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THE NEED FOR EQUITABLE UTILIZATION OF THE NILE WATER FOR SUSTAINABLE DEVELOPMENT

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Deng Aling is a South Sudanese Journalist, Author and Cultural Actor. He authored a book in Arabic (published in 2017) entitle (South Sudan and the Way Forward).

Deng holds a Bachelor of honors in Philosophy from Alneelain University, Khartoum, Sudan in 2012. He published many articles in various topics such as culture and history.

ABSTRACT

Throughout history the Nile has been a source of life and inspiration to millions of people living around its shores. The first human civilization was built along the Nile and by its waters, but in the last decade of the twentieth century the Nile has become a source of conflict between its riparian countries. The eight upstream countries asked for equitable and reasonable shares of water for development uses such as irrigation and hydropower; but the two downstream countries always declined any attempt to share the Nile waters and redistribute shares.

A conflict between the Nile Basin countries is expected; especially after upstream countries became aware of their rights and began lobbying in cohorts. Additionally, the pressing climate change effects and the consequential need for more water as the population is increasing are new pressure-points. In this volatile context, this paper will shed light on potential Nile Basin relations and why equitable use of water and cooperation is vital for all the states.

Keywords: Nile Basin, Nile Water Agreements, Equitable Utilization, Sustainable Development.

INTRODUCTION:

The Nile provided its inhabitants throughout the ages with water to drink and fish to eat, plus the appearance of the first human civilization along its shores. The Nile has been a source of life and inspiration for many nations living along its shores.

The Nile is the longest river in the world with a catchment of 6695 km¹. It is shared by 11 countries (Egypt, Sudan, Eritrea, Ethiopia, South Sudan, D. R. Congo, Rwanda, Uganda, Kenya, Burundi and Tanzania). They are understood as the Eastern sub-basin and Equatorial sub-basin.

The Eastern sub-basin includes Eritrea, Ethiopia, Sudan, and Egypt, and the Equatorial sub-basin or Great Lakes sub-basin includes South Sudan, Uganda, Rwanda, Burundi, the Democratic Republic of the Congo, Kenya, and Tanzania. Two major tributaries of importance compose the Nile River system: the Blue and White Nile Rivers. The White Nile River originates in Lake Victoria (Nyanza) and gives the Nile River its superlative length, while the Blue Nile River originates in Ethiopia's highlands² from Lake Tana. Both White and Blue Niles meet in Khartoum, Sudan to form the River Nile which goes north to Egypt. The four major headwater contributors to the Nile include the Albert Nile, the Baro-Sobat River, the Blue Nile and the Tekeze-Atbara River³. The river covers 10% of the African continent landmass and its combined population is estimated as 512 million⁴ most of this population depends on Nile water.

In the twentieth century two agreements on the utilization of water were signed. The first was in 1929 between Great Britain representing upstream riparian countries under its control (Sudan, Kenya, Uganda and Tanzania) and Egypt. In this agreement Egypt received the biggest share and Sudan received 4 billion cubic meters a year.

This agreement was adjusted after the independence of Sudan in early 1956. The military regime which took power in Khartoum in 1958 held meetings with the Egyptian government that led to signing of the Nile Water Agreement in 1959, increasing the share of Sudan to 18.5 billion cubic meters and Egypt had the rest. The two countries agreed to use Nile water and also monitor any activity on the Nile by any other riparian.

In 1960s when riparian states gained their independence they began to ask about their share of water for agricultural use and to generate power, although their economics were still weak by then. Most of these countries invoked the Nyerere Doctrine that specified that treaties signed during the colonial era are not bounding to those states. Even Ethiopia rejected the 1902 treaty between Ethiopia and the United Kingdom which banned Ethiopia from using Nile water. Egypt and Sudan did not agree to the upstream riparian demands.

After that many initiatives were initiated, the most important one is the Nile Basin Initiative (NBI) formed by Ministers of Water along the Nile Basin in 1999. The NBI helped in finding a common ground for different states to come together. As the longest river in the world, the Nile River is arguably the most geopolitically significant river basin lacking a cooperative management agreement¹.

After a long time of dispute and discussions, Nile Basin riparian countries came to agree on a Cooperative Framework Agreement (CFA) which was signed by six countries and ratified by three so far. The ratifying of the CFA will lead to the creation of the Nile Basin Commission (NBC) this will be the highest governing body in the Nile Basin so that it replaces the (NBI).

As a part of the ratification of the (CFA) Ethiopia started construction of the Grand Ethiopian Renaissance Dam to generate power for Ethiopia, Sudan and Djibouti which can be used for industrial purposes. Egypt was worried about the Ethiopian project on the Nile and this was about to lead the two countries to war in 2013.

After all, cooperation between the riparian states is necessary, and equitable use of water will also enable these countries to meet their needs in different fields. Climate change and growing population needs have to be tackled and that will happen in one way: working together and sharing the Nile that has been flowing for centuries.

This paper sheds a light on the River Nile and how the equitable utilization of this resource will lead to economic growth in the Nile Basin. This is a part of an ongoing discussion about the right of each country to utilize the water within its borders, as Ethiopia did, and before that Sudan and Egypt.



¹Nile Basin Riparian Countries

1 al., B.G. Habteyes et. *Journal of Hydrology* 529. 2015. p 1238.

1.0 THE NILE WATER AGREEMENTS:

In the nineteenth century, after the British colonized most of the Nile countries, they had a little dispute with France, another colonizer on the continent, about Fashoda (on the White Nile) in Southern Sudan at the end France left the area to Britain. The British went on to work on some projects especially in Sudan and Egypt ignoring other riparian countries with no clear reason. Britain needed cotton from Sudan for Lancashire factory so it secured water, and for Egypt it needed water for trade and other related issues.

Therefore in the early 19th century Britain colonized Egypt for so many interests. And then it managed to colonize Sudan, Kenya, Uganda and Tanzania. In order to save the interest of Egypt and its future of water Britain created an agreement known as the 1929 agreement between Egypt and Britain representing the rest of the riparian states. The 1929 Nile Waters Agreement between Sudan and Egypt further prioritized Egyptian water needs and purported to give Egypt the right to veto future hydroelectric projects in British colonies (which then included Kenya, Sudan, Tanganyika, and Uganda) along the Nile. According to the text of the exchange of notes, the original 1929 agreement is between Great Britain and Egypt and while it focused on development in Egypt and Sudan, the agreement also concerns other regions under British control². As a result to this agreement Egypt and Sudan took 100% of Nile waters for their use, excluding Ethiopia and East African countries from using the waters. However, in 1929 96% of flow was allocated to Egypt and 4% to the Sudan⁵. And thus Sudan and Egypt continued to use the Nile waters for development purposes although Egypt had the biggest share of water but Sudan managed to use some of its share. This agreement was challenged later on by riparian countries who were non-sovereign during the signing of the agreement. For British colonies like Kenya, Tanzania and Uganda, all declared the Nile Agreement non-binding following their independence from the United Kingdom. Other riparian countries like Ethiopia, Eritrea, Burundi, Rwanda and Congo were not party to the agreement⁶. Tanzania used “the Nyerere Doctrine” which rejected any treaty signed before independence. So the government of Tanganyika then made its position clear, in identical notes addressed to the governments of Britain, Egypt, and the Sudan on 4 July 1964, on the 1929 Agreements in the following terms:

The Government of Tanganyika has come to the conclusion that the provisions of the 1929 Agreement purporting to apply to the countries ‘under British Administration’ are not binding on Tanganyika. At the same time, however, and recognizing the importance of the waters of the Nile that have their source in Lake Victoria to the Government and peoples of all the riparian states, the Government of Tanganyika is willing to enter into discussions with other interested Governments at the appropriate time, with a view to formulating and agreeing on measures for the regulation and division of the waters in a manner that is just and equitable to all riparian states and of the greatest benefits to all their peoples. Uganda and Kenya followed Tanganyika in rejecting the agreement as not binding upon them on the same grounds⁷.

The control of the colonial British administration over Egypt lasted from the late 19th century to 1937, and over Sudan from 1899 to 1956. The other colonial powers who had a presence in this region were Italy (over Eritrea and Ethiopia), and France and Belgium (over the countries of the Equatorial Region)⁸. As cited before, the 1929 Agreement between Egypt and Britain gave Egypt the right to use 48 cubic kilometers and Sudan 4 cubic kilometers of water per year. The annual flow of the river is about 84 cubic kilometers (14 per cent from the White Nile and 86 per cent from the Blue Nile)⁹. After two year of independence military junta took over power in Sudan in 1958, being supported by Egypt, a new agreement on the sharing of the Nile River was reached in 1959 between Egypt and Sudan. From the newly-calculated annual flow of 84 km³ of water at Aswan, Egypt was to receive 55.5 km³ and 18.5 km³ were allotted to Sudan⁴. That means Egypt gets 75% of water each year and Sudan 25% a year as well, and again upstream countries were left out of the agreement.

The agreement also included some provisions for regulating the storage created by the Aswan Dam. Moreover, Egypt paid 15 million Egyptian pounds as compensation to Sudan for the resettlement of the 50 000 people displaced by Lake Nasser, which extended 150 km into the Sudanese territory. Sudan was granted permission to construct the Roseires Dam on the Blue Nile, as well as other projects necessary to utilize its own water share. Both parties also agreed to work on a cost-sharing basis to develop the water resources lost in the Sudanese swamps. Furthermore, both countries agreed that they would not negotiate with any third party over the Nile water before they had developed a common position. According to this agreement, the two countries signed a Protocol on 17 January 1960 to establish a Permanent Joint Technical Committee to facilitate technical cooperation on Nile and water projects⁵.

As Egypt and Sudan took full control and utilization of water, riparian states moved towards getting their share of water than accepting the 1929 and 1959 treaties. Tensions reached a peak in 1959, when Egypt and Sudan created the bilateral agreement between the United Arab Republic and the Republic of Sudan for the full utilization of the Nile Waters, dividing the entire flow of the Nile River Basin among them (United Arab Republic and Sudan Agreement for the Full Utilization of the Nile Waters 1959). The 1959 agreement is understandably rejected by all other riparian states, who assert the principle of equitable use to claim that the agreement is an infringement on their rights under international law (in addition to the fact that they are not parties to the treaty)⁶. Indeed neither the 1929 agreement nor the 1959 agreement has any binding effect on the other Nile riparian countries.

The rejection of upstream states to both agreements is backed by the Helsinki Rules which were adopted by the International Law Association at the fifty-second conference, held at Helsinki in August 1966. Article 4 says:

Each Basin State is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin⁷.

A convention was held in Berlin in 2004 on international water issues. The Berlin Rules maintained the equitable use—no significant harm dichotomy, but acknowledged the apparent tension between the two principles by incorporating one into the other: “basin States shall in their respective territories manage the waters of an international drainage basin in an equitable and reasonable manner having due regard for the obligation not to cause significant harm to other basin States.”

Reconciling the two principles requires a case-by-case balancing test: while “vital human needs” are given priority, no other use is per se more preferable than another. In the absence of a sovereign body to oversee trans boundary water resource conflicts, states are left to cooperate in good faith⁸. Notwithstanding, the only way for the Nile Basin countries to overcome the differences and work in a collective way is to cooperate.

2.0 THE NILE BASIN INITIATIVE:

The River Nile is the most geographical trans-boundary entity lacking concrete agreement in the world, with high potential of spurring conflict over water use. Sudan and Egypt have dominated the River Nile waters throughout history. Although Ethiopia is one of the major contributors to the Nile water, it has been left out from any treaty and denied the right to use water on its territory. The same thing happened with the rest of riparian countries.

After the independence of riparian states (Uganda 1961, Kenya 1964, Tanzania 1962, D. R. Congo 1960, Burundi 1962, Rwanda 1962) they refused the state succession of any treaty signed during the colonial era. Some including Tanganyika invoked “the Nyerere Doctrine”, others reached the level of challenging Egypt and Sudan’s colonial privilege to Nile waters. The differences between Nile Basin countries have been derived by political issues in many parts of it. Basin countries were unable to invest in water because of lack of resources and internal conflict. Egypt is significantly less troubled by internal conflicts, especially by armed conflict, although it is seriously divided internally over the issue of how and at what pace it should modernize its society and economy.

In the Southern countries in 2008 there were numerous examples of violent conflict; in the Sudan, in Uganda, in Kenya and in the DRC. There was an international violent intervention in Somalia in 2007, which was ongoing in 2008. If the 1990s are included all the Nile riparian’s except Egypt and Tanzania, have endured high levels of internal violent conflict⁹. And some of countries fueled the conflict in their neighboring countries. For example, Sudan and Ethiopia supported opposing rebels. Sudan supported Eritrean Revolutionaries which at the end managed to separate from Ethiopia. On the other hand Ethiopia gave Sudan People’s Liberation Movement (SPLA) all they needed to fight the central government in Khartoum, also Uganda and Kenya contributed in different ways in the Sudanese second civil war which was the longest in the continent and ended in 2005.

Egypt keeps a very close eye on developments in the upper regions of the Nile and does not hesitate to maneuver overtly or covertly on political issues it considers important to its own interests. Thus, it has always intervened in the long-standing conflict in Sudan between the northern Sudanese—primarily Muslims who claim Arab descent and culture—and the African people in the south, who belong to the Christian faith or profess traditional religious beliefs. For 19 years a civil war had been raging in this country, the largest in Africa, exacerbated by the present fundamentalist regime of General Omer El- Beshir in Khartoum, who intended not only to dominate but also to Arabize and Islamize the southern Sudanese¹⁰.

By the time Nile Basin riparian countries came to realize that they have a shared destiny, they realized they have one option; cooperation! In order to overcome the differences in the basin many initiatives have been launched. Starting from 1967 when Egypt, Kenya, Sudan, Tanzania and Uganda with the United Nations Development Programme (UNDP) and the World

Meteorological Organization (WMO), came together to launch the Hydromet Project. The purpose of the project was to evaluate the water balance of Lake Victoria’s catchment, in order to assist in any control and regulation of the Lake level as well as the flow of water down the Nile. Later, Rwanda and Burundi joined in the effort. This Project lasted for 25 years, but did not include the major water contributor Ethiopia, and failed in its effort to develop an effective basin-based arrangement¹¹.

In 1983, UNDUGU (“brotherhood” in Swahili) was formed at Egypt’s behest. UNDUGU included all Nile riparian’s except Kenya and Ethiopia, which participated as observers. The goal of UNDUGU was to foster economic,

social, cultural, and technical ties, although individual Nile riparian's may have been motivated to participate for varying reasons. Some argued that while many of the riparian countries were interested in fostering "self-reliance and African inter-dependence," for Egypt, UNDUGU was "an exercise in hegemonic influence." Despite arguable domination by Egypt, UNDUGU's lasting impact was to provide a forum for information sharing. "UNDUGU served as an institutional locus for sharing expertise" and allowed for the riparian countries to become "accustomed to treating the Nile as a whole, not as less than the sum of its national parts"¹⁰. Following the evanescence of Undugu, the Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile (TECCONILE) was established in 1992 by Egypt, Rwanda, Sudan, Tanzania, Uganda, and Zaire (DRC), with the other riparian countries participating as observers.

TECCONILE was established as a transitional scheme for a period of three years with the hope that on the expiry of the period a permanent basin-wide institution would be established. Though regarded by some as a new arrangement representing 'an attempt to circumvent the effects of the perceived political dominance of Egypt in Undugu' TECCONILE was in fact an offshoot of Hydromet and was strongly technical in its focus, so much so that major riparian countries like Ethiopia were discouraged from joining as fully-fledged members¹¹.

Although those initiatives lasted for decades, the equitable and reasonable use of water was still in dispute between Egypt and Sudan on one side and upstream states on the other. For the increase of population in all states and the need for water to use for irrigation and hydromet, those facts made it vital for the rest of riparian countries to ask of their share.

The ministers of water held many consultative meetings that led in the end in forming the Nile Basin Initiative (NBI) in February 1999. The main goal is a shared vision and equitable use plus benefiting from the Nile waters for all members whom are Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, Uganda and Eritrea held an observer status. In Entebbe the NBI secretariat was opened in September 1999.

The objectives of NBI are:

- 1). To develop the water resources of the Nile basin in a sustainable and equitable way to ensure prosperity, security and peace for all its peoples;
- 2). To ensure efficient water management and optimal use of the resources;
- 3). To ensure cooperation and joint action among the riparian countries, seeking win-win gains;
- 4). To target poverty eradication and promote economic integration; and
- 5). To ensure that the programme results in a move from planning to action¹².

In order to achieve goals the members devised Strategic Action Plan (SAP) to promote a Shared Vision Program (SVP) of which countries came to work together in collecting data and some developmental project in the basin.

10 K. Paisley, Taylor W. Henshaw - *ibid.* *Transboundary governance of the Nile River Basin: Past, present and future.* 2013. p. 64.

11 Mekonnen, Dereje Zeleke. *The Nile Basin Cooperative Framework Agreement Negotiations and the Adoption of a Water Security' Paradigm*, *ibid.* p. 427.

12 Ashok Swain, *ibid.* p. 692.

3.0 AGREEMENT ON THE NILE BASIN COOPERATIVE FRAMEWORK (CFA):

The Nile Basin Initiative provided all riparian countries a chance to work together and cooperate. But the outcomes were not that strong and motivating to many of basin states. Therefore some upstream members went on with the idea of Agreement on the Nile Basin Cooperative Framework Agreement which will replace the Nile Basin Initiative. The CFA concentrated on equitable use of water plus no significant harm on any state share.

Article 1 of the CFA says “The present Framework applies to the use, development, protection, conservation and management of the Nile River Basin and its resources and establishes an institutional mechanism for cooperation among the Nile Basin States”¹².

But article 4 (1 and 5) says “1. Nile Basin States shall in their respective territories utilize the water resources of the Nile River System in an equitable and reasonable manner. In particular, those water resources shall be used and developed by Nile Basin States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the Basin States concerned, consistent with adequate protection of those water resources. Each Basin State is entitled to an equitable and reasonable share in the beneficial uses of the water resources of the Nile River System.

5. Nile Basin States shall, in their respective territories, according to their national laws and regulations, keep the status of their water utilization under review in light of substantial changes in relevant factors and circumstances.

The CFA has been signed by six countries (Ethiopia, Kenya, Rwanda, Tanzania, Uganda, and Burundi) and ratified by one (Ethiopia)¹³.

This agreement was opposed by Sudan and Egypt who refused to sign the agreement. The main reason for opposition by Egypt and Sudan is that the CFA does not protect their historic rights over the Nile water¹⁴. The CFA was ratified by Ethiopia on June 2013 and Rwanda on August 2013 and lastly by Tanzania on March 2015¹³¹⁵.

On its face, the CFA largely reflects the legal provisions of the Watercourses Convention. Article 4 lays out the provisions of the equitable use principle, as well as a list of factors to be used in determining if a use is equitable and reasonable.

Article 5, meanwhile, establishes the principle of no significant harm. However, where the Watercourses Convention is silent with respect to the interplay between the two principles (or, at best, relies on the principle of state cooperation to balance competing uses), the CFA makes an attempt at reconciling equitable use and no significant harm by creating a third legal principle—water security.

The CFA defines water security as “the right of all Nile Basin States to reliable access to and use of the Nile River system for health, agriculture, livelihoods, production and environment.” However, the application of water security as a legal principle could not be agreed upon. Article 14(b) of the CFA initially required states “not to significantly affect the water security of any other Nile Basin State.” Egypt and Sudan, however, required the clause be amended to obligate states “not to adversely affect the water security and

current uses and rights of any other Nile Basin State.” Essentially, the concept of water security was used as a proxy by upstream states to reinforce the principle of equitable use, and by downstream Egypt and Sudan as affirmation of their preexisting claims to the entire flow of the basin based on the no significant harm principle¹⁴. The CFA if ratified by six (or more) riparian states will inter into force, and that means it will succeed the Nile Basin Initiative (NBI) by creating the Nile Basin Commission (NBC) that will be the highest governing body in the basin.

The only option left to Nile Basin states is cooperation between them and to use the Nile water reasonably and equitably for the benefit of their nations.

THE NEED FOR EQUITABLE UTILIZATION OF WATER FOR SUSTAINABLE DEVELOPMENT:

The Nile Basin population has doubled in the last two decades; now the total population of Nile Basin countries is estimated at 512 million. Ethiopia has the highest population (105.5million)¹⁵ closely followed by Egypt (97.9 million)¹⁶ and DR Congo (81.9 million)¹⁷, Tanzania (57.7 million)¹⁸, Kenya (49.9 million)¹⁹, Uganda (43.1 million)²⁰, Sudan (40.7 million)²¹, South Sudan (12.6 million)²², Rwanda (12.2 million)²³, Burundi (10.9 million)²⁴ and lastly Eritrea (5.2 million)²⁵. The riparian countries are poised to exceed 800 million people by 2025²⁶, the largest of this population is rural. Population pyramids for the Nile countries (which are a graphical representation of the population structure by sex and age) have a number of similarities and differences. The pyramids all have a broad base (indicating high birth rate), narrow apex (indicating high death rate and few elderly people), and a balanced sex ratio (almost equal numbers of males and females). The average family size in the region ranges from 4.5 persons (Tanzania) to 8.8 persons (South Sudan), with most countries having an average family size of between five and six people. The pyramids for DR Congo, Ethiopia, Tanzania, and Uganda, and to a lesser extent Kenya and Rwanda, have a wide base, concave sides, and an elongated apex. This is because close to 25 per cent of their populations are in the 20–34 years age bracket, which is sexually active and highly fertile, giving these countries high birth rates and a large population in the 0–4 year’s age group. They also have the highest child and adult mortality rates and low life expectancy, producing the curved narrowing of the pyramid. The thin apex of the pyramid reflects the high die-off of elderly people in these countries.

The pyramids of Burundi and Eritrea, and to a lesser extent Sudan, also show characteristics of high birth, fertility and death rates, but in addition show nearly equal proportions of the age groups in the 5–34 years bracket (5–29 years in the case of Burundi)²⁷. The increasing population put all the countries under pressure because there is a need for more services which each country will work hard to make for its citizens.

Most of the Nile Basin countries are the poorest and considered the least developed countries in the world. The economies of all but two of the basin countries (Egypt and Kenya) are among the least developed in the world²⁸. Four countries made it to the top 10 Least Developed Countries (LDCs) in the world in a 2017 report; these are the Democratic Republic of Congo, Ethiopia, Rwanda and Uganda²⁹. South Sudan would have been among the top 10 but it lacked figures of standardized sources although it is a part of the LDCs group. The LDCs standard are infrastructure such as information and communication technology, railway and roads.

Also energy (electricity) plus science, technology and innovation, and human and social development and many other factors. If we exclude Kenya and Egypt we find the rest of the Nile Basin countries in the list.

Now withstanding, equitable utilization of Nile water is now important more than ever. If we're putting aside climate change, then we have the increasing population of the Nile inhabitants and the need for water irrigation and other developmental uses. All these elements are important to press Nile Basin states to work together for sustainable development.

Sustainable development does not have a specific definition, but a common one says that "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"³⁰. Nile basin countries throughout the history –with the exclusion of Egypt and Sudan- have never been able to fulfill their potentials and fully utilize the Nile and soil (ground) water.

Since the 1990s some countries like Ethiopia and Kenya tried to execute some projects on the Nile, but because of bureaucracy they could not get funds neither from the World Bank or other funding agencies and they could not manage to fund their project on their own, for their economics are weak. Even the Grand Ethiopian Renaissance Dam did not get funds on time as promised, which made the Ethiopian government get contributions from the Ethiopian people themselves!

This bureaucracy favored some countries and made it hard for others to utilize the waters within their territories. But that finally began to change after Ethiopia managed to build GERD by the contributions of citizens only, and the project is expected to finish by the year; 2017.

Only Egypt and Sudan have been able to utilize river Nile waters for their economic and developmental projects, although the Egyptian economy is more advanced than the Sudanese because Egypt has been stable and Sudan witnessed the longest civil war in Africa; which weakened its economy because of the distraction caused by war. On the other hand; Kenya and Tanzania, both of which can be characterized as very dry countries with frequently occurring droughts, rely on the resources of Lake Victoria. In addition, they use the Nile water for agriculture and fishery as well as for tourism, especially in the western zones of their countries. Burundi and Rwanda, in contrast, have high and regular rainfall so that their interests in the Nile are confined mainly on hydropower generation; together with Kenya, Tanzania, and partly Burundi, they have a certain transboundary hydropower potential. Congo has not paid much attention to the Nile so far, but it has shown some interest in shipping and fishing rights next to Lake Albert³¹. Eritrea and South Sudan use and position on use of water within their territory is still not clear.

In order to make the discussion easier we will divide the examples of some projects in the River Nile into two:

- 1). The Downstream riparian projects (the Toshka as an example).
- 2). The Upstream riparian projects (the GERD as an example).

1.0 THE DOWNSTREAM COUNTRIES PROJECTS:

The downstream countries are Egypt and Sudan, and they are the only two countries out of ten “10” (before the succession of South Sudan) that have fully benefited from the Nile water. This advantage came out from the 1929 and 1959 Nile agreements which gave the two countries the right to fully use the Nile water without informing the remaining riparian countries.

A). Sudan:-

Sudan especially after the 1959 water agreement, has managed to utilize its water by building the Roseires dam and later Jabel Awuliaa dam in the south of Khartoum. It finally built Merowe dam to get the hydropower, apart from these dams Sudan is in need of more electricity for factories and other uses. Sudan uses water for irrigation such as Aljazira scheme which was for producing cotton and other schemes in Gadarif along the Sudanese- Ethiopian border. Although the share of Sudan is less than 30% by the 1959 agreement, it did not use all this share.

B). Egypt:-

For centuries Egypt has depended on River Nile in providing food and in development. And that made Egypt the most riparian state that utilized the Nile water for agriculture and to generate power. However, despite the limited amount of available water, many riparian countries, particularly Egypt and Ethiopia, have ambitious plans to use more water and develop hydroelectricity projects along the Nile. Egypt has also embarked on the New Valley Project (also known as the Toshka Project), designed to redirect 10% of its allotment from the Nile (approximately 4.94 billion cubic meters) to essentially establish and maintain a second Nile Valley and increase habitable land in the Western Desert³². This is an Egyptian unilateral project, started in 1997, which aims to reclaim one and a half million acres of land and is estimated to require over 5 Bm³ of water annually. During the last decade, Egypt has started transferring water from Lake Nasser to the Toshka depression area through a spillway and a huge pumping station. The project was heavily criticized by neighboring riparian countries, in particular Ethiopia. In brief, by developing the Toshka project and other new land reclamation projects, Egypt is sending strong messages to the Nile neighboring riparian countries that: a) existing water allocations are non-negotiable, and as such projects upstream that potentially decrease the Nile flows are considered unacceptable;

b) Egypt is determined to utilize more Nile water than it is already utilizing, by developing unilateral projects; and c) if possible, Egypt wants to go beyond the status quo, and to attain legal rights to additional water allocations³³. And now Egypt is more developed than any other riparian and its economy is strong and progressing. But its need for water is still vital because the population is increasing. Therefore the need for drinking water and food will be high as well, this in fact put a pressure on a state that has to fulfill its citizens need!

2.0 THE UPSTREAM COUNTRIES PROJECTS:

Upstream riparian countries are from equatorial region and sub-basin countries, but we brought them together for the sake of this paper. Those countries are: Ethiopia, Eritrea, South Sudan (it is also considered as a downstream and upstream riparian by some scholars), D. R. Congo, Rwanda, Burundi, Uganda, Kenya and Tanzania. Eritrea and South Sudan's use for water is not yet determined.

The upstream riparian countries in the last decade have been stable more than ever in their history and also found ways of funding their projects on the Nile. This started when Kenya, Tanzania and Uganda founded the East African Community (EAC) a regional intergovernmental organization, with the aim of cooperation in so many fields including political economic development.

Apart from Kenya and Tanzania, the rest of the countries especially Rwanda, Burundi, D. R. Congo and Eritrea have not benefited from Nile water in any way. Therefore, two projects of upstream riparian will be discussed as follows:

A). Tanzania: -

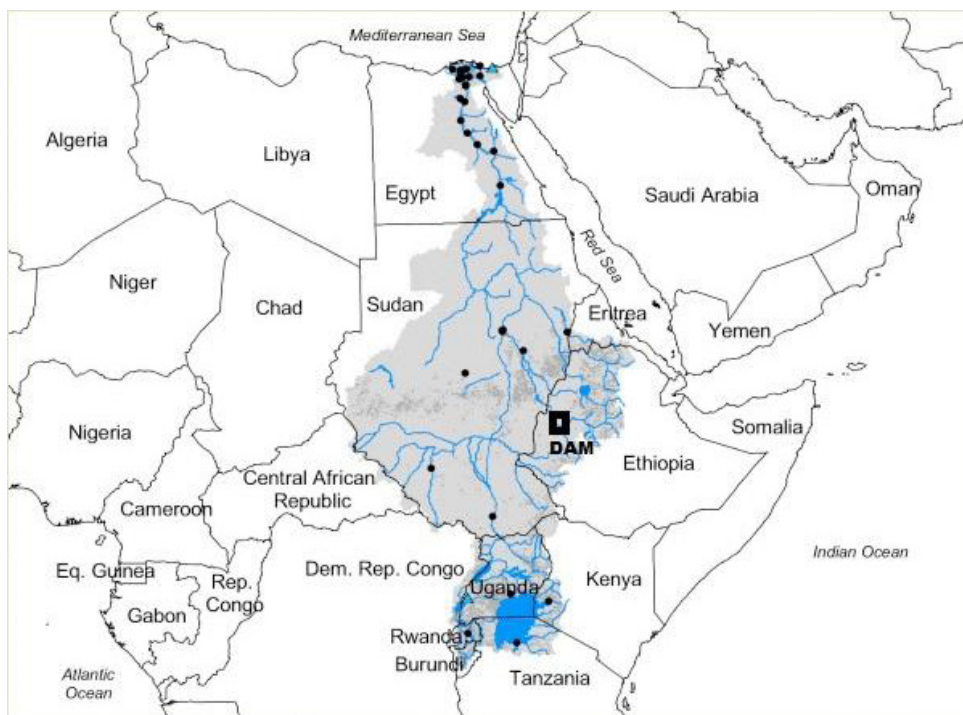
In meeting the needs for clean water, Tanzania began to build a pipeline in 2004 to supply drinking water to approximately 1 million inhabitants of its parched communities in Kahama and Shinyanga. Kenya's and other riparian neighbors need of water for various developmental-related works coupled with the strong desire of termination of colonial agreements have created a conducive environment to use the Nile water in the Great Lakes region³⁴. This project did not affect the water flow or cause any harm to any riparian state so far.

B). Uganda:-

Using clean power of industrial uses made many riparian states think of using water to build dams. And that made Uganda in 2012 built Bujagali dam with support from Public Private Partnerships (PPP) and the World Bank. This dam will generate 250 megawatt for Uganda's need of clean power.

This project was funded by some private companies also, which will run the dam up to 2042 and then it goes to the Ugandan government responsibility. But the project has been criticized by environmentalists plus it did not meet the need for clean energy³⁵.

Many equatorial region states are rich in soil water and enjoy a heavy rainfall for more than five months a year, and that enables them to use the rainfall water for agriculture. But it is going to change because irrigation helps in producing more crops and thus will make many states dependent on what they produce.



³⁶ GERD

C). Ethiopia:-

The Blue Nile originates in the Ethiopian highland “Tana Lake” and Ethiopia is the main contributor to the River Nile, its contribution is estimated at 86% while the rest comes from White Nile that originates in Burundi “Lake Nyanza” (Victoria). The population of Ethiopia is 105 million³⁷. Most of the population is youth, and Ethiopia has always faced droughts and a high wave of migration.

In overcoming all these difficulties Ethiopia had to utilize the Nile water to meet its need for clean power and agriculture, which it presented in the Grand Ethiopian Reissuance Dam (GERD). And that makes Ethiopia interested in using the waters of the Nile to alleviate poverty and enhance long-term economic development. Water development is planned for both small and large-scale irrigation projects as well as for hydroelectric power generation to support electrification. Due to the high variability in annual rainfall, conservation of water and irrigated agriculture are seen as ways to mitigate the effects of drought³⁸. Ethiopia started to play a new role which made it a major regional economic actor in the East and Horn of Africa regions. The decision to move ahead with the GERD was partly an outcome of these structural changes to the economy and polity of Ethiopia in the past decade³⁹.

GERD is expected to generate 6000 MW and is the largest construction project in Ethiopia and is a major step forward within the Ethiopian government’s development goals. The government hopes to alleviate Ethiopia’s citizens from current poverty-related challenges by 2025⁴⁰. International players also became part of Nile Basin policy making and sometimes fueling the conflict. China is believed to have contributed to the construction of the dam as Egypt played a diplomatic role in influencing agencies not to fund the GERD project, put Ethiopia managed to carry on.

When building started, Egypt and Sudan did not like that, for the dam is expected to uptake 60-80% of the Nile water which both countries considered as violating their rights to fully utilize Nile water. but Sudan's stance changed by time, since GERD will provide the country with electricity and more water. For Egypt this was a conflict with Ethiopia of which late Meles Zenawi asserted *"Some people in Egypt have old-fashioned ideas based on the assumption that the Nile water belongs to Egypt, and that Egypt has a right to decide who gets what, and that the upper countries are unable to use the Nile water because they will be unstable and they will be poor. These circumstances have changed and changed forever. Ethiopia is not unstable. Ethiopia is still poor, but it is able to cover the necessary resources to build whatever infrastructure and dams it wants on the Nile water"*⁴¹. The dynamics of power in the basin have changed and Egypt begun to understand that, since Sudan is now supporting Ethiopia.

In order to strike balance Egypt made South Sudan its ally in facing Ethiopia and Sudan and perhaps the equatorial region states. Since Sudanese and South Sudanese relations are not that good and so with Ethiopia. Also Egypt managed to influence South Sudan not to think of using Nile water by giving the country different kinds of support including military support in facing the rebels in the newest country in the world. Egypt's closeness to South Sudan is also derived by fear of Israeli influencing the country and giving it support to even build Fula dam near swamps to generate power, although it still lacks a vision and will to execute such a project and also because of ongoing conflict which erupted in late 2013. Other basin countries are facing conflict as well such as D. R. Congo and Burundi which will leave them some time not to think of doing any project on the Nile.

In fact, reduced share of the Nile waters is surely a bitter pill Egypt will for certain be unwilling to swallow easily. The truth though must be told forcefully, that it is time for Egyptians to let go of the wrong belief 'that their country will have the right forever, ad vitam aeternam, to all of the water carried by the Nile, as at the time of the Pharaohs'. The impoverished inhabitants of the basin count on the waters of the Nile to quench their thirst and better their lot somehow. Whether their governments would have the will and zeal to make this dream a reality is an open question; their unassailable right to a share of the Nile waters though is as strong as ever⁴².

II. CONCLUSION:

The increasing population of the Nile basin is worrying all riparian countries especially Ethiopia, for its population is rapidly growing followed by Egypt and then D. R. Congo. So they have to offer food, shelter, and electricity including services (health, education and jobs) to name a few. Keeping in mind that the basin nations are among the poorest in the world and least developed countries, even though these riparian countries are the richest in the continent in terms of minerals and natural resources.

Each additional individual requires about 1,000 m³ of water per year for food, livelihood and domestic water needs. Ninety per cent is for food. As a consequence of the rising populations all the economies have had to mobilize more water to meet the needs of the additional consumers. These additional demands have closed the freshwater Nile resources⁴³. Therefore, the only choice left to all the 11 riparian countries is a collective work and cooperation between them for sustainable. And this can only happen by ratifying the Cooperative Framework Agreement (CFA) by all riparian countries. It provide a reasonable article which will keep the rights of all countries such as equitable utilization of Nile water and giving each riparian state the right to utilize waters within its territory for developmental and agricultural use and not causing a significant harm to any riparian. For upstream countries contribute to the River Nile but do not use its water.

Signs of cooperation began to appear once again especially after the Khartoum agreement and last Entebbe meeting of which Egypt came back to the NBI after it has left it in 2000. This gives all riparian countries a chance to coordinate and share water in a reasonable manner, at the end it will lead to having a permanent agreement on Nile water use!

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P.O. BOX 619, Hai Jebrona, Adjacent to Martyrs School,
Opposite Simba Playground, Juba, South Sudan.
Tel: +211 (0) 920 310 415 | +211 (0) 915 652 847
<https://cspss.org.ss>