, utilization, norms, and ideology as shown

in Table 3.1. In other words, a hegemon desires to maintain power asymmetries and structural inequalities.

Counter Hydro Hegemony Framework refers to strategies employed by non-hegemonic riparian States to transform the rule of the game in transboundary river basin (Cascão et al., 2016). Such strategies include contesting the legitimacy of the order established by the hydro-hegemony; envisioning alternatives; and challenging the status quo. The power dynamics in transboundary water interactions show that non-hegemons can achieve more favourable outcomes if they tap into hegemonic vulnerabilities. Mechanisms of resistance and counter hegemony employed by non-hegemons in transboundary water basins include coercion, leverage, transformation, influence, and challenge (Zeitoun et al., 2017). In addition, the predominant power narrative is increasingly being challenged as outcomes cannot be explained only through the possession of various forms of power in a transboundary river system (Petersen-Perlman and Fischhendler, 2018).

Table 3.1: Hydro-hegemony and counter-hegemony frameworks of analysis in the Nile basin

	Strategy/ Tactic	Indicators	Pres- ence	Under devel- op- ment	Ab- sence	Interpretation
Water resources control strategies	Resource capture	Construction of dams and water reservoirs	√			Egypt's and Sudan's large dams and water reservoirs along the Nile
		Expansion of hydraulic projects	√			Egypt's new urban centres and industrial areas; and land reclamation projects in its Western Desert. The Southern Valley Agricultural Development Project (Toshka Project) is undertaken to resettle a significant population in the Western Desert

	Containment	Co-optation of non-hegemons rather than ignoring or discrediting their claims	√			Promotion of technical cooperation under Hydromet and Undugu initiatives
		Bilateral engagement and agreements signed between hydro-hegemon and non-hegemons to the advantage of the former	√			Hydro-hegemon (Egypt) supporting dams and water storage reservoirs that are not within the Nile basin
	Integration	Towards a benefit sharing regime in the basin		√		Currently, not in place after the downstream riparian countries withdrew their support for the Comprehensive Framework Agreement (CFA) in 2010
		Hydro-hegemonic leadership is viewed as positive by co-riparian States			√	Nile basin is largely characterized by asymmetrical power relations and structural inequalities perpetuated by the 1929 and 1959 Nile treaties
Tactics	Coercive compliance-producing mechanisms	Military threats against non-hegemons that interfere with Nile flow	√			Successive Egyptian governments have issued threats to a Nile basin country perceived to be a threat to Nile flow to Egypt
		Covert action	√			Egypt's presupposed support to armed actors such as Eritrean Liberation Front and Somalia's irredentism

		Diplomatic isolation	√			Egypt employing its influence to block ADB loan to upstream States
		Trade embargoes and economic sanctions	√			No explicit observance in literature
	Utilitarian compliance-producing mechanisms	Financial rewards	√			Egypt's pledge for Sudan's debt relief in May 2021
		Trade incentives	√			Egypt agreeing to build a joint industrial zone in Khartoum in January 2021
		Diplomatic recognition	√			Egypt's participation in International Conference on Sudan in Paris in May 2021
	Normative compliance-producing mechanisms	Signing a treaty to institutionalize status quo	√			Sudan signing 1959 treaty hope to benefit despite being in a subordinate position
		Bilateral treaty excluding other basin countries in a river basin	√			The 1929 and 1959 Nile treaties excluded Ethiopia and other upstream riparian countries
	Hegemonic compliance-producing mechanisms	Securitization of Nile River as a national security	√			Egypt treats interference over Nile flows as a threat to its national security
		Knowledge construction	√			Hydro hegemon veiling inequitable Nile water resources while emphasizing technical cooperation
		Sanctioned discourse	√			Egypt's support of benefit 'sharing' under the 1929 and 1959 Nile treaties

Counter-hegemony mechanisms	Coercion	Use of violence/sabotage to the existing asymmetrical order	√			Sudan People's Liberation Movement's disruption of the Jonglei Canal Project in 1984
		Defiance against the hydro-hegemon	√			The establishment of the Grand Ethiopian Renaissance Dam (GERD) in Ethiopia
	Leverage	Strategic alliance of Nile upstream countries	√			Increase of bargaining power in negotiations for equitable use of the Nile waters
		Normative instruments of international law	√			Advocating for the review the 1929 and 1959 treaties by employing principles of international water law; equitable and reasonable use
		Alternative sources of funding for non-hegemon hydraulic projects	√			Mobilization of resources to construct the GERD in Ethiopia; China's engagement in the Nile basin
	Transformation	Influencing: Matching of interests	√			Sharing of water-related benefits such as water development, irrigated agriculture, hydropower generation under NBI cooperative programmes
		Influencing: Encouragement of reform	√			Dialogue platforms for bringing together stakeholders (NBI platforms)
		Challenging: Levelling players	√			Capability building at regional, national and community levels in NBI member States

		Challenging: Leveling the playing ground	√			Strengthening the application of the principles of international water laws; improvement of legislative and regulatory frameworks across
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Source: Author's compilation

Objective 2: Transboundary management and governance of Nile basin

Factors that make the management of transboundary water extremely problematic include the critical importance of water for human existence, many uses of water, scarcity, maldistribution, allocation or sharing mechanism, over-utilization, and misuse. Transboundary management and governance of the Nile River basin is assessed through various indicators:

- Existence of inclusive transboundary water treaty
- River Basin Organization/Secretariat
- Stakeholder participation
- Information sharing among riparian countries
- Regulation of water quality and water quantity
- Climate change adaptation and mitigation measures
- Water allocation mechanisms
- Dispute resolution mechanisms
- Enforcement mechanisms

Table 3.2: Management and governance of the Nile basin

	Indicators	In place, functioning	Not in place	Under development	Interpretation
1.	Existence of inclusive and comprehensive treaty			√	The 1929 and 1959 Nile treaties have been challenged by upstream countries as not inclusive and discriminatory. The more comprehensive CFA is under development
2.	Existence of river basin organization	√			Under the 1959 Nile Treaty between Egypt and Sudan, the two countries set up a Permanent Joint Technical Commission with functions. Since February 1999, the NBI is in place but as a transition institution that will be replaced by the Nile River Basin Commission once the CFA comes into force

3.	Stakeholder participation policy or strategy	√			NBI activities are anchored on stakeholder engagement. Currently, NBI is implementing the Communication and Stakeholder Strategy 2018-2023 at basin, sub-basin and national levels
4.	Data exchange and information sharing channels	√			Nile Information System is in place as one of the programmes under the NBI. Under the 1929 and 1959 Nile treaties, there is no stakeholder involvement
5.	Regulation of water quality and water quantity		√		Water resource management and water resource development are key under the NBI. However, the projects are work in progress since all riparian countries are yet to reach consensus on contentious issues
6.	Climate change adaptation and mitigation measures			√	Though climate action was not a major issue when NBI was established in 1999, the basin is undertaking several projects on climate change adaptation and mitigation
7.	Water allocation formula/ mechanisms		√		Water allocation formula is yet to be developed. Water allocation in the 1929 and 1959 Nile treaties is for Egypt and Sudan only
8.	A formal institution for dispute resolution		√		The NBI secretariat tends to handle disputes. A formal dispute authority is likely when the CFA becomes operational
9.	Enforcement mechanisms		√		Substantive enforcement measures have been contemplated in the CFA

Source: Author's compilation

Objective 3: Benefit-sharing mechanisms in the Nile basin

Transboundary cooperation in the Nile River basin could generate multiple benefits, including the benefit accorded to the river by cooperative basin-wide environmental management; reap benefits from the river by cooperative development of the basin; savings that can be made by diminishing the costs of non-cooperation arising because of the river; and broader opportunities that are catalyzed beyond the river (Sadoff and Grey, 2002).

i. The ecological river: Increasing benefits to the river

- Restoration of degraded watersheds and wetlands
- Deployment of pollution control measures

ii. The economic river: Increasing benefits from the river

- Expansion of irrigated agriculture in the basin
- Development and management of water resources

- Joint exploitation of the hydro power potential in the basin
- iii. The political river: Reducing the costs because of the river
- Reduced tensions between riparian countries in the Nile basin
 - Using the NBI platform to build consensus and defuse tension in the basin
- iv. The catalytic river: Increasing benefits beyond the river
- Increased regional trade and investment in the Nile basin
 - Increased integration of infrastructure systems in the Nile basin

Table 3.3: Benefit sharing mechanisms in the Nile basin

	Type of benefits	Indicators	In place	Not in place	Under development	Remarks
1.	Ecological river: Increasing benefits to the Nile	Restoration of watersheds and wetlands			√	The NBI has undertaken baseline study on the wetlands and watersheds for concrete conservation action
		Water pollution control measures			√	Control of water pollution in the Nile basin is an ongoing project at basin, national and community levels
2.	Economic river: Increasing benefits from the Nile	Expansion of irrigation			√	Irrigation has been projected to make substantial growth in the next two or three decades. Under full implementation of planned projects, estimated 9.6 million ha will be under irrigation by 2050 from 6.6 million ha in 2018 (NBI, Corporate Report 2020: 22)
		Development and management of water resources	√			NBI explores opportunities for maximizing the benefits of the river's waters through cooperative development and management of the basin. It also explores other sources of water including groundwater resources (NBI, 2019)
		Joint hydropower projects			√	The 80MW Regional Rusumo Falls Hydroelectric Power (Burundi, Rwanda and Tanzania) is a NBI's flagship project. Interconnection of the Electric Grid of five countries (Burundi, DRC, Kenya, Rwanda and Uganda) is ongoing

3.	Political river: Reducing the costs because of the Nile	Reduced tensions between riparian countries			√	Tensions and mistrust have reduced in the basin, but the Eastern Nile sub-basin is relatively tense due to disagreement between Ethiopia and Egypt over the GERD
		NBI as a platform of consensus building	√			NBI provides a platform for discussion and building a mutual understanding among different countries, hence fostering mutual trust and confidence
4	Catalytic river: Increasing benefits beyond the Nile	Increased regional trade and investment			√	From EAC, regional trade and investment has increased. However, it is not yet clear how the cooperative initiatives under NBI contribute to increased trade and investment in the basin
		Increased integration of infrastructure			√	Integration of infrastructure in the Nile basin is significantly taking root as various inter-country infrastructure projects are launched

Source: Author's compilation

3.2 Data and Information Sources

The sources for data and information include reports, policy documents and strategies from the Nile Basin Initiative repository; relevant reports and information from Ministries, Departments and Agencies (MDAs) in Kenya and the East African Community (EAC) repository; the 1929 and 1959 Nile treaties; relevant studies on transboundary water governance and its use, and other relevant literature from selected transboundary river basin cases.

4. Analysis of Results

4.1 Power Asymmetry in Transboundary River Basins

The two main water resource control strategies employed by Egypt (and to some extent Sudan) are resource capture and containment as shown in Table 3.1. The two downstream riparian countries have established large hydraulic infrastructure projects along the Nile to capture and store water resources in large dams and water reservoirs. Due to scarcity of rainwater in the lower basin area, Egypt and Sudan largely rely on the Nile for their water needs (Swain, 2011). Several treaties were concluded among the colonial powers in the Nile basin and adjacent territories, which gave priority to Egyptian demands for the Nile water. Egypt's hydro-hegemony is anchored on the 1929 and 1959 Nile Water treaties that granted priority to Egypt water needs and providing it with the right to veto any future hydraulic infrastructure projects in any of the upstream countries (Brunnee and Toope, 2009). While the 1929 agreement recognized Egypt's historic and natural rights to Nile waters, both treaties granted Egypt the bulk of Nile water resources (Tekuya, 2018).

Egypt's predominance in the Nile basin was not only consolidated by its water resource control strategies, including resource capture and containment tactics but also its international diplomacy that ensured that international and continental financial institutions did not fund hydraulic infrastructure along the Nile River basin especially in the 1970s and 1980s (Darwisheh, 2021). Egypt's containment strategies were also explicit in initiating the establishment of Hydromet (1967-1992) and Undugu (1983-1992) initiative to deal largely with technical issues (Adar, 2007; Hassan and Al Rasheedy, 2007; Wolde, 2017). The pursuit of resource capture by the downstream countries led to the construction of huge water storage facilities, including the Aswan High Dam, Damietta Dam, Lake Nasser in Egypt, other water reservoirs; and several irrigation projects including Isna Barrage, Damietta and Rossetta deltas, Nag Hammedi Barrage, Asyut Barrage, Zifta Barrage, and Idfina Barrage; and Sennar Dam, Al-Rusayris Dam, Roseries Dam in Sudan (Swain, 2011). Egypt's efforts to expand projects such as the West Delta Irrigation Project, North Sinai Agriculture Development Project, and the South Valley/Toshka Development Project are expected to increase water demands from the Nile (Molle, 2018).

The consolidation of Egypt's power and hydro-hegemony in the Nile basin can be attributed to several factors, including the Nile Water agreements, advanced military establishment, high level of sustained growth and industrial development, highly developed hydraulic infrastructure, its geostrategic role recognized by the United States and Soviet Union during the Cold War period, and its privileged position to access foreign aid and investments (Ahmad, 2018; Hussein and Grandi, 2015). As a result, Egypt has pursued a multi-pronged strategy that aims at controlling the Nile and preventing the upstream fluvial countries through various tactics including coercion, utilization, norms, and ideology (Hussein and Grandi, 2015; Wolde, 2018). The coercive compliance-producing mechanisms employed by Egypt include military threats, covert action and diplomatic isolation. Successive Egyptian governments have issued threats to Ethiopia, Sudan and other riparian

States perceived to be a threat to the Nile flow. Covert action includes Egypt's presupposed support to armed actors such as the Eritrean Liberation Front and Somalia's irredentism; that is, the attempts to form a Greater Somalia by annexing Somali-speaking territories from neighbouring Kenya, Ethiopia and Djibouti. On the diplomatic front, Egypt has employed its influence to block development financing of hydraulic infrastructure projects for the upstream States (Hassan and Al Rasheedy, 2007; Darwisheh, 2021). However, the use of trade embargoes and economic sanctions against co-riparian States seems not explicit.

The use of 'carrots' tactic is visible through utilitarian compliance-producing mechanisms in the Nile basin. The utilitarian tactic mainly focuses on provision of incentives to non-hegemonic States upon compliance to the status quo (Wolde, 2018). Indicators for utilitarian tactic include financial rewards, trade incentives, diplomatic recognition, military protection, and working on shared interest projects. Through cooperative diplomacy with the co-riparian countries in the Nile basin, Egypt has employed various utilitarian tactics to ensure status quo. Egypt and Uganda have engaged on joint electricity grid projects (Yahat et al., 2022). Egypt has had a series of renewed engagement with Sudan, including pledging debt relief for Sudan in May 2021; agreeing to build a joint industrial zone in Khartoum in January 2021; and Egypt's participation in International Conference on Sudan in Paris in May 2021 as a way of recognizing the transitional government of Sudan.

Normative tactic entails the hydro-hegemon's efforts to consolidate the status quo by signing of agreements and treaties with non-hegemons in a transboundary water basin (Wolde, 2018). Other examples of normative tactics include best practice of transboundary water arrangement and operational procedures of international financial institutions investing in transboundary water projects. Normative compliance-producing mechanisms rely on instilling the belief that compliance with the existing order is right (Zeitoun et al., 2017). Egypt has employed normative tactic in the Nile basin through the signing of the 1959 Nile Treaty with Sudan with the latter hoping to benefit despite being in a subordinate position. Despite the 1959 Treaty appearing to have increased Sudan's Nile water allocation from 4 billion cubic metres to 18.5 billion cubic metres, the Treaty consolidated Egypt's grip on the Nile (Kimenyi and Mbaku, 2015). Both the 1929 and 1959 Nile treaties excluded Ethiopia and other riparian countries in the Nile basin.

Ideological hegemonic tactics entails construction of unfounded knowledge around an issue of interest and disseminating it by linking the issue with national security and promoting the legitimate right to take exceptional measures (Wolde, 2018). The Nile is framed in Egypt's Foreign Policy and National Security Strategy as a matter of survival (Siraw, 2023). Thus, Egypt treats interference over Nile flows as a threat to its national security. The securitization of Nile River as a national security provides legitimacy to Egypt's leadership to take extraordinary measures when the water security is severely threatened. Knowledge construction is also a powerful tactic in Egypt's hydro-diplomacy as Cairo veils inequitable Nile water resources while emphasizing technical cooperation. Egypt's support of

benefit 'sharing' under the 1929 and 1959 Nile treaties is viewed as a sanctioned discourse to perpetuate the narrative that the two treaties serve the interests of the Nile basin despite opposition from upstream riparian States.

Power plays a role in maintaining status quo and in transforming the asymmetries and structural inequalities in transboundary water basin (Zeitoun et al., 2017). In the past two decades, Egypt's hydro-hegemony in the Nile basin has been increasingly facing considerable resistance from a unified bloc of upper riparian countries. Upstream countries' counter-hegemony measures are intertwined with the evolving development in the Nile basin since the establishment of the NBI in February 1999, though some counter-hegemonic tactics were used in the 1980s. Coercive measures by non-hegemonic States or non-State actors in the Nile basin could be in form of sabotage, challenging the legitimacy of the 1929 and 1959 Nile agreements that underpin inequitable water resource allocation or unilateral development of hydraulic infrastructure projects along the Nile without seeking approval from Egypt. The attack on the Jonglei Canal project in southern Sudan in 1984 by the Sudanese People's Liberation Army/Movement (SPLA/M) rebels is an example of a sabotage tactic (Ahmad, 2008). The construction of the Grand Ethiopian Renaissance Dam (GERD) in Ethiopia has been regarded as a major unilateral action that challenges Egypt's dominance over the Nile.

The CFA not only envisions a new order at the Nile basin but also demystifies the downstream narrative of historical and acquired rights by advocating for a shared vision of transboundary cooperation anchored on the principles of equitable and reasonable utilization of the Nile water resources. Similarly, the construction of the GERD shows the use of resource capture strategy by Ethiopia to fulfill its hydraulic mission. The GERD is not only a game 'changer' that challenges Egypt's long-standing hegemony but also signals the transformation of Ethiopia's counter hegemony from reactive to proactive diplomacy (Tawfik, 2015). Nonetheless, the CFA is yet to be ratified by at least six riparian States for its operationalization to take effect. Tekuya (2018) contends that a substantive transformation could involve an establishment of a basin-wide multilateral agreement that harms none and benefits all riparian States in the Nile basin.

The leverage strategy employed by non-hegemon States in the Nile basin include strategic alliance of upstream countries, normative instruments of international law, and alternative sources of funding for their hydraulic projects. Strategic alliance of the upstream countries increases their bargaining power in negotiations for equitable use of the Nile waters. The NBI framework and regional integration processes have contributed to the upstream countries developing a common position for challenging hydro-hegemony in the basin. Under the NBI framework, the upstream countries have undertaken capacity building in various programmes at basin, sub-basin, national and community levels. The revival of the East African Community (EAC) has played a critical role in enhancing both material and bargaining power of the Equatorial basin countries (Cascao, 2009). Increasingly, Nile upstream countries employ international law water principles to advocate for equitable and reasonable use of the shared water resources, as the emergence of modern international laws has contributed to an awareness about the rights of riparian countries on shared water resources (Gebrehiwet, 2020). The

rise of Asian economic powers has also offered alternative sources of funding to riparian countries' hydraulic projects in the Nile basin (Swain, 2011). Specifically, the entry of China in the Nile basin development in the past two decades is viewed as a major factor in power shift as Beijing contributes to numerous infrastructure projects, including hydropower generation, irrigated agriculture, and construction of dams (Mahlakeng, 2017). China has invested in dam construction in Sudan and upstream countries including Ethiopia, Burundi, Uganda, and the DRC (Swain, 2011).

Transformative mechanisms of resistance and counter-hegemony seek to transform a hegemonic order of a transboundary river basin directly or indirectly by undermining the legitimacy of the foundations on which it is anchored (Zeitoun et al., 2017). Transformation of the status quo is achieved through influencing and challenging approaches (Zeitoun and Jagerskog, 2011). Influencing power employs two tactics, namely matching interests and encouraging reforms. On the other hand, challenging power entails levelling the players and levelling the playing field tactics. Under the NBI framework, non-hegemons implement matching interests by sharing water-related benefits such as water development, irrigated agriculture, hydropower generation. Further, stakeholders use the NBI platforms to champion reforms geared towards achieving an inclusive Nile River regime. Similarly, the NBI is increasingly making efforts in levelling players through capability building at regional, national and community levels in NBI member States (Nile Basin Initiative, 2019). Through awareness and the development of international water law, there have been efforts to strengthen the application of the principles of international water laws, and improvement of legislative and regulatory frameworks.

4.2 Management and Governance of the Nile River Basin

Effective governance of transboundary river basins is critical for fostering cooperation, preventing conflicts over shared water resources and providing a framework for ensuring that riparian States meet their energy, food, and other needs (Zawahri, 2018). Various studies on governance of transboundary river basins have shown that the efficacy of inclusive transboundary water agreement, river basin organization, stakeholder participation, information sharing among riparian States, regulation of water quality and water quantity, water allocation mechanisms, dispute resolution, and enforcement mechanisms are crucial for effective cooperation on shared water resources (Saruchera and Lautze, 2016; Medinilla, 2018; Tir and Stinnett, 2011). However, the effectiveness of institutional design for governing transboundary basins depends on geographic, political, social, economic, and ecological factors (Paisley and Henshaw, 2013). Assessment of transboundary governance of the Nile is central in understanding the various institutional mechanisms in place to foster cooperation among the riparian countries in the basin.

Currently, the Nile basin does not have an inclusive, comprehensive, and basin-wide multilateral treaty as the CFA process stalled due to objection from Egypt

and Sudan in 2010 (Mekonnen, 2010). However, governance institutions under the 1929 and 1959 Nile agreements are exclusive as they were not intended to cater for the interests of the upstream riparian territories/countries. The institutional design envisioned in the two treaties is to protect the interests of the downstream countries, leading to power asymmetries that have disadvantaged the upstream countries. Since the 1960s, attempts were made to forge basin-wide cooperation through institutional set-ups, including the hydro-meteorological Survey of the Equatorial Lakes (Hydromet), Undugu, and Technical Cooperation Commission for the Promotion and Development of the Nile (TECCONILE). The Hydromet was a cooperation arrangement that was established in 1967 due to the dictates of nature, rather than the deliberate decision of the riparian countries involved (Mekonnen, 2010). The dramatic rise in Lake Victoria in the early 1960s led to severe floods and damage that prompted the World Meteorological Organization (WMO) in collaboration with the United Nations Development Programme (UNDP) together with Egypt to establish an initiative to study the potential causes of the rise of water levels (Adar, 2007; Kagwanja, 2007). Though the Hydromet is seen as the first multilateral institutional mechanism to promote inter-riparian cooperation in the basin, it primarily served as a forum bringing together water experts and other technicians from participating countries and was limited in technical cooperation (Mekonnen, 2010).

In 1983, the Undugu initiative was initiated and dominated by Egypt to foster economic, social, cultural and technical ties between riparian countries in the Nile basin (Adar, 2007; Paisley and Henshaw, 2013). Its membership included Egypt, Uganda, Sudan, Rwanda, Burundi, Democratic Republic of Congo, and Central African Republic (non-Nile basin country) while Kenya and Ethiopia only participated as observers. The Undugu initiative intended to focus on non-water related issues, such as transportation, tourism, trade, public health, inter-riparian investment, and regional security. The Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile (TECCONILE) was established in 1992 by Egypt, Sudan, Rwanda, Tanzania, Uganda, and DRC as a transitional mechanism for a period of three years, with the hope that a permanent basin-wide institution would be established. Ethiopia, Kenya, Burundi, and Eritrea had observer status (Mekonnen, 2010; Woldetsadik, 2017). The TECCONILE initiative is seen to have contributed to the establishment of the Nile River Basin Action Plan (NRBAP) in 1995 and subsequently to the NBI in 1999.

Egypt and Sudan established Permanent Joint Technical Commission under the 1959 treaty with specific functions, including drawing of the basic outlines of projects for the increase of the Nile yield, and for the supervision of the studies necessary for the finalizing of projects, before presentation to the governments of Egypt and Sudan for approval; supervision of the execution of the projects approved by the two governments; drawing up of the working arrangements for any works to be constructed on the Nile; supervision of the application of all the working arrangements mentioned above in connection with works constructed within the boundaries of Sudan and also in connection with the Sudd el Aali Reservoir and Aswan Dam, through official engineers delegated for the purpose

by the two republics; and the supervision of the working of the upper Nile projects, as provided in the agreements concluded with the countries in which such projects are constructed; the task of devising a fair arrangement for the two republics to follow, with recommendations of the Commission presented to the two governments for approval (1959 Nile Treaty). Since February 1999, the Nile basin has been more inclusive, with the Nile Basin Initiative (NBI) as a transition institution, but it is expected to be replaced with a permanent Nile River Basin Commission once the CFA comes into force. The NBI has provided a platform for coordinating technical cooperation programmes and enabling all basin countries to engage, hence increasing mutual trust, confidence, and consensus building (Nile Basin Initiative, 2019).

The NBI activities have been anchored on confidence building and stakeholder participation that is carried out at the basin, sub-basin, and national levels. While public engagement has been minimal under the 1929 and 1959 Nile treaties, the NBI framework values public involvement in the governance of the Nile basin that entails public communication, public consultation and public participation in order to improve the quality of information concerning the population's values, needs, and preferences in relation to the shared Nile water resources; to encourage public debate over the fundamental direction of the development and utilizations of the water resources; to ensure public accountability for the processes within and outcomes of the development initiative; and to protect the public interest in the management of the Nile water resources (Nile Basin Initiative, 2009; Nile Basin Initiative, 2020). The NBI develops a five-year strategy for community and stakeholder engagement with the overall objective to support the successful implementation of the NBI ten-year strategic plan. Specifically, the objectives of communication and stakeholder engagement strategy are to create a foundation for factual and constructive dialogue on the Nile basin issues; and to get buy-in for NBI's activities to address challenges in the basin (Nile Basin Initiative, 2018; 2020). Further, the NBI aims at better utilization of strategic partnerships to engage specific stakeholder groups, leveraging regional events to advance the NBI agenda and enhance awareness of NBI's achievements and benefits of cooperation.

Data exchange and information sharing are central in NBI activities, hence the basin has invested in the Nile Information System and other critical projects that provide data and channels for information sharing (Nile Basin Initiative, 2019). Article 7 of the CFA draft proposes regular exchange of data and information among Nile basin countries. The Nile basin countries agreed to establish Nile Basin Data and Information Sharing and Exchange Interim Procedures to facilitate the successful implementation of NBI projects and programmes. The interim procedures were envisaged as critical for the basin, with the expectation that after the conclusion of the CFA, a full-fledged Protocol would be put in place. The categories of data and information covered by the interim procedures include meteorological, such as historical time series data on precipitation, temperature, evaporation, transpiration and other climatic variables; water resources and uses, such as historical hydrometric data, water uses, data on characteristics of existing water-related infrastructure, water demand data, reservoir operational

rules, agricultural information, reservoirs, characteristics of groundwater aquifers; ecological/environmental data and information, such as wildlife and fisheries, wetland characteristics, pollution sources, nature reserves, water quality parameters; basin physical characteristics such as land use and/or land cover, basin topography, drainage networks, soil erosion; and socio-economy, such as population distribution. The NBI established a Shared Regional Knowledge base to facilitate the systematic archiving, maintenance and dissemination of data and information collected through the implementation of the interim procedures.

Water resource management and water resource development are considered critical in ensuring that the Nile basin harnesses water resources for both present and future generations. However, water quality and water quantity are crucial for both water resource management and development priorities. The water quality of the Nile has been steadily deteriorating over the past decades due to the dumping of untreated effluents and anthropogenic inputs (Abdel-Satar et al., 2017). The deterioration of water quality is exacerbated by population growth and increased urbanization, agriculture intensification and industrial development (Nile Basin Initiative, 2021). Industrial, agriculture and domestic wastewater is a major source of pollution. Water quantity is at the core of the Nile basin cooperation as the demand for water, food and energy for both downstream and upstream countries increase. The NBI initiated the Strategic Water Resources Assessment following a directive of the Nile Council of Ministers in June 2016 to assess the current and projected future water demand in the basin (Nile Basin Initiative, 2019). Efforts geared towards the management and development of the Nile water resources in the current NBI's Strategic Plan (2017-2027) are expected to improve the water's quality and quantity (Nile Basin Initiative, 2017).

The preservation of transboundary basins is imperative as water resource is a necessity of life, agriculture, energy, industry, other human needs, and aquatic life. While climate was not a focus of the NBI's mandate when it was launched in February 1999, it has emerged increasingly as a key challenge in the Nile basin countries (Nile Basin Initiative, 2017). Climate change is likely to affect the basin adversely due to increased temperatures, decreased precipitation and irregular rainfall, hotter and longer dry seasons, rising sea levels, and more frequent and severe rainstorms. As a result, the NBI has developed a Climate Change Strategy and crafted some interventions, including bridging the knowledge and data gap, strengthening basin planning tools, promoting watershed management, expansion of the region's water and power infrastructure. A project for adaptation and mitigation (Nile Basin Initiative, 2015) was also launched.

Transboundary water allocation arrangements can work for the benefit of riparian States involved if they are well designed, jointly agreed, adaptable and effectively implemented (United Nations, 2021). With growing water scarcity in several transboundary basins, determining water allocation can present an enormous challenge. Transboundary water treaties may have specific arrangements for allocating water among parties. In some cases, treaty provisions designate volumetric quotas of water allocation for the riparian States involved in a shared water basin. The 1929 Nile Treaty allocated 48 bm^3 and 4 bm^3 to Egypt and Sudan, respectively, while giving Egypt veto power over constructions of projects over

the Nile River or any of its tributaries to minimize interference with the Nile flow. On the other hand, the 1959 Nile Treaty increased the water to 55.5 bm^3 and 18.5 bm^3 to Egypt and Sudan, respectively. However, most upstream countries have emphasized their right to equitable and reasonable utilization of the Nile waters in accordance with the international water law. Currently, neither the NBI framework nor the CFA draft has proposed a specific water allocation formula for the Nile waters.

The shared water resources tend to be a source of competition and conflict especially in water-scarce regions. Conflicts are expected to escalate due to growing population, industrial development, increasing urbanization and negative consequences of climate change (Tayia, 2019). The resolution of transboundary water conflicts needs sophisticated efforts due to multiplicity of conflict constraints. Under the 1959 Nile Treaty, a Permanent Joint Technical Commission was tasked with dispute resolution. With the establishment of a formal dispute resolution institution, enforcement measures might hinge on the operationalization of the proposed CFA. Currently, the NBI institutions oversee dispute resolution and enforcement measures (Nile Basin Initiative, 2020).

One of the common institutions for transboundary basin governance and coordination is the River Basin Organization (RBO). Saruchera and Lautze (2016) examined the degree to which Africa's RBOs with secretariats and RBOs without secretariats are endowed with key governance provisions. The study showed that RBOs with secretariats are endowed with a more robust set of governance instruments than RBOs without secretariats. Governance instruments, including decision-making, dispute resolution, information sharing, monitoring and stakeholder participation are found more frequently in RBOs with secretariats. Moreover, treaties that lay the foundation for RBOs with secretariats appear designed for more comprehensive governance of transboundary waters. The secretariats add value to RBOs and basins in which they are in operation. They are associated with more robust governance instruments and are cost-effective as the costs are outweighed by the investment that they seem to catalyze.

However, Saruchera and Lautze have argued that the presence and format of RBOs is context specific, meaning that secretariats should not be seen as a requirement. Medinilla (2018) contends that even though most African RBOs have adopted best practice models of shared water governance and principles of Integrated Water Resource Management (IWRM), collective management can be challenging to achieve in diverse and sometimes conflict-prone transboundary basins in the continent. The IWRM model is seen to stand fundamentally for a technical approach to water resource management that ignores the political process that is often at the core of decision-making on the allocation and use of water resources in the basins. In Medinilla's view, IWRM-inspired policy framework often disregards the existing political and regional reality of water governance and at times ignores interests and incentives within and between the basin countries. Thus, the IWRM can be problematic as water management is a continuous negotiation to deal with conflicting interests, competing claims, and emerging issues between upstream and downstream riparian countries.

While the institutional framework governing transboundary river basins, including international water treaties and river basin organizations can provide a framework for dialogue and negotiation, De Stefano (2017) contends that the presence of treaties does not necessarily indicate hydropolitical resilience. Treaties, per se, may not resolve the problem of power imbalances among riparian States. Similarly, the existence of RBOs does not ensure transboundary cooperation unless they have certain attributes and characteristics. However, institutional capacity in a transboundary river basin can be boosted by effective RBOs, resilient treaties and strong geopolitical relations.

Certain attributes and characteristics that have been shown to improve treaty effectiveness include flexible management structure, clear and flexible allocation criteria, equitable distribution of benefits, detailed conflict resolution instruments and mechanisms for increasing resilience towards water variability. While most ongoing or planned water infrastructure projects are either in emerging or developing economies that require hydropower to sustain their economic development, many of the regions still lack developed instruments for transboundary cooperation (United Nations Environment Programme, 2016). According to the Transboundary Freshwater Dispute Database (TFDD), 80 per cent of the 145 water-related treaties negotiated for transboundary rivers in the 20th century lack any enforcement mechanism (Qamar 2019). Moreover, several treaties only have basic monitoring mechanisms, with no conflict resolution mechanism. An effective transboundary water treaty may not only have attributes and characteristics identified in De Stefano's study but also mechanisms to deal with emerging issues such as climate change.

Despite the growth of transboundary river treaties, their institutional design seems to vary considerably. Tir and Stinnett (2011) contend that international institutions are critical in the promotion of transboundary water cooperation and avoidance of conflict. However, the design of water management institutions affects their ability to promote cooperation and resolve conflicts. In their study, Tir and Stinnett established that treaties that address difficult river use issues such as water quantity and navigation are most likely to contain provisions including monitoring, enforcement, conflict management and delegation of authority to intergovernmental organizations for institutional governance. The findings demonstrate that river use issues are more important determinants of institutionalization than geographic, economic, governance, power, or security-related factors.

Johns and Van Nijnatten (2021) argue that water governance approaches should recognize the conflictive and cooperative nature of complex water systems such as the transboundary ones. This might need incorporation of adaptive governance that emphasizes a resource management regime that is more coordinated, connected, and flexible; promotes broader stakeholder engagement; and generates and disseminates knowledge and stimulate learning. From the literature, the key water management and governance indicators include existence of a transboundary treaty/agreement, river basin organizations/secretariats, stakeholder participation, information sharing, regulation of water quality and water quantity, monitoring mechanisms, enforcement mechanisms, and adaptive

governance. For the RBOs to effectively serve the interests of riparian States, it is notable that certain measures need to be considered. Tir and Stinnett (2011) have highlighted the significance of international institutions such as treaties for transboundary river basin cooperation. However, treaties should address difficult river use issues such as water quantity and navigation, and should have provisions on monitoring, enforcement, conflict management and delegation of authority to RBOs. Improvement of treaty effectiveness involves existence of flexible management structure, clear and flexible allocation criteria, equitable distribution of benefits, and conflict resolution mechanisms (De Stefano, 2017).

4.3 Benefit-Sharing Mechanisms in the Nile Basin

Since co-riparian countries in a transboundary basin are likely to have different needs and goals, which have potential for conflicts or cooperation, the common interests of the riparian countries could be best guaranteed through equity-based cooperation, strong and enforceable legal framework and joint approaches to planning and management. Increasingly, there is a shift from volumetric allocation of shared water resources to amicable sharing of benefits. The shift could play a significant role in preventing tensions and conflicts (Hensengerth, 2012). Four types of benefits derived from cooperative management of transboundary river basins include benefits to the river (environment), benefits from the river (economic), reduction of costs because of the river (politics and security) and benefits beyond the river (catalytic) (Sadoff and Grey, 2002).

Benefits to the river can result from sustainable cooperative management of the ecosystem by addressing the challenges of degraded water quality, watershed, wetlands, and biodiversity. Efficient, cooperative management and development of river flow can yield to benefits such as increased water quantity, improved water quality, hydropower and agricultural production, floods-drought management, navigation, and environment conservation. Policy shifts from riparian disputes towards cooperative development can reduce costs of non-cooperation arising because of the river. Cooperation between riparian States can lead to economic, political, and institutional integration, improved regional infrastructure, markets and trade resulting in benefits beyond the river (Arjoon, et al., 2016; Hensengerth, 2012). A review of potential benefit-sharing of Nile water resources is critical for common development of riparian countries and in understanding its implications on Kenya's national interests in the basin.

Benefits to Nile River

The shared vision objective of the NBI contemplates the achievement of socio-economic development through equitable utilization of and benefit from the common Nile basin water resources. In its Strategic Plan for 2017-2027, the NBI prioritizes environmental sustainability and climate change adaptation besides other four priorities. Informed by the shared vision objective to achieve sustainable socio-economic development through equitable utilization of, and benefit from

the common Nile basin water resources, the focus on protection and restoration of degraded ecosystems and preparation for climate change impact to ensure integrity and biodiversity of the Nile is appropriate (Nile Basin Initiative, 2020). The NBI has invested in conducting diagnostic studies and preparing inventories to promote sustainable management of wetlands of transboundary significance and identifying and preparing projects for the restoration of degraded watersheds and wetlands. Control of water pollution in the Nile basin has also been prioritized, with measures progressively being implemented at basin, sub-basin, national and community levels. Nevertheless, these initiatives should be viewed as work in progress. Pollution has been recognized as a threat to water-related ecosystems in the Nile basin as untreated wastewater, fertilizer and pesticides from farmlands and sediments from land degradation compromise water quality (NBI, 2020).

Benefits from the Nile

The NBI programmes and activities aim at benefit-sharing with a goal to increase trust, cooperation, and equity for the benefit of all riparian States in the Nile basin. Further, the NBI intends to demonstrate the benefits of cooperation by ensuring that the shared vision programme and subsidiary action programmes deliver tangible outputs. The focus of the basin includes food security, water security and hydro power generation through shared plan and programmes by the member States (NBI, 2019; NBI, 2020). Projects on water-use and benefit-sharing, irrigation, soil stability and fisheries management are geared towards enhancing agricultural productivity and strengthening food security. Access to electricity is still low in several NBI countries, hence prioritization of investment in hydropower generation. A regional approach in hydropower investment would offer better returns than a national initiative (Jungudo, 2021). Through Regional Power Trade Project, the NBI is investing in several projects in both the Equatorial lakes basin and the Eastern Nile basin (NBI, 2019; NBI, 2020). Some of the hydro-power projects include the 80MW Regional Rusumo Falls Hydroelectric Power (Burundi, Rwanda, and Tanzania) and the Interconnection of the Electric Grid of five countries (Burundi, DRC, Kenya, Rwanda and Uganda).

Benefits because of the Nile

The NBI, though an interim institution, has played a significant role in promoting negotiation, dialogue, collaboration, and joint decision-making. As a result, member States have been leveraging the NBI to intermediate disagreements and differences to sustain basin cooperation (Nile Basin Initiative, 2020). For many years after independence, distrust, tensions, and mutual suspicions characterized relations of the riparian countries regarding sharing of Nile water resources. However, the launch of the NBI in 1999 was a turning point as the member countries had a platform to dialogue, communicate and share information on the Nile. Countries also had inadequate institutional capacity, skills, and knowledge on transboundary water resource management to engage in regional discussions. Therefore, non-cooperation was seen to be costly as it hampered constructive

engagement among riparian States. Despite the challenges in finalizing the CFA, the NBI has laid out frameworks that support dialogue and discussion at basin and sub-basin levels.

Benefits beyond the Nile

Improved cooperation and shared management of Nile water resources are central not only in increasing productivity of the Nile basin but also in generating additional opportunities and cooperation in non-water-related sectors such as regional trade and investments and increased integration of infrastructure (Sadoff and Grey, 2002). Currently, seven NBI member States including Burundi, DRC, Kenya, Rwanda, South Sudan, Tanzania, and Uganda have membership in the EAC. Increasingly, inter-country infrastructure projects are being launched and implemented in the basin. This is significant for interconnectedness of the basin, and therefore providing opportunities for cooperation and region trade and investment. An active and vibrant Nile basin cooperation will enhance deeper cooperation and integration not only for trade, investment, and infrastructure interconnection but also peace and security in the basin. Kenya's national interests in the Nile basin are informed by its desire to exploit the Nile waters resources, environmental conservation of the Nile ecosystem, regional peace, and security for realizing its economic diplomacy's objectives in the region. Nile cooperation and consequent benefit sharing mechanisms are vital in guaranteeing the country's national interests in the Nile basin.

5. Conclusion and Policy Recommendations

5.1 Conclusion

The study assessed the power relations between the downstream and upstream riparian States in the Nile basin. While Egypt has been a predominant hydro-hegemon for decades, the evolving geopolitical landscape shows that the upstream countries are steadily enhancing their bargaining power through regional integration and articulating their common positions in negotiations under the NBI framework. The involvement of external actors, including emerging economies and international financial institutions, has also supported large hydraulic projects in the basin. It is expected that the finalization of the CFA could be a game changer in terms of providing a comprehensive and inclusive legal and institutional framework for Nile cooperation and inclusive management and governance. The current dynamic environment in the Nile basin could offer the riparian countries an opportunity to consolidate the gains of the NBI and conclude the CFA negotiations.

The assessment of transboundary governance institutions of the Nile basin and other transboundary river basins, especially RBOs, commissions, and transboundary water agreements is central in understanding the factors that can contribute to effective transboundary institutions. The significance of inclusive and comprehensive transboundary water agreement, river basin organization, stakeholder participation, information sharing among riparian States, regulation of water quality and water quantity, water allocation mechanisms, dispute resolution and enforcement mechanisms are critical for establishing an effective and flexible cooperative framework for shared water resources. However, the Nile basin is yet to realize an inclusive transboundary legal framework due to the upstream-downstream divide on contentious provisions of the draft CFA. Though the CFA entered into force on 13th October 2024 after its ratification by six Nile basin States, effective implementation will depend on resolving outstanding issues in the Agreement. Establishment of a comprehensive legal framework is imperative for the operationalization of governance and management indicators, such as regulation of water quality and water quantity, water allocation mechanisms, dispute resolution and enforcement mechanisms.

The review of the 1929 Nile Agreement signed between the United Kingdom and Egypt and the 1959 Nile Agreement signed between the United Arab Republic (Egypt) and the Sudan was crucial in understanding the power asymmetry in the Nile basin as the two treaties established water allocation and usage rights that heavily favoured Egypt and Sudan. The two agreements are viewed by the upstream countries as bilateral agreements that mostly serve the interests of the downstream countries at the expense of their upstream counterparts. The analysis shows that the agreements largely concentrate on water exploitation with little regard to protection of the Nile ecosystem, biodiversity, and watersheds. The draft CFA offers viable options for improvement of water management, transboundary cooperation, and governance. However, the upstream and downstream countries need to initiate dialogue to address outstanding issues in the CFA process.

Benefit sharing is increasingly taking root in the Nile cooperation framework under various institutions, projects and programmes developed since the launch of the NBI in February 1999. Efforts towards environmental conservation will be crucial in realizing the core functions of the NBI, including water resource management, water resource development, climate change action and management of riverine pollution. Observance of the principles of sustainable development is critical in the pursuit of realizing food security, energy security and water security. The commitment of the NBI member States to Nile cooperation will be necessary not only in reducing mistrust and tensions among themselves of the shared resources, but also in opening opportunities for regional integration and cooperation beyond the river.

5.2 Policy Recommendations

- (i) Upstream riparian States are cognizant of the significance of their bargaining power through common position on negotiations under the NBI framework. It is crucial that they strategically support and champion joint mega hydraulic projects in the basin that could yield higher returns.
- (ii) There is an urgent need for Nile basin States to restart dialogue and develop consensus on the outstanding issues on the CFA, as this will be crucial in finding a solution to the disagreement between the upstream and downstream riparian States.
- (iii) Establishment of an effective and flexible management and governance system for the Nile basin is critical for optimizing potential benefits for all riparian States. In the spirit of the principle of subsidiarity, the NBI member countries, the NBI Secretariat and the two sub-basin structures should ensure that all management and governance indicators are streamlined in the programmes and activities of the Nile basin as efforts are made to operationalize the CFA.
- (iv) Under the transitional NBI framework, member States have made progress in developing programmes and projects that promote benefits to the Nile, such as environmental conservation of Nile ecosystem; economic benefits from the Nile including hydropower generation, increased agriculture for food security and water security; benefits because of the Nile and benefits beyond the Nile that involve regional integration and cooperation and promotion of regional peace and security. It is critical for Kenya to develop a strategic Nile Basin policy that could inform its engagement and realization of its national interests in the basin.

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