A New Stalemate: 
The Influence of South Sudan’s 
Independence on the Nile Basin’s 
Water Politics

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Abstract: This study assesses how South Sudan’s 2011 vote for independence has influenced the Nile Basin’s debate over water rights. Although it initially seemed that South Sudan was aligning itself with the upstream riparian states such as Ethiopia and Uganda, effectively leaving Egypt and Sudan as the only opponents to a Cooperative Framework Agreement and redefining so-called ‘historic water rights’, the escalation of the South Sudanese internal conflict between President Salva Kiir and ex-Vice-President Riek Machar changed this situation entirely. The conflict has reached a new stalemate, with Egypt giving military support to Salva Kiir in his fight against Machar, thus befriending South Sudan and strengthening its position in the Nile Basin, and Ethiopia hesitating to offer support and effectively losing South Sudan as a newly found ally. Currently, a Cooperative Framework Agreement is farther away from being signed than it was before South Sudan’s conflict escalated: South Sudan is no longer in any position to sign or implement agreements and policies regarding water issues, which allowed Egypt to reassert its dominant position in the debate. This study foresees three different possible future scenarios: one of perpetuated violent conflict, one of political conflict and one of increased interstate political cooperation.

Keywords: South Sudan, Nile, Water Politics, Peace and Conflict, Sustainable Development

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A New Stalemate: The Influence of South Sudan’s Independence on the Nile Basin’s Water Politics

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Summary: This study investigates how South Sudan’s 2011 independence influenced the region’s ongoing conflict over the use of the River Nile. While it initially seemed that South Sudan would help Ethiopia and other upstream Nile countries (Uganda, Burundi, Rwanda, DRC) to bring about a new agreement to replace the old one from 1959, which gave Egypt and Sudan a monopoly over the Nile, an escalation of ethnic tensions in South Sudan reversed this process, essentially bringing about a new stalemate, with Egypt and South Sudan on one side and Ethiopia, Sudan and other upstream states on the other. This stalemate will most likely remain at least until Ethiopia has finished constructing the Renaissance dam on the Blue Nile, which was endorsed by Sudan and initially also South Sudan, but is fiercely opposed by Egypt, which fears that the dam will affect its water availability. Construction of this dam is expected to be finished in 2017, and will generate a lot of electricity as well as provide the opportunity for irrigation projects. The stalemate that has arisen, however, will continue to complicate every attempt at negotiation over the Nile in the near future.

Keywords: South Sudan, Nile, Water Politics, Peace and Conflict, Sustainable Development

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1. Introduction

1.1. Research Aim
The Republic of South Sudan is the world’s youngest nation. It became independent from Sudan after a referendum held in January 2011 (Government of South Sudan, 2014a), and the newly formed country took on the difficult challenge of building a nation-state after decades of civil war.

As with any new country in this position, South Sudan is facing numerous political, economic, diplomatic, environmental and popular challenges. According to the United Nations, it is one of the least developed countries in the world (United Nations, 2013). Poverty is prevalent in every region of the country, economic development is proving slow and tedious, and tensions among the country’s various ethnic groups remain extremely problematic, as was made clear by the recent outbursts of violence between armed groups of ethnic Dinka, loyal to current president Salva Kiir Mayardit, and Nuer, who support former Vice President Riek Machar (Al-Jazeera, 2013b). The violence is still ongoing, and despite repeated requests for peace talks, currently no sustainable solution seems in sight.

The emergence of a new nation in a region invariably influences that region’s political situation. When South Sudan became independent, the Nile Basin gained an extra riparian state, bringing the total up to 11 (Salman 2013a, p.18). Negotiations over the use of the Nile waters have been going on since colonial times, and despite numerous efforts to come to a comprehensive agreement, so far none has been reached. South Sudan’s emergence as a state brought a new player to the table, and at the beginning it was unclear which direction the country would go in: if it would stick to the positions it took under Sudanese rule, or seek to side more with equatorial states such as Uganda and Kenya. Numerous academics have tried to predict how this was going to play out shortly after independence was obtained (Salman, 2013b, p. 349).

Now, three years into South Sudan’s independence, is a sensible time to revisit some of these predictions and assess the current water security situation in the Nile Basin. Enough time has passed to be able to see the progress made during the country’s infancy, and assess the degree of influence the emergence of a new state has had on intergovernmental relations between riparian states, as well as make a more sensible prediction about future developments than was possible right after the 2011 referendum.

1.2. Purpose

This study will focus on the changes that have taken place in the Nile Basin in terms of water security after South Sudanese independence. The objective of this study is therefore to form a comprehensive and complete overview of the current situation, and sketch a few informed possible future scenarios. To achieve this, it is first necessary to gain insight into scientific theories behind shared river systems and the conflicts that often arise in them. Furthermore, it is wise to provide the reader with a comprehensive history of the Nile conflict, as well as Sudan itself.

Subsequently, this study will discuss the different policies that have been proposed and implemented in the Nile Basin and (South) Sudan over the past few decades and to which degree they are still functioning. Then, it will discuss the water policies implemented by the government of South Sudan after 2011, as well as future policy proposals.

Next, the implications of these policies will be discussed and assessed for effectiveness, sustainability and accountability. Furthermore, the international response to South Sudan’s water policies will be discussed. The main focus of this will be on other Nile riparian states.

Finally, this study will attempt to draw out several possible future scenarios for the Nile Basin’s water security policy, taking into account the Republic of South Sudan’s problems and aspirations in this respect.

1.3. Methods
Considering that this study focuses on one specific case, that of South Sudan and its influence on the Nile Basin’s water politics, the scientific method that is the most suitable to apply during this study is the Qualitative Case Study Method.

Bill Gillham (2010, p.1) notes that this method is not easy to define, as even the word ‘case’ is vague and can have many widely different meanings. However, in this context, Gillham argues that a ‘case’ has the following features:

1. A case is a unit of human activity embedded in the world;
2. which can only be understood or studied in context;
3. which exists in the here and now;
4. that merges in with its context so that precise boundaries are hard to draw.

A case study, then, is a study that investigates the above in order to answer research questions. In order to do this, it is necessary to find multiple sources of evidence, so as to minimise the possibility of bias or one-sided research.
A case study can both be quantitative or qualitative (Gillham, 2010, p.9). Quantitative case studies involve statistics, and use these to draw conclusions. Qualitative case studies also make use of statistics, but do not conduct their own quantitative research; instead, such studies interpret data, statistical, numerical or more personal (such as the opinions of experts), in a scientific way.

This study uses the qualitative case study method: research primarily involves data on South Sudan’s current and past policies and directions regarding water security, as well as statistical and numerical data on South Sudan as well as the entire Nile Basin, in order to form a comprehensive a view as possible about South Sudan’s water security situation. To do this, the study makes use of articles written by other scientists, contemporary (local) news articles, and the findings of experts and people directly involved with the situation. This data will then be interpreted by the author, in order to be able to offer a complete overview of the current situation as well as well-informed predictions about future developments.

In order to safeguard the quality and scientific validity of this study, it is necessary to be aware of the pitfalls any scientific author could come across in the process of writing or researching. Robert K. Yin (2009, p.40) outlines four different criteria for sound case study research.

- **Construct validity:** in order to obtain results that are as objective as possible, the researcher must use a wide variety of sources, and make sure that what is being researched (in this case ‘water security’ as well as ‘South Sudan’ as well as ‘The Nile Basin’) is well-defined.
- **Internal validity:** this criterion deals mostly with causal relationships: in a qualitative case study, the researcher must be aware that inferring that event x caused event y, without regard for the possible influence of event z, is a trap many scientists fall into. Therefore, researchers must try to be as thorough as possible in their research, and make sure that what they infer makes sense.
- **External validity:** Researchers, especially those who conduct case studies, are often inclined to infer results beyond the scope of their study. Therefore, they must be well aware that although some theories or results or patterns can be extracted from the case at hand, that does not necessarily mean that they apply in general.

- **Reliability:** According to the scientific method, any study must be replicable, meaning that a different researcher with the same available data should be able to conduct the same experiments and logically come to more or less the same conclusions. Therefore, a researcher must make sure that the data they use are traceable and properly sourced.

This study uses the methods outlined above to have as wide a scope on the water security situation in South Sudan and the Nile Basin as possible, not in an attempt to form a general theory on water security, but to apply existing theories and practices to this specific case. For this, it uses a wide variety of sources from a range of different countries and regions (Ethiopia, Sudan, Egypt, the United States, the European Union, and Sub-Saharan Africa), and from researchers and experts with a wide range of different backgrounds. The sources are all checked for their scientific validity, either through peer review or by finding multiple sources containing the same information (to increase their reliability).

### 1.4. Case Selection

There are several reasons why one might choose to study a specific case. Fenno (1986) mentions three:

1. **The case at hand may be an outlier in a sample of similar cases.** Therefore, it might be able to offer more information than other similar cases.
2. **The case may be a so-called ‘key case’,** meaning that the case or the circumstances surrounding it are of great potential interest in a certain debate.
3. **The case could be of special interest to the author due to his or her knowledge of the area or field of study.**

This particular study falls partially under number 1, and partially under number 2. Firstly, the Nile is one of the longest rivers in the world, and unlike other major rivers it spans multiple countries, each with their own history, political system and economic situation. This makes the Nile a more complicated issue than, for example, the Yangtze or the Amazon. Furthermore, the Nile is an extremely important source of survival for millions of people, especially downstream. It provides dry, arid lands with the water needed to make civilisation possible. This makes the debate over the river not just one over development or sustainability, but also over basic human needs.

Secondly, the debate over the Nile waters has been ongoing since ancient times, and in its current form for more than 150 years. Reaching consensus and ending the debate over who can use which portion of the water, will bring about stability in the entire
region, and create much more opportunities for local and regional development. Furthermore, such a hallmark of international cooperation will be a sign of goodwill and a victory for international diplomacy, and help create a more hopeful vision of the future.

1.5. Limitations

Like any study, this study will also have its share of limitations.

Firstly, since the Nile debate is currently still ongoing and not likely to end any time soon, we are dealing with controversial matters that are disputed or criticised by many. Even though this study aims to comprehensively describe the different sides to the Nile debate and objectively try to predict its future implications, there is no certainty that this will be accomplished. True objectivity is hard to achieve, and there is no guarantee that what is described in this study will be the objective truth. The case is simply too multi-faceted and complicated to take every little detail into account. Furthermore, any prediction of the future is inherently uncertain. This study aims to analyse how the Nile debate will most likely play out in the near future, but such attempts are always vulnerable to errors, due to the complexity and flexibility of the case at hand and the people involved. The predictions mentioned in this study may therefore well turn out to be completely wrong.

Secondly, the author of this study does not speak, read or understand Arabic. While much information can be found online and in books about the topic, and luckily all the relevant treaties, laws and agreements have English- or French-language copies available, some important information, mostly from Egypt and Sudan, is in Arabic. Therefore, there is the possibility that this author has missed some aspects of the downstream side of the debate.

Thirdly, even though the case study method is generally comprehensive in its approach to different cases, each case studied is different and has its own unique properties and qualifications. Therefore, applying general, overarching theories of shared river systems, conflict studies and water management to a specific case will always come with certain limitations and miss certain relevant aspects. This study has aimed to avoid this by thoroughly describing the region’s history and specifically the debate over the Nile, and placing the overarching theoretical framework in this specific context.

Fourthly, the author is aware that this is a Master’s thesis, and thus not subject to the rigorous peer review that proper scientific studies usually are. While the author has attempted to use solid and extensive documentation for each part of this study, it has not been subjected to proper scientific scrutiny, making it more vulnerable to errors.
2. Background

In order to be able to place the case of South Sudan and its use of the Nile in a broader and more comprehensive context, this chapter will first provide the reader with a general framework of theories surrounding shared river basins and the conflicts that often accompany them, as well as defining ‘water security’ and what it entails. Next, this chapter will feature both a geographic and hydrological analysis of the river, its basin and the countries dependent on it, as well as an overview of the history of the River Nile, beginning at the British colonial era and ending in the present day. This is necessary so as to understand the geopolitical, economic and geographic context behind the present day situation, including the various treaties and agreements stemming from colonial times that still retain their relevance today. Furthermore, the framework provided in the first part of this chapter will be applied to the Nile conflict specifically, in order to specify different theories and have a more comprehensive overview. Finally, in order to complete the general framework and the background to South Sudan’s water security situation, this chapter will detail the case of Sudan, its relevance to the Nile river basin and the positions it has taken politically and economically over the course of its long history. It will give an overview of the history of the country, the historical tensions between North and South and the events that led to the 2011 referendum, in which South Sudan voted to secede from the country and become the latest independent addition to the world map.

2.1. Shared River Systems

There are approximately 260 rivers in the world that either form or cross borders. Their basins cover around half of the world’s land surface, and around 40% of the global population is dependent on them for livelihood (Sadoff and Grey, 2002, p.391). Toset et al. (2000) distinguish three types of shared river systems relationships (see fig. 1): River Boundary relationships, Mixed Boundary relationships, and Upstream/Downstream relationships. In order for a river to count as a boundary type or a mixed type, it has to make up more than 10km of the border between two countries.

![Fig. 1: Different types of shared dyads (Toset et al., 2000, p.980)](image)

Vast amounts of people are both directly and indirectly dependent on these rivers in terms of agriculture, fishing, tourism and water consumption. This, naturally, calls for comprehensive and clearly defined rules and regulations as to which country or region is allowed to use a certain international river’s resources. The FAO has identified over 3 600 treaties related to the non-navigational use of waters between the years 805 and 1984. Since World War II, more than 300 treaties and agreements over the use of international river basins have been reached (SIWI, 2000, p. 37). However, with the effects of global climate change becoming more and more visible, water security issues are becoming increasingly important. For example, in Southern Africa, many countries including Malawi, South Africa, Zimbabwe and Zambia are currently in a state of serious water stress (defined as less than 1700m$^3$ per person per year), or even approaching absolute water scarcity (less than 1000m$^3$) (Savenije and van der Zaag, 2000, p.10). This appears to be part of a global problem. With a finite amount of water on the planet and the global human population growing rapidly, it stands to reason that it will eventually become harder and harder for each individual to have access to sufficient amounts of water. This, some fear, will lead to an increase in violent conflicts over water and its resources in the near future. There is a host of websites warning about these so-called Water Wars (Al-Jazeera, 2012), and there was even a prize winning documentary on the topic (Bozzo, 2013).

However, save for a few minor skirmishes, so far no wars have been started specifically over water resources, despite numerous warning signs (SIWI, 2000, p.136). Ashok Swain (2000) mentions three reasons for this:

1. A lot of time is needed in order for a country to carry out a water-related threat, such as diverting a river or building a dam. This interval between the proposed threat and the actual effects of the threat to kick in allows for diplomatic settlements to be found.
2. Developing countries often cannot undertake large-scale water projects without international aid. Since the fall of the Soviet Union in 1991 it has become increasingly difficult for countries to get funding for projects, if these projects are a potential source of conflict. Examples of this include Ethiopia in the Nile basin and Kyrgyzstan and Tajikistan in the Aral Sea basin.

3. International river basins are the source of livelihood for a lot of people in the area. Violent conflicts over water resources pose a risk of seriously disrupting water supply all over the region. This deterring effect is often enough for conflicting parties to limit violent escalation of the conflict.

However, this does not mean that water availability is not a contributing factor to international conflict. Toset et al. (2000, p.987) argue in a statistical analysis of modern conflicts that, everything else being equal, two contiguous states or regions (referred to as dyads) that share a river are significantly more likely to engage in militarised conflict than those that do not. The same holds true for dyads where one or more parties suffer from water shortages.

In their analysis, Toset et al. further conclude that an upstream/downstream relationship between states is the most conflict-prone, before mixed boundary and finally a river boundary relationship (see fig. 1).

Indeed, the mere fact that two states share a border appears to be a much greater indicator of conflict than the presence of a shared river (Toset et al., 2000, p.990). Furthermore, the analysis does not account for the length of the shared border; considering that dyads sharing a longer border are also more likely to share a river, the conclusion that shared rivers make two parties more conflict-prone could well be a proxy for the length of the border. Nonetheless, wars are rarely started for one single discernible reason. Water security is simply one of the contributing factors that can cause a conflict to escalate, and deserves to be taken seriously in future considerations.

Toset et al. do not distinguish between different types of conflict that two parties can engage in, nor do they take into account the various levels of cooperation that are possible. Sadoff and Grey (2002) analysed these factors, and came up with several ways in which rivers can promote cooperation.

Rivers have historically been of enormous importance to human civilisation and state building (Sadoff and Grey, 2002, p.392). They necessitated treaties and bilateral agreements in terms of navigational and irrigational use of the waters, and boosted technological development to build dykes, canals and levees. Therefore, cooperation is necessary to provide maximum benefit for all parties involved. Sadoff and Grey (2002, p.393) point out four different types of shared river cooperation.

Firstly, dyads can try to increase benefits to the river: parties make efforts to reduce pollution and overexploitation of the river’s resources to support biodiversity, tourism, recreation and public health. The aim here is to maintain a ‘healthy’ river ecosystem which can be sustained for a large number of years. This, of course, is much more difficult in poorer countries, where environmental protection and long-term sustainability may not be among the primary concerns.

Secondly, parties can increase their benefits from the river: cooperatively managing water resources can greatly increase economic activity and the availability of water for electricity, agriculture and human consumption. Cooperation is not always easy: water availability is often seen as a zero-sum game, where the use of water by one party automatically excludes the other party from using it. However, Sadoff and Grey argue, it ceases to be a zero-sum game if benefits are counted in dollars and not in cubic metres. Therefore, cooperation is necessary to reach a situation where each party benefits from a river financially.

Thirdly, dyads with a shared river can attempt to reducing costs made because of the river: shared rivers are often a source of conflict, as pointed out by Toset et al. This damages interstate relationships, often resulting in reduced trade and other economic integration. Bilateral agreements can help improve these relationships and boost economic growth.

Finally, there is the opportunity to increase benefits beyond the river: By forging comprehensive policies on water resources, parties can generate benefits in fields and sectors seemingly unrelated to water security. For example, an agreement to build a hydropower dam in a certain area will boost electricity production, and may subsequently trigger investments in infrastructure. Furthermore, improved cooperation could also boost the movement of labour, goods and finance between two parties.
However, cooperation is not always a given. Savenije and van der Zaag (2000, p.13) point out various principles that can complicate international water management:

- **Sovereignty principle**: States have a right to develop policies, laws and strategies related to their natural resources.
- **Transboundary principle**: Upstream states have a responsibility for water resources in regards to downstream states, and vice versa.
- **Equity principle**: All people have the right to sufficient access to water resources to assure their survival and development.
- **Intergenerational principle**: Future generations should be guaranteed the possibility to use the resources to more or less the same extent as current generations.
- **User Pays principle**: Users of water resources should pay for the use of them, provided they are able to. Water can be seen as an economic good, and provided it does not clash with the Equity principle, people can be expected to pay for water services.
- **Polluter Pays principle**: An individual, government or company can be expected to pay for any pollution this entity is causing to the river system.
- **Precautionary principle**: Governments can be expected to take serious measures to protect people from disaster, even if there is no unequivocal scientific proof that these disasters will take place.

These principles are not by definition contradictory, but they certainly complicate situations in which one party’s principles clash with another’s. Therefore, reaching bilateral agreements can be extremely difficult, and sometimes requires international intervention or mediation.

In other words, ‘water security’ in this study means several things:

- Access to a sufficient amount of water, as defined for the whole region. Thus, if for example Egypt is able to increase the amount of available water at the cost of another country, the region’s water security is not improved.
- Access to clean water: it is not simply the amount of water that counts, it is also the quality of it. For example, water that contains even minor amounts of dissolved salts are more or less useless for use in the irrigation of crops. The water has to be useful for it to add to water security.
- Limited damage to the environment and political relations: the water security issue, although important, does not trump all other potential problems in the region. For example, an escalation of violent conflict between two Nile riparian states over water resources would be detrimental to many, hence negotiations are almost always favoured over conflict.

To conclude, shared water resources between two states or regions are almost always a source of tensions. Despite the fact that no all-out war has ever been declared solely over the use of water, water security has definitely proven to be a contributing factor to interstate and intrastate conflict. Although cooperation is definitely possible (as proven by several real-world examples, such as the Danube, Rhine and Senegal river agreements) and can even be extremely beneficial to all parties involved, it becomes increasingly harder to achieve with higher water scarcity and higher economic, agricultural and nutritional dependence on a single shared water resource. Therefore, water remains an important source of conflict for many parts of the world.

Finally, in order to be able to assess the situation in South Sudan properly, it is also necessary to define the concept of ‘water security’.

This study will make use of the definition as given by the UN:

“Water security is the capacity of the population to safeguard a sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability” (UN Water, 2013, p. 1).
2.2. The Nile Conflict
This subchapter will detail the intricacies of the Nile Conflict, starting with the river’s geography and hydrology, and then provide a detailed explanation of how the conflict over the river’s waters was fought out among the various actors throughout history.

2.2.1. Geographical and Hydrological Properties of the Nile
The River Nile is either the longest or the second longest river in the world, depending on how you count the length of the Amazon. It stretches for 4187 miles or 6738 kilometres (Government of the State of Egypt, 2014), across eleven different countries: Burundi, the Democratic Republic of the Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania and Uganda (See fig. 2).

Its drainage basin covers more than 3.2 million square kilometres, making up about one tenth of the total land mass of the African continent.

![Fig. 2: the Nile Basin (BBC, 2013a)](image)

Despite it being the largest (or second largest) river in the world in terms of length, its total flow is just a fraction of that of the world’s other major rivers such as the Amazon, the Yangtze, the Rhine or the Congo. This is partially explained by the river’s low runoff coefficient and the fact that about 40% of the Nile’s basin area is made up of dry, arid land, which contributes little to the river’s total flow (Nile Basin Initiative, 2014a).

The Nile’s main tributaries are the Blue Nile and the White Nile (Ibrahim, 2011, p.285).

The White Nile originates in the Kagera Basin in Burundi and Rwanda. It then flows into Lake Kyoga and Lake Albert in Uganda, and enters South Sudan at the town of Nimule. Here, the South Sudanese call it Bahr el Jebel. The country’s capital, Juba, is on this river. The river then enters the Sudd marshes near the town of Bor. This is the world’s largest freshwater wetlands system (about 6000km² in size), and here the river loses up to 60% of its water, or around 14 billion m³, through evaporation and seepage. After the Sudd it branches off into the Bahr el Jebel and Bahr el Zaraf.

Another major tributary, the Bahr el Arab, originates in the west, near the border with the Central African Republic, and eventually flows into the Bahr el Ghazal. After Bahr el Ghazal and Bahr el Jebel join at Lake No, the river is called the White Nile. The river then flows east to the city of Malakal, where it is joined by the Sobat, which originates in the Ethiopian highlands. The White Nile then flows on further into Sudan, where it is joined by the Blue Nile at the city of Khartoum.

The total flow of the White Nile is about 11.5 billion cubic metres, or around 14% of the Nile’s total flow at Aswan (Salman, 2013b, p.333). The Blue Nile originates in the Ethiopian highlands, and constitutes about 86% of the river’s 87km³ average annual flow (Tafesse, 2001, p.24). It begins in a small stream called Gilgel Abbay, close to Lake Tsana. The Rahad and the Dinder rivers are its main two tributaries. After converging with the White Nile at Khartoum, the two rivers continue as the Nile River. The Atbara river, which also originates in the Ethiopian highlands, joins the Nile further downstream at the town of Atbara. This is the last major tributary to join the Nile, which then flows through northern Sudan and Egypt and empties into the Mediterranean Sea (Salman, 2013b, p.333).

The Blue Nile’s flow varies greatly with changing precipitation: 70% of the annual rainfall in Ethiopia occurs between June and September (Amer et al., 2005, p.7), and it is in these months that the river is at its largest.

The White Nile’s flow varies very little during the year, due to the fact that climate variations in tropical areas are much less severe, making for more constant rainfall patterns (Ibrahim 2011, p.285). Over the years, several plans have been drawn up and partially implemented in order to divert the water from the Sudd, so as to prevent too much water from evaporating there. However, as of yet, none of those plans have come to fruition.

The Nile is of great importance for many countries in the basin. Egypt, for example, relies on the river for 96% of its renewable water (Ibrahim 2011, p.287). 85% of the populations of both South and North Sudan are dependent in some way on the river. The downstream river countries, Egypt and Sudan, lie in the Sahara desert, making it almost impossible for them to survive without the Nile. On the other hand, upstream countries, especially those
in more tropical areas, experience sufficient rainfall to meet most of their water needs. Most of the river’s water is used for irrigation. It is estimated that about 86% of the water in the Eastern Nile Basin is used for agricultural purposes (Amer et al., p.7). Contrary to water used to generate electricity, water used for agriculture generally does not flow back into the main river, but instead ends up in crops or groundwater aquifers. The FAO estimates that the total available irrigable land in the Nile Basin is larger than the total amount of available water (FAO, 2014). With a growing population throughout the region and the increasing need for electricity and agricultural industries that comes with this, the rights to the use of the Nile are becoming an increasingly complicated topic of discussion.

2.2.2. The Historic Struggle

Ever since ancient times, the Nile has continuously enabled civilisations in the basin to grow and flourish. At the same time, countries are so heavily reliant on the river that conflict is unavoidable.

This subchapter will provide an overview of the conflicts and efforts to cooperate that have taken place since the British colonial era, starting in the early 1900’s. The reason for not starting earlier, for example in ancient Egyptian times, is that these conflicts are rarely still relevant in the present day, especially in the light of South Sudan’s recent independence.

At the start of the 20th Century, the British Empire developed a growing interest in controlling the River Nile. Britain’s vast cotton plantations in Egypt and the Sudan called for comprehensive irrigation schemes. In order to safeguard its cotton production, Britain granted certain privileges for the use of the Nile waters to Egypt. This laid the groundwork for Egypt’s persisting dominant position in the Nile conflict over other riparian states (Abdo, 2004, p.45).

On May 15th, 1902, the British empire signed an agreement with Ethiopian emperor Menelik II, establishing the border between British-controlled Sudan and independent Ethiopia. Article III of this agreement states that Ethiopia

“[will] not construct, or allow to be constructed, any work across the Blue Nile, Lake Tsana, or the Sobat which would arrest the flow of their waters into the Nile except in agreement with His Britannic Majesty’s Government and the Government of the Soudan.” (Berhane, 2011).

Despite the fact that the Ethiopian government signed this agreement, it was deemed bizarre at the time that Egypt and Sudan effectively ignored Ethiopia in its claim to the Nile, despite 86% of its flow originating in the country. The treaty, however, remains of little relevance today.

On May 9th, 1906, an agreement was signed between Congo (at the time a Belgian colony) and Great Britain, where it was agreed that Congo would not construct any works on the Semliki or Isango River that would diminish the flow of water into Lake Albert (which sits on the present-day border between Congo and Uganda), unless in agreement with the government of Sudan (Grey and van Eetvelde, 1906). This treaty was mostly favourable to Sudan and Egypt, and paid little attention to upstream riparian states’ interests. However, this treaty currently does not have a great degree of influence in present-day negotiations.

On May 7th, 1929, a major agreement between Egypt and Sudan was signed over the use of the Nile waters. It stated that Egypt and Sudan were allowed to use 48 and 4 billion cubic metres respectively per annum (amounting to 92.3 and 7.7% of the river’s total flow), citing ‘historic acquired rights’ (Lumumba, 2007, p.14). Egypt also reserved the right to monitor the flow of the Nile in upstream countries and undertake large-scale water projects (such as dams) without other riparian states’ consent. Furthermore, Egypt was allowed to veto any projects proposed by other riparian states that might influence the total water flow into Egypt. During the negotiations, no riparian countries other than Egypt and Sudan were consulted or included in the decision making process. This has led to widespread criticism, especially from Ethiopia, and several scholars have voiced their objections to the treaty’s legality (Lumumba, 2007, p.17). Countries and scholars in disagreement with the 1929 agreement’s present-day relevance often cite Article 34 of the Vienna Convention, which states that “a treaty does not create either rights or obligations for a third State without its consent.” (United Nations, 1969, p.13). Since only Sudan and Egypt signed the treaty, its content would not apply in any way to any other states within the Nile Basin.

Egypt, on the other hand, cites the fact that the agreement has never been formally overturned in a court of law, and considers it valid pending further agreement (Kieyah, 2007, p.9).

In November 1959, the 1929 agreement was revisited by Egypt and Sudan, which had now become independent countries. Sudan demanded a more equitable division of the Nile waters (Abdo, 2004, p.50). The eventual agreement contained several provisions: Egypt and Sudan were the sole legal users of the Nile waters, and 55.5 and 18.5 billion cubic metres were allotted respectively. Furthermore, Sudan promised to start construction
on projects that would limit evapotranspiration from the Sudd and other evaporation-prone areas, in order to increase the Nile’s total flow. Egypt, in turn, agreed to start construction on the Aswan High Dam. This dam, completed in the 1970’s, created a 500km long reservoir stretching into Sudan, and can generate around 2 100 MW of energy (Scudder, 2003, p.2). Currently, it still generates 16% of Egypt’s electricity, but its biggest asset was the capacity to regulate flooding. The dam transformed Egypt from a society almost entirely dependent on flood patterns to one that could regulate the flow of water at will. Sudan, which was and still is not using its allowed 18.5 billion cubic metres per year, agreed to use its full water allotment.

The 1959 revision of the 1959 treaty is currently still seen by Egypt and Sudan as legally binding, and in spite of numerous objections by mostly Ethiopia, it is still the closest the Nile Basin has come to an overarching agreement. However, since no other countries than Sudan and Egypt signed it, it is often challenged by academics and government officials from Nile riparian states. Many states, including international, non-riparian actors, still call for basin-wide consensus.

In 1966, the International Law Association adopted the Helsinki Rules on the Use of the Waters of International Rivers. The document states that “each State is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the water in an international drainage basin.” (International Law Association, 1967). This is principle of ‘equitable share’ has often been used by upstream Nile Basin countries to counter Egypt and Sudan’s claim to dominance over the river. However, the Helsinki Rules are not legally binding, nor do they provide guidelines on how to deal with the Nile case specifically.

Egypt and Sudan reached out to other riparian states in 1967 by joining Hydromet, a project supported by the UN which aimed to establish cooperation between Nile Basin states (Tvedt, 2009, p.215). Its objective was to collect hydro-meteorological data of the catchments of the major lakes in the basin, in order to study the water balance in the Upper Nile. Despite some minor successes, the project failed to establish a long-term cooperation between the different states.

In 1993, Egypt and Ethiopia engaged in negotiations over the Nile for the first time as independent states, resulting in the signing of the Framework for General Cooperation (Abdo, 2004, p.50). Egypt and Ethiopia both agreed to follow international law when negotiating over future agreements, and expressed their commitment to the so-called ‘no harm’-principle. This principle basically states that new agreements and treaties should do no harm onto already existing water consumption in a country. Considering Egypt’s current water use, the deal was more favourable to Egypt than to Ethiopia, although the Framework did not contain any policies or detailed rules as to the future use of the Nile. However, Ethiopia’s rapid population growth and economic development demand a more sustainable solution than the 1959 agreement.

The next major step in the Nile negotiations was taken in 1999, with the launch of the Nile Basin Initiative (NBI), a platform where members of all riparian states can “develop the River Nile in a cooperative manner, share substantial socio-economic benefits and promote regional peace and security” (Nile Basin Initiative, 2014b). All Nile Basin countries except Eritrea are a member of the Initiative, which serves as a transitional agreement until all countries could agree to a sustainable solution. Egypt, a country not naturally inclined to change the situation in any way, agreed to be a part of the NBI after the World Bank put pressure on Egypt by drastically reducing its loans to the country (Swain, 2002, p.303). Although the NBI represented the first ever basin-wide initiative to solve the Nile water problem, so far no real steps have been taken to curb Egypt’s ‘acquired’ water rights. South Sudan became the latest member of the NBI when it signed the agreement in August of 2013 (Sudan Tribune, 2013a).

The ongoing negotiations within the Nile Basin Initiative resulted in the 2009 Cooperative Framework Agreement (International Water Law Project, 2010). The CFA aimed to install a legal framework for the equitable and fair use of the Nile for all riparian states, and actively called for a (re-) allocation of resources if necessary. However, despite decade-long negotiations, no agreement was reached over the exact definition of ‘water security’ (Article 14b of the agreement), and what exactly this concept would entail: Egypt and Sudan proposed an amendment to the original document, which would oblige other countries not to “adversely affect the water security and current use and rights of any other Nile Basin State” (Mekonnen, 2010, p.428). All other states were against this provision, and instead pushed for one that would allow them to use the Nile waters without prior consent of Egypt or Sudan. This created a deadlock in the negotiations, and eventually resulted in Sudan and Egypt’s refusal to sign.
Currently, seven countries have signed the CFA: Ethiopia, Rwanda, Tanzania, Uganda, Kenya, Burundi, and as recently as June 2013, South Sudan (Al-Jazeera, 2013b). The Government of Egypt up to this day refuses to sign the agreement, citing ‘historic rights’ to the use of the Nile (Government of the State of Egypt, 2013). However, the CFA is based on a majority vote rule, and with South Sudan’s signing of the treaty, the upstream riparian states are now in the majority. Egypt is therefore calling to instead shift to a consensus-based decision making process.

The overthrow of Hosni Mubarak in 2011 and the subsequent destabilisation of Egypt have left the country unable to respond in full to certain provocations it may previously not have taken lightly. When Ethiopia began constructing the Renaissance Dam, a huge hydroelectric project located on the Blue Nile, in 2011, Egypt at first protested, even threatening military action to prevent the dam from reaching completion (BBC, 2013b). However, Ethiopia continued construction undeterred, and even though Egypt has continued to express its concern, the rhetoric seems to have calmed down over the last few years. The dam is expected to be finished in 2017, and will generate around 6000 Megawatts of energy. Ethiopia claims that the dam will be beneficial to all Nile countries, including Egypt, but so far Egypt is refusing to accept this (BBC, 2014a).

To summarise, the conflict over the use of the Nile has been going on for more than a century. The two main adversaries, Egypt and Ethiopia, have exchanged occasional barbs and pokes over the years, but never has it come to a full-scale militarised conflict.

In recent years, it appears that Egypt’s colonial-era dominance (some might argue monopoly) over the Nile is diminishing. The recent Nile Basin Initiative and the Cooperative Framework Agreement that resulted from it may mean a change in policy and a shift away from the 1929 and 1959 agreements.

2.3. The Case of Sudan
Sudan has long been one of the most important countries in the Nile Basin. For the sake of clarity and convenience, this subchapter will first provide an overview of Sudan and South Sudan’s turbulent history, not necessarily in direct relation to the Nile, up to the 2011 referendum that granted South Sudan independence. Next, this subchapter will assess Sudan’s historic relationship with the Nile river, and line out its positions and policies up to 2011. South Sudan’s position in the Nile conflict and its starting points as they were outlined in 2011 will be discussed in a later chapter, as they are part of the analysis this study aims to perform.

2.3.1 A History of Sudan
Sudan occupies a huge land mass, and until 2011 was the largest country in Africa. It sits along the Nile, its north arid, thinly populated desert and its south covered in tropical, humid rainforest.

The country’s history does not begin at the British colonial age, but it is appropriate to start here, as it is in this age where its relevance to the global political world begins.

Although Sudan, especially its northern parts, have periodically been under Egyptian rule since the time of the Pharaohs, it was only in 1899 that Sudan came under definite Egyptian and British influence: Britain had increased its presence in Egypt after the completion of the Suez Canal in 1869, and sought to expand its influence to Sudan. After the Mahdist rebellion, which aimed to install a sovereign Islamist government, was defeated, Sudan became a so-called hybrid state: not exactly a colony of the British empire, but governed by a British Governor-General (Collins, 2008, p.33). Egypt, then a British colony, was also a signee to this agreement, which was called the Anglo-Egyptian Condominium Agreement of 1899.

Southern Sudan and its non-Arab, non-Muslim peoples proved much harder to conquer, and it was not for another thirty years before the British managed to navigate the Sudd wetlands and bring the region under its control (Collins 2008, p.35).

The British considered making South Sudan a separate colony due to the large differences in culture, language, race, politics and administration that existed between North and South Sudan. However, in 1947 it was decided that South Sudan remain part of Sudan proper (Al-Battahani 2006, p.2).

After Britain lost its influence over Egypt during the Suez Crisis, it granted Sudan independence in 1956, to prevent Egypt from claiming the territory for itself (Al Battahani 2006, p.3). This happened over the course of a three-year transition period, during which almost all of the administrative, military and political power was given to northern, Arabic-speaking elites. This misdistribution of power and resources sparked aggression in the south, and the first Southern rebellion broke out in 1955. This rebellion developed into what is often referred to as the North-South Civil War. The rebels, calling themselves the Anya Nya, continued to fight a guerrilla war from Uganda, but only managed to organise themselves properly after Joseph Nagu took control of the movement in 1970.

Meanwhile, the situation in Northern Sudan was everything but stable. The British-backed government was already overthrown in 1958 in a
coup led by General Ibrahim Abboud, who in turn was forced to step down in 1964, after which civilian-led governments took over. All of these, however, opposed Southern autonomy and independence. In 1969, Jaafar Nimeiri, the leader of a group of left-wing militiants, overthrew the Khartoum government with significant backing from the south, and signed a peace deal with Nagu in 1972, which gave the South more regional autonomy. Sudan became a politically secular state in 1973.

Nimeiri’s government felt increasingly threatened by the country’s powerful sectarian (Islamic) political movements, and found itself forced to take up Islamic figures into its cabinet, provoking so-called progressive Islamisation (Al-Battahani, 2006, p.4). The pressure on Nimeiri became so large that he abrogated the 1973 agreement with the South in 1983, making its acquired constitutional rights null and void (Salman, 2013, p.372).

This was the last straw for Southern rebel movements, which had become increasingly disaffected with the North’s increasingly Islamic policies and open rejection of Southern autonomy. In 1983, former army colonel John Garang formed the Sudan People’s Liberation Movement/Army (SPLM/A), which sparked a second civil war. Garang aimed to establish a secular, unified ‘New Sudan’, despite a majority of Southerners favouring complete independence and the failure of all attempts at peace talks with the transition government in Khartoum (Salman, 2013, p.373).

The 1986 North Sudan elections brought to power Sadig Al-Mahdi, who was a fervent supporter of an Islamic, unified Sudan. However, his presidency did not bring the political and economic stability that many had hoped for, and while he was in Addis Ababa for negotiations with John Garang, his government was overthrown in a coup led by Omar Al-Bashir in 1989.

The civil war itself was extremely brutal, with government forces hiring tribal militias such as the Misseriya in regions like Darfur and Kordofan to fight rebel movements in those areas, with the pretence of fighting a Holy War (Al-Battahani, 2006, p.4). This resulted in widespread famine and forced migration. Furthermore, tensions between ethnic groups in the South were stirred up, and infighting within the SPLM/A and among the population resulted in a splinter group, led by Riek Machar, splitting away from the SPLM/A in 1991.

The conflict escalated. Al-Bashir and his government increasingly saw it as a Holy War, or *Jihad*, and Northern fighters and militia members who died in the South were hailed as martyrs (Salman, 2013, p.377). Millions of people lost their lives in a war that, to both parties, became increasingly unwinnable.

Around the early 2000s, the cost of human life and fiscal resources had become so great and to so little avail, that both the SPLM/A and the Khartoum government became more open to negotiations. The international community also increased its pressure on Khartoum, pressing for the conflict to come to an end. Another incentive to end the war was the discovery of oil in South Sudan: it was only possible for Khartoum to exploit these resources if the country was unified and at peace. This gave way to serious negotiations, and in 2002 the first part of the Comprehensive Peace Agreement was signed (Salman, 2013, p.378), which gradually reduced the calls for *Jihad* and led to more acceptance of the South’s distinctly non-Arab culture, languages and people.

On January 9th, 2005, the full version of the Comprehensive Peace Agreement (CPA) was signed after tough, three-year long negotiations. The decades-spanning civil war came to an end. The CPA’s most important provision was the South Sudanese right to self-determination. This right, sought after by all factions of the SPLM/A during the latter half of the conflict (including Riek Machar, who reconciled with Garang and was allowed back into the movement) (Salman, 2013, p.385).

It was decided that a referendum be held in South Sudan exactly six years after the CPA was signed, on January 9th, 2011. The options available for South Sudanese citizens were either unity (federal or confederal) or secession. Furthermore, the CPA established that Sudan was a multi-ethnic, multi-lingual and multi-cultural nation, where religion should not be a factor in the peace building process (Salman, 2013, p.396). Religious discrimination was outlawed. Thirdly, and importantly, the CPA established an internationally monitored ceasefire, although still allowing for separate but equal armed forces on both sides. Fourthly, it was agreed that the North and South would each get a fair share of the oil- and non-oil revenues that both states generated (Salman 2012, p.4). Finally, the agreement detailed the conflict resolution process in a heavily contested state, Abyei, which is geographically part of North Sudan, but ethnically and religiously Southern. Despite tough negotiations over the exact size of these areas and the best way to solve local tribal disputes, it was finally decided that Abyei was to hold its own separate referendum on whether to join South or North Sudan, also on January 9th, 2011. Due to disputes between Khartoum and Juba over the oil wells in the area, and especially between the Ngok Dinka and Misseriya tribes over land rights
(the Dinka are mostly agriculturalists who do not move around, whereas the Misseriya are a pastoralist, cow-herding tribe which claims ownership of Dinka lands), this referendum did not take place as planned. There was an unofficial referendum held on October 31st, 2013, in which the residents of Abyei voted to join South Sudan, but this referendum was disputed by Sudan, and the region remains contested (BBC, 2013c).

After the CPA was signed, some relatively minor disputes arose and remained prevalent all the way up to the 2011 referendum. The Abyei conflict exacerbated and remained a source of conflict. Furthermore, only four weeks after the final ratification of the CPA, John Garang, who had been the chief negotiator within the SPLM/A, was killed in a plane crash on July 30th, 2005 (Salman, 2013, p.402). The event sparked riots all throughout the country, as people refused to believe that Khartoum had no hand in Garang’s death. Eventually, the situation calmed down, and Garang was succeeded by Salva Kiir, who remains president of South Sudan today.

On July 9th, 2011, South Sudanese residents voted overwhelmingly for independence. The civil war that, with interruptions, had lasted 50 years, had taken the lives of more than two million people and destroyed many more, had finally come to an end.

The new country now covers an area of about 640,000 square kilometres, or about 26% of greater Sudan’s total land mass. A 2009 census said its population is about 8.2 million, or about 21% of greater Sudan’s 39.1 million. South Sudan shares about 2000 kilometres of border with Sudan, most of which involves tributaries of the White Nile, such as the Bahr el Arab and the Bahr el Ghazal. It further borders the Central African Republic, Ethiopia, Kenya, Uganda and the DR Congo (Salman, 2013b, p.333).

The country managed to remain stable for only two and a half years. On December 15th, 2013, after a meeting of the SPLM/A’s National Liberation Council, violent clashes happened, initially between members of the Presidential Guard. The main reason mentioned for the clashes was President Salva Kiir’s firing of his Vice-President Riek Machar, following accusations from Kiir that Machar was planning to overthrow the government. The conflict soon took a turn for the worse, when ethnic clashes between the Dinka (who support Kiir) and Nuer (who support Machar) quickly developed into a humanitarian catastrophe (United Nations, 2014, p.5). The violence spread to Juba and the SPLM/A headquarters, after which arrest warrants were issued by the government for several key military and political figures. Riek Machar was one of them, but he evaded arrest and fled the capital to begin his own rebel movement. His intention was and is to bring down Mr. Kiir’s government. His forces subsequently took control over the capitals of Jonglei, Upper Nile and Unity states, at the cost of many human lives.

As of yet, it is unclear why and how the conflict escalated so quickly, and both sides are blaming each other for the atrocities committed against civilians. The country has become massively unstable, although Salva Kiir’s government remains in power and is still seen as legitimate by most other countries. However, there appears to be no end in sight to the violence; at the time of writing (April 2014), rebel forces have been attacking oil fields, vital to the country’s economic development, and the UN warns that the country needs $230 million in international aid to prevent large-scale famine (New York Times, 2014a).

The conflict threw the country back into a state closely resembling civil war. Its attempts at development have been severely hampered, and the country can no longer focus on the long term, but instead is forced to put all its efforts into stabilising the country and ending the violence.

2.3.2 Sudan and the Nile
Sudan, North as well as South, has always been very dependent on the Nile river. All major tributaries, including the White Nile, the Blue Nile and the Atbara, flow through it (Tvedt, 2009, p.179). Sudan has the second largest irrigated area in all of Africa, second only to Egypt, and over the course of its history, government officials have repeatedly referred to Sudan as the ‘Bread Basket of the Middle East’. This subchapter will first briefly discuss the hydrological dependence of both North and South Sudan on the Nile, and then detail Sudan’s history of Nile water management.

Present-day South Sudan is highly dependent on the White Nile. More than 90% of the country lies inside its catchment area. The heavy evaporation in the Sudd swamps that occur, as well as the size of the river make the country a very important contributor to the Nile debate (Salman, 2013b, p.335). The country is not in the Blue Nile’s catchment area, and although some areas of the country could benefit from, for example, agricultural works in the Ethiopian highlands, it is fair to say that the country’s dependence on the Blue Nile is low.

Sudan (the north) is less dependent on the White Nile: the river enters the country near the town of Kosti, but the majority of the country’s water comes from the Atbara and the Blue Nile, which
both originate in the Ethiopian highlands (fig. 3).

However, unlike South Sudan, the majority of Sudan is desert, especially in the north. Therefore, its agricultural, environmental and electrical dependence on the flow of the river is much greater. The White Nile’s flow varies little over the year, which makes it an important safeguard for water consumption and electricity production for Sudan. However, it still relies mainly on the Atbara and the Blue Nile to fulfil its needs.

During the Colonial era, several important river projects took place in Sudan. Shortly after the First World War, the Sennar Dam was constructed. 80% of its 800 million m\(^3\) storage capacity would go to Egypt to irrigate the cotton farms (Tvedt, 2009, p.182). It was also used to irrigate the Gezira plain, a large, mostly flat area southeast of Khartoum. To this day, it is one of the largest man-made irrigation projects in the world.

After this, the next large dam, the Jebel Auliya dam, was constructed to the benefit of Egypt. It was completed in 1937 after political difficulties halted construction, and eventually had a holding capacity of 3,500 million cubic metres. A project of this size naturally affects its surroundings, and it disrupted the way of life of many people in the area (Tvedt, 2009, p.185).

In 1925, a commission, headed by the British, was formed to make recommendations with regard to the Nile waters in Sudan. In its report, it reasserted Egypt’s claims to the sole use of the Nile, an assertion which was later taken up in the 1929 Nile Waters Agreement. Sudan was henceforth only allowed to construct irrigation or power works within its borders with the explicit permission of the Egyptian government.

In the period leading up to South Sudan’s independence, the country nearly doubled its population, greatly increasing its need for water. The 1929 agreement therefore had to be adapted to accommodate these circumstances. In the early 1950s, the Sudanese government threatened Egypt to halt construction on the Roseires Dam and an extension to the Gezira scheme (which, again, would be beneficial to Egypt) if its water use rights were not redefined. This led to tough negotiations between the two countries, which had not been resolved when Sudan became independent in 1956 (Tvedt, 2009, p.189). It was only after General Ibrahim Abboud took power in 1958 that negotiations were back on the table. Egypt welcomed this, as they needed a deal with Sudan to begin construction on the Aswan High Dam.

As one might expect, the 1959 agreement was not necessarily beneficial to Sudan: it was left with a mere 18.5 billion cubic metres out of a possible 84, the rest going to Egypt.

However, the 1959 agreement did pave the way for the construction of several more large water works, the Roseires dam and the Khashm el Girba dam. The latter, located on the Atbara to facilitate the flooding of parts of the Gash delta, was completed in 1964, and was plagued with problems from the start: it caused severe forced migration among local inhabitants, and the amount of silt building up in its reservoirs is so large that the dam is only running at 60% capacity today (Tvedt, 2009, p.195). The only solution to this problem is to build dams in Ethiopia to lessen siltation.

Another major attempt at controlling the Nile was the Jonglei Canal. The Sudd, as mentioned before, is the world’s largest freshwater wetlands system, located in current South Sudan. Water gets stuck in this area for a long time, causing up to 14 billion cubic metres per year to evaporate. The best way to counter this, according to British and Egyptian authorities, was to build a canal to bypass the Sudd area in order to prevent evapotranspiration (Tvedt, 2009, p.200). However, the implementation of this
project was hindered by the ongoing civil war between North and South Sudan. Nonetheless, construction of the canal began in 1978 (Tafesse, 2001, p.42). Originally, the canal was supposed to be around 360 kilometres long, about 50 metres wide and 7 metres deep. The total amount of money earmarked by both the Sudanese and the Egyptian government was initially around 125 million US dollars. Construction came to an abrupt end when the head office of one of the contractors, La Compagnie de Constructions Internationales, was attacked by John Garang’s SPLM/A in 1984 (Tafesse, 2001, p.43). The reason the SPLM/A gave for the attack was that the project would only benefit Sudan and Egypt, as none of the promised projects that were supposed to help South Sudan’s economic development had even been started in 1983 (Salman, 2013b, p.343). Currently the canal is lying idle, with no future construction projects in sight. This is partly due to serious objections from both environmental groups and Sudd natives, who fear that it will become impossible to preserve the Sudd’s unique natural beauty and importance to South Sudan’s lifestyle and culture if the canal is constructed. They received international support when the Ramsar Convention on Wetlands declared the Sudd a Wetland of International Importance, granting it protected status (Ramsar, 2006).

The Government of Sudan attempted to implement various schemes over the years in order to improve both water availability and electricity production throughout the country. For example, the Al-Bashir government launched a ten-year plan known as the Comprehensive National Strategy, which ran from 1992 to 2002, and focused on food security, agricultural development and sustained resource use (Tvedt, 2009, p.207). The plan included building several new dams, investments in irrigation schemes and extending the Roseires dam to increase its capacity. Unfortunately, the policy failed due to a lack of experience in the country with liberal-economic policies and an unwillingness of many people to cooperate. However, it is not water availability that appears to be the main problem for both countries, but efficiency. Currently, Sudan and South Sudan together do not use the full 18.5 billion cubic metres as was allotted in the 1959 agreement. It is also worth noting that all major irrigation projects and dams are located in current North Sudan. South Sudan, comparatively, is using very little of the Nile waters.

In general, the relationship between Sudan and other countries has been mixed. Egypt and Sudan have usually been on speaking terms, especially with regard to water policy (Tvedt, 2009, p.213). However, Sudan stood and stands to win a lot by cooperating well with Ethiopia: allowing Ethiopia to build dams on the Blue Nile could reduce flood risk and problems with sedimentation and siltation in Sudan. The 1959 agreement effectively tied Sudan’s hands in regards to its wishes of cooperating more with Ethiopia.

This situation has not changed dramatically over the years, although minor incidents have occurred that hinted at increased cooperation between Sudan and Ethiopia (such as the 1991 Statement of Principles over equitable use of the Blue Nile and the Atbara) (Tvedt, 2009, p.216). Sudan also joined the Nile Basin Initiative in 1999, but during negotiations in the first few years of the 21st century, the country appeared firmly on the side of Egypt.

In sum, the Khartoum government has largely determined Sudan’s water policy ever since the country became independent in 1956. South Sudan has effectively had no say in this, and sometimes, such as in the case of the Jonglei canal, resorted to sabotage rather than negotiations to make its voice heard. Despite having a huge part of the White Nile’s catchment basin within its territory, South Sudan has not had the opportunity to actively determine what to do with these waters over the course of its history. This changed in 2011, as the next chapters will explain in more detail.
3. Sudan’s Current Situation

This chapter will explain which steps South Sudan has taken in regards to its water policy, from the referendum act in 2005 up to the present day. It will discuss the hydropolitical situation in the region since the country was allowed its right to self-determination in 2005. Next, it will detail the more recent events in South Sudan, including the December 2013 re-ignition of the country’s internal and intragovernmental conflict. A discussion of these policies and events, the reasons and motivations behind their implementation and their implications for the Nile Basin will be discussed in the next chapter.

3.1. The Peaceful Years 2005-2013

The 2005 Comprehensive Peace Agreement between the Government of Sudan and the SPLM/A was a milestone in the North-South conflict and largely brought an end to the violence that had been going on between the two sides for decades. Regarding the Nile and the management of its waters, the document states that

“the Nile Water Commission, the management of the Nile Waters, transboundary waters and disputes arising from the management of interstate waters between Northern states and any dispute between Northern and Southern States shall remain exclusive competencies of the National Government during the Interim Period” (UN Missions 2005, p.40).

There was ostensibly no change in water policy after the 2005 agreement: the status quo as it existed before was maintained up to the referendum in 2011. This is exemplified by the Jonglei Canal case. Theoretically, the Sudanese government would have been able to restart construction activities on the canal during the interim period, but the Southern Sudanese government stated its environmental, social and economic concerns with the project, and expressed its unwillingness to cooperate on expanding the canal (Kiir, 2010). Between 2005 and 2009, little happened in Sudan in terms of water policy; however, several large-scale projects were planned, including the heightening of the Roseires dam and the construction of the Bedden Hydropower Dam in Southern Sudan (Dams Implementation Unit, 2010). These projects were all in accordance with the 1959 agreement, as Sudan was not making full use of its allotted 18.5bcm, and thus entitled to construct more water conservation projects.

The 2009 South Sudan Referendum Act, which established the circumstances and conditions under which the 2011 referendum was to be held, named a number of key issues that North and South Sudan would engage in serious negotiations over before the referendum, knowing that negotiations between two independent states are usually more difficult than between two regions belonging to the same state (National Legislature of the Republic of the Sudan, 2009, p.32/33). One of these issues was water. However, thanks in part due to the escalation of the conflict over the Abyei region, these negotiations did not take place before July of 2011. Thus, the issue remained unresolved for the time being.

Once independent, the South Sudanese government took several decisions that affected its position in the Nile waters debate.

In February of 2012, the government awarded a US$ 1.4bn contract to China GeZhouBa Group Co Ltd., the main contractor for the Three Gorges Dam project in China, for the construction of the Bedden Hydroelectric Dam, to be located around 30km south of Juba (Dams and Alternatives, 2012). This project had been in development during the interim period, but it was an independent decision by the South Sudanese government to award this contract and begin construction. The dam is planned to be finished in 2019, and will have an installed capacity of 540MW.

In the same year, the South Sudanese and Sudanese governments signed an agreement reiterating their friendly relationship and their willingness to peacefully resolve any remaining disputes (Cooperation Agreement, 2012).

In August of 2013, the South Sudanese parliament voted to become a member of the Nile Basin Initiative, although it had already applied for membership months before (Sudan Tribune, 2013a). This step in itself was not all that remarkable: Egypt is also a member of the NBI, and has repeatedly expressed its willingness to cooperate on water issues through multilateral negotiations. It was reasonable for South Sudan to join the Initiative and become a full-fledged member of the Nile community.

Soon after joining the NBI, South Sudan ratified the Cooperative Framework Agreement (as mentioned under subchapter 2.2.2). The 1959 agreement and the CFA contain provisions directly contradictory to each other, and CFA signatories consider the agreement to effectively be a replacement of the 1959 situation (Katz, 2013, p.1267). The most hotly contested provision in the CFA is article 14b, which states that countries would ‘not [...] significantly
affect the water security of any other Nile Basin State’, whereas Egypt and Sudan wanted it to read ‘not […] adversely affect the water security and current uses and rights of any other Nile Basin State’ (Arsano, 2011, p.4/5). The original wording was accepted and ratified by a 7-1 vote margin (Egypt voting against) in May 2009.

South Sudan signed the CFA in June of 2013. In the same month, the South Sudanese government endorsed Ethiopia’s bid to construct the Renaissance Dam on the Blue Nile (Sudan Tribune, 2013b). This dam, when completed, will lie around 30 to 40 kilometres from the South Sudanese border, and the government reckoned it could be an important source of electricity and spur development in the country. As was previously mentioned, the building of the dam is contested by Egypt, which argues that its construction goes against the 1959 agreement and will impair Egypt’s use of the Nile waters.

In December of 2013, Sudanese president Omar Al-Bashir also publicly announced his support for the Renaissance Dam, leaving Egypt the only opponent to the project at that time (Global Times, 2013). Al-Bashir supported the findings of the International Panel of Experts, which issued a report on May 31st, 2013, stating that the construction of the dam would result in an (insignificant) 3% evaporation loss at the Ethiopia-Sudan border. There would, however, be significant benefits to the dam’s construction for both Sudan and Egypt: the report mentions reduced siltation at Lake Nasser, increased protection against flooding, seepage and spillage, and an overall increase in the Eastern Nile Basin storage capacity from 134 210 Mm$^3$ to 194 210 Mm$^3$ (IPoE, 2013, p.41).

The first eight years of South Sudan’s self-reliance (including two and a half years of actual independence) were relatively quiet and free from violent conflict. For various reasons, the country appeared to be aligning itself more and more with upstream riparian states, mainly Ethiopia. It expanded its planned construction projects on the White Nile, but remained reluctant to restart construction of the Jonglei Canal. At the time, the South Sudanese government considered this to be detrimental to its own ecological and demographic position, and alignment with upstream riparian states much more beneficial.

3.2. A Return to Conflict 2013 -

This subchapter will summarise the positions of other riparian states in the South Sudan conflict of 2013-2014, in order to clarify the situation as it currently is. The next chapter, Chapter 5, will include a more detailed discussion of these positions, and the possible reasons and motivations behind them.

As mentioned under subchapter 2.3.1., South Sudan only enjoyed a brief period of peace before violent clashes severely disrupted the country and caused a humanitarian catastrophe. Thousands of people were killed, and hundreds of thousands more became internally displaced (fig. 4).

![Fig. 4: Conflict-stricken areas in South Sudan (BBC, 2014b).](image)

This left the country in no position to conduct negotiations on water policy, and it was suddenly all but certain that planned projects and policies could even be implemented in the near future.

However, the other riparian states now found themselves forced to take sides in the conflict, and express their support either for Salva Kiir’s government or Riek Machar’s rebel movement. Many countries were wary of this, considering that no one truly knew who was to be held accountable for the mass killings and extreme violence.

Uganda was the first to act: on January 13th, 2014, a month after the conflict started, President Yoweri Museveni sent 1 600 soldiers into South Sudan to support Salva Kiir’s government troops in their fight against the rebels (BBC, 2014c). Machar’s actions were renounced as a ‘coup attempt’.

In a response to this, Ethiopia’s Prime Minister Hailemariam Desalegn called for all foreign troops in South Sudan to withdraw, stating that ‘because of this intervention, the conflict might end up as a regional conflict because there are other interests also from other sides’ (South Sudan News Agency, 2014). Desalegn reiterated Ethiopia’s commitment
to a peaceful solution to the conflict, and called for the release of all political prisoners in the country.

Egypt initially expressed its concern about the situation but did not openly take a side in the conflict (Daily News Egypt, 2013). This changed in March of 2014. Egypt publicly renounced Machar’s actions, and promised to send troops to South Sudan to support Kiir’s fight against ‘coup attempts’ (Government of South Sudan, 2014b).

Sudan also publicly announced its support of Kiir’s government, and offered help by tightening controls on the Sudan-South Sudan border and holding talks for protecting the oil fields in the region (Sudan Tribune, 2014a). Sudan has so far accepted around 30 000 South Sudanese refugees into the country.

In short, it appears that most regional players back Kiir’s government, although they do not openly support his version of events (Machar attempted a coup d’état), considering that violent acts have been committed by both sides. Most governments are careful to not condone this from either side. Ethiopia is an outlier in the debate, being the only country calling for less military intervention and immediate peace talks.
4. Discussion

In chronological order, this chapter will discuss the events that occurred and the actions that were taken by all Nile riparian states (as mentioned in the previous chapter), and analyse how they influenced the hydro-political situation in the Nile Basin. Next, the author will sketch different scenarios on how the conflict will play out in the foreseeable future.

4.1. Analysis

The 2005 peace agreement contained no major changes in either Sudan or South Sudan’s rights to and claims over the Nile waters. In fact, it appears that water politics played a very small role in the negotiations in comparison to other issues such as the right to self-determination. It seems that the SPLM/A made a conscious decision not to include water rights in the peace negotiations. Salman M.A. Salman (2012, p.11) points out two reasons for this.

Firstly, Salman argues, the Nile Basin Initiative’s attempts to conclude a Cooperative Framework Agreement proved fruitless in the first years of the NBI’s existence. Any attempt by the SPLM/A to increase its influence over the Nile would be seen by Egypt and especially Sudan as an attempt to befriend Ethiopia and other upstream states. This could easily jeopardise the negotiations process. The hard-won right to self-determination would be in danger, and this was seen as a higher priority. This argument seems reasonable: partly due to the cultural, linguistic and geographic differences between the two Sudans, it was a fair assumption at the time that the newly independent South Sudan would identify itself more with the upstream riparian states rather than Egypt or Sudan. Sudan, and by extension Egypt, could easily see it become a competitor in the Nile issue, and the SPLM/A’s temporary assurance that this would not (yet) be the case eased the negotiations process. The same goes for other states: by not making hydropolitics part of the negotiations, other countries found it easier to support or at least remain neutral on South Sudan’s bid for independence.

Secondly, Salman mentions that there were no significant irrigation projects going on in South Sudan at the time of the negotiations. The only projects of significance were in the North, although they did not exhaust the 18.5 bcm the country was allowed to use under the 1959 agreement. South Sudan’s existing projects were all either unfinished or in serious need of restoration. For the time being, the high precipitation in South Sudan and the constant flow of the White Nile would be enough to ensure the country’s water supply.

This argument, again, seems agreeable. Not demanding a larger share of the Nile waters meant securing South Sudan’s water supply for at least the near future. The alternative would have meant more difficult negotiations with a more questionable outcome, and risked alienating Egypt and Sudan as potential allies.

However, there might be a third reason for the SPLM/A not to negotiate over the Nile. SPLM/A negotiators might have foreseen that the issue would become more important in the near future, and they were trying to position themselves so that future negotiations would be beneficial, regardless of what direction they would go in.

Under the 2005 agreement, Sudan agreed to share 50% of the oil revenue with South Sudan after it would become independent. This meant a significant loss for Sudan, and it would force them to invest in other industries to make up for the lost revenue. One of these industries would likely be agriculture, considering Sudan has enormous swaths of irrigable land that are currently not being used (Salman, 2013b, p.344). Therefore, as SPLM/A negotiators might have foreseen, water rights could become a much more important issue in the years after the peace agreement. They reckoned the CFA negotiations could go two ways: either Egypt would retain its influence, thus safeguarding the 1959 status quo, or the CFA would become the new norm, thus changing the status quo in favour of Ethiopia. By remaining neutral, South Sudan was in a position to either demand a share of the White Nile waters if the 1959 agreement was upheld, or switch sides and become a CFA signee if that was to be the new norm. Considering there was no immediate need for South Sudan to secure its water supply, this was an ideal position to be in.

As mentioned in subchapter 4.1., South Sudan and Sudan were not in dispute over water rights between 2005 and 2009. Despite occasional bickering over Abyei and oil wells, there was little violent escalation, and disputes were mostly resolved through negotiations. Water, it appears, had been pushed to the side as an issue of minor importance. The two parties worked together on the plans for the development of the Bedden dam, although these plans did not come to fruition during the interim period.

The 2009 South Sudan Referendum Act mentioned water was one of the key issues to be resolved between the two nations before the referendum. Both South Sudan and Sudan agreed that there would have to be some sort of agreement between them if they wanted the process of separation to run smoothly. These attempts at negotiation failed, and the issue remained unresolved until after South Sudan declared itself independent.

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In 2012, the two countries signed an agreement reaffirming the two nations’ friendly relationship and readiness to cooperate on border issues, pensions, security, et cetera (Cooperation Agreement, 2012). This was mostly a sign of good will: the two countries saw each other as allies, and aimed to develop their relationship in a positive way despite years of civil unrest and rivalry. The agreement did not demarcate any borders in disputed areas, as it was mostly provisional, although it did reaffirm both sides’ willingness to cooperate on these issues, as well as the rights of all citizens to freedom of movement, property ownership and residence (Sudan Tribune, 2012).

However, the agreement did not mention water security. This could mean two things: either it was pushed aside in favour of more important issues such as border disputes, oil gains and economic development, or the issue was considered to be more or less resolved. Either way, the water issue was apparently not important enough for the two nations to be in conflict over.

In its first years of independence, South Sudan allied itself more and more with the upstream riparian states. This was exemplified by the country’s signing of the Cooperative Framework Agreement in 2013. Signees effectively consider the CFA to be a replacement of the 1959 agreement, which is the main reason why Egypt is objecting to it. South Sudan’s signing of the CFA and the subsequent endorsement of Ethiopia’s Renaissance Dam meant a big step upstream (Sudan Tribune, 2013b). At the time, there were some significant advantages to this: South Sudan could personally benefit from the Renaissance Dam in terms of electricity and some (relatively minor) irrigational structures in the country’s northeast. Furthermore, it gave the government the opportunity to allocate more White Nile waters for itself, and leave the conflict over the Blue Nile between Sudan, Egypt and Ethiopia.

Around this time, it seemed very likely that the CFA was going to become the new overarching Nile agreement, especially after Sudan also endorsed the Renaissance dam in December of 2013. Al-Bashir’s government seemed to have realised that it had a lot to gain from cooperating with Ethiopia, especially in terms of flood protection, reducing siltation and the expansion of the electricity grid. This left Egypt as the lone opponent to the CFA, and it appeared that it was only a matter of time before it was forced to capitulate and give in to the other states’ demands.

The escalation of the conflict between Salva Kiir and Riek Machar completely changed this apparently stable situation almost overnight. All Nile Basin governments suddenly found themselves forced to take sides in a conflict they had not seen coming. South Sudan was thrown into a civil war-like situation, with horrific consequences. Salva Kiir was suddenly in desperate need of support, and welcomed Uganda’s troops into the country in January of 2014. Uganda’s President Yoweri Museveni has a vested interest in maintaining some degree of stability in South Sudan, not only because the two countries share a border and there is a risk of the conflict expanding into Uganda, but also because of South Sudan’s substantial oil riches. Museveni might be looking to expand his influence over Kiir’s government, and supporting him militarily might be a good way to do so.

Sudan’s government is also openly backing Kiir, although it is not sending any troops as of yet. Some argue that this is mainly to safeguard oil revenue (Marclay, 2014, p.3), but it is a little more complicated than that. Firstly, although Khartoum is generally not opposed to having some minor instability in South Sudan, as this improves its position in any negotiations over oil or water rights, too much stability is detrimental. South Sudan’s oil wells are now at serious risk (New York Times, 2014b). Destabilising the country further could mean a nullification of existing agreements, not only in terms of oil, which would only affect Khartoum negatively (Sudan Tribune, 2014a).

Secondly, by helping Kiir assure his position as the country’s legitimate leader, Khartoum could extract further concessions from him in the future. The rapprochement is not entirely one-sided: Kiir had to ensure friendly relations with Khartoum before Machar would have a chance to do so. Kiir needs all the allies he can find, even if it means asking the help of a former enemy (Thoughts on the Sudans, 2014).

Egypt was at first hesitant to express support for Kiir’s government, but this changed not much later. On March 11th, 2014, Egypt announced that it would also be sending troops into South Sudan to support Kiir’s government in his fight against Machar (Government of South Sudan, 2014b).

This reaction might seem somewhat counterintuitive, since Egypt and South Sudan had been drifting away from each other during the last few years, but there is some sense to it.

Egypt lost an ally in Sudan after it endorsed the building of the Renaissance dam and building up more friendly relationships with Ethiopia. Egypt saw its water security at risk, and feared losing its dominance over other Nile countries altogether. Therefore, Egypt sought a new ally in South Sudan.
Egypt would benefit from seeking to align itself with Kiir, as it would provide leverage to pressure South Sudan into restarting construction on the Jonglei Canal, or otherwise shift its stance in the Nile Basin Initiative negotiations. Kiir’s government has little to say in the matter, as it is entangled in a violent conflict and in no position to refuse military support from any side (Mekonnen, 2014). This became even more apparent when Egypt and South Sudan signed a military cooperation agreement on March 22nd, 2014 (Sudan Tribune, 2014b).

By doing this, Egypt is adapting to the changing geopolitical realities in the region, and trying to gain at least one important ally in its face-off against Ethiopia. It seeks to increase its pressure on Addis Ababa and Khartoum. For example, by having troops in South Sudan, the Renaissance dam suddenly lies within Egyptian combat radius (Madote, 2014a). Despite Egypt’s recent destabilisation after the overthrow of the Morsi government, the country is still able to put pressure on other countries, and it appears that it has not given up the fight for dominance over the Nile.

While Salva Kiir is happy with any help he can get, he has expressed his anger over some other countries’ lack of support for his version of events, namely that Machar was planning a coup d’état and that Kiir was justified in ousting him. This is especially true for Ethiopia, which called for the withdrawal of all foreign troops in the country (South Sudan News Agency, 2014). This angered Kiir, and he has alleged that Ethiopia might be funding Machar’s rebellion (Madote, 2014a).

There are several reasons behind this theory. Firstly, Machar is Nuer, and Ethiopia is trying to protect its own Nuer population that lives in the country’s southwest (Madote, 2014b). Secondly, as some allege, opposing military intervention could be a way for the Ethiopian government to deflect attention from its own deteriorating human rights situation by presenting itself as the region’s peacekeeper, thus improving its relations with the West and gaining political clout to increase its influence over the region.

These arguments are not entirely justifiable. It seems more likely that there is a financial or geopolitical incentive for Ethiopia to keep the region as stable as possible, and de-escalate the conflict through peaceful means.

The destabilisation of South Sudan is detrimental to Ethiopia. Before the conflict escalated, the two countries were signing partnerships, and it appeared that South Sudan was aligning itself more and more with the upstream riparian states, which was very much in Ethiopia’s best interest.

The escalation of the conflict changed this situation. South Sudan is now more unstable than it was a year ago, and in no position to be a reliable partner in any way. This poses a problem for Ethiopia: it loses a partner in the CFA and NBI negotiations, which appeared to be going Ethiopia’s way, especially after Sudan also endorsed the construction of the Renaissance dam and agreed to increase interstate cooperation.

Ethiopia therefore has little personal interest in backing Riek Machar’s rebel movement: when Salva Kiir was firmly in power, when South Sudan was stable with no rebel opposition to speak of, the relationship between South Sudan and Ethiopia was what Ethiopia wanted it to be. It was Kiir’s sacking of Machar as vice-president and the subsequent rebellion that escalated the conflict and ended Ethiopia’s rising influence in the region. Thus, Ethiopia has a vested interest in restabilising the situation, and backing Machar’s rebel movement is not a good way to do this; it is simply unfeasible that Machar’s troops will be able to overthrow Kiir’s government and create a stable regime within a reasonable time span. Furthermore, before the conflict escalated, Addis Ababa was already on friendly terms with Kiir’s government, and there is no reason to seek a regime change: it would simply not improve the relationship between the two countries since it was already good.

At the same time, Ethiopia knew it could not endorse Uganda sending troops into the country, as this would mean that Egypt would be allowed to send in troops as well, which, as previously mentioned, would give Egypt leverage in the conflict over the Nile dam. Any military intervention from either side means a step away from peace talks and a peaceful solution to the conflict. Thus, Ethiopia’s calls for demilitarisation and immediate peace talks between Kiir and Machar make both geopolitical and economic sense. An unstable South Sudan is beneficial to Egypt (since South Sudan is now no longer able to align itself with Ethiopia in the Nile dispute), but not to Ethiopia. Therefore, having no foreign troops in South Sudan whatsoever and increasing the efforts to organise peace talks and de-escalate the conflict is in Ethiopia’s best interest. The claims that Addis Ababa is backing Machar out of personal interest, essentially turning the conflict into a proxy war, do not appear to hold much water.

To summarise, the escalation of the conflict between Kiir and Machar in December of 2013 has had a major influence on the Nile waters negotiations. Almost overnight, Egypt was no longer the lone opponent of the Cooperative
4.2. Future Scenarios

This subchapter will attempt to predict what the hydro-political future of the Nile conflict might look like, in the light of the events in South Sudan. Taking into account that it is of course impossible to accurately predict the future, multiple factors have to be considered and analysed. Therefore, this subchapter will detail several different ways the hydro-political situation in the Nile Basin might change in the foreseeable future: through climate change, an exacerbation of the current violent conflict, through continued political bickering, and finally through increased interstate cooperation.

4.2.1. Climate Change

The first factor to be considered is climate change. It is becoming increasingly clear that excessive greenhouse gas emissions and other anthropogenic activities are having a serious effect on the earth’s climate. In 2014, the Intergovernmental Panel on Climate Change (IPCC) issued its latest comprehensive report on anthropogenic climate change, and warned policy makers that the window of opportunity to avoid exceeding the internationally agreed safe limit of 2 degrees Celsius by 2100 is rapidly closing (BBC, 2014d).

The IPCC also published detailed reports on what effect climate change will have on the different continents. In regards to the Nile Basin, the IPCC concludes that Eastern Africa will see wetter rainy seasons and less frequent and intense droughts during the 21st century (IPCC, 2014, p.11/12). South Sudan, Uganda and parts of Kenya will see increased drying in August and September. Over the last 30-60 years, the region has seen more frequent extreme rainfall patterns (droughts and floods), but it is not entirely clear whether this is due to anthropogenic activity or multi-decade weather pattern variations. What is clear, however, is that the region will most likely see an increase in heavy precipitation in the near future. This is no cause for immediate concern for South Sudan: the country depends on rainfall to support its water supply, and it is not likely that this source of water will dry up soon. However, there might be some need to revise its water policy to adapt to these changing patterns. The country might have to invest in flood protection or find other ways to not suffer too much damage from torrential rains. This would require investing more in sustainable, flood-proof irrigation projects throughout the country. However, due to the uncertainty and unpredictability of such extreme events and the country’s current instability it is unlikely that South Sudan will be able to implement a comprehensive climate change adaptation strategy in the near future. On the other hand, South Sudan is not among the countries that will suffer the most from climate change, and thus it may not soon cause an outright ecological or humanitarian disaster.

The IPCC report states that the Nile Basin will see an increase in stream flow in the medium term (2010-2039), but a strong decrease (as measured at Aswan) after this, due to a combination of climate change and upstream economic development (IPCC, 2014, p.18). The areas downstream from Aswan will see a decrease in water allocation for agriculture in the long term. These long-term predictions are unlikely to prompt serious hydro-political reforms in the Nile Basin. The actions taken by different states will most likely be more reactionary than strategic, and the cooperating states will probably react to changing patterns in precipitation and increased water consumption due to changes in population as they present themselves. The changes projected by the IPCC are simply too small and unpredictable to warrant a serious and immediate change in policy. Climate change will affect the Nile Basin, as the IPCC report confirms, but not as much as changes in population pressure, food security or interstate conflict. Unlike other parts of earth, where climate change will increasingly determine much of countries’ politics and economic situation, the Nile Basin might avert the worst effects of anthropogenic global warming, and instead focus on other, more pressing issues such as overpopulation and food security.

4.2.2. Violent Conflict

The second scenario, how South Sudan’s internal conflict might continue, is through further escalation of the conflict, with other Nile Basin countries becoming increasingly entangled in it.

Tensions over the use of the Nile waters have been simmering for hundreds of years, as detailed in chapter 2 of this study. However, the conflict has never developed into full-scale violent confrontation. This could be a sign of the region’s relative stability and general opposition to hostilities, although, as was also pointed out in chapter 2, water resources are seldom the main reason for two conflicting parties to go to war. Contrary to this, intrastate conflict has been all too common within the Nile Basin: Sudan and South Sudan have seen and are seeing their fair share of violence, Uganda saw the rise and fall of the Lord’s Resistance Army, and currently Egypt is experiencing violent clashes between two increasingly distinct groups in its society.
It is, however, rare that Nile Basin conflicts spread across international borders, except when it comes to refugees. Some internal conflicts were fought over resources (such as in the DRC), others were fought along religious or ethnic lines. The current conflict in South Sudan seems to be mostly an ethnic conflict. Ethnic Dinka and Nuer have become increasingly unable to seek peace talks, and even international intervention from other Nile states is not mitigating the violence. Violent ethnic conflicts are never easy to resolve. It not only requires the passing of laws, the enactment of policies and the implementation of reforms that are satisfactory to all parties; this would merely be conflict settlement. True conflict resolution requires much more than that, namely a transformation in the relationship between the conflicting parties, and the removal of the cause of the problems (Isajiw, 2000, p.114).

One example of this is the case of Rwanda. In 1994, the country experienced extremely violent clashes between ethnic Hutu and Tutsi, resulting in the deaths of hundreds of thousands of people in a mere 100 days. After the violence ended, serious reforms were necessary, not just judicial and political, but also societal reforms to prevent such violence from happening again. The Rwandese government not only invested heavily in poverty reduction as a reconciliation effort, but also made ethnicity-based decision making, on a macro as well as a micro level, illegal (Zorbas, 2004, p.38). Cultural reconciliation also plays an important role: genocide memorials and monuments have been erected throughout the country, to serve as a permanent reminder of the violence. However, despite Rwanda’s remarkable upsurge in economic development of the past years (ADB, 2014) and the best efforts of Rwanda’s people, its government and the international community to rebuild the country, the ethnic tensions have not been fully resolved (Zorbas, 2004, p.41). Hutu’s and Tutsi’s disagree on the best methods of reconciliation, and although the violence in the country has thankfully ended, the root causes of the conflict have not yet been eliminated.

South Sudan might be facing a similar situation. The clashes between Dinka and Nuer have not yet developed into a genocide, but so far it appears that tensions are growing rather than receding. It is very possible that the current conflict will remain a problem for the country for years to come, thus hampering its development and its position in the negotiations over the Nile. If Salva Kiir can suppress Riek Machar’s rebellion, bring an end to the violence, and manage to reconcile Dinka and Nuer in such a way that peaceful cooperation and progress becomes possible, then South Sudan will have taken a big step forward towards overcoming its internal struggles. However, this will be an incredibly difficult task, as exemplified by the case of Rwanda mentioned above. It will require massive effort from all sides, including the other Nile Basin countries.

As long as particularly Ethiopia and Egypt see South Sudan as a theatre of proxy war, where both countries have their own interests to protect, these efforts remain compromised. A truly peaceful and sustainable solution to South Sudan’s current problems is not immediately in sight, but the fact that other countries are bickering over what should be done does not bring the solution any closer.

Therefore, the scenario of a perpetuated internal conflict is a bleak one: if South Sudan remains in an effective state of civil war and fails to quickly resolve the simmering tensions within the country, the recent developments in the conflict over the Nile waters will most likely exacerbate: Egypt will continue to attempt to befriend Kiir’s government and use this as leverage to put pressure on Ethiopia and Sudan and thus increase its influence in the Nile debate and the CFA negotiations. Ethiopia, on the other hand, will remain stalwart in its efforts to construct the Renaissance dam and exert its influence on the CFA and in the NBI, without coming any closer to a deal with Egypt. Its interest in resolving the South Sudanese conflict only extends to achieving stability. As long as South Sudan does not actively take Egypt’s side in the Nile debate, Ethiopia does not see the need to intervene in the conflict. Ethiopia and Egypt will find each other drifting more and more away from each other, after almost reaching an agreement in mid-2013. In this scenario, the South Sudanese internal conflict has served and will serve as a catalyst for further escalation.

4.2.3. Political Conflict
In this scenario, Kiir and Machar manage to reach some sort of peace agreement in the near future, ending the violence and creating an opportunity for reconciliation between Dinka and Nuer. This would open a window for a more stable and sustained development of the country, provided that the reconciliatory efforts are genuine and more or less accepted by all sides. This would, however, not mean an end to the political conflicts that plague the region. Theoretically, a pacified South Sudan would go back to its original position from before December 2013, effectively aligning itself with the upstream riparian states. This scenario does not seem likely: Egypt will not easily let go of its newly found ally, and either demand political concessions and support from Kiir (or whoever would be agreed to replace him) in the Nile debate, or refuse to withdraw its
troops from South Sudan for reasons of maintaining and safeguarding the country’s stability. This would effectively mean a new stalemate. The CFA negotiations would once again be hindered, as South Sudan would not be allowed to choose its own course: expanding its use of the Nile waters on its own terms would be unacceptable for Egypt, as it would effectively mean a step away from the 1959 agreement which Egypt still considers valid. Ethiopia might try to reconcile with Kiir’s government, but considering Kiir’s public suspicion of Ethiopia’s support for Machar, this would most likely prove to be very difficult. Therefore, in this scenario, the Nile conflict would also be far from over. The standoff between Ethiopia and Egypt would continue as it has since the founding of the NBI, with no real new agreement in sight.

The Renaissance dam will be complete in a couple of years. As long as it is being built, the disagreement between Egypt and Ethiopia over its construction will most likely involve the occasional verbal barb or threat, but not escalate into violent conflict. This might change once the dam is ready for use; depending on the situation at that time, Egypt might decide to act militarily. This has become more likely after the escalation of the conflict in South Sudan: Egypt now has troops in the dam’s vicinity and could force a military standoff. However, considering the history of the Nile conflict, a violent escalation over the Renaissance dam is not very likely. More probably, the political and economic tensions within the region would exacerbate, resulting for example in trade embargos or the severing of diplomatic relations. This would also mean that the Nile conflict would not be resolved to each party’s satisfaction, but rather remain an underlying source of dispute within the region.

4.2.4. Interstate Cooperation
This scenario, the ‘ideal’ scenario so to speak, would involve both a quick and sustainable solution to South Sudan’s internal conflict and a serious effort by all Nile Basin countries to continue cooperation.

This might happen if the international community manages to bring Kiir and Machar to the negotiating table before relations between Nuer and Dinka become irreparably damaged. Egypt and Ethiopia would both have to play a quintessential role in making these negotiations successful, for example by acting as mediators in the conflict. For this to happen, Egypt and Ethiopia would have to reach some sort of agreement on what South Sudan would be allowed to do next. Since both countries have an interest in befriending South Sudan’s government so as to be able to influence its foreign and regional policy, such an agreement would most likely mean a pledge of neutrality on several issues, including the use of the Nile waters.

For example, it could be beneficial for both Ethiopia and Egypt if South Sudan’s government promised to remain neutral on all constructions and projects on the Blue Nile and Atbara rivers. Since South Sudan lies almost entirely in the White Nile catchment area, and has no hydrological or geographic dependence on the Blue Nile, the negotiations over the Renaissance dam and other projects would then only involve Egypt, Sudan and Ethiopia. The outcome of these negotiations would not at all be predetermined, and could become lengthy and strenuous, but it might be a better starting point than the current situation. Presently, both Egypt and Ethiopia are suffering the consequences of South Sudan’s instability: it is unable to become a viable economic, political or trade partner of any kind in the near future, and the country’s natural resources are at risk. Furthermore, there is always a risk of the conflict spreading to other areas in the region.

Therefore, it can be argued that brokering a peace deal in South Sudan while guaranteeing its neutrality on several important but not necessarily directly related issues could be beneficial for all Nile Basin countries. It could at least serve as a starting point for continued peaceful negotiations, which all countries have shown to prefer over violent conflict.
5. Conclusion

This study has aimed to answer the following question: "what has been and will be the influence of South Sudan’s independence on the Nile Basin’s water politics?"

This chapter will summarise the multiple answers to this question, taking into account the multi-faceted, complex reality of the Nile Basin’s water security situation.

Firstly, South Sudan’s independence was hard-fought and took decades to achieve. It brought an end to a drawn-out and violent civil war and can serve as an example of the power of diplomacy. The fact that Sudan and South Sudan to this day have a good and even friendly relationship is a testament to this. It seemed that the entire Nile Basin would benefit from ending the hostilities, allowing for a more sustained region-wide development.

However, it appears that the ethnic tensions and other severe disagreements within South Sudan were merely put aside during its struggle for independence. With the sudden absence of a common enemy, it did not take long for South Sudan to fall back into violence. There seems no real end to the conflict in sight, and it is very possible that the current conflict will continue to destabilise the country and the entire region.

South Sudan initially appeared to be siding with Ethiopia and the other upstream states. At the time, this made sense: geographically, culturally, linguistically and hydropolitically the country shares much more with sub-Saharan Africa than Egypt and Sudan.

The Cooperative Framework Agreement appeared to become the new norm and was even very close to full implementation. This would have meant an end to Egypt’s dominant position and possibly the start of a more balanced regional development. South Sudan was an important part of this process, as siding with the upstream countries meant an absolute minority for Egypt and Sudan in the NBI. Sudan realised this, and after being assured that Ethiopia’s planned hydropower and irrigation projects would not hurt the country’s water supply and could even be beneficial, it switched sides, essentially leaving Egypt in a nearly indefensible position.

This situation changed completely in December of 2013, when the conflict in South Sudan escalated. This forced every regional player to take sides, and Egypt took the opportunity to befriend and support Salva Kiir’s government. Egypt gained foothold and strengthened its position in the area, allowing it to put more pressure on Ethiopia and Sudan. Ethiopia’s hesitation in supporting Kiir and its bid to solve the conflict peacefully did not go down well with Kiir’s government, which currently appears to be changing its position in the Nile debate.

Thus, the situation has reversed, and essentially a new stalemate has arisen: Egypt and South Sudan are holding out against Ethiopia, Sudan and the other (less influential) riparian states. It is likely that the situation will remain more or less the same at least until the Renaissance dam’s construction is complete. When this happens, Egypt has a tough choice to make: either begrudgingly accept the dam’s existence, which would open up the way for further negotiations, or use political or even military pressure to stop the dam from becoming operational. Both of these scenarios are possible, although it is less likely that Egypt will actually deploy its military, since this has not happened in the past, even in equally pressing situations.

In sum, South Sudan’s independence initially appeared to have a positive influence on the Nile conflict, bringing it closer to an acceptable solution, but ultimately its instability brought the conflict farther away from a new agreement than before. Whether this situation will change in the near future depends on the Nile Basin countries’ willingness to cooperate as well as the ability of the South Sudanese people to resolve their differences and end their internal struggles.

As the case of Rwanda has shown, this is extremely difficult but thankfully not impossible to pull off. It will require large-scale sustained cooperation from all sides, and the realisation that compromise is always a joint effort.
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7. References


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