Norwegian University of Life Sciences
Faculty of Social Sciences
Department of International Environment and Development Studies

Master Thesis 2015
30 credits

Integrated Management of the Nile's Water: The Institutional Effects of the Nile Basin Initiative

Randi Versto Kaasa

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randivk@me.com

Noragric
Department of International Environment and Development Studies
P.O. Box 5003
N-1432 Ås
Norway
Tel.: +47 64 96 52 00
Fax: +47 64 96 52 01
Internet: http://www.nmbu.no/noragric

Declaration

I, Randi Versto Kaasa, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature……..

Date: August 17, 2015

Acknowledgement

First and foremost, I would like to thank my supervisors Stig Jarle Hansen and Jon Harald Sande Lie for sharing their valuable advice. Thank you for providing guidance, critique and encouragements and taking the time to read my drafts. Likewise, a great thanks to Trygve Berg, who has offered advice and recommendations.

I would also like to thank the Noragric Writing Centre, specifically Afshan Bibi, who has been of great help in the writing process. Thank you for reading my draft and providing helpful comments.

Thanks to Kenneth Marc Strzepek and John Mukum Mbaku for participating in my study.

Finally, thanks to friends and family for being helpful and encouraging throughout my studies.

Randi Versto Kaasa 17. August, 2015. Oslo, Norway.

Abstract

The Nile is the world's longest river shared and used by 11 countries, influencing 350 million people. Population growth and improved living standards has increased each Nile state's demand for water, and the river has thus become a significant part of interstate politics. With the increasing demand for water, there is too an increasing need to jointly manage the Nile's waters in an equitable and efficient way to meet the domestic, commercial and industrial needs for freshwater for all basin states.

The Nile basin states agree on the need to cooperate to jointly protect and manage the Nile's waters, and have invested great amounts of time, efforts and resources to ensure equitable and efficient water use. This thesis looks at the efforts made to jointly manage the Nile's water, namely the Nile Basin Initiative (NBI) and the process of establishing the Cooperative Framework Agreement (CFA). This thesis further reviews the effect of the NBI in managing the freshwater resources of the Nile. In particular, concepts of regime effectiveness are applied in the empirical analysis.

Based on the empirical and theoretical analysis, this thesis concludes that although NBI is facing important challenges for effective water management, the NBI is a vital milestone in the joint management of water. The initiative is an important catalyst for enhanced economic and political cooperation in the region, with potential benefits beyond that of the river itself.

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Abbreviations and acronyms

CFA	Cooperation Framework Agreement
EN-COM	Eastern Nile Council of Ministers
ENSAP	Eastern Nile Subsidiary Action Program
ENSAPT	Eastern Nile Strategic Action Program Technical Committee
ENTRO	Eastern Nile Technical Regional Office
GERD	Grand Ethiopian Renaissance Dam
ICCON	International Consortium for Cooperation on the Nile
IR	International Relations
NELSAP	Nile Equatorial Likes Subsidiary Action Program
NBI	Nile Basin Initiative
NBI-ISP	Nile Basin Initiative-Institutional Strengthening Project
NCORE	Nile Cooperation for Results Project
NEL-COM	Nile Equatorial Lakes Council of Ministers
NELSAP-CU	Nile Equatorial Lakes Subsidiary Action Program Coordination Unit
NEL-TAC	Nile Equatorial Lakes Technical Advisory Committee
Nile-COM	Nile Council of Ministries of Water Resources
Nile-SEC	NBI Secretariat
Nile-TAC	Nile Council of Ministers and A Technical Advisory Committee
NRBC	Nile River Basin Commission
RBO	River Basin Organisation
SVP	Shared Vision Program
SAP	Subsidiary Action Program
TECCONILE	Technical Cooperation Committee for Promotion of Development and Environmental protection
UNDP	United Nations Development Program

Map of the Nile

Figure 1 'Map of the Nile Basin' from the World Bank (2004)

1.0 Introduction

Fresh water is an irreplaceable, scarce and divided resource. It has no substitute and is therefore the most valuable resource on the planet - and also the most threatened. Water is vital for both individual and national survival; states are therefore likely to have conflicting interests over the resources, which may generate cooperation or conflict when fresh water crosses national borders.

A river that has been subject to both conflict and cooperation is the Nile. The Nile is the world's longest river, a 6, 695 km lifeline for half a continent, inhabiting 160 million people, impacting nearly 350 million people and running through 11 countries (Tvedt, 2010). The population of the Nile is expected to increase by nearly 100 per cent before 2025, reaching a population of more than 600 million (Mohamoda, 2003). Population growth and improved living standards have increased each Nile state's demand for water, and the river has thus become a significant part of interstate politics. The growing population in the 11 basin states have to share the limited water, and it is thus vital that the Nile basin states jointly manage the waters in an equitable and efficient way to meet the domestic, commercial and industrial needs for freshwater for all basin states.

The management and distribution of the Nile's waters is affected by a complex history, and by environmental, economic, social and political issues (Belay, Semakula, Wambura, & Jan, 2010). To manage these issues, the Nile basin states agree on the need to cooperate to jointly protect and manage the Nile's waters. Through the Nile Basin Initiative (NBI), the riparian states have invested great amounts of time, efforts, prestige and resources to ensure equitable and efficient water use.

The NBI was launched in 1999 as a basin-wide integrated water resource management program. The initiative is an intergovernmental partnership among ten basin states, seeking to facilitate the move from unilateral to multilateral Nile resource management. Starting by facilitating dialogue, the NBI now provides the first basin-wide platform for

information sharing, joint planning and management of the Nile's waters. The NBI consists of a wide spectrum of projects and programs, which are all closely tied with the NBI's Shared Vision 'to achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources' (Kimenyi & Mbaku, 2015, p. 74). As of today, the NBI remains a transnational institution binding the basin states together, with the intention to move into a Cooperative Framework Agreement (CFA), which would make the NBI a River Basin Organisation (RBO). Although the CFA is yet to enter into force, Petros J. Gebeto (2010) denotes the NBI as the most significant institutional arrangement for cooperation on Nile resource politics.

Institutional arrangements, such as the NBI and the CFA, can be analysed through various social theories. In this thesis, I apply neo-liberal institutionalist conceptualisations of *international regimes* within International Relations (IR). Regime theory provides a foundation that is broad enough to incorporate a wide range of institutional arrangements, as well as operational conceptualisations that enable an empirical analysis of regime effectiveness. Robert Keohane (1989, p. 4) defines regimes as 'institutions with explicit rules, agreed upon by governments, which pertain to particular sets of issues in international relations'. International rivers are an example of an area of international relations in which such regimes come into existence (Haftendorn, 2000).

This thesis seeks to analyse the integrated management of the Nile's waters. First, I analyse the efforts made to manage the Nile basin's freshwater resources, in particular the NBI and the process of establishing the CFA. Reaching a legal and institutional framework is a step in the right direction towards reasonable and sustainable water use, African economic growth and peaceful relations between the Nile basin states (Kimenyi & Mbaku, 2015).

Secondly, the main contribution of this thesis is the analysis of the effectiveness of the NBI, in promoting cooperation and establishing equitable management of the Nile's water. In Haas, Keohane, and Levy (1993) *Institutions of the Earth,* they highlight three conditions for effective regimes, which are labelled the 'three C's': concern, contractual

environment and capacity. This thesis applies the 'three C's' as a framework for exploring the effectiveness of the NBI, and further questions the explanatory power of the 'three C's' as a framework for studying the effectiveness of the NBI.

Thus, the aim of this paper is twofold: first, I seek to examine the efforts made to manage the Nile's freshwater resources, second, this thesis seeks to analyse the effectiveness of the NBI by applying Haas et al.'s (1993) three conditions of effective regimes.

1.1 Research Questions

To analyse the role and effectiveness of the NBI in the management of the Nile's freshwater resources, and with emphasis on breadth, flexibility and ability to go in depth, I have framed the following research questions to guide the research process:

- *What multilateral efforts have been made to manage the Nile's freshwater resources?*
- *What effects have the NBI had in establishing integrated management of water and cooperation in the Nile basin?*

1.2 Organisation of the Thesis

To answer these research questions, this thesis is structured in six sections. I continue with an elaboration on *methods* (Chapter 2), touch on qualitative and quantitative methods, but focus on justifying my research choices, specifically in connection with archival research and e-interviews.

I further continue with a *background* chapter (Chapter 3) on the Nile basin and its region. Here, I outline the troubled history of Nile basin cooperation, from the late nineteenth to the late twentieth century, and briefly present the current issues in the Nile basin. This background is crucial in order to grasp current attempts of cooperation between the basin states. Further, this thesis continues with a *theoretical framework*

(Chapter 4), which presents neo-liberal institutionalism, and its conceptualisations of international regimes.

The *background* and the *theoretical framework* lay the foundation for the *analysis* (Chapter 5), where I thoroughly analyse the effects of the NBI in establishing integrated water management and cooperation in the Nile basin.

In the final chapter, the *conclusion* (Chapter 6), I further reflect on the significance of this study and outline the main findings. Based on the empirical and theoretical analysis, this thesis concludes that although NBI is facing important challenges for effective water management, the NBI is vital in the management of the Nile's water. Overall, the NBI is an important catalyst for enhanced economic and political cooperation in the region, with potential benefits beyond those of the river itself.

2.0 Methods

To analyse the role and effectiveness of the NBI in managing the Nile's waters, this thesis has mainly used inductive qualitative methods in order to provide a detailed and thorough analysis of the research questions. The data-gathering strategies applied are archival research, complemented by e-interviews. In this chapter, I present and justify the research choices of this thesis.

2.1 Qualitative vs. Quantitative Research Methods

In Dahilon Yassin Mohamoda's (2003) review of Nile basin literature, he points out that researchers have traditionally conducted qualitative studies of the management of shared water resources, but that quantitative studies have recently taken over the field. While quantitative analysis gives insights into measurable aspects such as water availability or deaths from water conflicts, they do not provide the context of each river basin, which entails historical, social and political accounts of relations between the basin states and their people.[1]

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[1] Quantitative research methods enable researchers to quantify and simplify data, and suggest general patterns in the study object. To falsify, predict and observe patterns are among the most used quantitative strategies (Moses & Knutsen, 2012). Researchers of qualitative methods are less interested in numerical data than the complexity of social phenomena. The intent of qualitative methods is, according to Bruce L. Berg and Howard Lune (2014), to achieve 'naturally emerging languages, motivations, symbols and their meanings, empathy, and other subjective aspects associated with naturally evolving lives of individuals and groups'. Qualitative methods are often associated with inductive reasoning. The inductive logic of research is commonly described as a bottom up approach, which starts with observation, identifying patterns and subsequently developing theory (Berg & Lune, 2014). Deductive approaches, on the other hand, are often associated with quantitative research, which starts with a theory, before testing its validity with data.

Terje Tvedt (2010) writes that understanding the Nile basin region today requires an analysis which includes what defines the Nile region, and that is, according to Robert Collins (2002, p. 11), 'not its volume but its rich and colourful history, its profound role in shaping human civilization in Africa, and absolute dependency on the river and its vagaries of those who live in its basin'.

With aim of providing historical context and analysing the role and effectiveness of the NBI, this thesis applies inductive qualitative methods. This choice of methods enables historical, social and political accounts of the Nile basin and the role and effectiveness of the multilateral attempts to manage the waters. To gather data, I conduct qualitative interviews, but focus on archival research.

2.2 Archival Research

In order to analyse the role and effectiveness of the NBI in managing the freshwater resources of the Nile, this thesis is a desk study, including a literature review of both policy documents and academic literature. The decision to apply archival research is linked to the vast existing literature on the Nile region and its waters[2]. Archival research provides a strong foundation for further analysis and helps to identify relevant issues, questions and gaps (Berg & Lune, 2014).

For this purpose, the main challenge of archival research has been the lack scholarly published work, especially within the field of IR, on the current role and effects of the NBI. Further, this archival research is limited to English literature despite publications in other languages such as Swahili, Arabic and Amharic. Archival research may be problematic because the researcher relies on other scholars' judgement. In this sense archival data should be interpreted as subjective because it is based on perceptions of reality, rather than a direct account of reality itself (Berg & Lune, 2014). However,

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[2]'The Nile: an annotated bibliography' (Tvedt, 2004a) .

reports by the World Bank (2003, 2010, 2013, 2015) provided valid and relevant insights into the achievements and the constraints of the initiative, which I further analysed from an IR perspective.

In the search for relevant literature, certain books and journals have been particularly helpful. Tvedt's (2010) *The river Nile in the Post-Colonial age: Conflict and cooperation among the Nile basin countries* provides a clear and in-depth analysis of the history of the Nile basin region. Further, Gebeto (2010) and Kimenyi and Mbaku (2015) provide relevant insights into international freshwater management and the NBI. Particularly the latter, Kimenyi and Mbaku's (2015) *Governing the Nile river basin: The search for a new legal regime*, contains up-to-date information about the NBI and the CFA. The analysis is to a large extent based on the World Bank (2003, 2010, 2013, 2015) reports and a SWOT analysis (strengths, weaknesses, opportunities and threats) of the NBI, presented by Belay et al. (2010), which combined give detailed insights into the achievements and constraints of the NBI's many projects and programs.

Other than the World Bank reports, there is little up-to-date published work available about the NBI's current position and potential. Since the establishment of the NBI in 1999, the initiative has undergone significant institutional changes, particularly now, with the on-going ratification of the CFA (Kimenyi & Mbaku, 2015). Furthermore, international water management is rarely studied from an IR perspective (Jagerskog, 2001). This thesis applies regime theory, which has become a major concept in IR since its introduction in the 1970s. Although regime-theoretical approaches have taken root as the foundation of research in several subfields of IR, there is little research done on international freshwater management from a regime theoretical perspective. This is where this thesis could add greater insight to the research scope – by drawing on and connecting two distinct realms; the empirical setting of the Nile water resources and the theoretical approaches of regime theory. In this thesis, I mainly apply Robert Keohane's (1984, 1989) ideas of international regimes, and Peter M. Haas, Robert Keohane and Marc A. Levy's (1993) conceptualisation of regime effectiveness in the analysis of the freshwater management of the Nile.

Although this thesis to a large extent is based on secondary data, to compliment the archival research, I have conducted e-interviews with academics and bureaucrats working in Nile freshwater management.

2.3 First-hand Data - Sampling Approach and Data Collection

In preparation for conducting the interviews, I designed a sampling approach. The sample for this analysis does not represent a population, thus the sampling approach is limited to one of the *non-probability sampling* approaches (Berg & Lune, 2014, p. 50). With the aim to gather data to compliment the archival research in answering my research questions, I picked the sample units based on their interest in and knowledge of Nile water management. This way of selecting a sample is referred to as *purposive sampling.* Purposive sampling is often used when sampling proportionality is less important than certain characteristics of the sample units, which is beneficial for the analysis (Berg & Lune, 2014).

The sample for this study consists of 24 scholars and bureaucrats, 8 women and 16 men, of different ages, nationalities, ethnicities and backgrounds. What they have in common is an interest and knowledge about the Nile basin and water management. Some of the informants have published papers about the Nile, while some are current or earlier associates of the NBI. The informants represent no one but themselves, which was explicitly stated before each interview.

Because of constraints in terms of time and resources, and geographically spread and not easily accessible informants, I employed email to conduct in-depth interviews, or *e-interviews* in the words of Bampton and Cowton (2002, p. 1). E-interviews are cost effective, flexible, and allow researchers to interview across time zones and locations. They are further efficient in terms of time for transcription and enables the researcher to interview more than one informant at a time (Berg & Lune, 2014; Meho, 2006). Berg and Lune (2014, p. 134) further make the point that e-interviews are private: 'no one else online can add to, delete, or interrupt the exchange', which is a crucial ethical concern.

Moreover, e-interviews involve certain challenges and drawbacks. By conducting e-interviews the researcher misses out on the value of social interaction and observation. For instance, in identifying the social markers of the informant, in the ability to observe and in the ability to ask spontaneous probing questions. E-interviews are further restricted to informants with Internet access and a computer (Berg & Lune, 2014).

While I sent the e-interview to 24 scholars and bureaucrats, only a few of them replied with valuable insights. While Bampton and Cowton (2002) highlight that the flexible and impersonal nature of e-interviews are two of its main drawbacks, perhaps another reason for the few replies is the topic of study. The conflict and cooperation over the Nile's waters has become a politicised topic, where states and individuals have different interests and hold diverse perspectives about how water-related issues should be solved. While acknowledging this, I had still hoped to obtain a larger amount of data from the first-hand data collection. The desired outcome of these interviews was to gain experts' opinions about the effects of the NBI and the CFA to complement the archival research. Only a few scholars and bureaucrats participated in the study, which constrained the significance of the first-hand data in this analysis. Nonetheless, I include the findings from the e-interviews because they (to some extent) enrich the analysis of the role and the effectiveness of the NBI in managing the Nile's freshwater resources.

Nineteen informants did not reply to the e-mails at all, three informants replied that they did not have the time to answer my questions, but the remaining two informants, John Mukum Mbaku and Kenneth Marc Strzepek, gave insightful answers. Kenneth Marc Strzepek has a Ph.D in Water Resource Systems and has 40 years of experience working on the Nile basin. John Mukum Mbaku is co-editor of the book *Governing the Nile river basin: The search for a new legal regime*, published in 2015, which has been of great importance for this thesis. I focused on ending these e-interviews on a positive note and thanked the informants for their participation.

An important ethical concern is the requirement to obtain consent from informants. While I did not use an *informed consent form,* each interview contained a statement explaining the nature of the interview, the topic for discussion and potential risks and

benefits of the study (Berg & Lune, 2014). In the statement I also asked for approval to use the informants names and direct quotations of their response. Further, I also stated that response to the emails and completed interviews would serve as *implied consent*.

Berg and Lune (2014, pp. 108-115) distinguish between three types of interviews: *standardised, semi-standardised and unstandardised interviews*. These types of interviews are different in the rigidity of their structure (Berg & Lune, 2014). E-interviews are naturally more or less structured. I asked predetermined questions in the first email of every interview, but continued the e-mail exchange with probing questions and clarifications, which made the interviews less standardised.

The guidelines for the interviews, the questions and their order were prepared considering the objectives of the research, namely to analyse:

- *What multilateral efforts have been made to manage the Nile's freshwater resources?*
- *What effects have the NBI had in establishing joint management of water and cooperation in the Nile basin?*

With these research questions in mind, I made a list of broad relevant categories and developed possible questions for each category. The interview guide (Appendix 1) contains the email I sent out to the 24 scholars and bureaucrats.

2.4 Content Analysis: Archival Research and E-interviews

Berg and Lune (2014, p. 335) define content analysis as 'a careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, biases and meanings'. Content analysis is a process of coding and interpreting data obtained from human communication, for instance documents or interviews (Berg & Lune, 2014). Content analysis does not merely include what the informants or texts say, but the meaning behind what they are saying in their social and cultural setting.

After the e-interviews, I coded the data in different colours to identify trends. The colours revealed frequently used words, themes and categories, which made it easier to explore and analyse the results. In terms of the archival research, I gathered a large quantity of relevant, available and trustworthy classical and new academic literature. For each relevant resource, I identified the subject matter, keywords, major claims and methods of the work, and wrote down unique explanations, definitions and findings. To organise the findings from the policy documents, in particular those by the World Bank (2003, 2010, 2013, 2015), I organised the achievements of the NBI (highlighted in the reports) in a table consisting of the NBI's main programs (Appendix 2). This provided an overview of the literature and institutional achievements, which was beneficial throughout the planning and writing process of this thesis.

3.0 Background

It is impossible to grasp the attempts of cooperation between the Nile basin states without background and historical context. The modern history of the Nile basin is complex and has consequences for current attempts to jointly manage the water resources. The eleven basin states further share a river with a relatively small volume, and are brought together in a compound environment characterised by 'high climatic diversity and variability, low percentage of rainfall reaching the main river, and an uneven distribution of its water resources' (Nile Basin Initiative, 2012b, p. 26). These challenges affect the region's attempts to jointly manage the waters.

To understand the efforts made to multilaterally manage the Nile's water, it is therefore important to include background information. This chapter briefly presents the geography of the region, before providing historical context, which is crucial for understanding the current attempts of cooperation among Nile basin states. In particular, this chapter presents the colonial agreements of 1929 and 1959, which is a main motive (and challenge) for developing a new institutional framework for water management. Subsequently, this chapter outlines the current challenges concerning basin states' dependence on and use of the water, in particular, the construction of the Grand Ethiopian Renaissance Dam (GERD).

3.1 The River Nile and its Region

The world's longest watercourse, the Nile, is a 6, 695 km lifeline for half a continent, impacting nearly 350 million people and embodying 11 countries: Rwanda, Ethiopia, Eritrea, Kenya, DRC, Tanzania, Uganda, Burundi, Egypt, Sudan and South Sudan (Kimenyi & Mbaku, 2015; Tvedt, 2010). These riparian states are divided into upstream and downstream states. The downstream countries, Sudan and Egypt are the net users of the Nile's water. The sources of the Nile are found hundreds of kilometres upstream from their borders, thus a great part of Sudan's and Egypt's water resources originate

externally - 77 per cent for Sudan and 95 per cent for Egypt (Fick & Bushra, 2014). The upstream countries are further divided by the Nile Basin's two main river systems – the Blue Nile and the White Nile.

The White Nile, whose initial sources are found in Burundi, embodies Rwanda, Tanzania, Uganda, Burundi, Democratic Republic of the Congo (DRC), South Sudan and Kenya. The Blue Nile embodies Ethiopia and Eritrea and originates from the Ethiopian highlands, mainly from Lake Tana (Kimenyi & Mbaku, 2015). The two river systems meet and merge at Khartoum in Sudan from which it continues through Sudan, Egypt and out into the Mediterranean Sea. While the Nile is great in terms of length, its volume is in comparison small. The Nile holds 2 per cent of the volume of the Amazon and 20 per cent of the volume of the Mekong river. In total, the river is estimated to hold 84 billion cubic meters (bm^3) of water, of which the Blue Nile contributes 86 per cent of the water reaching Egypt (Lie, 2011).

The basin states' contribution of water to the Nile varies considerably. While Ethiopia contributes the most, Egypt nearly does not contribute with water, but is however almost totally dependent on the freshwater of the Nile (Mohamoda, 2003). Both because of the dependence on the Nile's water and the spread origin of the water, it is significant that the Nile basin states come together and agree on an efficient and equitable distribution and management of the waters. Since the early twentieth century, Nile basin states have time and again attempted to come to an agreement about the distribution of the Nile's water, both bilaterally and multilaterally. These agreements are crucial to understanding the desire and process to develop a new framework for governing the Nile's freshwater resources (Kimenyi & Mbaku, 2015).

3.2 Colonial Agreements on Nile Water Distribution

Petros J. Gebeto (2010) points out that the historic relations between the upstream and downstream basin states complicate their ability to cooperate. Current disputes and attempts of cooperation between the Nile basin states are related to colonial decisions from the nineteenth century (Tvedt, 2011). In 1884, at the Berlin Conference, the

African continent was divided between European countries and the USA, together with a set of regulations for colonisation and trade in Africa. Large parts of the Nile basin region fell under British rule, which two years earlier had claimed Egypt to control the Suez Canal, which was, and still is, strategically important for the traffic between the Indian Ocean and the Mediterranean Sea. The British also entered into agreements with other leaders along the River Nile: the Ethiopian emperor, King Leopold II of the Congo, with the French and with the Italians in Eritrea. Common to these agreements was that no one would use the Nile's waters without British pre-approval. By the early Twentieth Century, the British reigned over the Nile, from the outlet in Alexandria through Sudan and up to the great lakes of Central Africa (Tvedt, 2004b).

Between 1891 and 1959 eight agreements were signed on the use of the water resources of the Nile. All of these agreements were meant to ensure Egypt full access and control over the Nile, of which most were signed under British watch as the colonial authority of the Nile basin. In practice, the agreements ignored most riparian states, particularly the upstream states. Of the eight agreements, two agreements, one from 1929 and another from 1959, have according to Gebeto (2010) had particularly damaging consequences for the upstream basin states.

3.2.1 The Agreement of 1929 on the Use of Nile Basin Water

The 1929 agreement between the British – who at this time represented Sudan, Tanganyika, Uganda and Kenya – and the Egyptians, highlighted Egypt's rights to the Nile's waters. The agreement demonstrates the unjust distribution of the Nile's water in disfavour of the voiceless upstream basin states.

Prior to the agreement, Egypt and Britain negotiated British control over the Suez Canal, and Egypt was in return rewarded exclusive control over the Nile in the 1929 agreement:

> 'Save with the previous agreement of the Egyptian Government, no irrigation or power works or measures are to be constructed or taken on the River Nile and its branches, or on the lakes from

> which it flows, so far as all these are in the Sudan or in countries under British administration, which would, in such a manner as to entail any prejudice to the interests of Egypt, either reduce the quantity of water arriving in Egypt, or modify the date of its arrival, or lower its level' (Anglo-Egyptian treaty, para. 4 (ii), cited in: Tvedt, 2004b, p. 266).

According to the 1929 agreement, Sudan was allowed 4 bm^3 of water, compared to Egypt's 48 bm^3. The agreement further stated that the Nile water 'should be reserved for the benefit of Egypt from the 9th January to the 15th July [dry season]' (Anglo-Egyptian treaty, ch.5, cited in: Kimenyi & Mbaku, 2015, p. 38). Egypt was also granted the right to control the flow of the Nile in upstream basin states, conduct any action in the Nile river regardless of consent from other basin states and veto any other basin states´ construction projects (Gebeto, 2010).

Egypt more or less claimed full control over the Nile River in the decades after 1929. But following the end of the Second World War came decolonisation, and the basin states regained their independence. This development encouraged a new bilateral agreement between Sudan and Egypt.

3.2.2 The 1959 Agreement

The 1959 agreement was a bilateral agreement between Sudan and Egypt providing for 'full utilisation of the Nile Waters' (Treaty of 1959 between Egypt and Sudan, arts. 1 and 2., cited in: Kimenyi & Mbaku, 2015, p. 39). When Sudan regained independence in 1956, it became Africa's largest country with more than 60% of the Nile river waters within its borders. Sudan and Egypt renegotiated the 1929 agreement, which also reinforced the legal grounds for their control over the Nile waters. The 1959 agreement was, according to Gebeto (2010), the most damaging agreement in the history of the Nile basin.

The agreement was damaging particularly because it covers the use of the total annual water flow of the Nile, distributed only between the two signatories (Kimenyi & Mbaku, 2015). Of the 84 bm^3 total annual water, Egypt was allocated 55.5 bm^3, approximately

75 per cent, and Sudan was allocated 18.5 bm^3, which was increased from 4 bm^3 (Haftendorn, 2000). The agreement left out 10 bm^3 to account for evaporation and seepage (Kimenyi & Mbaku, 2015). The agreement further allowed Sudan to construct the Rosaries Dam and other dams until Sudan's water quotation was fully redeemed. Egypt gained rights to construct the Aswan High Dam, which created the massive lake Nasser, located in the south of Egypt stretching into northern Sudan, with a capacity to store the total annual flow of the Nile of 84 bm^3. The 1959 agreement further reinforced Egypt's right to veto any project that would affect the Egyptian water-share or the water flow running into Egypt (Kimenyi & Mbaku, 2015).

Unsatisfactory use and distribution of the Nile's water increased dialogue among basin states, specifically upstream riparian states. They criticised the colonial agreements and demanded amendment on the basis that most basin states were deprived of reasonable use and access to water (Kimenyi & Mbaku, 2015). Since the late 1950s, these riparian states have sought to find new ways of cooperation, both bilateral and multilateral (Gebeto, 2010). However, lack of integrated actions, distrust and conflict of interest has characterised the basin state's relations, until the 1990's when the basin: 'witnessed a remarkable shift in the tone and substance of state-to-state relationships along the Nile' (Brunnee & Toope, 2002, p. 132).

According to Brunnee and Toope (2002, p. 137), the NBI symbolises: 'a breakthrough from competition to cooperation'. The NBI is a basin-wide intergovernmental partnership, with aim to facilitate the move from unilateral to multilateral Nile resource management and 'to achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources' (Kimenyi & Mbaku, 2015, p. 74). The NBI consists of a wide spectrum of projects and programs designed to facilitate information sharing, confidence and joint planning and management of the Nile's waters. While the NBI has made significance achievements, there are however current challenges in the basin that complicate the process of achieving multilateral equitable and efficient management of the Nile's waters.

3.3 Current Challenges in the Nile Basin

The relations between Nile basin states are affected by environmental, economic, social and political issues such as: conflicts over the use and control over water resources, droughts, floods, food and water insecurity, population growth and poverty (Mohamoda, 2003).[3] Such factors complicate the process of ensuring joint management and equitable and efficient water use. Indeed, while the Nile basin states have a common desire to cooperate, it has proven to be difficult to establish a legal framework for joint management of the water. The NBI and the process of establishing the CFA is a step in the right direction, however, the basin states are facing challenges that impede this process.

The Nile is, as mentioned above, great in terms of length, but holds a relatively small volume. As the foundation for economic and human development for the basin's 11 states and 350 million people, Kimenyi and Mbaku (2015) claim that the volume of the Nile is too small to meet the region's commercial, domestic and ecological needs. Furthermore, the Nile basin population is expected to increase by nearly 100 per cent before 2025, reaching a population of more than 600 million (Mohamoda, 2003). Population growth and improved living standards have increased each Nile state's demand for water, and the river has thus become a significant part of interstate politics. With the increasing demand for water, there is also an increasing need to jointly manage the Nile's water in an equitable and efficient way to meet all basin states' need for freshwater (Wolf, 1998).

The eleven basin states acknowledge the need to establish and adapt an institutional and legal framework to jointly protect, manage and sustainably use the Nile (Kimenyi & Mbaku, 2015). Moreover, while the Nile basin states agree on the need to cooperate, they do not agree on *how* to do this. The focal point of this disagreement is Egypt and Sudan's acquired rights to water on the basis of the colonial agreements of 1929 and 1959. The basin states are divided on how to distribute the Nile's waters. On the one

[3] Five of the eleven basin states are among the world's ten poorest countries.

side are Egypt and Sudan, holding on to colonial agreements and on the other side are the upstream countries demanding new terms for sharing the limited water supplies. Egypt and Sudan's construction projects during the colonial period, enabled a much higher level of water use and control, compared to upstream basin states. According to Cascao (2009), Egypt uses about 55.5 bm^3 and Sudan approximately 14.6 bm^3 of water, while the upstream basin states' withdrawal remains limited. Egypt further remains reluctant to change its share of water, which has been communicated on many occasions. Answar el-Sadat said in 1979, 'The only matter that could take Egypt to war again is water' (Lynn-Jones & Miller, 1995, p. 91) Later, in 1988, Egyptian Foreign Minister, Boutros Boutros-Ghali said, 'the next war in our region will be over the waters of the Nile, not politics' (Barnett, 2001, p. 56).

Brochmann and Gleditsch (2012) highlight the two main reasons for Egypt's reluctance to change their water share. First is because of the Egyptian understanding that only 5% of the Nile waters reach their boarders[4]. And secondly is because Egypt depends on the Nile for 96 per cent of its renewable water. Indeed, Egypt is almost completely dependent on other riparian states for water, as the water sources are found hundreds of kilometres upstream of the Egyptian borders (Fick & Bushra, 2014).

Moreover, the upstream states share the understanding that they contribute to the Nile, but are unable to use the water (Tvedt, 2010). From the 1960s to date, the new independent upstream basin states have sought to gain more control over the Nile's resources. Paul Kagame, President of Rwanda (1994 – present) has said, 'Some countries rely on this water more than others, but that does not give them any more right over the use of this water than others' (Tvedt, 2014).

In all, the basin states hold different perspectives and interests that impede the process of ensuring joint management and equitable and efficient water use. While the basin states have entered into an institutional collaboration, the NBI, they are still divided on how to distribute the resources, and this issue has intensified with current construction

[4] This conclusion is based on numbers of the total rainfall in the Nile, of 1.6 trillion cubic meters.

projects in the upper Nile, in particular the Ethiopian construction of Africa's largest hydroelectric power plant dam.

3.3.1 Construction Projects: The GERD

Despite Egypt's power to veto any construction projects on the Nile, which was granted by the colonial agreements of 1929 and 1959, Uganda opened a hydroelectric power station, Bujagali in 2012, and Ethiopia (which contributes with 85% of the water reaching Egypt, and up until now has used relatively little water) is now building Africa's largest hydroelectric power plant dam, the GERD.

The GERD is currently about 40 per cent complete and is expected to open in 2017. The dam is intended to give electricity to Ethiopian citizens, with the aim of producing 6, 000 megawatts of electricity annually. Another primary purpose of the GERD is to manage droughts and floods, enabled by the dam's storage capacity of 60 billion cubic meters (Kimenyi & Mbaku, 2015).

The dam's possible impacts have fuelled regional disagreements and are affecting the basin states' attitudes and actions (Kimenyi & Mbaku, 2015). While for Ethiopia the dam is considered a symbol of the future, for Egypt, the dam and its unknown consequences is perceived as a serious threat (Hussein, 2014). The Egyptian government has unsuccessfully demanded Ethiopia to pause the construction work and start negotiations. The Egyptian Minister of Irrigation and Water resources from 2009-2011, Mohamed Nasr Allam, said:

> 'Now they [Ethiopia] are talking about a dam with 74 million cubic metres capacity. It is no doubt that the dam will have severe impact, short term and long term, on the Egyptian population, on Egyptian new construction, on Egyptian political regime, on Egyptian social stability, on Egyptian economy' (Tvedt, 2014).

The dam has caused political tension between the two states, and has further complicated the process of coming to an agreement about the distribution and management of the Nile's water.

4.0 Theoretical Framework

Theory is the foundation of empirical analysis, and is part of forming our understanding of a phenomenon (Berg & Lune, 2014). The choice of theory entails selecting and omitting ways of perceiving, and thus affects the research process and results. This thesis applies neo-liberal institutionalist understandings of regime theory. The reason for this choice is neo-liberal institutionalism's emphasis on the possibility of cooperation through regimes. They hold the fundamental assumption that states are or should be concerned with absolute, rather than relative gains. Neo-liberal institutionalists' understanding of regimes provides an insight into the features and effects of regimes, which in this case contribute to analysing the role and effectiveness of the NBI. Neo-liberal institutionalist understandings of regime theory have a seductive fit with the empirical context of Nile freshwater management, thus providing a theoretical vantage point to understand the role and effectiveness of the NBI.

This chapter begins with the historical context of neo-liberal institutionalism, including a brief account of neo-liberal institutionalism's position within International Relations theory. Drawing on this, the chapter continues with neo-liberal institutionalist contributions on regime theory. In particular, this chapter presents the perceptions of the regime's formation, functions and effectiveness. I will apply Keohane (1984) and Haas, Keohane and Levy's (1993) model of the effectiveness of the international regime in the study of the role and effectiveness of the NBI.

4.1 Historical Context of Neo-liberal Institutionalism

The theoretical starting point of this thesis is neo-liberal institutionalism. Neo-liberal institutionalism spurs from the liberalist tradition of International Relations (IR), and formed one side of the so-called neo-neo debate from the 1970s. The neo-neo debate concerns the convergence of two main theoretical traditions within IR theory: liberalism

and realism. Particularly in the USA, the debate has gained ground in IR scholarship in the last 10-15 years, according to Steven L. Lamy (2011).

Neo-realism, also called structural realism, emphasises the structure of the international system in understanding international relations. One of the main authors of this theoretical branch is Kenneth Waltz (1979), who presents three main assumptions that define the structure of the international system. First, the international structure is anarchic, without a centralised authority. Second, the main actors in the international system are states, who are self-interested and rational actors, with fundamentally similar structures. Because states only rely on themselves for survival, they seek to maximise their relative gains over absolute gains and self-help behaviour over cooperative behaviour. The third assumption is that states have different and changing capabilities, which constitute a state's power and affect the balance of power in the international system. The other theoretical branch of the neo-neo debate, neo-liberalism, shares some of Waltz's (1979) assumptions, but emphasises the possibility of cooperation.

Several varieties of neo-liberalism exist, however this thesis focuses on neo-liberal institutionalism. A main scholar of neo-liberal institutionalism is Robert Keohane (1984), who shares the realist assumption that states are self-centred, rational actors who seek to maximize their own interests in an anarchical international system. Moreover, Keohane (1984) argues that states are not solely concerned with short-term interests, but may prioritise long-term shared gains when states share interests. Peace, prosperity, economic growth and increased problem-solving capacity can be obtained if sovereign states pool their resources and transfer parts of their sovereignty to create sets of governing arrangements on issues where states share interests (Lamy, 2011).

Such governing arrangements, for instance regimes and institutions, act as 'intermediate factors between the power structure of an international system and the political and economic bargaining that takes place within it' (Crane & Amawi, 1991, p. 132). Governing arrangements are however never without sacrifice, but it is in the interests of states, as rational actors, to bear the cost of these arrangements, if the gains are mutually beneficial (Lamy, 2011). Thus, under certain circumstances states seek to

maximise absolute gains, before relative gains, according to neo-liberal institutionalism.

The establishment of the NBI in 1999 shows that the Nile basin states are willing to take on the costs of institutions in return for mutual benefits and absolute, long-term gains. Indeed, the riparian states acknowledge the possible benefits of cooperation, and has agreed to establish a new legal framework to jointly protect, manage and sustainably use the Nile's water.

4.2 Robert Keohane's Neo-liberal Institutionalism – Institutions and Regimes

In Robert Keohane's influential work, *International Institutions and State Power* (1989), he writes that in order to understand world politics, one must include an account of the meaning and effect of institutions. Keohane (1989, p. 3) defines institutions as 'persistent and connected sets of rules (formal and informal) that prescribe behavioural roles, constrain activity, and shape expectations'.[5] Cooperation and communication between states depends on such institutions, which vary across time and space, in strength and nature. International institutions are, according to Keohane (1984), tools of statecraft that are beneficial in many issues and a crucial force of international

[5] Keohane (1989) is also concerned with the process of *institutionalisation*; institutions' impact on states' actions, and vice versa. He acknowledges the reciprocal interaction between states and international institutions, and that states are both shaped by, and shape international institutions. Thus, institutions are not merely a consequence of rational states acting in self-interest in the anarchical international system, but institutions also influence the behaviour and expectations of states:

> '[V]ariations in the institutionalisation of world politics exert significant impact on the behaviour of governments. In particular, patterns of cooperation and discord can be understood only in the context of the institutions that help define the meaning and importance of state action' (Keohane, 1989, p. 2).

relations. These types of institution exist in three forms: formal intergovernmental or cross-national nongovernmental organisations, conventions and international regimes.

In an international system of anarchy, international regimes seek to find 'cooperation under anarchy' or 'governance without government' (Oye, 1986, p. 1; Rosenau & Czempiel, 1992, p. 30). States have shared interests in many issues, and to facilitate mutual gains, self-interested states may establish international regimes (Haas et al., 1993). Keohane (1984) highlights the three main functions of international regimes. First, international regimes create contractual environments, which identify what is legitimate and illegitimate behaviour. In this way, international regimes provide an environment in which members are guided towards cooperation. Second, international regimes enable increased and improved information exchange, which in a successful regime generates mutual trust and increased interaction between members. Third, an international regime reduces the transaction costs associated with an issue. Although international regimes are not cost-free, Keohane (1989) emphasises that the mutual benefits of an effective regime will outdo the costs of transaction.

Manoj Gupta (2010, p. 70) provides an illustrative description of regimes as 'dispersed small islands of cooperation in the oceanic expanse of anarchy that have come to be the mainstay of peace, development and sustainability'. Not without criticism, studies of regimes have transcended to become a key subject for scholars of IR.

4.3 Regime Definitions

International regimes became a major concept in International Relations analysis in the 1970s, particularly due to Robert O. Keohane and Joseph S. Nye (1977/2012), Stephen Krasner (1983) and John Gerard Ruggie's (1975) contributions. Ruggie (1975, p. 570) first introduced the idea of regimes in IR literature in 1975, which was defined as 'a set of mutual expectations, rules and regulations, plans, organizational energies and financial commitments, which have been accredited by a group of states'. A few years

later, a collective definition was developed at a conference on international regimes. This definition is presented in Krasner's (1983, p. 2) book *International Regimes*:

> 'Regimes can be defined as sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations. Principles are beliefs of fact, causation, and rectitude. Norms are standards of behaviour defined in terms of rights and obligations. Rules are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice'.

Critics of Krasner's definition highlight the difficulty in separating principles, norms, rules and decision-making procedures (Gupta, 2010; Kutting, 2000; Strange, 1982). Gabriala Kutting (2000) points out that the definition fails to distinguish between the international system and international regimes. Similarly, Susan Strange (1982) criticises regime theory for lacking an agreement on what is and what is not a regime, and points out that the definition's breadth limits its explanatory power. In particular, Strange (1982) emphasises that the early definitions of international regimes are vague enough to encompass all forms of state interaction. For instance, by applying Krasner's (1983) definition of international regimes, Puchala and Hopkins (1983) label colonialism as a regime.

Thus, in 1989, Keohane presented a narrowed definition: 'Regimes are institutions with explicit rules, agreed upon by governments, which pertain to particular sets of issues in international relations' (Keohane, 1989, p. 4). Common to these definitions is the assumption that regimes are part of forming actors' behaviour on certain issues. Gupta (2010, p. 72) sums it up:

> 'In effect, a regime institutionalises cooperation amongst actors to better-manage…particular international issues for the collective good of humanity. Regimes are required where there is an inability on the part of actors to overcome problems in an issue-area without collective action'.

These definitions of regimes can be applied to regimes that pertain to transboundary watercourses, labelled water regimes. Water regimes provide an arena within which norms, rules, principles and decision-making procedures may increase confidence, capacity and enable joint management of water-related issues. Haftendorn (2000) distinguishes between general and specific water regimes. General water regimes are,

for example, the *1997 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses*, while specific water regimes are those negotiated to govern a specific watercourse. Water regimes provide an arena to ease the tension between riparian states, find joint solutions and facilitate cooperation between basin states (Haftendorn, 2000). Arun Elhance (2000) argues that water regimes enables: economic, social, political and environmental absolute gains, desired by states as rational actors. The NBI provides an arena within which norms, rules, principles and decision-making procedures are designed to increase confidence and capacity, and enable joint water management, and can accordingly be conceptualised as a water regime.

4.4 The Study of International Regimes

4.4.1 Regime Formation

Keohane (1984) raises the questions of why certain states do, and others do not, enter into international regimes, under particular conditions. In Keohane's (1984, 1989) analysis, he signifies that the formation of regimes is dependent on a number of variables, particularly the relationship between the costs and benefits.[6] The lower the cost and the greater the benefit, the more likely the formation and continuation of an international regime. This ratio depends on three main variables: first the distribution of

[6] In the calculations of costs and benefits of regime formation, Keohane (1984) applies collective good theory, rational choice theory and game theory, in particular *the prisoner's dilemma.* The prisoner's dilemma is a story of two prisoners which offers Keohane (1984) and other neo-liberal institutionalists a rationale for interstate cooperation in an anarchic international system. The dilemma involves two prisoners, who are imprisoned for the same alleged crime. Each prisoner is told that if one of them confesses, he/she will go free and the other prisoner will get a long sentence. If both confess, both get slightly reduced prison time, and if neither confesses both get a short sentence due to lack of evidence. In this situation, with no possibility to talk or exchange notes, both prisoners will, as rational self-interested actors confess, and receive sentences that could have been avoided had they cooperated and kept quiet. Thus, it is in the self-interest of both parties to cooperate (Keohane, 1984).

power in the international system, second the number of states involved and third, the degree of interdependence in the international society.

According to Keohane (1984, 1989), the possible benefits of a regime correlate with the degree of interdependence between states. 'Interdependence, most simply defined, means mutual dependence. Interdependence in world politics refers to situations characterised by reciprocal effects among countries or among actors in different countries' (Keohane & Nye, 1977/2012, p. 7).[7] Further, the higher number of states involved, the higher the cost of regime formation and the more complex the implementation of cooperation.

The cost-benefit ratio further depends on the distribution of power. Hegemony may, for instance, contribute to regime formation as it requires cooperation to establish and enforce its own rules (Keohane, 1984, 1989). A hegemon can produce shared interests by offering inducements for cooperation and punishment for unwillingness to comply. Moreover, Keohane (1984) adds that such carrots and sticks can be applied without hegemony. So while the cost-benefit ratio may be affected by a hegemonic power, hegemony is not a required condition for regime formation.

Keohane (1989) further points out that the formation of regimes also depends on existing patterns of regimes, and the density of the issue. High density of policy issues increases the incentive to create regimes, as regimes lower transaction costs and

[7] Following Keohane and Nye (2012 [1977]), complex interdependence is characterised by three main components:

1. Societies apply many channels of contact; formal and informal ties through interstate, transgovernmental and transnational units. The two latter units challenge the realist assumption of states as coherent and dominant actors of world politics.
2. Issues have no clear hierarchical order. International relations involve a variety of issues, and these cannot be arranged in a clear hierarchy. This contradicts the realist assumptions that military security is the most important issue of world politics.
3. On issues in regions of complex interdependence, military force will not be used.

establish standards of consistency. The patterns of existing regimes, their effectiveness in establishing commitment and improving information exchange also have a partial effect on regime formation (Keohane, 1984, 1989).

Keohane (1989) concludes that as long as there are mutual interests, states will be motivated to coordinate their actions. When such motivations occur, coupled with an adequate degree of interdependence, chances of regime formation will be present. 'International regimes depend on the existence of patterns of common or complementary interests that are perceived or capable of being perceived by political actors. This makes common action to produce joint gains rational' (Keohane, 1984, p. 78).

In terms of the Nile basin, the basin states have entered into the NBI, which in the last decade has become significant in the joint management of the Nile's waters. Furthermore, the riparian states hold different perspectives and interests that complicate their wish to establish a new legal framework, the CFA. The basin states are deadlocked on the issue of how to distribute the water in the negotiations towards establishing a permanent River Basin Organisation (RBO). In the CFA negotiations, Egypt and Sudan seek to maximise relative gains, underpinning their historical rights to a large quantity of the Nile waters, while upstream states prioritise absolute gains, by establishing a new legal framework for equitable and efficient water management for all. Thus, while common action is perceived as rationale by the basin states, they have so far been unable to establish the new water regime.

4.4.2 The Effectiveness of International Regimes

In 1989, Peter Haas (p. 377) questioned 'Do regimes matter?' Since then, the study of regime effectiveness has become a major field of research within International Relations (Helm & Sprinz, 2000).

The conceptualisation of the effectiveness of regimes varies significantly. For instance, Young (1992, p. 161) writes that a regime 'is effective to the extent that its operation

impels actors to behave differently than they would if the institutions did not exist or if some other constitutional arrangement was put in its place'. Haas et al. (1993, p. 7) conceptualise environmental regimes' effectiveness by asking: 'is the quality of the environment or resource better because of the institution? That is, without the institution would things be worse?'

This thesis focuses on the perhaps best known explanation of regime effectiveness, put forward by Haas et al. (1993). They evaluate the effectiveness of regimes in terms of the regime's ability to enhance 'the three C's': concern, contractual environment and capacity. The 'three C's' are casual pathways or conditions of effectiveness, thus effective regimes will likely enhance the 'three C's': increase governmental and international concern, enhance the contractual environment for mutually beneficial agreements and increase national and institutional capacity to take on obligations set out by the international regime.

An analysis of how a regime has changed, or failed to change the 'three C's', provide a framework for an insightful analysis of complex instruments. Haas et al.'s (1993) model is developed to explain international *environmental* regimes. They have undertaken case studies of environmental issues, to which there is an envisioned solution or possibility of improvement, which is obtainable through effective international regimes. According to Levy and Keohane (1996), the 'three C's' is a coherent analytical framework for describing, explaining and evaluating regime effectiveness. Thus, this thesis applies their model to analyse the regime effectiveness of the NBI, with regards to the environmental as well as political issue; multilateral management of the Nile's freshwater resources.

The 'three C's' are not sequential activities, but overlap and may reinforce each other. Haas et al. (1993) signify that an effective regime will operate at multiple levels in a dynamic process. Haas et al. (1993, pp. 19-20) summarise the functions of the 'three C's' and highlight their relevance:

> 'Effective management of environmental problems requires three fundamental conditions to be met. First, governmental concern must be sufficiently high to prompt states to develop scarce resources to

> solve the problem. … Second, transboundary and common problems cannot be effectively resolved without a hospitable contractual environment. By this phrase we mean that states must be able to make credible commitments, to enact joint rules with reasonable ease, and to monitor each other's behaviour at moderate cost so that strategies of reciprocity can be followed. … Finally, states must possess the political and administrative capacity to make the domestic adjustment necessary for the implementation of international norms, principles, or rules'.

In the next chapter, the analysis, I apply these conceptualisations of regime effectiveness as a framework to analyse the role and effectiveness of the NBI in managing the Nile's waters.

5.0 Analysis

As shown above, bilateral agreements from the twentieth century have played an important role in access and control over the Nile basin's resources. However, an international regime, the NBI have, in the last few decades, become a significant part of water resource management (United Nations Environment Programme, 2014).

This chapter goes back to the research questions, with aim of providing insights into the efforts and effects of regimes in establishing integrated water management and cooperation in the Nile basin. The first part of the analysis seeks to answer research question 1: *What multilateral efforts have been made to manage the Nile's freshwater resources?* Here, I present the NBI and the process of establishing a new legal and institutional framework for Nile water management, namely the CFA. It should be noted that this section is a presentation, more than a discussion, of the multilateral efforts made to coordinate actions in the Nile basin. The second, and main part of the analysis, seeks to answer research question 2: *What effects have the NBI had in establishing integrated management of water and cooperation in the Nile basin?* Here, I explore the NBI's effectiveness, by analysing the extent to which the NBI has enhanced Haas et al.'s (1993) 'three C's': concern, contractual environment and capacity. I apply Haas et al.'s (1993) conceptualisation of regime effectiveness, in the hope of providing insights into the role and effectiveness of the NBI in managing the Nile's waters. Haas et al. (1993, p. 398) write that effective regimes: 'enhance the ability to make and keep agreements, they promote concern among governments, and they build national political and administrative capacity'.

With the aim of exploring the effectiveness of the NBI, this thesis evaluates the results of the NBI's many programs, in accordance with the 'three C's'. The NBI's Strategic Action Program aims to provide the necessary tools to transform the NBI's objectives and Shared Vision into operations on the ground. To a large extent, this analysis will be based on the results of these programs, as well as incorporating the achievements of the Nile Basin Initiative – Institutional Strengthening Project (NBI-ISP) and the on-going,

Nile Cooperation for Results Project (NCORE). I will not include an analysis of every program of the initiative, but will highlight frequently made points by the World Bank (2010, 2013, 2015), Belay et al. (2010), Kimenyi and Mbaku (2015) and Teshome (2008) and demonstrate these with examples. This analysis is limited to the study of multilateral institutional cooperation, and does not go into each states efforts, perspectives and interests, but focus on the achievements made jointly, through the NBI.

In the light of these findings, I continue with an elaboration of whether the NBI actually has enhanced cooperation in the Nile basin. I also highlight challenges that have an impact on the effectiveness of the NBI and discuss the 'three C's' ability to explore the effectiveness of water regimes.

5.1 Research Question 1: What Multilateral Efforts Have Been Made to Manage the Nile's Freshwater Resources?

5.1.1 The Nile Basin Initiative

Despite disputes about the distribution of water, the Nile basin states have sought to find ways to work together. During the last four decades, there has been several attempts to encourage the Nile basin region to cooperate and agree on the management and distribution of the Nile's water. Keohane (1989) writes that regime formation dependents on a number of variables, amongst others on the degree of mutual interests and the incapacity to overcome issues without collective action. All basin states acknowledged in the early 1990s the need to establish an institutional framework to jointly manage the Nile's water in an equitable and efficient way.

The history of the NBI dates back to 1992, when the Council Ministers of Water Affairs of the Nile Basin acknowledged the demand for basin-wide cooperation, and thus established The Technical Cooperation Committee for the Promotion of Development and Environmental Protection of the Nile Basin (TECCONILE). The Council converted the TECCONILE into the Nile River Action Plan in 1995, which was extended and

materialised at a meeting of the basin states' Ministries of Water Affairs (or Water Resources) in 1999 with the launch of the Nile Basin Initiative (NBI) (Lie, 2011). At the meeting, the Ministers signed the Agreed Minutes, which included a framework for the NBI's core functions and institutional structure. According to the Agreed Minutes, the basin states shall: 'invest the NBI, on a transitional basis, with legal personality to perform all of the functions entrusted to it, including the power to sue and be sued, and to acquire or dispose of moveable and immovable property' (as cited in: Salman, 2013, p. 393).

The NBI is a temporary institution established to facilitate the move from unilateral to multilateral Nile resource management, and to foster cooperation in the Nile for the benefit of all basin states and their inhabitants. The NBI is the first regime to bring all basin states together at the ministerial level. 10 of 11 Nile basin states are members of the initiative, and Eritrea holds observer status.[8] One of the NBI's main objectives is to conclude the CFA, which would bring the principles, programs and structure of the NBI into a legal framework (Salman, 2013). Indeed, Jon Harald Sande Lie (2011, p. 3) writes that the NBI aims to provide: 'a framework through which its member states can cooperatively develop the resources of the Nile Basin to fight poverty and promote socio-economic development in the region'.

The NBI holds a Shared Vision 'to achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources' (Kimenyi & Mbaku, 2015, p. 74). In addition to the Shared Vision, the NBI is further guided by its objectives:

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

[8] While Eritrea is not a member of the NBI, it is a prospective member, and holds observer status in the Nile-Com.

- To ensure that the program results in a move from planning to action' [sic.] (Nile Basin Initiative, 2012b).

To implement the NBI's Shared Vision and to achieve its objectives, the Nile Council of Ministries of Water resources (Nile-COM) developed the Strategic Action Program. The Strategic Action Program aims to provide the necessary tools to implement regional, spatial, sectorial, knowledge and economic integration. According to Gebeto (2010), the Strategic Action Program is a critical step towards integrated Nile resource management.

A few years after the establishment of the NBI, in 2001, its partners and the Nile Basin governments met in Geneva for the International Consortium for Cooperation on the Nile (ICCON). As a result of this meeting, the World Bank established the Nile Basin Trust Fund (NBTF) in 2003, with a consortium of ten contributors[9], who promised US$140 million for the implementation of NBI's Shared Vision and its programs. The NBI is further supported by bilateral donors, such as the African Development Bank, the United Nations Development Program (UNDP), the United States, Sweden and Germany (World Bank, 2013). According to Keohane's (1989) theory on regime formation, low cost for the beneficiaries increases the chances of regime formation and continuation. The NBI's partnerships reduced the basin states' transaction costs and secured the continuity of the NBI's operations.

The components of the governance structure of the NBI (Figure 2) are spread throughout the basin. The Nile-COM, which consists of the Nile countries' Ministers of Water Affairs, is the highest decision-making body of the initiative. The Technical Advisory Committee (Nile-TAC), which consists of technical representatives from each basin state, maintains an overview of the NBI's activities and advises the Nile-COM. The Nile-TAC further guides the NBI Secretariat (Nile-SEC), based in Uganda, which is the main head office of three head offices of the NBI in total, with the purpose of

[9] The ten contributors to the NBTF are: the World Bank, the European Commission, Finland, France, the Netherlands, Norway, Sweden, Denmark, the United Kingdom and Canada.

supervising, coordinating and monitoring the NBI's activities. The two additional offices are the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) in Rwanda and the Eastern Nile Technical Regional Office (ENTRO) in Ethiopia. These offices are further coordinated with the Eastern Nile Strategic Action Program Technical Committee (ENSAPT) and the Eastern Nile Council of Ministers (EN-COM), which govern activities in the eastern Nile. Also, the Nile Equatorial Lakes Technical Advisory Committee (NEL-TAC) and the Nile Equatorial Lakes Council of Ministers (NEL-COM) govern the activities in the equatorial sub-basin (World Bank, 2013).

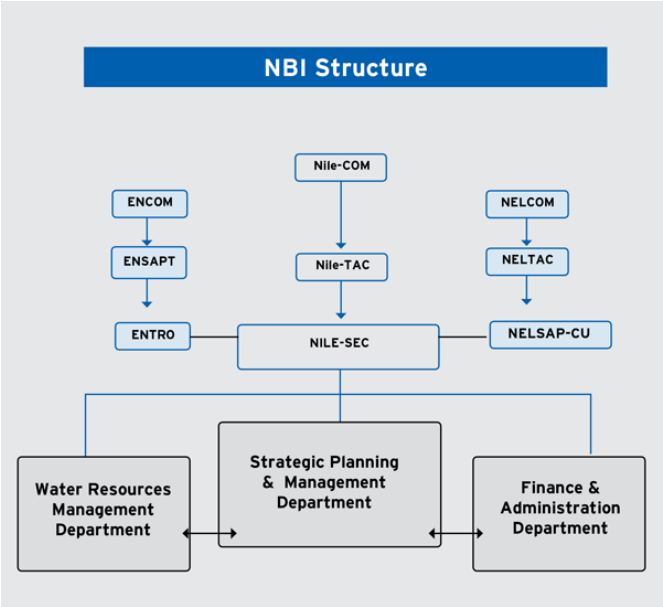

Figure 2 'NBI Structure' from Nile Basin Initiative (n.d.-b)

A great part of the NBI's activities conform to the Strategic Action Program, which is composed of two main programs, the Shared Vision Program (SVP) and the Subsidiary Action Program (SAP). The latter is divided into two branches; the Eastern Nile Subsidiary Action Program (ENSAP) and the Nile Equatorial Lakes Subsidiary Action Program (NELSAP).[10] The SAP aims to initiate joint investments, plans and implements programs at a low level within each state.[11]

[10] The ENSAP is comprised of Egypt, Ethiopia, Sudan and the Republic of South Sudan. The NELSAP of Burundi, Uganda, Tanzania, Kenya, Rwanda and the Democratic Republic of Congo.

[11] The SAP's main activities include:

The second pillar of the Strategic Action Program, the SVP, is the core of the NBI.[12] The SVP aims to build basin-wide trust, capacity and confidence to enable cooperation on the ground level.[13] The main objectives of the SVP are to: 'i) build trust among the Nile riparian countries; ii) build capacity in member countries; and iii) create an enabling environment for trans-boundary investments' (World Bank, 2010, p. 3).

Both branches of the Strategic Action Program, the SVP and the SAP, represent a deep commitment by all basin states to jointly manage their common concerns and shared

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- 'river flow regulations and water harvesting and conservation;
- hydropower generation and irrigated food production;
- water shed management and soil erosion control;
- reduction of evaporation losses from swamps;
- fisheries development and transport and navigation development;
- eco-tourism development; weed control; waste water treatment; and
- pollution control and water quality management, and efficient uses and improvements.' [sic.] (Gebeto, 2010, p. 14)

[12] The SVP is funded by the World Bank, African Development Bank, United Nation Development Program, Canadian International Development Agency, the German Agency for Technological Cooperation and Global Environmental Facility and the Nile Basin Trust Fund (Lie, 2011).

[13] To facilitate this aim, the SVP is composed of eight projects:

1. 'The Applied Training Project (*in Cairo*), to build the skills needed in each of the NBI countries;
2. The Nile Trans-boundary Environmental Action Project (*in Khartoum*) aimed at promoting cooperation among the Nile Basin countries;
3. The Nile Basin Region Power Trade Project (*in Dar-es-Salaam*) to establish the institutional means to coordinate the development of regional power markets;
4. Efficient Water Use for Agriculture Project (*in Nairobi*) to provide a sound conceptual and practical basis to increase the availability and efficient use of water for agricultural production;
5. The Water Resource Planning and Management Project (*in Addis Ababa*) for coordinated basin-wide development plan;
6. The Confidence-building and Stakeholder Involvement Project (*in Entebbe*);
7. The Socio-economic development scenarios and benefit-sharing schemes (*in Entebbe*);
8. The SVP Executive and Coordination Project (*in Entebbe*) to strengthen the capacity of the NBI institutions, to carry out the basin-wide coordination of SVP' [sic.] (Gebeto, 2010, p. 18).

interests, to promote cooperation and regional integration. Belay et al. (2010, pp. 9-10) write:

> 'The NBI's Strategic Action Program is the greatest fundamental turning point and landmark towards integrated water resource management of the Nile River. In its whole, the Strategic Action Program is trying to create a knowledge base and essential tools for integrated water resource management through regional, economic, spatial sectorial and knowledge integration'.

The NBI has further established a strategy for projects and activities running from 2013 to 2017. The Strategic Plan (Figure 3) illustrates how the NBI at present expands its activities beyond the Strategic Action Program and focuses on delivering results. One of the main reasons for this expansion is that the NBI has been unable to conclude the CFA with all riparian states involved. Included in the NBI's Strategic Plan is the Nile Cooperation for Results Project (NCORE), which has three main aims: to enable integrated water resource management, to facilitate cooperation and to facilitate Nile water development (World Bank, 2013).

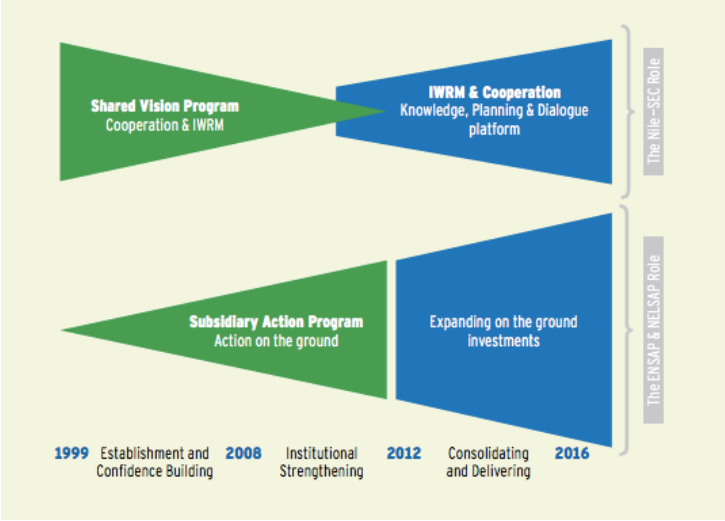

Figure 3 'A new phase of the NBI Strategic Action Program' (Nile Basin Initiative, 2012a)

Considering every branch and program of the NBI, among others Gebeto (2010) refers to the initiative as the most complex and ambitious transboundary river project of all time. According to Kimenyi and Mbaku (2015), successful implementation of the

ambitious initiative is crucial to obtain reasonable and sustainable water use of the Nile basin. Furthermore, successful implementation requires the Nile basin states to pool their recourses, transfer parts of their sovereignly, prioritise the collective good, amend the colonial agreements and abandon the idea of the right to unilaterally control the water resource within one's own territory (Gebeto, 2010; Keohane, 1989).

5.1.2 The Cooperation Framework Agreement

As of today, the NBI remains a transnational institution binding the basin states together, with the intention to move to a Cooperative Framework Agreement (CFA), which would make the NBI a River Basin Organisation (RBO). The NBI has served as a facilitator for establishing the CFA, as a new legal framework for Nile water management. This process started immediately after the establishment of the NBI, and has continued for more than 15 years. The CFA is the first attempt of basin-wide legal governance of water to facilitate equitable distribution, economic growth and development.

According to Keohane (1989), such an international regime can increase regional capacity, generate trust, increase interaction, and guide the members towards cooperation. Indeed, the NBI writes: 'The Treaty could play a key role in catalysing economic growth, reducing poverty, facilitating regional integration and promoting regional peace and stability' (Nile Basin Initiative, n.d.-a, pp. 'What is the Significance of the Treaty for Nile Basin Development', para. 3).

The CFA contains principles, obligations and rules that seek to promote integrated water management, development and cooperation between Nile basin states and its people (Nile Basin Initiative, 2007). The CFA Treaty is divided into six parts. Part one, *general principles*, includes principles of international water law, which are meant to guide the basin states on how to manage the resource. Notably, the principles concern the equitable use of water and protecting the Nile's ecosystem. Part two, *rights and obligation*, includes obligations to exchange information, to inform about construction

projects, to observe the principle of subsidiarity, to assess the environmental impact of intended water projects, and to not do harm to other basin states' water security. Part three, *institutional structure and role of the Nile River Basin Commission (NRBC)*, outlines the organs of the framework agreement, with emphasis on the NRBC. Part four, *subsidiary institutions*, briefly outlines the possibility to form subsidiary institutions. Part five*, miscellaneous provisions*, includes procedures for conflict resolution on issues arising during the process of implementing the CFA, as well as the possibility to establish an additional agreement to supplement the CFA. The sixth and final part, *final clauses*, includes the procedures of ratification, implementation and possible changes to the framework agreement (Nile Basin Initiative, 2007).

Although all basin states have recognised the need to cooperate to jointly manage the Nile's water, they have so far been unable to establish the CFA. Today, the basin states agree on most parts of the framework agreement, but there are two main issues holding back the implementation of the CFA. The first is whether the issue of water security is fairly addressed, considering both upstream and downstream states' point of view. While the second is whether the CFA will nullify the colonial agreements of 1929 and 1959 (Kimenyi & Mbaku, 2015).

Due to issues about water security and the colonial agreements, the CFA negotiations came to a deadlock over article 14(b); 'not do cause significant harm to the water security of any other Nile basin countries' (Nile Basin Initiative, 2007). Egypt and Sudan insisted on a reformulation of the article, to read: 'not to adversely affect the water security of current users and rights of any other Nile basin countries', thus underpinning Sudan and Egypt's historical rights to water on the basis of the agreements of 1929 and 1959 (Kimenyi & Mbaku, 2015, p. 78).

Again the question of regime formation arises. Following Keohane's (1989) theory, regime formation depends on certain main variables: mutual interests, number of states involved, degree of interdependence and existing patterns of regimes. In the Nile basin, states share interests and has expressed a willingness to cooperate. Indeed, the states are unable to overcome the water-related issues alone. In terms of interdependence, defined as situations in which states or actors in different states are mutually dependent

on each other, the degree of interdependence in the basin has increased due to of the NBI's many programs and project that have brought the states together. As this thesis discuss bellow, the NBI has made significant contributions towards joint management, thus the existing patterns of regimes are overall decent. Nevertheless, while the Nile basin states have a common desire to cooperate, it has proven difficult to establish the new legal framework for joint management of the water.

Despite attempts to resolve the issues concerning article 14(b) and the colonial agreements of 1929 and 1959, the basin states have not come to an agreement. In fact, as a result of the CFA negotiations, respective positions about the distribution of water in accordance to the colonial agreements has resurfaced and hardened (Salman, 2013). Upstream basin states agree that the CFA should nullify the colonial agreements and provide a new legal framework, to ensure equitable and efficient water management. On the other hand, the downstream states maintain that the CFA should recognise the legitimacy of the 1929 and 1959 agreements.

Moreover, this disagreement may not hinder the implementation of the CFA. Indeed, Kimenyi and Mbaku (2015) highlight that the framework agreement is likely to enter into force within the next few months. Five upstream basin states, Kenya, Rwanda, Tanzania, Uganda and Ethiopia, signed the CFA in May 2010, and Burundi signed close to a year later, in February 2011. Sudan and Egypt strongly opposed the signing and have continuously refused to sign the CFA and any other agreement concerning management of the Nile's water, 'unless they are first guaranteed an exact share of the water (BBC News, 2010)'.[14] Nonetheless, Article 43 states that 'the present Framework shall enter into force on the sixtieth day following the date of the deposit of the sixth instrument of ratification or accession with the African Union' (Nile Basin Initiative, 2007, p. 62). Ethiopia ratified the CFA in June 2013, Rwanda in August 2013, most recently Tanzania ratified the CFA in March 2015, and more basin states are expected to follow (Kimenyi & Mbaku, 2015; Nile Basin Initiative, n.d.-a). A central question then is, what effect and status will the CFA have if both Sudan and Egypt refuse to sign and ratify the framework, as the basin states that do not ratify the CFA are not bound to the

[14] Until the CFA has entered into force, the text of the treaty can be renegotiated.

agreement? Although the CFA may enter into force, it may not solve the long-lasting conflict between upstream and downstream basin states, which centres around the historic rights to use water. In an e-interview, John Mukum Mbaku writes:

> '[I]t is very important that all the Nile River states undertake...negotiations to agree on a new framework that is agreeable to *all* of them and allows them to manage the river's waters equitably and reasonably. … Efficient and sustainable management of the Nile River can only be accomplished if *all* the river's relevant stakeholders agree on a new legal regime' (J. M. Mbaku, personal communication, 24 May, 2015).

While the NBI remains a transitional regime, that so far has been unable to move into the CFA, the NBI has made other significant achievements that will be analysed in the next section.

5.2 Research Question 2: *What Effects have the NBI had in Establishing Integrated Management of Water and Cooperation in the Nile Basin?*

The NBI was established to facilitate the formation of a new legal and institutional framework for Nile water management and to 'achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources' (Nile Basin Initiative, n.d.-c, para. 4). Although this is a complex mission, the NBI has made significant results in a relatively short time. In this section, I explore to what extent the NBI has enhanced Haas et al.'s (1993) 'three C's': concern, capacity and contractual environment.

5.2.1 Concern

Levy and Keohane (1996, p. 9) define concern as 'the interests in perceiving the [regime issue] expressed by potential funders, recipients, and governments involved (…) For serious action to be taken, the interest of powerful governments must to some extent be complimentary'. For instance, a regime may enhance concern by promoting public

pressure and normative pressure on states and enhance international concern. Enhanced concern can be achieved by providing training to enhance knowledge, information exchange, and linking relevant issues to increase the issue-density (Haas et al., 1993).

According to Belay et al. (2010), the NBI has increased concern by enhancing knowledge, raising awareness and facilitating information-exchange. The NBI raises concern through basin-wide forums and education networks that jointly gather data and further spread information about water-related issues locally, nationally and internationally. In particular, the NBI focuses on building mutual understanding and concern about common regional issues that cannot be handled by one state alone (World Bank, 2010). The NBI has further, through the SVP, prepared a strategy of how to address these issues.

Raising concern is for instance a crucial component of the *Nile Trans-boundary Environmental Action Project,* under the SVP, located in Sudan's capital, Khartoum. The project aims to raise awareness about environmental issues in the region that are relevant to the basin's water resources. Among the environmental issues in the basin are: deforestation, soil erosion, water pollution, proliferation of aquatic weeds and increased water scarcity due to population growth (World Bank, 2010). The *Nile Trans-boundary Environmental Action Project* provides training to enhance knowledge about environmental issues to all the basin states' governments, non-governmental organisations (NGOs) and local communities by: 'strengthening networks of environmental education practitioners; developing curriculum for primary, secondary, and university students; and supporting environmental awareness campaigns through nature clubs, schools, youth groups, scout troops, universities, churches and mosques' (Belay et al., 2010, p. 10).

Added to this, one of the main objectives of the NBI-ISP is to enhance public and national concern and knowledge about transboundary river management. Under the NBI-ISP, the NBI started publishing comprehensive Nile basin reports, named *State of the River Nile Basin*, to enhance concern and access to valid, in-depth information (Nile Basin Initiative, 2012b). The NBI-ISP has, according to the World Bank (2013), successfully

managed to enhance transboundary concern, which is reflected in national policies.

The on-going project, NCORE, also focuses on concern. The project has conducted a new analysis and expanded projects, with the aim to enhance awareness of common issues. For instance, the Nile-SEC has produced and published a flagship paper about common water management, which has been distributed to all NBI member states. Also, ENTRO is currently expanding a regional flood forecasting service that aims to enhance regional and international awareness and concern about floods, and highlight possible solutions. The service is currently used by 43 organisations, including the UN, and the NCORE is in the process of establishing a web application to make the flood forecasting services accessible for a wider audience (World Bank, 2015).

In all, the NBI has raised concern through the Strategic Action Program, NBI-ISP and NCORE, mainly through enhancing knowledge, raising awareness and facilitating information-exchange about transboundary water management and environmental issues.

5.2.2 Contractual Environment

Levy and Keohane (1996) refer to the contractual environment as one of the main components of effective international regimes. Effective international regimes need to establish robust institutional mechanisms to ensure: confidence between stakeholders; the implementation of set obligations; reporting; joint decision-making and to prevent attempts of manipulation. A robust contractual environment depends, in particular, on two main components: first, on effective monitoring, which enhances a state's willingness to comply with obligations and to enhance the credibility of their commitment. Second, establishing effective bargaining forums, which generate common decision-making procedures, increasing information exchange and reducing transaction costs (Levy & Keohane, 1996).

The NBI has established structures, governance and mechanisms to enable both bargaining forums and effective monitoring (Belay et al., 2010; World Bank, 2010). The NBI has managed to create a framework for monitoring projects through regular financial reports and project management units in each basin state. These activities have, according to Belay et al. (2010), strengthened actors' ownership and willingness to comply with the obligations set out by the NBI.

The NBI has further managed to establish bargaining forums which include systems for basin-wide stakeholder participation to enable collective: information-sharing, dialogue, collective decision-making, analysis, and action (World Bank, 2010). In Belay et al.'s (2010, p. 15) analysis of the NBI, they write: 'The NBI has set up governance, institutional structures and processes to provide permanent mechanisms for constructive dialogue, planning and development among riparians, focused on the sharing of water and water's benefits'.

Both branches of the Strategic Action Program, the SVP and the SAP, hold components with the aim of strengthening the institutional structure of the NBI. The SAP and the SVP include components to enable joint monitoring and bargaining, as well as confidence building, information exchange, and decision-making (Teshome, 2008). In particular, one of the aims of the SVP project: the *Confidence-building and Stakeholder Involvement Project*, is to handle issues concerning the joint management of the Nile's resources, and to build cooperation, trust and confidence through basin-wide stakeholder participation. The project has established forums and procedures for collective analysis, bargaining, decision-making and monitoring to develop a sense of ownership towards NBI's activities. The project also enhances information exchange among journalists, universities, scholars, parliamentarians, local leaders and students (World Bank, 2003).

The NBI has enhanced the contractual environment in the Nile basin, most notably through the SVPs and the SAP, however the NBI's institutional structure has also (as discussed further in Chapter 5.4) been subject to criticism. To strengthen the institutional structure of the NBI, the NBI-ISP was launched in 2008, with the aim to strengthen the institutional infrastructure and capacity to make the initiative more effective. The NBI-ISP contains five main basin-wide components with a focus on

principles of institutional effectiveness and integration, which are relevant for all basin states. For instance, the NBI-ISP has established standards and procedures for: program management, integrated water management, internal and external communications, budgeting, HR, planning and procurement (World Bank, 2013). The World Bank (2013, p. II). writes that the NBI-ISP 'has strengthened foundation for institutional sustainability, enhanced capacity, and harmonized corporate management to more effectively deliver programs and projects'.

Added to the NBI-ISP and the Strategic Action Program, Teshome (2008) highlights that another great achievement of the NBI is the accomplishment of the draft of the Cooperative Framework Agreement (CFA). In an e-interview, Kenneth Marc Strzepek also highlights the CFA as one of the most important achievements by the NBI, in addition to establishing basin-wide expertise on water related issues and enhanced dialogue between states (K. M. Strzepek, personal communication, 21 May, 2015). The process of accomplishing the draft of the framework has been challenging. Mekonnen (2010, p. 422) writes: 'the Nile riparians have been, over the past decade, striving to work out the details of and agree on a draft Cooperate Framework Agreement (CFA)'. The CFA contains principles, obligations and rules for Nile basin water management, and is the first basin-wide attempt to establish legal grounds for the distribution of the Nile basin's freshwater (Kimenyi & Mbaku, 2015). When entering in to force, the CFA will become the new institutional framework and the main contractual environment for Nile basin cooperation.

Due to the efforts of the NBI, the Nile basin has moved from having no common platform to handling joint Nile basin issues, to a point where the Nile basin countries have a contractual environment that enables bargaining and monitoring, as well as enhanced dialogue, information-sharing, decision-making, joint investment and enhanced credibility of stakeholders' commitment (World Bank, 2010).

5.2.3 Capacity

By capacity, Haas et al. (1993) denote both national and institutional capacity, which enhances the actors' ability to implement and comply with the obligations set out by the regime.

> 'The capacity of recipient governments to implement policies designed to protect the natural environment and assure sustainability is crucial. Often … the lack of such capacity is a critical source of policy ineffectiveness. Also important is the capacity of the donor institution (Levy & Keohane, 1996, p. 12).

Capacity building may involve strengthening financial capacity, technical capacity and analytical capacity. It is not only a matter of administrative capacity, but also political capacity in terms of actors' commitment and implementation. In this sense, capacity is often also closely tied with concern (Haas et al., 1993).

The NBI has, according to Belay et al. (2010), developed training to enhance the political and administrative capacity of governmental ministries and local communities in all the basin states. Capacity building is one of the three main objectives of the SVP, and has thus been a top priority in nearly all SVP programs (World Bank, 2010). Capacity has also been a crucial component in the NBI-ISP and is also incorporated in the NCORE project.

In terms of *financial capacity*, the NBI has successfully identified available funds, approached international funding institutions and gained funding for their operations (Teshome, 2008). So far, the NBTF has funded 29 projects to support Nile cooperation (World Bank, 2013). More than 17 partners have offered both financial and technical support to the NBI. In total, the NBI has an investment portfolio of more than US$ 1 billion (World Bank, 2013). In addition, the NBI-ISP has managed to gain basin states' promise to finance the minimum cost of NBI's fundamental operations of US$3.5 million annually by 2017. This has provided an assurance for NBI's continuous functionality (World Bank, 2013).

The NBI has enhanced the *technical capacity* in the Nile basin region by improving the regional technical cooperation, establishing a joint technical foundation, enhancing knowledge about the necessary tools for efficient water use, establishing a regional electricity market and has trained thousands of technical staff on water planning and management (World Bank, 2010, 2013, 2015).

Many of these activities are included in the *Nile Basin Regional Power Trade Project,* under the SVP. This project is a response to the unreliable electricity in the Nile basin region, and aims to increase knowledge about tools for efficient water use and to form a regional electricity market. The market is believed to increase capacity and regional cooperation beyond water management. The project has trained staff, enhanced knowledge and established the Nile Basin Power Forum, where technological experts meet to discuss and exchange ideas about power technology, power trade and technical integration (World Bank, 2010).

The NBI-ISP has further enhanced technical capacity in the basin by strengthening the *Nile Technical Advisory Committee* (established in 1989), establishing systems for technical modelling and decision support, enhanced the leadership in the power sector, enhanced the systems for preparing and identifying possibilities for water development and improved the common technical facilities and equipment. The World Bank's (2013, p. 28) report on the results of the NBI-ISP states: 'NBI is becoming the 'go-to' technical institution for the Nile basin for Member States'.

In terms of *analytical capacity*, the World Bank (2013, p. 4) writes: 'The NBI centres have improved the collation, analysis, and access to information relating to the Nile basin, including procedures and norms for … information sharing and exchange'. The NBI has established programs with a focus on basin-wide and multi-sectorial capacity building, to enhance the basis for cooperation among basin states. The aim of these capacity building projects is to establish tools for basin-wide water management and to enhance knowledge. The activities include collective analysis, information exchange among basin states, skills training, basin-wide research institutions, and are integrated in several of the Strategic Action Programs (World Bank, 2013).

For instance, one of the SVPs, the *Applied Training Project*, aims to build capacity among basin states to enhance basin-wide water management. The project has three main components: skill training in integrated freshwater management for professionals and decision-makers; scholarships at master's and doctoral level to undertake research on joint freshwater management in order to establish a specialist group to promote integration; forming the NileNet, which will engage in joint research and problem-solving, and personnel exchange among basin states (World Bank, 2010).

5.3 Enhanced Cooperation in the Nile Basin?

According to the analysis above, the NBI has enhanced the 'three C's', but does enhanced concern, a contractual environment and capacity enable joint management and cooperation in the Nile basin?

The World Bank (2010, p. 4) explains that the 'SVP and the Subsidiary Action Programs (SAP) have jointly contributed to the remarkable progress towards transboundary cooperation'. Indeed, from its starting point in 1999, the NBI has made progress towards cooperation. The Nile basin has moved from having no common platform to handling joint issues concerning the Nile waters, to a point where the Nile basin countries have a robust institutional platform and numerous projects which overall has enhanced knowledge, dialogue, discussion, investment, and thus increased interdependence among the Nile basin states (World Bank, 2013). The projects under the Strategic Action Program and the NBI-ISP have established international partnerships and networks that have brought the basin states and their people together. This has, according to the World Bank (2013), resulted in a shared understanding of common transboundary water issues and an enhanced level of trust among stakeholders. The World Bank (2013, p. 28) further highlights the challenges of analysing the actual long-term benefits of the NBI, but expects that: 'in the longer term NBI will be able to develop a full basin sustainability function, delivering real environmental benefits and creating the framework for optimal basin-wide planning and the development of water resources'.

Moreover, Tvedt (2010) and the World Bank (2010) signifies that the NBI is often criticised for lacking results on the ground. While the NBI's efforts to build trust and confidence among the basin states remain crucial for ensuring political stability and harmony in the region, its results are ambiguous (World Bank, 2010). The progress and outcomes of the NBI, highlighted by the World Bank (2010, 2013), overall seem to be more technical than political. The World Bank (2010, p. 4) writes that the: 'rising trust observed during the past ten years has been largely at the technical level and little progress has been made in the political arena'. Indeed, the NBI are facing challenges that impede the effectiveness of the regime.

5.4 Main Challenges: Upstream-downstream Asymmetries and Weak Institutional Structure

While the NBI has made important steps towards the joint management of water, the initiative is facing constraints for effective implementation. Among the challenges affecting the NBI's efficiency is weak institutional structure and conflicting interests between the basin states.

5.4.1 Upstream – downstream Asymmetries

The Nile region, with its 350 million people, is characterised by political instability and power asymmetries, which are rooted in the colonial period. Belay et al. (2010, p. 8) explain: 'the Nile Basin people have been facing many complex environmental, social, economic and political challenges that have made it difficult for the proper management and sustainability of Nile water'. Indeed, Kenneth Marc Strzepek writes (in capital letters) in an e-interview that the main challenge of the NBI is: 'GETTING ALL RIPARIANS TO AGREE TO THEIR ROLE AS BROKER IN THE BASIN' (K. M. Stzepek, personal communication, 21 May, 2015). Furthermore, despite basin states' different perspectives and interests, all stakeholders have recognised the need to cooperate to jointly manage the Nile's water. Still, these differences impede the process of ensuring

equitable and efficient basin-wide management of the Nile's waters, which is crucial for social, economic and political development (Kimenyi & Mbaku, 2015).

Egypt has historically had the greatest political leverage of the Nile basin states, both due to its strong relations with the United States, the Middle East and Europe, and because of its historic rights to water through the colonial agreements of 1929 and 1959 (Cascao, 2009). After Egyptian independence in 1922, Egypt steadily gained the position as a regional hegemon and has continuously sought to expand its water share, enabled by the colonial agreements, without giving much thought to other basin states' water needs (Waterbury, 2002).

However, Egypt does not dominate the Nile basin to the same extent as before. Domestic issues have weakened Egypt's position, and several upstream basin states have gradually developed and gained capacity to assert their interests. For instance, that Ethiopia is building the GERD, despite Egyptian opposition, contradicts Egypt's acquired right to veto other basin states' construction projects. The dam has caused political tension between Egypt and Ethiopia, and has complicated the process of coming to an agreement about the content of the CFA. Furthermore, in 2012, Sudan officially stated their support of the dam, which means that all basin states, except Egypt, now recognise other riparians right to use water and complete construction projects along the Nile. While Sudan is yet to sign and ratify the CFA, Kimenyi and Mbaku (2015) and Lamere (2012) highlight that Sudanese support of the dam could lead the way to further cooperation.

Another conflict of interest among the upstream and downstream basin states is that over article 14(b) of the CFA, concerning the possible amendment of the colonial agreements. The NBI was established to facilitate the move from unilateral to multilateral Nile resource management through the CFA, however the CFA is yet to be ratified by most NBI members. While the upstream states agree that the CFA should replace the colonial agreements and provide a new legal framework to ensure equitable and efficient water management, the downstream states maintain that the CFA should recognise the legitimacy of the 1929 and 1959 agreements. The disagreement over article 14(b) has affected the NBI's activities. Due to the deadlock of the CFA, two basin

states refused to pay their annual fees to the NBI in 2010, and have refused to participate in certain activities initiated by the NBI. Teshome (2008) argues that a major constraint of the NBI, namely is this absence of a legal framework.

In an e-interview with John Mukum Mbaku, he writes:

> 'Climate change and population growth will make water management very difficult. However, the most important problem is how to convince Egypt and Sudan to give up their claims to "rights acquired through the Nile Waters Agreements" and allow all the riparian States, mostly likely through the NBI, to engage in new negotiations to agree on a legal framework that guarantees equity, reasonableness, and sustainability in the management of the Nile River's waters. … Unfortunately, the insistence by Egypt and Sudan that the water rights granted to them by the 1929 Anglo-Egyptian Treaty and the 1959 bilateral Agreement between Egypt and Sudan be recognized by all riparian States, has frustrated progress with the CFA and effectively brought negotiations to a stand still. … Unless the disagreement between the upstream riparian States—who, under the Nile Waters Agreements do not have any water allocations—and the downstream riparian States, who effectively continue to monopolize access to the waters of the Nile, is resolved and done so to the satisfaction of all parties, the conflict in the Nile River Basin could turn violent as countries scramble for water to meet national development needs' (J. M. Mbaku, personal communication, 24 May, 2015).

5.4.2 Institutional Challenges

According to Gebeto (2010), the NBI is the most comprehensive and ambitious transboundary water project. Partly because of this width and complexity, the NBI is facing certain institutional challenges, most notably concerning funding and staff (Belay et al., 2010; World Bank, 2010).

Belay et al. (2010) signify that the NBI lacks sufficient staff to achieve its ambitious objectives. The World Bank (2010) also highlights that both branches of the Strategic Action Program, the SVP and SAP have been impeded by two main issues: first, the lack of procedures for financial management and procurement and two, the slow requirement of staff. In particular, the NBI has been unable to handle the increasing institutional demands in terms of: planning, responding to common challenges, establishing strong political leadership, managing the large amount of information

gathered from the NBI's many projects and mobilising resources. Partly because of the global economic crisis, as well as more acute incidents, such as earthquakes, civil wars and famine emergencies, the NBI has not raised adequate funds to accomplish its objectives (Gebeto, 2010).

The NBI-ISP, with the aim of strengthening the institutional structure of the NBI, included components to ensure future funding of the institution and to strengthen the professional teams of staff in the Nile-SEC and other key offices. However according to the World Bank (2013), the NBI still lacks sufficient staff and is facing challenges in funding future activities.

5.5 The 'Three C's' Ability to Explain Regime Effectiveness

As mentioned above, the study of regime effectiveness has become a major field within IR, and perhaps the best known framework of regime effectiveness is the 'three C's', put forward by Haas et al. (1993). According to Haas et al. (1993), an effective regime must meet three conditions: sufficient concern, a robust contractual environment and sufficient technical, financial and analytical capacity. Thus the 'three C's' is, according to Haas et al. (1993), a coherent analytical framework for describing, explaining and evaluating regime effectiveness.

Nonetheless, the 'three C's' has certain deficiencies. The 'three C's' reveal institutional results, rather than impact on the regime issue itself. The 'three C's' does provide a clear framework for an empirical analysis of *institutional* effectiveness, but the bigger question is whether the regime has had an impact on the regime issue itself.

Kutting (2000) argues that the 'three C's' are vague in applying the institutional achievements of regimes as variables of effectiveness, without assessing the regimes' consequences against given standards. She adds that indicators of effectiveness should be defined in terms of the issue under study, and the regime's goals. Kutting (2000) also criticises regime theory for focusing on 'action, or behaviour, but without seeing this action as part of a wider social, even historical, process and context'. Strange (1982)

adds that cooperation is not only limited to that enabled by a regime. A thorough analysis of international cooperation would also incorporate cooperation that is external to the regime. In this sense, one must be careful when drawing conclusions about the role and effectiveness of the NBI, without including an assessment of external factors.

Although the 'three C's' do not directly offer an insight into the regime's impact on the regime issue, the 'three C's' provide a suitable analytical framework for an empirical analysis of regime effectiveness. While I agree with Kutting (2000) that the indicators of effectiveness should ideally be closely tied with the goals of a regime, Haas et al. (1993, p. 7) apply the 'three C's' due to the common absence of reliable data and the long time lag between the actions initiated by a regime and the impacts that follow. In their conceptualisation of regime effectiveness, Haas et al.'s (1993) main question is whether the regime has had a positive impact on the regime issue. 'This does not mean that problems are solved, merely that international [regimes have had] a positive contribution on the treatment of shared problems' (Haas et al., 1993, p. 7). Because of the absence of reliable data, they argue that regime effectiveness should be studied in terms of the: 'observable political effects of institutions rather than direct on environmental impact' (Haas et al., 1993). In their view, the 'three C's' is a coherent framework that has the ability to explain regime effectiveness and an effective regime will, according to Haas et al. (1993), enhance the regime issue.

6.0 Conclusion

From the great lakes of East Africa, the highlands of Ethiopia, through the swamps of the Sudd, the desert of the Sahara, the fertile valleys of Sudan and Egypt, flowing out into the Mediterranean Sea, the Nile is a 6, 695 km lifeline for 350 million people in 11 basin states. For a long time these basin states have disagreed on the distribution and management of the Nile's waters. Since the early twentieth century Egypt has claimed superior rights to water, while most other basin states have called for the establishment of a new legal and institutional framework. Today, the basin states agree on the need to cooperate to jointly protect, manage and sustainably use the Nile's waters, but they do not agree on *how* to do this.

No simple answer exists to the problems faced by the Nile basin. Indeed, Tvedt (2010, p. 246) writes: '[t]here is no simple institutional solution to the collective action problem in the Nile basin, and no ready-made model that can be applied'. This thesis has highlighted the efforts of institutional cooperation, and analysed the effectiveness and challenges of these efforts, through a regime theoretical framework.

6.1. Concluding Remarks on Research Question 1: *What Multilateral Efforts Have Been Made to Manage the Nile's Freshwater Resources?*

With independence, upstream basin states advocated basin-wide negotiations to establish a new multilateral institutional framework for the equitable distribution and management of the resources. For the last four decades, the basin states have on several occasions attempted to gather the Nile basin region to cooperate and agree on the management and distribution of Nile water: the TECCONILE in 1992, the Nile River Action Plan in 1995 and the contemporary NBI, launched in 1999. The basin-wide water management program, the NBI, is a temporary institution, which was designed to facilitate the move from unilateral to multilateral Nile resource management and to

promote peaceful relations between the basin states. According to Metawie (2004, pp. 1-2), the NBI 'represents deep commitment by the Nile riparian countries to foster cooperation and pursue jointly sustainable development and management of Nile water resources for the benefit of all'.

The NBI holds a Shared Vision 'to achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources' (Kimenyi & Mbaku, 2015, p. 74). The NBI is a complex and ambitious institution, composed of numerous projects and programs that are closely linked to the regime's Shared Vision. The NBI has served as a facilitator for establishing a new legal and institutional framework for Nile water management that would form a permanent river basin organisation, the CFA. The CFA is the first attempt of basin-wide legal governance of water to facilitate equitable distribution, economic growth and development.

Creating a legal and institutional framework is indeed a critical step towards efficient and equitable management and distribution, prosperity, economic growth and peaceful relations between the Nile basin states (Kimenyi & Mbaku, 2015). Although the NBI has finished the draft of the CFA, two main issues are holding back the implementation of the CFA. The first is conflicting views about water security, concerning the basin states' dependence on the Nile's waters, while the second is whether the CFA shall nullify the colonial agreements of 1929 and 1959.

Despite these and other challenges in the basin, the NBI has made important results in a relatively short time. To analyse the role and effects of the NBI in establishing joint management of water and cooperation in the Nile basin, I applied Haas et al.'s (1993) 'three C's'.

6.2. Concluding Remarks on Research Question 2: *What Effects Have the NBI had in Establishing Integrated Management of Water and Cooperation in the Nile Basin?*

Regime theory and the 'three C's' has provided a foundation that is broad enough to incorporate a wide range of institutional arrangements as well as operational conceptualisations that enable empirical analysis of the regime's effectiveness.

Because of the common absence of reliable data, Haas et al. (1993) apply the 'three C's' as a framework to address the institutional effects that are pathways to effectiveness: concern, contractual environment and capacity. Although the 'three C's' do not directly provide an insight into the regime's impact on the regime issue, the 'three C's' provide a suitable analytical framework the for empirical analysis of the regime's effectiveness.

The NBI has enhanced international and national concern, increased technical, analytical and financial capacity and established a contractual environment. Thanks to the contractual environment established by the NBI, the Nile basin has moved from having no common platform to handle joint Nile basin issues, to having a contractual environment that facilitates dialogue, bargaining, monitoring and decision-making. The improved contractual environment has facilitated cooperation between states. Further in terms of capacity, the NBI has gained funding for their operations through more than 17 financial partnerships and established basin-wide networks and corporations that have enhanced analytical and technical capacity and brought the region together (World Bank, 2010). The NBI has moreover enhanced concern through facilitating increased knowledge, awareness and information exchange. This has, according to the World Bank (2013), produced a common understanding of shared issues, improved access to reliable information and has enhanced the level of trust among stakeholders.

These results do not mean the problems have been solved, or that the Nile basin has achieved integrated management of water and cooperation among basin states. While the NBI has taken important steps towards fulfilling its Shared Vision, the NBI is still facing significant challenges that impede the process of facilitating multilateral water management. So far, the NBI has been insufficient in resolving issues concerning the

colonial agreements, which has been the root of disagreement between upstream and downstream states for decades. Because of this, the NBI has been unable to facilitate political cooperative action, mainly because cooperative action requires fully-fledged support from all basin states. These and other issues concerning the NBI's institutional structure have impacted the regime's effects in realising basin-wide management of the Nile's waters.

Despite these challenges, the NBI has had a positive impact on the treatment of common issues in the Nile basin, towards cooperation and joint management of water. The NBI has enabled greater cooperation among states, through enhanced confidence and trust among basin states. The World Bank (2010, p. 6) writes: 'Even such a highly complex regional program can succeed if there is political will, participation, prudent institutional and technical design, and strong partnerships'. Indeed, the NBI has facilitated 'participation', 'institutional and technical design' and a 'strong[er] partnership'. Overall the NBI is an important catalyst for enhanced economic and political cooperation in the region, with potential benefits beyond those of the river itself.

6.3 Future Research

This thesis has aimed to provide greater insight into the research scope, by drawing on and connecting two distinct realms: the empirical setting of the Nile water resources and the theoretical approaches of regime theory. While this is a contribution towards a more in depth analysis of the regime's role in managing the Nile's waters, much still needs to be done to gain a comprehensive understanding of the institutional efforts and effects in the Nile basin.

Indeed, due to the limits of this thesis, there is a range of questions and issues that are yet to be explored. This thesis is limited to the institutional effects of the NBI, and thus leaves out other forms of cooperation, and external and internal factors that may affect the process towards joint management of the Nile's water.

Further research may explore each basin states' perspectives, looking at the uncertainty of water availability and other factors that may affect each state's interests and willingness for cooperation. Another research path could be to identify a comprehensive theoretical framework for studying water regimes' effectiveness, perhaps where external factors, other forms of cooperation and historical context are added to the 'three C's'. There is little research on international fresh-water management from a regime theoretical perspective. The empirical context of Nile freshwater management and the theoretical approaches of regime theory deserve more attention.

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8.0 Appendix

8.1 Appendix 1: Interview guide

E-mail introduction:
Dear (NAME)
my name is Randi Versto Kaasa. I am a student of International Relations at the Norwegian University of Life Sciences.

I am currently writing a masters thesis on Nile water management. The topic of study is freshwater management, and the role and effects of institutions in managing freshwater resources. The thesis is largely based in secondary data, however to compliment the archival research I also conduct e-interviews.

You are selected as a possible participant because of your knowledge of, or association with the Nile basin/ the NBI. I hope you will take the time to answer the questions bellow. For information about consent, and possible benefits and risk of this study, please read the *Consent and Statement of Risk* bellow:

Your reply would be highly appreciated. Thank you very much.

Questions:

1) In you opinion, is there a need for a multilateral institution to facilitate Nile freshwater management? If yes, please explain why.

2) In your opinion, what are the most important multilateral instrument(s) required to ensure efficient management of the Nile basin freshwater? Please explain why.

3) What do you think is the most important efforts AND achievements made (so far) by the Nile Basin Initiative (NBI) to promote sustainable and fair distribution of Nile freshwater resources?

4) 5) In your opinion, what actual effects has the NBI had on the outcomes of the efforts made to manage the Nile's freshwater resources?

5) What do you think is the main challenges for the NBI in ensuring sustainable and fair distribution of Nile freshwater resources?

Consent and statement of risk:
Your participation in the study is completely voluntary and you may refuse to answer any question or choose to stop participating at any time. I do not foresee any risks or discomfort from your participation in the research, however this study may contribute with knowledge

about the role and effects of institutions in managing the Nile's freshwater resources.

I hereby ask for permission to use your name and direct quotations in my thesis. The master degree will not be published, but will be available online (http://brage.bibsys.no/xmlui/handle/11250/187698) by the end of 2015.

Response to this email and completed interviews will serve as implied consent.

Email conclusion:
If you have questions about the research in general or about your role in the study, please feel free to contact me.

All the best,
Randi Versto Kaasa
Tlf: 0047 93298818
E-mail: randivk@me.com

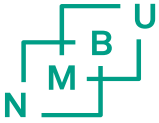
8.2 Appendix 2: Summary of the NBI's achievements

THE SVP	
The Applied Training Project (APT in Cairo)	• Developing a strategy for capacity building. • Training experts in and decision-makers in joint water management (1,325 participants). • Scholarships to post-graduate students in Nile basin states to undertake research on water management (156 academics) • Awareness raising towards policy makers (achievement 88 policy makers). • E-learning about water management established and four professional exchange programs completed. • Establishing the NileNet – network for joint research, problem-solving.
The Nile Trans-boundary Environmental Action Project (NTEAP in Khartoum)	• A basin-wide strategy developed for biodiversity and wetlands. • Skill training and working groups of government ministries, NGO's and local communities (347) in environmental management, monitoring and conservation. • Awareness raising of environmental issues through networks of environmental education practitioners in churches, mosques, schools, nature clubs, youth groups, scouts troops, universities. • Including information about environmental treats into school curriculums (primary, secondary and university) • Information sharing and establishment of a system for decision and support - all stakeholders in the NBI. • Established a database for reliable environmental data from all NBI members. • World Bank (2010:59) writes: 'Overall NTEAP achieved its objective. Training, networking, collaboration with national agencies and in working groups, and the development of the environmental and social assessment framework all contributed to institutional strengthening'.
The Nile Basin Region Power Trade Project (RPT in Dar-es-Salaam)	• Start-up delayed and efficiency reduces. • Skill training of all NBI members (governments, NGO's and local communities) on environmental issues, technical tools and implementing integrated water resource management into national policies. • Supporting basin-wide dialogue for integrated strategies and planning. • Capacity building for power trade through workshops and training. • Facilitating power trade partnerships (a regional electricity market) between basin states. • Knowledge integration through the establishment of the Nile Basin Decision Support System (data on hydrology). • Forums for enhanced exchange among stakeholders – schools,

	universities, parliamentarians, journalists, and local leaders. By others the Nile Power Forum where technical experts meet, exchange ideas. • Awareness raising campaigns and networks for discussion of joint development and poverty reduction. • Planning and establishment of a regional electricity market model. • Established the Nile Basin Regional Power Sector Data Bank. • Established the Training Program for Power Purchase Agreement
Efficient Water Use for Agriculture Project (EWUAP in Nairobi)	• Established guidelines for how to handle joint agricultural issues (irrigation and harvesting). • Completed workshop, seminars, and consultations to enhance knowledge integration. • Training on irrigation, harvesting and water management for 400 regional staff. Published 8 reports on agriculture and water use.
The Water Resource Planning and Management Project (WRPM in Addis Ababa)	• Developed manuals, guidelines and technical assistance for best practices in water planning and management, and integration in national policies. • The Nile Basin Planning Decision Support System – first phase completed. • Completed seven workshops to train stakeholders in managing regional projects. • Basin-wide forum in Addis Ababa in 2006. • The World Bank (2010:77) writes that the WRPM has 'contributed to developing national water policies and capacities based on IWRM principles and good practices addressing the transboundary dimension'.
The Confidence-building and Stakeholder Involvement Project (CBSI in Entebbe);	• Established a basin-wide communication strategy. • Enhanced stakeholder dialogue. Raising and improving issues regarding lack of cooperation (dialogue, joint analysis, monitoring, decision-making and action). • Public information about stakeholders and the NBI, The Nile Story (programs and projects). • Established mechanisms, networks and databases for integrated planning, development, decision-making and action. • World Bank (2010:47) writes: 'Overall CBSI largely achieved its objective by building trust and confidence, providing for stakeholder involvement and helping create a receptive environment for investment'.
The Socio-economic development scenarios and benefit-sharing schemes (SDBS in Entebbe)	• Delays due to lack of clarity, management and programming. • Research paper published in five thematic areas on benefit sharing in socio-economic development. • Knowledge integration by establishing a basin-wide multidisciplinary network. • Established Nile Trans-boundary Development Network - integrated research groups, which has fostered information sharing and public awareness – works as think tank. • Capacity building – new scenarios of basin-wide development.

Shared Vision Program Coordination Project (SVP-C)	• Has coordinated NBI projects and programs. • Solved issues related to the institutional structure of the NBI. • Established a plan to enhance the NBI's sustainability. • Supported the main function of the NBI (the process towards CFA and other SVP projects).

The NBI-ISP
• Developed a strategic direction and design for implementation of NBI's core functions, through the Institutional Design Study. • Enabled members state commitment to finance NBI's continuous minimum functionality (minimum US$ 3.8 million annually). • Enhanced institutional capacity – strengthen management, completed technical skill training, portfolio management, program management, multi-sectorial integrated water planning, development and management. • Strengthening the Nile Technical Advisory Committee – established systems for technical modelling, decision-making, identifying possibilities, training experts and technical leaders. • Improved access to technical equipment and facilities. • Enhanced available information through the report State of the River Nile Basin. • Established the Nile Basin Decision Support System in Nile-COM, Nile-SEC and Nile-TAC. • Established guidelines for national assessment and monitoring. • Strengthened corporate management by establishing standards and manuals for internal and external communications, planning, budgeting, HR and procurement. • Established a financing strategy and gained funding for the NBI's continuous projects and programs, of US$1.3 billon. • Overall strengthen the NBI's institutional capacity, management and technical capabilities. • The World Bank (2013:23) writes that the NBI-ISPI has: 'strengthen foundation for institutional sustainability, enhanced capacity, and harmonized corporate management to more effectively deliver programs and projects'.



Norwegian University
of Life Sciences

Postboks 5003
NO-1432 Ås, Norway
+47 67 23 00 00
www.nmbu.no