

# \* The Nile Basin Initiative

An initiative which helps Ethiopia to get access to Nile water resources?



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25-06-2014

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## Introduction

The Nile river flows for 6695 kilometres through ten countries in northeastern Africa: Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda (Swain, 1997). The trans-boundary character of the Nile presents a great challenge and cooperation in the Nile basin started at the beginning of the last century with the Nile Waters Agreement of 1929 (Metawie, 2004). The British government assigned the rights of the Nile's flow to Sudan and Egypt. However, the 1929 Agreement was too restrictive for the development of Sudan and in the 1959 Agreement the Nile was reallocated between the two countries. This initiative allocated the entire average annual flow of the Nile to be shared between the Sudan and Egypt at 18.5 and 55.5 billion cubic meters respectively, however the rights to water of the remaining eight Nile countries were ignored (Hornstein, 1998). In 1999, the Nile Basin Initiative (NBI) was launched. This initiative can be considered as a historical step in the cooperation between the riparian countries, because it included all of the Nile riparian countries and provided a basin-wide framework with the purpose to fight poverty and promote economic development (Hefny & Amer, 2005).

The most successful result from the NBI cooperation is the Cooperative Framework Agreement (CFA). In May 2010 five of the upstream riparian states signed the CFA to seek more water from the River Nile — a move strongly opposed by Egypt, despite the legality of the process. As a result Egypt is not being expected to co sign this agreement. The riparian states have introduced this international, 'legal' instrument to solve issues at an organizational level, especially with the aim of providing equal access to the Nile's water and potential for development (Mc Kenzie, 2012).

It has been estimated that 86% of the total Nile flow originates in the Ethiopian highlands (Arjoon et al., 2013). Because of the 1959 agreement Ethiopia is entitled to none of its resources (Metawie, 2004). Demand for fresh water in Ethiopia and the rest of the riparian states is likely to rise, with expanding populations, while supply will decrease in the future and water scarcity and environmental degradation will need a lot of attention. The feud between Ethiopia and Egypt is visceral. Despite the fact they do not share borders, the two countries are tied in an ecological relation by the Nile. Their relationship can be characterised by deep distrust, suspicion, misunderstanding and even political and military confrontations throughout history. Ethiopia uses less than one percent of the water resources of the Nile basin, while the annual runoff that flows to the neighbouring countries contributes to 62% of the Nile River water flow (Melesse et al., 2014). Consequently the following research question is derived: *“Will the Nile Basin Cooperative Framework Agreement help Ethiopia to overcome the unjust and unequal distribution of the Nile water resources?”*

To judge the strength of the water management and governance, an interdisciplinary assessment method as shown in Figure 1 was used. It has been developed to assess the main gaps in the (1) knowledge base, (2) weaknesses in the organisation process, and (3) problems that may arise when implementing the agreed service level. The method consists of ten building blocks and is of a diagnostic nature. Knowledge about the water system in time and space and values, principles and policy discourses are required for the organizational process to come to an agreed service level. For the organizational process, sufficient stakeholder involvement, insight into the trade-off between social objectives, attribution of responsibilities, authorization and the associated means, regulations and agreements are necessary as well as financial arrangements. To implement the agreed service level, engineering of infrastructure, enforcement and conflict resolution are required (Brouwer et al., 2012).

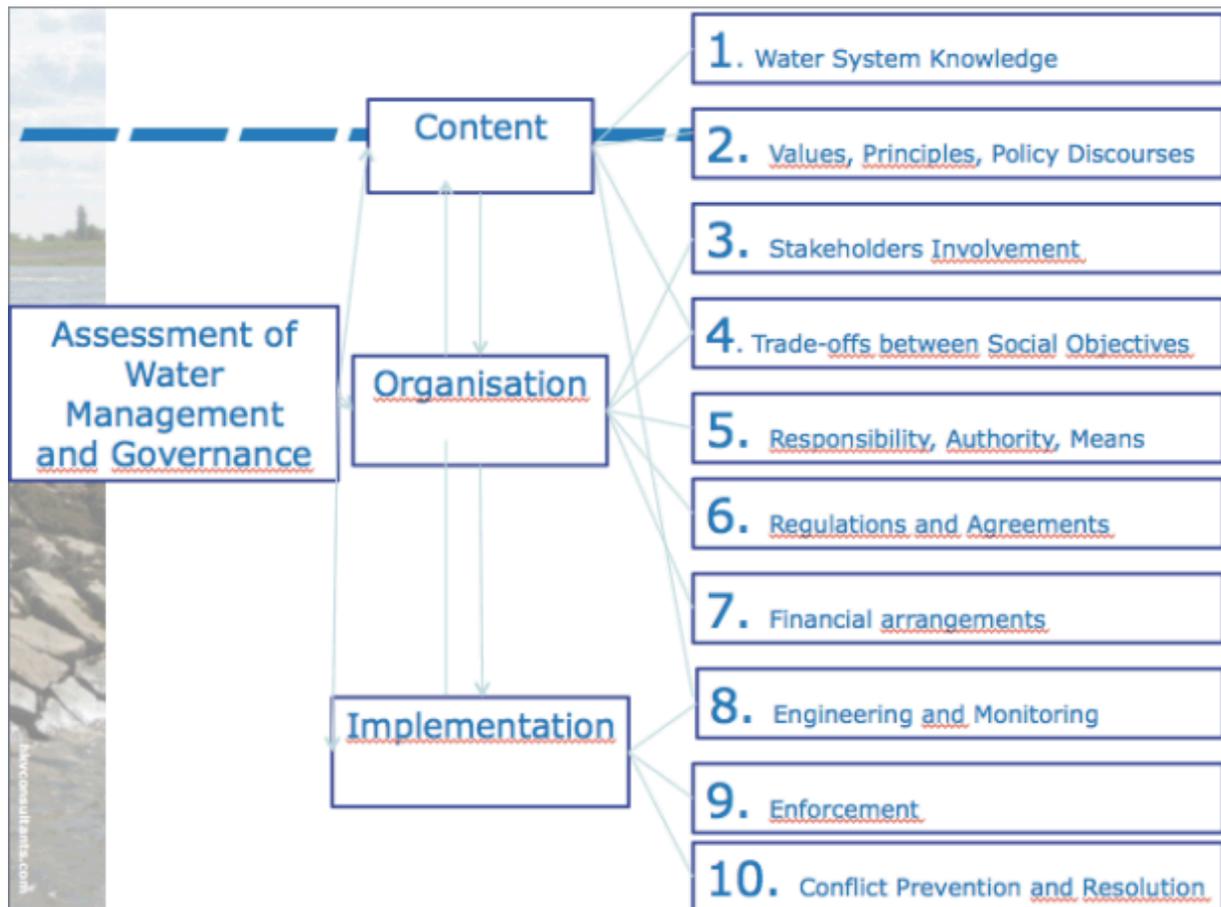


Figure 1. The multiple dimensions of water management and governance

## 1. Water system knowledge

With 6695 kilometres, the Nile is the longest river in the world and flows through the most arid regions of North Africa. The drainage Basin of the Nile covers about 3.2 million square kilometres, which is an area about one tenth of the land surface of Africa (NBI, 1999). The north-south orientation of the Nile extends over 36 degrees of latitude (Melesse, 2014) and because of extreme climate variability the climate range varies between aridity in the north and tropical conditions in the south (Nicol, 2003). Due to this, Egypt and Sudan are rainless during the winter, while the Ethiopian Highlands as well as southern riparian countries experience heavy rainfall during the summer (Karyabwite, 2000). It can be stated that 'the precipitation regime of the Nile basin can be characterized as irregular, which varies widely from season to season, from year to year, and from region to region' (Melesse, 2014).

Although its annual discharge is almost used in its entirety by Egypt and Sudan, 10 different countries share the Nile Basin: Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, South Sudan, Tanzania and Uganda (Figure 2) (Wu & Whittington, 2006). The Nile is fed by two main river systems: the White Nile, which stems from Lake Victoria on the Equatorial Lake Plateau (Burundi, Rwanda, Tanzania, Kenya, DR Congo and Uganda) and the Blue Nile with its source in Ethiopia in Lake Tana. Both rivers confluence in Sudan and flow further as the Nile River through Egypt to finally end up as a delta in the Mediterranean Sea. The sources are located in humid regions with an average precipitation of over 1000 mm/year. The arid region starts in Sudan, which can be divided in three rainfall zones: the most southern part of the country where

precipitation ranges from 1200 to 1500 mm/year, the middle part where rainfall is 400 to 800 mm/year, and the upper northern part where precipitation is about 20 mm/year. Going further north, up to Egypt the rainfall is less than 20 mm/year (Frenken & Faures, 1997). Table 1 shows the Nile basin countries with drainage area in the basin (km<sup>2</sup>) and irrigated land (ha).

86% of the Main Nile's water stems from Ethiopian highlands (Blue Nile system), the rest originates mainly from the watersheds of the equatorial lakes (White Nile system). While the Blue Nile system is characterized by extreme differences in discharge between peak and low periods, the White Nile system is more uniform. As many countries in the region are semi-arid, they highly depend on the Nile's water (Mason, 2004). To regulate the uneven annual flow from the Blue Nile system, the British constructed the Aswan low dam in 1902, to manage the quantity of the water availability (Common Dreams, 2014). This dam was replaced by the Aswan high dam, which was finished in 1970 as the former dam was not sufficient. Egypt uses more than 95% of the Nile's water available, which means that it is highly dependent on rainfall across the borders (Mason, 2004). Therefore, Egypt always kept a close eye on Ethiopia's developments regarding water issues since the implementation of irrigation plans could reduce Egypt's water supply. On the 30th May, the Ethiopian government launched a plan to construct the 'Grand Renaissance Dam' (GERD), this has increasingly caused tensions between the two riparian countries (International debate education association).

'The Nile River is home to more than 160 million people and the population is growing by 2-3% per year. The Nile Basin covers an area of 3.1 million km<sup>2</sup>, of which 1% is urban, 2% are covered by forest, 3% by wetlands, 3% by open waters, 4% by shrub, 5% by irrigated cropland, 10% by cropland, 30% by desert/semi-desert and 42% by grassland' (Mason, 2004).

Table 1: Nile basin countries with drainage area in the basin and irrigated land.

Country	Area in the Nile basin (km <sup>2</sup> )	Percent of country	Irrigated land in the basin (ha)	Irrigable land <sup>a</sup> (ha)
Burundi	13,000	46	50	80,000
D. R. Congo	22,300	1	80	10,000
Eritrea	25,700	21	5,800	150,000
Ethiopia	366,000	32	32,100	2,220,000
Egypt	307,900	33	2,923,200	4,420,000
Kenya	52,100	9	9,800	180,000
Rwanda	20,400	83	3,300	150,000
Sudan and South Sudan	1,943,100	78	1,930,300	2,750,000
Tanzania	118,400	13	14,100	30,000
Uganda	238,700	98	9,100	202,000
Total	3,107,600	414	4,927,830	10,192,000

(Source: Appelgren et al., 2000)



Figure 2. Map Nile River Basin (Wu & Whittington, 2006)

## 2. Values, principles and policy discourses

Political tensions and conflicts can be the result of an unequal spatial and temporal distribution of natural resources within the Nile basin, especially if the water qualities and quantities change with respect to the available supply and demand (Melesse *et al.*, 2014). Natural or human-made factors, like unsustainable water withdrawal or population pressure can affect water quantities and qualities (Melesse *et al.*, 2014)

In the Nile Basin, Egypt and Ethiopia are opposites, Egypt with a downstream position and Ethiopia with an upstream position; both countries have something the other one doesn't have: the Ethiopians have water, the Egyptians have power (Warner, 2004a; 2004b). In Egypt, it hardly rains and is therefore almost completely dependent on the Nile for drinking water, irrigation and industry. Moreover, along with Sudan, Egypt is the main consumer of the Nile. In the 1959 Convention, the principle of territorial integrity is clear when Egypt and Sudan as downstream states, decide that upstream states are not able to extend their water usage. With 86%, Ethiopia is the main supplier of the Nile River, but despite this the country was not involved in the agreements between Egypt and Sudan. In the past, Egypt often threatened to intervene militarily action if Ethiopia would touch the Nile water. Up till now it has been only threats, but the attempt by Ethiopia to provide loans from international financial institutions for the development of irrigation and hydropower projects, was crossed by Egypt (El-Fadel *et al.*, 2003).

The following quotes give an impression of the relationship between Egypt and Ethiopia.

*"The Nile is Egypt's lifeline, so it can't accept any decline or decrease of water (...) "Each country has water rights, but if any country takes more than its rights, Egypt will not forgive it." Says Ahmed El-Naggar of the Al-Ahram Centre for Political and Strategic Studies in Cairo in 2004 (Sudan Tribune).*

*"Any action that would endanger the waters of the Blue Nile will be faced with a firm reaction on the part of Egypt, even if that action should lead to war." Stated by Anwar Sadat, former President of Egypt (Kendie, 1999).*

An acute observer of the Egyptian scene wrote:

*"The arithmetic of the waters of the Blue Nile River is (...) a zero-sum game, which Egypt is determined to win. It must have a hegemonic relationship with the countries of the Nile Valley and the Horn of Africa. When, for instance, Ethiopia is weak and internally divided, Egypt can rest. But when Ethiopia is prosperous and self-confident, playing a leading role in the region, Egypt is worried" (Kendie, 1999).*

If we look at the political conflict between Egypt and Ethiopia, it can be stated that the upstream states use water to gain more power, while downstream states use power to gain more water (Warner, 2004a).

### *The Nile Basin Initiative*

The Nile Basin Initiative (NBI) is a regional intergovernmental partnership that seeks to develop the River Nile in a cooperative manner, share substantial socio-economic benefits and promote regional peace and security. It was launched on the 22nd of February 1999 by Ministers in charge of Water Affairs in the riparian countries. NBI provides these countries with the first and only all-inclusive regional platform for multi stakeholder dialogue, information sharing as well as joint planning and management of water and related resources in the Nile Basin. NBI was conceived as a transitional institution until the CFA negotiations were finalized and a permanent institution was created (NBI, 1999).

The Shared Vision Objective is “to achieve sustainable socio-economic development through equitable utilization of, and benefit from, the common Nile Basin water resources”. To guide NBI the following NBI objectives were formulated in a Strategic Action Program (NBI, 2012):

- To develop the Nile Basin water resources in a sustainable and equitable way to ensure prosperity, security, and peace for all its peoples.
- To ensure efficient water management and the optimal use of the resources.
- To ensure cooperation and joint action between the riparian countries, seeking win-win gains.
- To target poverty eradication and promote economic integration.
- To ensure that the program results in a move from planning to action.

“The NBI focus for 2012-2016 is on consolidating gains so far and delivering benefits/products, building on earlier establishment, confidence building and institutional strengthening phases” as shown in figure 3 (NBI, 2012).



Figure 3. The NBI focus for 2012-2016 (NBI, 2012)

### 3. Stakeholder involvement

As can be derived from the discussed quotes and articles about the Nile, management and governance of the Nile may be considered a complex process. The Nile is a shared river basin and ‘managed’ by the surrounding ten riparian states (UNEP, 2010). In this process stakeholders with different and oftentimes opposing values, viewpoints and interests discuss, deliberate and negotiate problem analysis and solution findings to water issues (Edelenbos & Teisman, 2011). Cooperative management of the Nile as a shared river system among these riparian states is an adaptation initiative that requires coordination at e.g. not only the regional level but also cooperation between national governments (UNEP, 2010).

The NBI was launched in 1999 by the water ministers of the countries that share the Nile river and this initiative embarked a new path of cooperation, and may be considered a historic step towards cooperation between all of the Nile riparian countries (Hefny & Amer, 2005). The NBI is comprised of the following actors (IW LEARN, 2013): The Council of Ministers of Water Affairs of the Nile Basin States (Nile-COM); The Technological Advisory Committee (Nile-TAX); and the Secretariat (Nile-SEC). The Nile-Com is the highest decision-making body of the NBI. Some combined initiatives have been organized with the aim of involving non-governmental organizations and civil society in the work of the NBI, including the Nile Basin Discourse (“NBD”), which is funded by international partners.

The NBI provided a forum for the negotiation of the CFA to set up a legal and institutional framework (Mekonnen, 2010). In April 2010, seven of the Nile Basin countries agreed to open the CFA for signature. Egypt and Sudan did not want to sign the agreement and rejected the proposition. Nevertheless, and despite the disagreements, the official CFA was opened in the same year, in May 2010 and was immediately signed by Ethiopia, Rwanda, Tanzania and Uganda (IW LEARN, 2013). The strength of such participation in a policy process can be determined by two dimensions formulated by Berry et al. (1993):

the degree to which a member of a community can participate in each phase of the process, it is about the width. Depth is about the extent to which they can influence the final outcome of the interactive process. With the NBI and CFA, Ethiopia is not only given the chance to participate in every phase of the agreements, but is also given the chance to influence the outcomes of the processes. With these agreements significant steps towards a more cooperative framework between the Nile riparian countries have been made. To secure the framework, the NBI process is from the start supported by strong partnerships. This NBI Development Partnership includes 17 bilateral and multilateral donors coordinated by the World Bank and the bank is also actively engaged in facilitating the NBI process, on request of the riparian states (World Bank, 2013).

Nevertheless there are some concerns that public participation has lagged behind in what the NBI does, and the insufficient structure of the NBI to engage local stakeholders and interest groups outside the government departments (Morbach et al., 2014). An important process is the Integrated Water Resources Management (IWRM). IWRM can be defined as 'a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems (GWP, 2010). Participation is of crucial importance. As a result, the detected failure to involve civil society in decision-making processes is addressed by the Nile Basin Society (NBS). NBS is a non-profit organisation whose goal is to involve all stakeholders in water resources management (Morbach et al., 2014). The simple existence of this particular organisation shows that NBI currently does not sufficiently include the public in the decision-making processes (NBS, 2009).

#### **4. Trade-offs between social objectives: Management and trans-boundary management**

As discussed trans-boundary management is the biggest issue for Ethiopia and the rest of the riparian countries. Basis for the prevailing trans-boundary water management issues are the colonial geo-political arrangements that were served when the colonial powers still controlled the region. Because of the British Empire, in the agreements, Egypt obtained a dominant right on the Nile Basin in 1959. No other nations, besides Egypt and Sudan, were involved in this agreement (Hefny & Amer, 2005). As a result no opportunities for Ethiopian stakeholders have been made available the following decades, until 1993. That is the year that a framework for general cooperation between Egypt and Ethiopia was made (Metawie, 2004). The agreement includes a clause regarding the Nile River, however no specific framework or legal regime is described. They have agreed not to modify the Nile River in any way that would harm the other country, and to consult and co-operate on future water projects that might generate benefits for both nations (Wichelns et al., 2003). At the time water resources were adequate to meet demands from the various economic sectors in the Nile Basin countries. Nevertheless today tensions increase gradually as a result of population pressure, the use of lands in the upstream riparian states and the expansion of irrigated areas in the downstream countries (Mysiak et al., 2010). Egypt is constantly keeping a close eye on Ethiopia's water issue development, since implementation of irrigation plans or damming could reduce Egypt's water supply (Wolf, 1999).

Not only Egypt, but each Nile state expects benefits from the control and management of the Nile water. In reality there is a low probability that all countries will benefit, because change in water allocation can have an impact on the competitiveness of some industries and such considerations can make the political economy of the reform of water complex

(Mysiak et al., 2010). This sets further challenges to organizing participation and interaction (Lynch et al., 2008). The NBI is particularly important when it comes to organizing shared action. Therefore, a Strategic Action Program was developed in 1999. This program translated the NBI objectives into the Shared Vision Program (SVP) and the Subsidiary Action Program (SAP). The SVP aims at building cooperation and building capacity for IWRM, all in trans-boundary context and the SAP aimed at early concrete investments 'on the ground level' (NBI, 2012). The latter operates in two sub-regions: the Eastern Nile Region (ENSAP) and Nile Equatorial Lakes Region (NELSAP) programmes. The Nile-SEC coordinates the SVP projects, which are hosted in several NBI Member States. Ethiopia is engaged in seven programs of the SVP and ENSAP projects (IW LEARN, 2013).

Separated, but in addition of the Strategic Action Program, the Nile-Com pursued the formulation of the CFA. This will elaborate the NBI principles by establishing a common framework and create permanent institutions to replace the current transitional arrangements of the NBI (NBI, 2012). Active participation of Ethiopia was motivated by the CFA, but also by a sincere interest in cooperation to achieve equal utilization of the water resources. In addition Ethiopia is encouraged by the World Bank, UNDP and other well-intentioned governments to facilitate cooperation in the Nile Basin. Most important is Ethiopia's interest is what they have to gain by its own water development strategies and programs (Arsano & Tamrat, 2005).

## 5. Responsibility, authority and means

A river basin is a large unit with a considerable scale. As a result, related water issues are difficult to manage and control. Institutional arrangements for a river such as the Nile are more complex than for small local or national river basins, although in essence no different (Jaspers, 2003). Ethiopia has been struggling with institutional issues for decades when it comes to water management. Hagos et al. (2011) analysed the institutional design architecture of land and water institutions in Ethiopia. They used five criteria for their discussion: presence of clear institutional objectives; actor linkages and information flow; formal and informal institutions; appropriateness of scale and compliance capacity.

The presence of clear institutional objectives for land and water in Ethiopia are relatively well defined. Organizations that have to directly or indirectly deal with land and water have been identified and have duties and responsibilities given by law (FDRE, 2005). A look at the ministries shows the presence of overlaps in objectives between the Ministry of Water Resources (MoWR), Ministry of Agriculture and Rural Development (MoARD) and the Environmental Protection Authority (EPA). For example the Environmental Impact Assessment (EIA) and water pollution control fall under the jurisdiction of both the EPA and MoWR. However, conflicting responsibilities and overlaps are no exception in the wider Nile Basin (Hagos et al., 2011). The next criteria concerns actor linkages and information flows. Indirect flows and linkages usually take place through reports to a higher body and discussions at the council of ministers. On the other hand horizontal communication is seldom, and there are no structural and coordinated linkages among the stakeholders that are involved in water sector activities, there is even limited coordination between MoWR and MoARD. When it comes to the third criteria of formal and informal institutions, a priority-requiring gap can be identified. Ethiopian water policy has difficulties with the management of trans-boundary waters; they are proponents of integrated water resources development, and adequate upstream and downstream considerations are lacking in the processes which is the result of historically grown rules and agreements (NBI, 1999). These historical practices still dominate, while Ethiopia

recognizes the need of conducting proper EIAs for any type of water development. The following criteria, that is criteria four, concerns differing opinions about what the appropriate scale is. Regional bureaus and feral are offices are organized on the basis of an administrative scale, while water resources policy advocate that watershed or basin is the planning unit. (Hagos et al., 2011). However, with some slight adaptations, hydrologic subdivisions may effectively coincide with administrative boundaries and the other way around. This may add considerably to the co-ordination potential (Jaspers, 2003). The final criteria of Hagos et al. (2011) encompasses the compliance capacity. Because of a lack of enforcement capacity, Ethiopia's control standards are overall not effectively set. EPA reported insufficient staff and resources, as well did the regions. Knowing that there is no integrated information management system in place to enable information sharing and exchanges, it can be concluded that there is a lot of room for improvement.

Laws and policies developed up to now in Ethiopia are said to reflect the widespread adoption of the IWRM principles (NBI, 2006). However, the country's' water policy does not consider the need for improved land management in relation to water resources development (Hagos et al, 2011). In this regard it is progressive that as theme topic for the Nile Basin Initiative the ten Nile riparian countries adopted IWRM. With this they wanted to develop a mutual platform for the development of a shared vision on the benefits of the Nile and the common use of water resources (NBI, 1999). Nevertheless, Ethiopia made a lot of progress in creating such an institutional framework with policies and laws developed for the Blue Nile Basin which reflect with global policy changes (Hagos et al., 2011).

## 6. Regulations and agreements

Colonial treaties made by some Nile states in the past have successively been challenged and denounced by the majority of the riparian countries; today there is still no comprehensive regulative mechanism for the Nile (Beyene & Wadley, 2004). With the knowledge that a treaty is only binding for those states who sign it, its striking that the riparian states abided the colonial treaties for so long. The Nile countries should always bear in mind two principles that are captured in the UN Framework Convention on the Law of the Non-Navigational Uses of International Waterways. That is 'equitable utilization' and 'no significant harm', which are subordinates and qualifying principles of the principles of Distributive Justice (Beyene & Wadley, 2004). That treaty is considered a summary of the customary principles of international water law (Mc Kenzie, 2012). The CFA made an attempt at reconciling the two principles by creating a third legal principal: water security. This principle can be defined as the right of all the riparian Nile states to reliable access to and use of the Nile River system for health, agriculture, livelihoods, production and environment (Morbach et al., 2014).

The first concept in international law is 'equitable use'. The 1959 treaty assumes that Egypt and Sudan are the only two riparian countries whose interests should be considered for the division of the Nile water. This is an example of a classic concept, or 'classic benefit' of equitable use. The second type is 'shared benefits' that considers water only as one part of a larger equation (Tarlock, 2007). This is also support by the African Union and Ethiopia. The African Union says that Member States should use basin-wide, multi state solutions for solving conflicts with their water policies (African Union, 2012). Ethiopia confirms this and states that 'Water security for the downstream countries of the Nile can only be achieved through a basin-wide cooperation that strives to achieve a balance between the water demand of each co basin state' (Arsano & Tamrat, 2005). In spite of the fact that old rules still govern the distribution of Nile water, important progress has been made through initiatives like the NBI and individual efforts

of riparian countries. However, there is still not a equitable and efficient distribution mechanism for the Nile water and Ethiopia is until today still respecting the water allocation of the 1959 Nile agreement between Egypt and Sudan. (Hagos et al, 2011).

The second concept consists of two parts, namely 'do no harm' and 'timely notifications'. The first part meaning that upstream countries cannot drastically harm the water of downstream countries, e.g. pollution and damming (Mc Kenzie, 2012). To-date, however, Ethiopia is the country that uses the least amount of water from the Nile due to historical and natural rights claimed by, the downstream countries Egypt and Sudan. As a result there is still a relatively tense relationship and a lack of cooperation between upstream and downstream countries despite the NBI (Arsano & Tamrat, 2005). The second party of the concept concerns timely notification, and is about having adequate time for parties so that they are capable of planning and preventing harms to occur using modern engineering. This concept has strong roots in international law, being part of the 1992 Rio Declaration and gives countries the opportunity to lodge a complaint with the ultimate goal of finding a workable solution for both parties.

Finally the third point, as stated by the CFA, is water security. However, this cannot be used as a legal principle because Egypt and Sudan resisted and required an amendment of Article 14 of the CFA. The article initially required states 'not to significantly affect the water security of any other Nile Basin State', but was amended to 'not to adversely affect the water security and current uses and rights of any other Nile Basin State' (Melesse et al., 2014). Egypt and Sudan wanted to keep their existing claim on the Nile, while the upstream states used it to reinforce the principle of equitable use. Egypt needs to lose the status quo of controlling the river and threatening military action against their upstream neighbours. Egypt's legal position defined through the 1959 Treaty is not legally viable. Thus the current regime is unsupported by international law (Mc Kenzie, 2012). Disagreement, not only over the most suitable application of the 'water security' principle, but also by some extension over the interplay between the first and second principle, led to a deadlock in the CFA negotiations. Despite the deadlock the CFA was signed by six countries and ratified by one; Ethiopia. Only when the CFA collects six ratifications, the creation of the Nile Basin Commission will be triggered and succeed the NBI (Melesse et al., 2014)

## 7. Financial Arrangements

The Nile Basin Initiative is financed by the Nile Basin member states, including Ethiopia, through annual dues. The states also provide funds for the NBI projects and contribute to the Nile-Sec department. Shared Vision Programs (SVP) is funded by the state that hosts the project within its borders and not by NBI (IW LEARN, 2013). That is a consequence of the inadequate country-specific financing mechanisms to support NBI projects (Melesse et al., 2014).

Resulting in Nile-COM requesting assistance of the World Bank to coordinate donor involvement, because joint development of Nile waters required significant financial resources. As a result, in 2001 the International Consortium for Cooperation of the Nile (ICCON) was established. ICCON promotes transparent financing for cooperative water resource development and management of the Nile river basin. With the formal launch of ICCON in Geneva in 2001, the second phase of the initiative started and approximately US \$130 million was committed to the NBI (Swain, 2002). In 2003, the third phase comprised a Nile Basin Trust Fund (NBTF), for the support of the NBI programs and projects. This Funds was established by the World Bank and the donor partners (World Bank, 2013). The NBTF supports the implementation of the SVP, as well as sub-basin

investment programs in the ENSAP and the NELSAP. The goal, as progress is made is to transfer the NBTF to a NBI institution. Donors to the NBTF are i.e. the European Commission, Canada, Denmark, Finland, France, the Netherlands, Norway, Sweden, the United Kingdom, and the World Bank. There are also other bilateral and multilateral NBI development partners, i.a. the African Development Bank, Germany, the Global Environment Facility, Italy, Japan, Switzerland, the UNDP, and the United States (IW LEARN, 2013).

### 8. Engineering and Monitoring

The Nile-SEC is responsible for compliance and monitoring of NBI’s shared vision program (SVP) projects under the banner of the Shared Vision Coordination Project. Control of the Nile Basin Trust Fund currently lies with the NBTF Committee through the World Bank (IW LEARN, 2013).

The implementation of the NBI strategic plan is monitored through a Results-Based System. NBI developed a Life Cycle Assessment for the overall initiative and for the various program components. It also included the development of tools, guides, training and coaching programs, monitoring, implementing and reporting on results (NBI, 2012). A monitoring Framework will be developed in line with the NBI Results chain (Table 2.)

Program	Key outcome	Indicators of success
Facilitating Cooperation	To raise the level and degree of cooperation between the riparian countries	<ul style="list-style-type: none"> <li>- % coverage of the cost of minimum functionality by Member States</li> <li>- Effectiveness of national focal points</li> </ul>
Water Resource Management	To become the expert water resources knowledge centre for the Nile Basin	<ul style="list-style-type: none"> <li>- Level of availability of key hydrologic data</li> <li>- No. of regular users of web-based knowledge centre from each Member State</li> <li>- Strategic trans-boundary climate resilient water resource options generated</li> </ul>

Table 2. Monitoring NBI Strategic plan (NBI,2012)

However, the unequal distribution of capacity among the riparian countries makes monitoring and engineering complicated. To give an illustration: There is a varying ability to address technical, institutional, and financial aspects among riparian countries such as lack of capacity to handle regional databases and share water resource information. This results in a great disparity between countries to implement information- and data-sharing agreements (Hearns et al., 2010).

### 9. Enforcement

It is stated that good water management and governance can only be achieved if rules and regulations can be enforced. Special attention should be paid to the whole policy process from setting the goal to actual achieve these goals. Thus, implementation of regulations and agreements needs more attention as well as the possibilities to enforce the agreements that have been made (Brouwer et al., 2012).

Figure 3 shows the NBI’s focus for 2012-2016, which is on consolidating gains up till now, building on earlier establishment, and confidence and institutional strengthening (NBI, 2012). Bringing all riparian countries together to address a common agenda is quite a new approach. Before, there were several initiatives for example the Hydromet project in 1967 and running parallel to this the Undugu project from 1983 to 1992. The Undugu project was followed by the Technical Cooperation Committee for the Promotion of Development and Environmental Protection of the Basin (TECCONILE) in 1993 among others. However, they lack at some points; not all riparian countries were present

at that time and they did not anchor the cooperation effort between riparian countries within the boundaries of a shared vision (NBI, 2012).

The NBI initiative is the beginning of a trans-boundary perspective where all member states share the same vision and mission (NBI, 1999). Central in the NBI overarching strategic plan 2012-2016 are core basin-wide programs and functions, and the divisions of these across the NBI Centres. The plan does however not prescribe implementation details. It is assumed that implementation details are the responsibility of the individual Centres (NBI, 2012).

The NBI Overarching Strategic Plan gives the Nile-SEC specific driving elements for strategic planning to contribute to the NBI Specific Strategic Objectives for 2012-2016:

- a) *Focus on institutional sustainability*; by maintaining a continuous focus on institutional strengthening, forcing and completing an NBI Financial Sustainability Plan keeping Nile-SEC 'lean and mean', well-managed and producing only priority deliverables, and changing the culture of the Secretariat to that of a business unit which is driven by its clients' needs.
- b) *Focus in its lead role in two core programs: Basin Cooperation Program*, which includes supporting, nurturing and fostering basin-wide cooperation so as to enhance and consolidate the ability of NBI to achieve the Objectives of the Nile River Basin Strategic Action Plan. The *Water Resources Management Program* is on building and operationalizing an accessible, interactive knowledge base and system that will facilitate optimal water resource management and development through provision of comprehensive information and scenario analysis.
- c) *Focus on support to national ministries and SAPs in their tasks for water resources development* through both on-going capacity building and through consultative development of trans-boundary guidelines within the Nile Basin Sustainability Framework (NBI, 2012).

## 10. Conflict prevention and resolution

Especially when environmental, socioeconomic, and political problems are increasing, cooperation is a long and difficult process that can require significant human, financial, technical, and legal resources. The resources in the current condition within the Nile Basin are scarce, and apart from the remarkable performances obtained by NBI, the situation has created a number of regulatory obstacles for this institution. As a result, it is 'very difficult to manage and develop the waters of the Nile in a sustainable and generally accepted way' (Melesse et al., 2014).

The classical mistrust between upstream and downstream countries partly derives from a lack of knowledge about the possible impact on water flows of water development in Ethiopia. There were potential plans for hydropower generation, but due to the lack of knowledge, civil conflict, absence of a coordination mechanism and lack of investment, Ethiopia did not come to an agreement with other Nile countries. They now found out that Hydropower production will not reduce the water flow significantly and therefore it is an ideal project with benefits for all riparian countries. The Hydro-electric Project, facilitates power-trade among Burundi, DR Congo, Kenya, Rwanda and Uganda, and will be implemented and effective in 2015. This project reflects a major breakthrough of trans-boundary cooperation between the Nile states. The project will generate 80 MW of renewable hydroelectric power, which will increase the additional access rates (NBI, 1999). Other benefits derived from the project are: reduction in electricity costs, lower final costs of goods and services, the costs for energy to homes will reduce and

construction and installation of the power plant will provide new working spaces (NBI, 1999).

The River Nile is one of the least developed rivers in the world, therefore it has a great potential to grow and serve all riparian countries that will benefit from this development. The Nile Basin offers opportunities for cooperative management and development of the shared water resources, which offers a win-win situation for all riparian countries. The Basin has potential for enlarging the irrigated land as well as the rain-fed agricultural production; also water use will be more efficient. There are possibilities for sustaining biodiversity, and preservation and use for eco-tourism. There are opportunities for economic integration on a regional scale and regional peace and security can be promoted. Last but not least, the Basin offers opportunities to jointly ensure the survival of the River Nile through careful and wise use (NBI, 1999).

For more than the last 45 years, riparian countries have been banding together, admitting that cooperation on the Nile is of great importance to come to solutions and tackle the various development difficulties. These issues offer opportunities to come to win-win outcomes where all riparian countries benefit from (NBI, 1999).

## Discussion

The failure to develop a strong and clear legal framework, agreed by all NBI member countries can be seen as one of the most serious obstacles to why the transitional NBI has not been replaced by the CFA yet. The states could not reach an agreement on how the waters of the Nile should be allocated in a mutually accepted manner, mainly because of the resistance of Egypt and Sudan. Despite the fact that the CFA has already been signed by six Nile basin states (Ethiopia, Kenya, Rwanda, Tanzania, Uganda, and Burundi), continuing disagreements among states resulted in the CFA not being finalized and ratified yet. The CFA can be regarded as a new beginning for all the riparian countries, intended to rearrange the colonial-era water rights and usage regime on the Nile River (see 1929 and 1959 Nile Water Treaties). This is also the reason why Egypt and Sudan resisted the CFA so far (mostly to Art. 14). The CFA will undermine Egypt and Sudan's historical claims in which the two nations allocated almost all of the Nile's water to themselves. Consequently, the CFA would also affect Egypt's claim that it holds a veto, and historical right over all upstream hydro projects under a 1929 agreement with Britain (Eckstein, 2002).

The lack of unity between the Nile countries concerning the CFA and the UN Watercourse Convention reflects how challenging it was for the NBI to settle down. This is also shown by the disputes among the riparian states related to the allocation, management, and use of water resources. Nonetheless, the presence of a legal framework is of vital importance for improving trans-boundary water cooperation and resolving water-related disputes. The 1997 UN Watercourses Convention could be used as a good starting point in terms of searching for a legal framework that hopefully would have the capacity to efficiently face the mentioned problems. Nevertheless, the on-going disputes and the fact that the NBI seems to delay this sensitive topic, result in further increase of the problems related to the CFA. Lemma states: "It is not a secret that the unwritten but real strategy of the NBI is to secure the consensus of all the riparian countries on the less controversial issues by postponing the key but difficult issues of the Nile to a future date" (Lemma, 2001). Accordingly, it could be presumed that the longer this current situation persists, riparian states quit their NBI membership, especially the countries that are most dependent on the Nile water resources. It could also increase mistrust and misunderstandings between the Nile basin countries (Shema, 2009).

Nonetheless, disagreements between the riparian countries are not the only problem in making the NBI and CFA success stories. There are some concerns that public participation has lagged behind in what de NBI does, and that there is insufficient structure to engage local stakeholders and interest groups outside the government departments as in foundation. Public participation and communication is lacking, as well as communication in the internal government. The Ethiopian government has no structural and coordinated linkage between the stakeholders that are involved in water sector activities, and limited coordination between the involved water departments. The coordination potential will considerably grow if hydrologic subdivisions effectively coincide with the administrative boundaries and the other way around. Yet, the regional and federal offices are organised on administrative scale, while water resource policy advocates a basin scale. However, with some slight adaptations, hydrological subdivisions may effectively coincide with administrative boundaries, which make it a relatively easy problem to solve. Hence, resolve overlaps and conflicting responsibilities. This is easier said than done, especially on a basin wide scale. There is an unequal distribution of capacity among the riparian states, which makes monitoring and engineering of activities complicated.

## Recommendations

The riparian Nile countries should use the 1997 UN Watercourses Convention as a starting point in the search for a legal framework. A permanent legal and institutional framework is also a basic requirement of the IWRM. The framework will create the capacity to face problems more efficiently. Consequently, to more adequately protect the countries in conflict situations, the two principles of distributive justice should be given a sharper focus, which makes them less sensitive for manipulation.

As far as for the participation and communication regarding the CFA, constructive engagement should be pursued. Meaning that communication and negotiations between all of the Nile states has to continue. Additionally, the capability of involved organizations should be improved to better utilize the potential of the water system and invest in technology to make better use of the water. Involve local stakeholders, interest groups and NGO's and stimulate interaction between all those levels and parties. By involving competent organizations in development and management of water related services, a more stable investment for investors is created. These investors would otherwise be unwilling to participate. Financing instruments are needed to develop and implement projects. Here involvement of the international community can contribute. In the end it is important to ensure that the Nile is strategically directed, supervised and integrated with the environmental sector, but also with the social and economic sector.

## Conclusion

In this study the Nile Basin Initiative and the Cooperative Framework Agreement were analysed, with the aim of determining whether these agreements will help Ethiopia to overcome unjust and unequal distribution of the Nile water resources. The NBI agreement has been, and still is a historical step for all Nile riparian countries. The 1929 and 1959 colonial agreements gave Sudan and Egypt a sole right on the Nile River, unsupported by international law. The CFA negotiations however, ended in a deadlock because of disagreement, not only about the most suitable application of the 'water security' principle, but also by some extension over the interplay between the first and second distributive principle of the UN Convention. The two principles 'equitable use' and 'no significant harm' are not strictly defined and as a result still sensitive for manipulation.

Despite the deadlock the CFA was signed by six countries and ratified by one; Ethiopia. Only when the CFA collects six ratifications, this agreement of the Nile Basin Commission will be triggered and the NBI will succeed. However, without the participation of Egypt and Sudan it will be a continuous struggle how to resolve trans-boundary water management issues. Despite the fact that the upstream countries have the international law on their side, it is of great importance that Egypt and Sudan 'willingly' accept the agreements. When the trans-boundary management is generally accepted by all countries, the continuous struggle between the countries will largely resolve itself. As Smith (1996) stated 'Where nature conspired to provide common resources, there can be no ultimate independence only mutual dependence'.

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