

Transboundary Water Management

The Case of the Kikagati/Murongo Hydropower
Development Project

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ABSTRACT

Water, the energizer of all life on earth, knows no boundaries. It crosses national borders, and links nearly forty per cent of world population together, through their common dependability on a transboundary water source. Transboundary water resources and the management of them are central points of focus in this thesis. A case study will present a hydropower development project in Kagera River. This river floats on the border between Uganda and Tanzania, and it therefore a shared resource. A private developer has been given the task to implement the project. This has not been as easy task, as the resource is shared, and the two states have had to carry out several complicated negotiations in order to decide how the project should be carried out. Through qualitative methods, this research sets out to describe and explain he processes within the Kikagati/Murongo Hydropower Project from its beginning towards its final agreement. This study shows how the negotiation processes of transboundary water resources can be carried out. Moreover, this study shows that water resources cannot be managed well if the involved states do not cooperate.

LIST OF ACRONYMS

EAC	East African Community
ECE	Economic Commission
ERA	Electricity Regulatory Authority
EWURA	Energy and Water Utilities Regulatory Authority
GW	Giga Watt
HPP	Hydropower Project
ILC	International Law Commission
kV	Kilovolt
KWh	Kilo Watt hour
MW	Mega Watt
MoU	Memorandum of Understanding
NBI	Nile Basin Initiative
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NEMA	National Environment Management Authority
NEMC	National Environment Management Council
PPA	Power Purchase Agreement
TANESCO	Tanzania Electricity Supply Company Ltd
UETCL	Uganda Electricity Transmission Company Limited
UN	United Nation

Chapter 1. INTRODUCTION

Water is an essential element for all life. It is the resource for sustaining life and livelihoods. No other resource can compete with the importance water has for human life on earth. Only water can secure the multitude of ecosystem services, support cultural and economic activities and ensure basic human needs (Conner et al, 2012). We need water for drinking, food production, hygiene, energy production, transportation, industry, and for the wellbeing of all ecosystems on earth. There is no such thing as managing water for a single purpose; all water management is based on navigating competing interests and is therefore multi-objective (Wolf et al, 2010).

Despite the importance of water, and the enormous need for it in the world, water is a limited and scarce resource. Even though 70 % of the surface on planet earth is covered by water, only a small share of it is fresh drinking water. Of all water on earth, 97.5% is salt water. Of the remaining 2.5%, which is not salt water, 98.7% is either frozen and locked into glaciers, such as on Greenland and Antarctica, or is situated in underground aquifers, not accessible for humans to use (USGS, 2013). Of all the freshwater in the world, only 1.3 % is what can be called surface water. Most of this surface water exists as ice, and therefore not directly available for people to use. This leaves only 0.007% of the Earth's water, found in lakes, rivers, reservoirs and those underground sources that are shallow enough to be tapped at an affordable cost, to be usable for humans. Only this amount is regularly renewed by snow and rainfall and is therefore accessible on a sustainable basis (University of Michigan, 2000).

Despite the share of accessible water being low, compared to the amount of water covering the Earth's surface, it is still sufficient to sustain the seven billion people living on Earth. The ability to sustain the world population with the existing 0.007% of accessible water is fully possible. However, what's problematic is that this 0.007% is unevenly distributed between states, and a significant amount of it is polluted, wasted and poorly managed. Water usage has been growing at more than twice the

speed of population increase during the last century. This has generated significant pressure on the water resources around the world (UN-Water, 2006). Climate change also plays the role of a major challenge in this regard. The associated changes in the terrestrial water cycle are likely to affect the availability and nature of natural water resources. Consequently, it will also affect human societies relying on them (World Bank, 2012). No matter if these changes and factors might lead to either dryer weather, or more rain, and floods, the need for a stable and good management of the water is essential. Additionally, effective water resources development and management play a fundamental role in sustainable growth in the society and in poverty reduction (World Bank, 2004).

1.1. Sharing the Worlds Water Resources

When water leaves the national territory of one state and crosses over the border to another, it becomes a transboundary resource, and therefore considerably more complicated to manage. These because water-related activities in one nation are likely to impact the water situation in another. Consequently, water-related problems can often only be solved through transboundary cooperation (Vollmer et al, 2009). A definition to transboundary water can be “freshwater resources shared by two or more states and comprising rivers, lakes and aquifers” (Vollmer et al, 2009). Put in different words, it is water that crosses national boundaries.

This thesis will focus on surface water. Even though water sources in water in underground aquifers also can fall under this definition, the focus of this thesis will be on the freshwater in rivers, lakes and reservoirs, which gather and floats on the surface of the earth. (Tietenberg and Lewis, 2009). More specifically, the focus of this thesis will be on rivers and the basins they float through.

There are 276 transboundary river basins in the world, accounting for roughly 60% of the global river flow (UN-Water, 2013). These river basins are being shared by 148 states and are home to some 40% of the world’s population (UN-Water, 2008). These rivers are fundamental for the planets ecology. Without them, many ecosystems would have perished. Rivers shape the terrain and create wide basins and steep mountains. These landscapes are home to a wide variety of animals and plants. For

thousands of years, areas near rivers have attracted human settlements. Thus, where water is found, basis for life is formed and eventually, it flourishes (Shadoff and Grey 2002).

As the demand for water grows in all nations, these shared resources will increasingly be drawn upon to meet the challenging needs of billions of people for drinking water, energy, food, and industrial production. These needs leave less water, often of much lesser quality, to sustain ecosystems and to meet people's future demands (Shadoff et al, 2008). Consequently, if nations, and people within them do not cooperate on managing the water, it will not be managed in the most effective way to sustain the human lives and economic development (UN-Water, 2013). However, if states do cooperate on the management of water in river basins, the possibility of achieving prosperity, peace and sustainable development.

Cooperation on management of water is important for ensuring sustainability of ecosystems, and the continuation of the life of the human kind. The importance of this gains great attention in the world today. An example of this can be the fact that this year the United Nations are targeting their attention to cooperation of water management, by announcing 2013 as the official year international water cooperation.

1.2. The Kikagati/Murongo Hydropower Project

The Kikagati/Murongo hydropower project is the story about a 16 MW power station, which is to be constructed on the Kagera River, on a location where the river forms the border between the two African states, Uganda and Tanzania. Work on this project started in 2005, when a private a private developer applied for permission from the Ugandan authorities to construct a small hydropower station. Permission was granted and all looked promising for the construction of the power station. However, Tanzania had not been included in the planning, even though they own half of the river on which the power station was to be constructed. As the planning of the project evolved, there was an eventual need for approving the planned project with the Tanzanian authorities. Tanzania then got involved, but the continuation of work with the project became described as challenging.

The project of Kikagati/Murongo is the first transboundary cooperation project to find place between Tanzania and Uganda. Additionally, this project is the first project of its kind in Africa, where a private developer is responsible for the construction in a river that constitutes the border between two sovereign states. Now, half way in the year 2013, the main part of negotiations and agreements are falling into place, and the implementation of the project can soon begin.

Since the project started as a unilateral Ugandan project, it was first named “Kikagati Hydropower Project”. This name comes from the area on the Ugandan side of the border where the hydropower station is to be situated. When Tanzania became involved in the project, the name changed to “Kikagati/Murongo Hydropower Project”. Murongo is the name on the Tanzanian side of the area at the project site. The new name marked that this was now a project between two states.

Even though the most commonly used name for the project, among many of the actors involved, is “Kikagati Hydropower Project”, the name used in this thesis will be the official “Kikagati/Murongo Hydropower Project”. As for the planned hydropower station, the name will be “Kikagati Power Station”, or in some cases even referred to as simply “Kikagati”.

1.3. Research Objective and Questions

This study will have emphasis on giving a clearer picture of a hydropower project where to neighboring nations have had to cooperate on the implementation and thus serve as a real life example of transboundary water management. The research objective of this study is therefore *“To describe and explain the process within the project from the start to a final agreement, in order to enable a better understanding of the realities of the Kikagati/Murongo Hydropower Project”*

In order to being able to follow this research objective, three research questions are created. These questions will be answered throughout the study.

Research question 1: What role have the different actors in the project played, and how have they affected the project

Research question 2: What challenges have there been for the project?

Research question 3: What is the motivation for the states to cooperate and reach an agreement?

1.4. Structure of the Study

This research consists of eight chapters, including concluding remarks. The two primary chapters give an introduction to the rest of the thesis. *Chapter 1* gives an introduction to the meaning of water and presents the term transboundary water. The Kikagati/Murongo Hydropower Project, objective of the study, and the research questions are also presented in this chapter. *Chapter 2* gives an introduction to the study context. The two partner states, Uganda and Tanzania, are presented. Furthermore, a description of the electricity supply in the two countries is given, and the River Kagera and project site are described. *Chapter 3* presents the theoretical framework of this study. Here, relevant theory related to transboundary water is presented. The main focus will be given to cooperation on transboundary water as this is the most relevant theory and feature for the case of Kikagati/Murongo Hydropower Project. *Chapter 4* presents the research methodology, which is qualitative method. Here I outline the reason to why I chose this type of research method, how the research was designed and the various techniques of data collection I have used. *Chapters 5 and 6* look at the findings of this study. These findings are presented and analyzed. *Chapter 7* looks at the main barriers to, and the main benefits from, the Kikagati/Murongo project. These benefits and barriers are presented and discussed. *Chapter 8* presents concluding remarks on this thesis.

Chapter 2. STUDY CONTEXT

2.1. Country Profiles

TANZANIA

Tanzania is the largest East-African nation and is located on the Southeast part of the African continent. The country's geography is one of the most varied and unique in the world, as it contains Africa's highest peak, lakes and natural parks. Tanzania shares border with Mozambique, Malawi, Zambia, Congo, Burundi, Rwanda and Uganda. The eastern border of Tanzania is washed by the Indian Ocean (Geographia, 2005). Northeast of Tanzania is mountainous and includes Kilimanjaro and Meru. Further west, we find the large Lake Victoria, situated on the border between Kenya, Uganda and Tanzania. The Northwestern part of the Tanzanian territory the Kagera river is situated on the border between Uganda and Tanzania. Tropical savannas and warm climate cover vast parts of Tanzania (Kortner et al 1994a). The country's climate ranges from temperate climate at the elevated centre to a more hot and humid temperature on the coast.

Politics

The country of Tanganyika received its independence from Britain in 1961. The states known as Tanzania was formed in 1964 as Tanganyika and Zanzibar went into a union. Later, Zanzibar became a semi-autonomous state with an own president (Leraand, 2013). From 1963 to the beginning of 1990s, Tanzania was a one-party state. During this period, the government carried out an economic and political program that would make Tanzania a socialistic state.

With the newly acquired independence and new political situation, Tanzania has held a visible regional profile both regionally and on the African continent in general (Leraand, 2013). The country's last election was in 2010. CCM and Jakaya Mirisho Kikwete were re-elected as the ruling party and President. The government has many challenges, which they have promised to deal with during their time in power. Among

these challenges there is severe corruption, energy infrastructure and effectiveness in the public sector. Additionally, President Kikwete has promised to change the current constitution, which gives a vast amount of power to the president, in time for the next election in 2015 (Utenriksdepartementet, 2013a).

Economy

Tanzania's economy has experienced a relatively steady and high growth the last decade. The sources of this growth are situated in different sectors. The main drivers of the economy have been telecommunications, tourism, mining and construction. Additionally, government spending has contributed greatly to growth, in contrast to private investments. Inflation has been disturbing the Tanzanian economy since the year of 2011. Still, the outlook for Tanzania's growth looks bright despite the inflation and a rather high ranking of the corruption list (Transparency International, 2013). Nevertheless, even though the economic future of Tanzania looks good, the state's economy is vulnerable to international economic shocks and recessions; this might cause great problems for this steadily growing African state (World Bank, 2013c). Additionally, Tanzania with its 48,262,000 citizens (CAI World Factbook, 2013a) is still one of poorest countries in the world, ranking 152 out of 186 on the Human Development Index (UNDP, 2013)

UGANDA

Uganda is situated in the middle of the African continent and is landlocked in between South-Sudan, Congo, Rwanda, Tanzania and Kenya. Nevertheless, lakes cover almost a fifth of the country's areal. Among them is the Lake Victoria, which Uganda shares with Kenya and Tanzania. The climate in Uganda is tropical, but somewhat limited by the countries high altitude (Kortner et al, 1994b). The country is affected by a large biodiversity, and diversity in landscape. There are mountains and valleys. In the west, there is rainforest, while plateau valleys dominate the east.

Politics

Uganda is a republic governed by president Yoweri Kaguta Museveni. Uganda has ever since the independence from Britain, in 1962, been troubled by political and military instability. Both president Milton Obote's and Idi Amin's regimes have been authoritative and been marked by extensive use of violence and conflicts (Haslie,

2013). The current president took power through a coup d'état in 1986, in the following time he has been re-elected through national elections. The most recent re-election of Museveni took place in 2011, as he became elected to govern for five new years. A constitution from 2005 makes it possible for the president to become re-elected for an indefinite amount of times.

Uganda's relation to the neighbouring states has at times been strained, especially with DR Congo. Nowadays, however, the relations between Uganda and the surrounding nations are stable (Leraand, 2013). The development of the hydropower project with Tanzania can be an example of this improvement of neighbouring relations.

Economy

In the years between 1990 and the new millennium, Uganda has managed to establish a strong record of prudent macroeconomic management and structural reforms. For the fact, Uganda was one of the first Sub-Saharan Africa states to establish a liberal and market-oriented economic policy in the late 1980's. In the years after the new millennium, Uganda has experienced an economic growth that has managed to withstand a global economic crisis and some other exogenous shocks (World Bank, 2013d). Although, great challenges with the high level of corruption within the national political system troubles the Ugandan economy. Additionally there is a yearly inflation rate at over 15% this makes the Ugandan Shilling weaker (Utenriksdepartementet, 2013b). Also, Uganda with a population of close to 35 million people (CIA World Factbook, 2013b) is, along with Tanzania, one of the poorest countries in the world, rating as number 161 on the Human Development Index list (UNDP, 2013).

Relationship between the States

Tanzania and Uganda have for a long time had a good bilateral relationship. Nevertheless, it must be mentioned that under the rule of Idi Amin in Uganda, the relations between the states were filled with conflict. The situation escalated to Amin attacking Tanzania in October 1978. However, the battle ended up in Tanzania, along with Ugandan exiles, defeat of Amin and his aggressive regime. After the end of the war in 1979, the bilateral relations between Uganda and Tanzania grew steadily

towards stability and friendliness (McKenna, 2011). In 2001 the bilateral relations reached a new level of cooperation, as the East African Community became established (EAC, 2013). In 2004, a customs union was established between Tanzania, Uganda and Kenya. These three states also created a military cooperation through the East African Stability Force (Leraand, 2013). The work within the EAC has continued, something that has led the integration and cooperation between the states to become stronger.

2.2. The electricity supply in Tanzania and Uganda

Both Uganda and Tanzania experiencing severe power shortage at the same time as there is a rapid growth in the demand for more electricity. At the moment only a small part of the population has access to electricity. Uganda has an electrification rate at approximately 12 percent (ERA, 2012) while in Tanzania approximately 14 percent (World Bank, 2013a) have access to electricity. At the same time there is an estimated annual demand growth at 8-10 percent for more electric power in both the countries in the years to come (African Development Fund, 2010; Dhalla, 2011). There are great challenges with covering the demands, as there is a major amount of black outs in both of the states. Numbers from 2010 show that there was an installed generation capacity in Tanzania is 887 MW (Maposa, 2011). While the number of installed generation capacity in Uganda is 573 MW (Dhalla, 2011). There has however not been possible to fully use this capacity. In Tanzania, for instance, there has been a lot of drought the last years. A large part of Tanzania's electricity is generated from four hydro-powered stations, however the increased intensity and occurrence of droughts has significantly reduced Tanzania's generating capacity (Maposa, 2011). To compensate for these problems, and the increasing demand for electric power, both of the states have had to expand the use of thermal power stations. An increase in the number of these types of power plants is not good, as they have a negative effect on the environment at the same time as they generate electricity with a much higher cost per kWh compared to hydropower. Yet another negative effect of thermal power plants is that they have a negative effect for the state economy as the two countries governments subsidize a large share of the power. The subsidization makes it possible for the citizens to buy the electricity. This share tends to vary, and is dependent on several factors, like share size of the hydropower and thermal power, as well as the

price for petroleum, which fuels the thermal plants. Share size of the subsidies during the last years has been approximately 30 percent in Tanzania (Hoogeveen, 2007) and 45 percent (Dhalla, 2011) in Uganda. Consequently, both of the states need to increase the production of environmental friendly and cost effective power in the future. For more details about the electricity production in Uganda and Tanzania, see table 1 and table 2.

Table 1. Uganda Electricity: Key Information for 2006 and 2009

Uganda	2006	2009
Total energy production	1530 MWh	2127 MWh
Total from renewable %	77 %	61 %
Total from thermal %	23 %	39 %
System losses %	32 %	28.2 %

Source: Dhalla, 2011; ERA, 2012

Table 2. Tanzania Electricity: Key information for 2004 and 2009

Tanzania	2004	2009
Total energy production	2089 GWh	4164 GWh
Total from renewable %	81,5 %	63 %
Total from thermal %	18,5 %	37 %
System losses %	20,7 %	21,5 %

Source: World Bank, 2013a

2.3. Kagera River Basin

River Nile is the world's longest river, flowing for more than 6,650 km from its origins in Rwanda and Burundi to Egypt at the Mediterranean Sea (Salman, 2013). The Nile is extending over 11 countries that share the river, has a basin area of more than three million km², in addition to covering one-tenth of the African continent (Collins, 2002) About 300 million people live by the Nile, or depend on the waters of the river for survival. The number of people depending on the Nile is expected to reach 500 million by 2030.

The two district basins, White Nile and the Blue Nile, make up the Nile River system. The White Nile has originates in the springs rising from the hills of Rwanda and Burundi. These springs combine and form the Kagera River, which with its 34 percent

of the annual tributary inflow, is the largest of the rivers that drains into Lake Victoria (GWP, 2011).

The Kagera basin has a general elevation of 1,200 – 1,600 m but rises above 2,500 m in the west, with peaks reaching 4,500 m. The whole Kagera basin covers approximately 60,000 km² in the four countries of Rwanda, Burundi, Uganda and Tanzania. There are two main rain seasons in the basin, one from February to May, and one from September to November (Dumont, 2009). Rainfall is less than 1,000 mm over most of the eastern half of the basin but increases to over 1,800 mm in the west. It is in the west the most of the runoff is generated (WSP, 2003). Much of the Kagera Basin is characterized by the number of shallow lakes and swamps, which play an important part in the natural regulation of the river. This however, creates some concern because it leads to water loss due to evaporation (Tvedt, 2010). Estimations show that Kagera River Basin supports the livelihoods of some 16.5 million people. Thus, the settlement patterns within the catchments are described as having a high population density (FAO, 2013). The basin lies within the territory of four of the world's poorest countries, and except in the major cities like Kigali, the basin is described to be economically depressed and neglected in terms of development (WSP, 2003). Most people live in the rural areas and depend on farming, fishing and herding to maintain their subsistence.

High population concentrations in the catchment have led to extensive clearing of forests and pressure on agricultural land, resulting in land degradation and loss of soil fertility (World Bank, 2009). This unsustainable practice for land management has led to widespread land cover depletion, and there is not as no ongoing reforestation activities (FAO, 2013). Soil erosion and an increased nutrient accumulation in the river, as well as in Lake Victoria, have led to serious problems of eutrophication and water hyacinth (NBI, 2013). Although, if managed properly the, Kagera basin holds great possibilities for development and growth. Good management of the river might create benefits such as increase of food production, industrial development, transportation, energy availability, environmental conservation and other related sustainable development activities (NBI, 2013). It can also be mentioned that the basin once had technical committee, the Kagera Basin Organization, which was to coordinate the regional plans in the basin. This Organization did not become as

expected and hoped for, based on the internal turmoil as well as ethnic and political conflicts between the member states (Tvedt, 2010). The Kagera Basin Organization was therefore dissolved in 2004.

Figure 1. Map of the region and project location.



2.4. Location of the Kikagati/Murongo Hydropower Project

The Kikagati Hydropower Plant will be located on the Kagera River some 200 km upstream Lake Victoria (Bugten, 2010). This is an area where the river actually flows on, and demarcates, the border between Uganda and Tanzania. Earlier, there was a 4 MW power station. This station was totally demolished in 1979 during the war between Tanzania and Uganda. The area lies 1250 meters above the sea line (Koksæter, 2011) and the mean annual river flow at the location where the power station will be built is estimated to be 194 m³/s (Bugten, 2010).

On the Ugandan side, in Kikagati sub-county, the estimated number of people is approximately 58 100. A similar estimate shows that there are approximately 11 100 people living on the Tanzanian side, in the area of Murongo. (Ndyabarema et al, 2011). The area is generally lacking water resources, except from Kagera River, which is the main source of water in the area. It can also be mentioned that the literacy rate is relatively high, despite this being a poor area. On the Ugandan side 71 percent of the population above 18 year are literate and on the Tanzanian side 72 percent are literate.

Investigation done by NEWPLAN in 2011 showed that only 11.2% of the inhabitants on the Ugandan side were connected to the electricity grid, despite most of the population wanting to be connected to the grid. When asked about why they were not connected, the inhabitants responded that the costs of connecting to the grid are too high, and that they have more pressing needs to cover. The Tanzanian side is not yet connected to the grid. The area is located far away from possible connection points in Tanzania, and it will be very costly to build a connecting power line. The area has therefore not been electrified since an old 4 MW power station, which used to supply the area, was destroyed in the war in 1979 (Ndyabarema et al, 2011). Based on this, the Tanzanian inhabitants mostly use firewood and charcoal for cooking and paraffin for lighting. Some people use solar panels, however, these are mostly used in restaurants trading centers, and even then, only for lights and refrigerating. On the Ugandan side, firewood, charcoal and paraffin are being used in the villages, whereas solar panels, paraffin and electricity from the national grid is more often used in the town and trading centers.

Chapter 3. THEORETICAL FRAMEWORK

The following section contains key features and theory, surrounding transboundary water management. The main focus will be given to cooperation on transboundary water, as this is the most relevant theory and feature for the case of Kikagati/Murongo Hydropower Project.

3.1. The Hydrological Interdependence in Transboundary Water Basins

Rivers, who crosses national borders and becomes transboundary, binds both livelihoods of people and nation states. Take the Mekong River as an example. It is one of the greatest river-systems in the world. Mekong generates power in its upper reaches in China. It sustains rich production of fishery systems, which in turn support the livelihoods of more than 60 million peoples in the lower reaches of its basin (Anton and Shelton, 2011).

States that share transboundary waters are bound by a hydrological interdependence (Jägerskog and Phillips, 2009). When underground aquifers, rivers and lakes cross national boundaries of states, they become committed by recourses that are partly theirs and partly someone else's. This creates three main reasons for concern between the involved parties. The first issue of concern is the issue of sovereignty. The second is national security. The third is territorial integrity.

As a productive recourse, water is distinctive in that it can never be managed for a single use. This is because it flows between users and sectors (Anton and Shelton, 2011). This means that the consumption of a common pool resource, like water, by one user will leave less for others (Rowland, 2005). Thus in a way, water can be interpreted as a null-sum-resource.

Nation states, that share transboundary water resources, are linked by a set of complex factors such as environmental policies, economy as well as security. The mentioned factors can both be a force for peace and conflict among the states that share water

resources. However, it is the political factor that decides how the co-management takes place in the end (UNDP, 2006). Especially in water-scarce river basins a hydrological-interdependence can create a reason for conflict.

Transboundary waters create the need for close attention and management that is well thought through at the national political level. An effective governance of the water is an increasingly recognized tool for addressing fundamental challenges that might occur between hydrologically interdependent states (Jägerskog and Phillips, 2009). Consequently, the absence of cooperation between the interdependent states makes it difficult to achieve optimization of the human progress in respect to the water resources (UNDP 2006). Because water has the characteristic of being a flowing resource, which is not permanently situated in one place, its use in one place might affect its use in another place. In other words if one actor pollutes the water, all of the other actors downstream will be affected.

Transboundary water links the states of which territory it crosses together. Because even though the states are sovereign, and in theory independent from one another, their environments, livelihoods and growth becomes connected to the water they share, and consequently to each other. For instance, problems might occur if upstream users dam up the water for hydropower purposes while the states downstream need it for agriculture. Thus, the use of the water upstream determines the options for water management downstream. A good example here is the Toktogul reservoir in Kyrgyzstan. During times of the USSR, most of the water in Syr Darya was released during the summer for irrigation of the large agricultural areas in Kazakhstan and Uzbekistan. As compensation, Kyrgyzstan received gas from Kazakhstan and Uzbekistan so that the Kirghiz energy demands were covered during wintertime (Hodgsen, 2010). After the fall of the Soviet Union, this system was dissolved. This resulted in Kyrgyzstan using the water in Toktogul reservoir for energy production during wintertime. Consequently, a lot of water was released from the reservoir during wintertime, and very little during summertime. This resulted in major problems for the agricultural areas in Uzbekistan and Kazakhstan (Hodgsen, 2010).

Nevertheless, the consequences might be greater if the agriculture areas are located upstream. Even though it is common to collect and store water in large reservoirs for use in hydropower production, the water is not used up by being sent through the turbines. The only water-loss, which happens in this regard, is the loss due to evaporation. Although, in areas with much hot weather, the water loss due to evaporation might in fact be significant (Rekacewicz, 2009). However, irrigation for agriculture has been and still is the number one water consumer, and accounts for approximately 70 per cent of all the water withdrawals in the world (FAO, 2008). At the same time downstream nations must also be careful in their exploitation because they can harm the quality and cycle of the water just as upstream nations can. Downstream states can generate harm upstream by effectively foreclosing future opportunities for the users upstream. Further on, downstream extraction can generate externalities upstream by lessening future available flows upstream because of downstream claims of acquired rights to that water (Sadoff and Grey, 2002). A good example here is how Egypt, even though it is a downstream country, for many years has claimed its right to use two thirds of the water in the Nile (Allan, 1999). Africa is a geographical place that clearly illustrates the realities of hydrological interdependence. The regional maps drawn by the former European colonial states many decades ago has been the reason why every African country, except the island states, has its territory in at least one of the continents 63 (Scheumann and Neubert, 2006) transboundary basins (Lautze and Giordano, 2006).

3.1.1. Both national and shared water

According to modern water rights, the use of water within countries is governed through clearly defined laws and institutions (Hodgson, 2006). Burns and Meinzen-Dick (2000), on the other hand, argue that the common practice to just look at a single system to identify water rights is not sufficient. They argue that in relation to this, concepts of legal pluralism are central. Instead of just focusing on state law, it is important to also recognise that multiple normative and legal frameworks coexist (Burns & Meinzen-Dick, 2000). Frameworks like religious, government and customary laws, as well as local unwritten norms, may play a part in deciding who will receive water for what purpose, and from which source. Especially in rural areas of many developing countries, customary or local laws continue to play an important

role in water allocation (Hodgson, 2006). In contrast, these elements are rather poorly defined at the transboundary level. There are not so many legal or normative frameworks to guide riparian's in how to share their shared water resource. Thus, the sovereignty of states is one of the most important aspects of transboundary water management (UNDP, 2006).

Both governments and people tend to think that water, which flows through their countries, is something that belongs to them. In some legal and constitutional ways this might be true. However, much of this national water is in fact shared with other states that might in the same way look that the water as theirs (Jägerskog and Phillips, 2009). Thus, water priorities might look different depending on from which side of the border one are observing. In this way, the management of water claimed by several actors requires a well-organized political leadership (UNDP 2006).

Access to water is an essential factor for human development as well as the development of nations. Having this thought in mind it is clear that every country has its own agenda for using shared water. Naturally, the starting point of any cooperation would be to acknowledge that sovereign countries have legitimate, rational as well as obvious agendas for deriving as many benefits as possible from the water (Sadoff and Grey, 2005).

3.2. International Legal Framework in Transboundary Water

A legal framework is important at all stages of the design, planning and implementation of water management systems. Applying a suitable legal framework helps avoid, or settle, conflicts between competing water users and their interests in addition to promote efficient management. A legal aspect of water might already be challenging on the national scale. When it crosses the national borders and becomes international it gets even more complex. When a water resource is transboundary, it is necessary to jointly develop a management system and not just follow the rules of each individual state (Sadoff et al, 2008). Some of the first international agreements focused largely on navigational uses. Agreements made later included regulation of the management of water resources for other specified purposes such as irrigation, flood control or industrial production. Most recent agreements attempt to apply a

holistic approach that includes equity and environmental concerns (Sadoff et al, 2008).

The following section will focus on the most important laws related to transboundary water. Laws that Vollmer et al. (2009) refers to as external drivers for cooperation on transboundary water.

3.2.1. The 1966 Helsinki Rules

Several discussions, statements and resolutions paved the way for the 1966 Helsinki Rules on the Uses of the Waters of International Rivers, ten years after the International Law Commission (ILC) had started their work on transboundary rivers (Salman, 2007b). The Helsinki Rules created the principle of equitable and reasonable utilization of the waters of an international water basin among the riparian states as the central norm of international water law (Bogdanović, 2001).

It is noteworthy that the Helsinki Rules on 66 is the first international legal instrument to include rules for both non-navigational and navigational uses of international rivers. These rules do not include a separate reference to the obligation not to cause harm. Rather, they specify the injury that may result from the use of the river by one riparian as one of the factors for determining reasonable exploitation (Salman, 2007b).

The Helsinki Rules have no legal standing or formal binding effect per se. Still, until the adoption of the UN Convention 30 years later, Helsinki Rules remained the single most widely quoted and authoritative set of rules for regulating the protection and use of international watercourses (Bogdanović, 2001). Thus, the Helsinki Rules are the first general codification of the law of international watercourses, and they have been referred to or adopted by a number of organizations and countries (Salman, 2007b)

3.2.2 The UN-convention of 1997

The United Nation General Assembly adopted the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses in 1997. The convention builds on the 1966 Helsinki rules for use of shared water and it took the

International Law Commission (ILC) about twenty-three years to prepare it before the approval (Salman, 2007a). The convention is a worldwide agreement that emphasizes on the management of international watercourses for other purposes than navigation and their conservation (Sadoff et al, 2008). The core meaning of the UN 1997 convention is prior notification of works, no significant harm and equitable and reasonable utilization (Vollmer et al, 2009). The main idea behind the convention is that states should take into account the effects of water-use; size of the population affected and socioeconomic needs in other countries before creating a transboundary water policy. Factors such as protection, conservation and development are also very valuable (McCaffrey, 2008). As of today only thirty states that have ratified the 1997 UN convention, five short to make it enter into force (UN Treaty Collection, 2013). Consequently, since the treaty has not entered into force, it is not yet binding to any country (Sadoff et al, 2008).

3.2.3. The 1992 UN Economic Commission for Europe Convention (ECPUTW)

The 1992 Economic Commission for Europe Convention on Protection and Use of Transboundary Watercourses and International Lakes is another important framework, in addition to the UN-convention of 1997 and the Helsinki Rules of 1966 (UNDP, 2006). It differs from the 1997 UN Convention in its consideration of river basins being ecological units, and its focus on the quality of the water within this basin. It also obliges the Parties to reduce and prevent water pollution from any sources (Timmerman and Langaas, 2004). This convention puts emphasis on the responsibility held by states in respect to current water needs rather than historical use of water. This last factor is necessary in consideration to the human development principle. The convention includes mechanisms for monitoring, information sharing, warning and alarm systems, research and development and so on (Timmerman and Langaas, 2004).

The ECPUTW was initially negotiated as a regional instrument. It was amended in 2003, to allow accession by all the United Nations Member States. The Convention turned into a global legal framework for transboundary water cooperation when the amendments entered into force on February the 6th 2013. It is predicted that non-ECE

countries will have the possibility to join the Convention at of the end of 2013 (UNECE, 2013).

Looking at the rules from 1966 and the conventions of 1992 and 1997, the real challenge is to be able to operationalize them within the frameworks of the real world problems of water governance (UNDP, 2006). International law regulating transboundary water suffers from the same lack of enforceability as international law in general. The lack of enforceability, as well as the lack of normative clarity, can in some cases result in the strong states disregarding the restrictions imposed by international law. Thus, the more influential states and would then promote their own interest inequitable to the detriment of co-riparian states. (Earle et al 2010).

Salman (2007) argues that nowadays is no, apart from the ECPUTW framework, universal treaty in force to regulate the protection and use of transboundary water. However, an absence of this kind of universal treaty has neither excluded cooperation between sovereign states, nor does it imply that the principles are not broadly accepted. Even though for instance the UN Convention of 1997 not yet has been ratified, it plays an influential role in the negotiation of transboundary water (McCaffrey 2008). The principle of these frameworks enables states to find solutions and compromises among their different interests. It gives them guidelines and procedures on how they can codify clear rules on how water and the benefits derived from development of water resources should be shared (Saddof et al, 2008).

3.3 Conflicts and War over Water

The topic of water-wars has been given a lot of attention to in the literature. Thus, it is important to present some of the main features within this theory. However, as water-wars topic is not directly related to the main topic of this paper, it will be only briefly mentioned.

Water is the only scarce natural resource for which there is no substitute in the world. Additionally, it is the resource over which there is poorly developed international law. Furthermore, water is a resource for which the need is overwhelming, immediate and constant (Wolf, 1998). While most countries have institutional mechanisms for

allocating water and resolving conflict within countries, transboundary institutional mechanisms are far weaker. A risk of conflict over water is evident due to water stress and weak institutions (Anton and Shelton, 2011). The control over water resources such as river basins gives great economic opportunities to states. In addition, possession of large waters becomes intertwined with culture, society and sometimes even with national security of states. A study, done by Wollebæk et. Al. (2000) shows a larger risk of militarized dispute and armed conflicts between states with a transboundary water resource, than within states where the water is completely situated within the boundaries of a state.

Despite this, the discourse on hydro politics has changed over the last decades. Earlier discussions highlighted the risks of conflicts as the main consequence of the competition over transboundary water resources. Later on, scholars have argued against the water wars-thesis and instead focused on the potential for water cooperation (Kim and Glaumann, 2012). Wolf (1998) claims that the risk of water wars is overestimated. Wolf compares the data for water-based conflicts with the treaties found in the Transboundary Freshwater Dispute Database (TFDD). Between the years of 1918 and 1994 (Kim and Glaumann, 2012) 145 water-related treaties were signed. In the same period, there were only seven minor water related conflicts reported (Wolf, 1998).

The focus on water related conflicts might stem from the fact that academic literature often has taken examples of case studies from the “hottest” and most conflicting river basins. Examples of Jordan, Tigris, Euphrates, Indus and the Nile have been given a lot of attention in the literature about transboundary water conflicts. Some researchers have tried to generalize and draw lines from these cases to international river basins as a whole (Boesen and Ravnborg, 2004).

Even though there have not been fought any wars over water the last centuries, disputes over this resource do occur (Wolf, 1998). Thus, it is wrong merely to say that there either are or are not conflicts over water in the world. There are neither only cases of cooperation, nor merely cases of conflict (Zeitoun and Mirumachi, 2008). However, what is evident is that there are disputes between states that share water resources. However, these disputes seldom develop into greater conflicts, as this

would threaten the use of the resource itself. Instead, nations either reach a deadlock over the shared water, or manage to some degree choose to cooperate (Earle et al 2010). The management of shared water can be both a source for peace and reason to conflict. In the end, it is the political factor that decides whether shared management leads to cooperation or conflict (Sadoff and Grey, 2002).

3.3.1 Conflict or cooperation on shared water

To measure the level of conflict between nations cooperation on water can be extremely difficult. The reason to this might be that water is rarely a sole issue of foreign policy of states (Earle et al, 2010). However, if one did look closer into the relations between states in respect to shared management of water resources some factors would seem to appear. The majority of the conflictive events were connected to the creation of new infrastructure and changes in volumes of water flows (UNDP, 2006). Fortunately, many states realize that acts of violence such as war seldom serve as strategically workable or economically viable solutions to disagreements related to shared water resources (Wolf, 1998). Still, the matter of shared water resources is often a very sensitive issue for many states, and consequently it takes time to negotiate a proper solution to the problem. Examples that support this statement can be found in the facts that it took 10 years to negotiate the Indus Treaty, 20 years to agree on the Nile Basin Initiative and no less than 40 years for creating the Jordan agreement (UNDP, 2006).

3.3.2 The role of the basin hegemon in transboundary water management

Serving as one of the biggest obstacles to successful cooperation on co-management of shared resources is the factor of asymmetrical power (Jägerskog and Zeitoun, 2009). What this means is that one state has waster power than another/the others in the sphere of cooperation. The risk is that the weaker or less capable states tend to play after the stronger state's rules. This will in turn leave them with fewer benefits than they would have gotten from a balanced power-relation (Jägerskog and Zeitoun, 2009).

A basin-hegemon is often the state, which through being a great regional power, has the ability to press through its own interests at the same time as the interests of the co-

riparian states are curbed. Military force, coercion-pressure, existing treaties and sanctions can demonstrate this kind of pressure (Zeitoun and Warner (2006).

A basin-hegemon can be defined based on two characters. The state is either a bully or a leader. In a transboundary basin with a clear basin hegemon, the most stable situation when it comes to the relations between the riparian states is when the hegemon has negotiated a water-sharing arrangement that is perceived positively by all of the riparian's. The basin hegemon then act as a fair leader. On the other side of the scale, we have a dominating basin hegemon that seeks maximum control over the water resource through a unilateral approach. In such circumstances, the basin hegemon can be looked at as a basin bully (Zeitoun and Warner (2006).

However, there are solutions to problems based on power asymmetry. Equality and egalitarian distribution of benefits might be achieved through strategies that influence “win-win” solutions. Additionally, strategies that can transform the basin-bully into a fair leader are possible to create; all it takes is patience, negotiation and willingness to cooperate. Furthermore, enhancing capacity of weaker states and creation of fair water-sharing and establishment of objective can be effective ways to challenge the asymmetry in power and increase the fairness in transboundary water management (Jägerskog and Zeitoun, 2009).

3.4 Cooperation on Transboundary Water

Even though there have not been any wars entirely over water, it does not necessary mean that states cooperate in the management of shared water resources. Neither does it mean that co-riparian states share the resource fairly and reasonably among themselves (Earle et al, 2010). Building effective cooperation on transboundary waters is never an easy task (Jägerskog and Zeitoun, 2009). There is not just one single and obvious way of handling it. Neither are there many shortcuts that can be taken to such cooperation (Sadoff and Grey, 2005). Additionally, sovereign nations will always have national agendas for the development of their transboundary rivers. This is something that is perceived to be both legitimate and rational (Sadoff et al, 2008). This can be explained by the null-sum-game, one state loses what the other gains. In other words, one state loses a resource, which the other state gains. This is

perceived to be a cost for a state, no matter how small the reduction of sovereignty (Jägerskog and Zeitoun, 2009). The meaning of cooperation on transboundary water can sometimes be unclear. Jägerskog and Zeitoun (2009) attempt to provide a definition on what effective cooperation in an international river basin is:

“Effective cooperation on an international watercourse is any action or set of actions by riparian states that lead to enhanced management or development of the water- course to their mutual satisfaction”

In a river basin, two different states will often have two different agendas. If, however, these agendas bear some similarities, a fundament for cooperating might occur. The cooperation might become a rational priority of both states when benefits cannot be achieved at a reasonable cost through non-cooperative national agendas. (Sadoff et al, 2008). Thus, states sharing transboundary resources often choose to cooperate based on the evaluation of whether the cooperation will be beneficial. In other words, if the gain is bigger through cooperation than through non-cooperation, the primary will be chosen over the latter.

3.4.1 Levels of cooperation

Building accountable and reliable institutions to manage transboundary waters is a vital part of transboundary water management. However, it is certainly not the end goal of activities and the actors performing them. Promoting cooperation in transboundary water management is more a process- rather than an outcome-oriented activity (Kim and Glaumann, 2012). Gerlak (2007) has created three categories for the degree of cooperation in transboundary water management.

1. Shallow cooperation: Described by having a loose institutional cooperation. There are no formalized bureaucratic mechanisms or official headquarters of cooperation. Instead, there may be shifting structures such as coordination teams, joint committees technical teams, partnerships and task forces.

2. Intermediate cooperation: Described by a more sophisticated level of bureaucratic organization. There are regular meetings, which are held between the parties, in

addition to a permanent headquarters or secretariat with independent staff. This organization is not financially independent. Intermediate cooperation is often dependent on donor funding.

3. Deep cooperation: Described as a high degree of financial independence and bureaucratic organization. Such institutional arrangements of deep cooperation are formal international organizations. They institutionalize oversight in governance and cooperative decision-making (Kim and Glaumann, 2012).

Negotiation is a continuing process, which is influenced, yet not totally determined, by changes in rules and laws. Agreements, made through negotiations, are major leaps for project developments. However, usually, agreements lead to further negotiation. These negotiations are often about how the agreement is to be worked out in detail. Additionally, through negotiations it is possible to respond to violations and monitor compliance, and whether it is necessary to revise agreements (Burns and Meinzen-Dick, 2000). In order to reach deep, stable and long-lasting cooperation, it is necessary to create appropriate bureaucratic organizations to ensure stability in the management (Kim and Glaumann, 2012).

Research done by Gerlak (2007) showed that in total 180 cooperative institutional agreements of varying level of cooperation were found in 124 international river basins. This means that only about 40 percent of the world's transboundary river basins are managed through some sort of cooperative institutional arrangements (Gerlak et al 2009). Additionally, where frameworks for transboundary water management do exist they tend to be bilateral rather than multilateral (Wolf and Hammer, 2000).

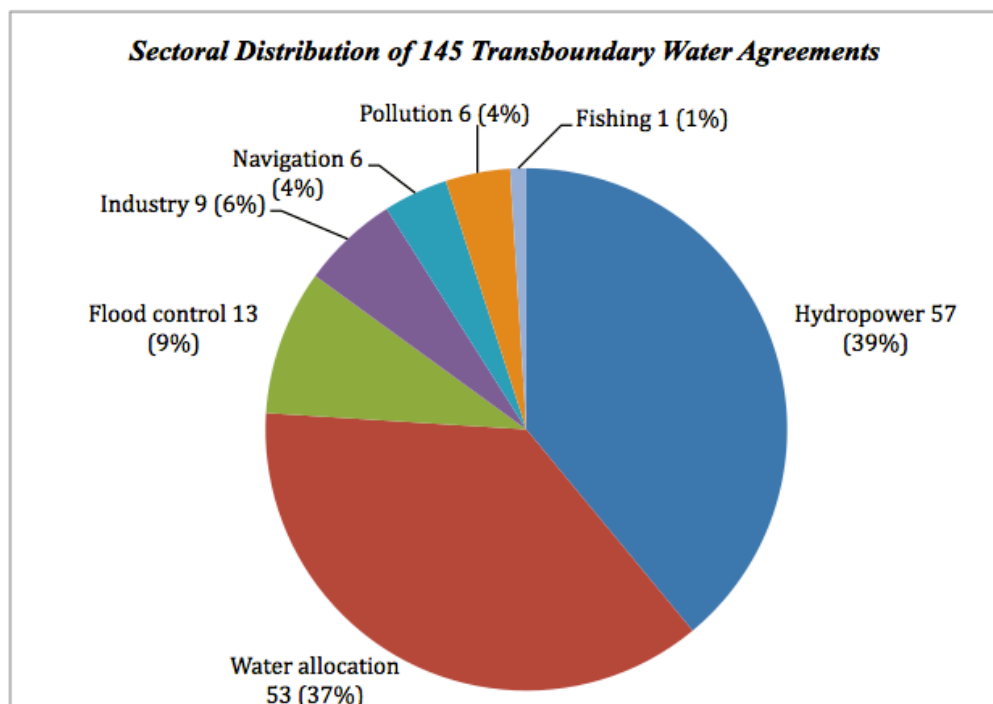
3.4.2 Types of cooperation

Cooperation within river basins can reduce the unpredictable vulnerabilities and risks created by the dependence on a shared water resource (Sadoff and Grey 2005). Integrated planning cannot stop at the state's border when the object of management floats across borders. Lake basins and rivers are biological ecosystems that can stretch across the territory of several states, and the integrity of any part of these systems is

dependent on the integrity of the whole system. Thus, the rational way to administer the water is to manage it at the basin level, even when it crosses borders of states (UNDP, 2006).

The range of the teamwork between states sharing water resources stretches within several disciplines. For example, states cooperate in the allocation of water for purposes like hydropower production, irrigation, drinking water and water for the industry. Furthermore, states cooperate to prevent and control pollution and build joint monitor and warning systems in the river basin. Information sharing and to increase public awareness about the water recourse are also some of many other important aspects of states cooperation on water (Vollmer et al, 2009). Wolf and Hammer (2000) conducted a study where they identified 145 transboundary water agreements. The results of the study showed that there were 86 % bilateral agreements while the rest, 14 %, were multilateral. Out of the 145 cases, 57 were about hydroelectric generation, while 53 cases covered water allocation. For rest of the cases, see figure 2.

Figure 2. Sectoral Distribution of 145 Transboundary Water Agreements



Source; Wolf and Hammer (2000)

Initially, transboundary water management involved allocating water shares between countries. Once the water was divided between states, each of them then worked with optimization of management within their borders, instead of across the shared basin.

The will and motivation for transboundary cooperation are low when the nations focus solely on allocating shares of water. Thus, they miss out on the possibilities and benefits a shared water management could have brought them (Sadoff et al, 2008). In recent times, negotiators of some rivers have focused on benefits, rather than the water resource in itself. Benefit sharing offers a more flexible framework that can severely increase the range of cooperative potentials (Sadoff et al, 2008).

3.5 Benefits From Managing Transboundary Water

The first step in motivating states to cooperate is to recognize the widest feasible range of potential benefits, which cooperation could bring. If benefits are perceived to be insufficient compared to the cost of cooperation, there will be no incentive for cooperation (Sadoff and Grey, 2005). Benefits might be whatever that society recognizes as valuable. Examples of such benefits are livelihoods, ecosystem, growth, services, biodiversity, natural and national heritage, gender equality, security, ethics, aesthetics and international perceptions. Understanding and identifying the range of interrelated benefits derived from the cooperative management. Thus, development of international rivers is central both to better management of the world's rivers and to relations among the states sharing those rivers (Sadoff et al, 2008).

The benefits from the river often reflect history, economy, culture, hydrology and the politics of a nation and a region. Thus, the benefits will be unique to each and every state involved in the transboundary water cooperation (Sadoff and Grey, 2002). This again means that the benefits will vary among states and among river basins. The sum of benefits and costs must be weighed and analyzed by the actors prior to the establishment of cooperation. Reasoning behind this is that the cost of establishing and maintaining multi-country water basin institutions might not always justify the cooperative efforts (Sadoff and Grey, 2002).

Grey and Sadoff (2002) present four different types of benefits one can achieve if riparian states cooperates in transboundary river basins. These are benefits to the

river, benefits from the river, benefits because of the river and benefits beyond the river. These four categories are widely recognised and are cited in several articles and books, among others in Jägerskog & Phillips 2009; Vollmer et al 2009; Earle et al 2010 and Wolf et al, 2010. The following section will look closer at each of the four categories.

3.5.1 Benefits to the river

Transboundary cooperation in water management can have great environmental benefits; this of course requires management to be based on values of sustainability. If the management is indeed based on environmental and sustainable values, the development in cooperation can bring benefits to all river users.

In some occurrences, mainly in poor regions, there is often a sharper emphasis on river development for human needs than for management of ecosystem (Sadoff et al, 2008). Fortunately, most of the modern river basin managements incorporate a conscious design process to ensure a “healthy” river system. What this means is that the managers preserve the fertility of the river soil, protect watersheds, reduce soil transport as well as conserve wetlands. Additionally the responsible actors have to maintain groundwater and floodplains recharge areas, protect the aquatic and riverine terrestrial bio-diversity. (Sadoff and Grey, 2002).

Even though water resources such as rivers often can rebuild and rinse themselves, heavy industrial activity, pollution and overuse of biological resources can seriously harm the quality of water, amount of water and the biodiversity within the water. In worst cases, this can lead to fatal consequences for human and animal life that is dependent on the water resources for survival. Additionally sloppy or absent management of rivers can become quite costly if left unattended until it reaches levels of major damage. Solutions to such problems have to come through transboundary cooperation.

3.5.2 Benefits from the river

If managed in a proper way, water resources such as rivers can bring great benefits to all the actors that are hydrologically interdependent. Examples of such goods can be more food, more power and more navigational opportunities. All of this can be achieved while environmental integrity is sustained.

There are several non-consumptive ways of using water. An example can be hydropower generation, navigation and recreation. In many ways, one could say that this kind of water use does not harm or reduce the quality or amount of water available in the system for other users. It is however important to shed light on the fact that when water is collected in large magazines or dams, the risk and probability of evaporation is significant. Additionally, large magazines of water can reduce the river flow downstream for some periods (Sadoff and Grey 2002).

Perspectives on river basin planners can often be understood through their focus on the benefits from the use of water. In fact, the basin planner often tends to focus on the benefits and opportunities water can give them rather than the water itself. This might in turn be dangerous for the biodiversity, cycle and quality of the water. On the other side, this kind of focus can provide greater scope for cooperation and flexibility among the parties involved. Additionally, acceptability can widen among the involved actors (Sadoff and Grey, 2002). Most importantly, the distribution of these benefits must be fair in order for all of the actors to be accepting the cooperation and have a willingness to be involved. Sadly, there are nowadays examples of benefits being distributed unfairly, in a sense where one state gains far more benefits than the others. In this way, cooperation does not pay off equally for all of the parties involved. The transboundary parties are seldom indifferent to the gains of one another. Obstacles such as envy and relative deprivation can occur.

3.5.3 Benefits because of the river

Extensive advantages from cooperation in transboundary rivers may occur as cost savings because of the river. The control of river flows and basins has long been, and to some extent always is in all international rivers, a source of dispute and tension (Sadoff and Grey, 2002). Furthermore, control of river basins is for many nations an

issue of sovereignty, national pride and strategic necessity. This type of tensions, often inextricably linked to other tensions, may stretch to the point where they affect the geo-political relationships between nations within a basin. Thus, tensions over transboundary water management can become hindrances to growth, by constraining the regional political economy and diverting resources from economic development (Shadoff and Grey, 2002). These costs and tensions will always to some degree be present in all river basins. Some basins might experience the tensions as insignificant while others might experience enormous challenges due to them (Sadoff et al, 2008).

Transnational cooperation can relieve tensions over shared waters, and provide benefits in the form of the savings that can be achieved. Furthermore, the costs of non-cooperation or dispute that can be avoided. However, costs and tensions of this kind will to some degree always present every river basins. In some basins they may be insignificant, while in others they might present massive challenges. (Shadoff and Grey, 2002).

3.5.4 Benefits beyond the river

Cooperation on management of water resources can open doors to other collective actions between the involved actors as well as cooperation beyond the river. In other words, transboundary hydrological interdependence can lead to international political progress for those countries that manage to divide the benefits from the river in a satisfying way for all parties. If the cooperation in respect to the river management is successful, the involved actors might see it as beneficial to cooperate in other sectors as well. In other words, flows other than the river may grow. For the best cases of river cooperation, the relation between the cooperating states might improve, and basis for cooperative socioeconomic development might occur (Sadoff and Grey, 2002).

Collaboration with regard water systems can facilitate political processes needed to facilitate cooperation in other systems. These are systems both within and beyond the river basin and can be flow of labour, infrastructure and market. These socioeconomic systems have the possibility to “grow” way beyond the river that started the cooperation in the first place. It is however important to understand that everything

that “grows” from the initial cooperation is closely intertwined. The benefits of the collaboration on international rivers might be in addition to knowing how it can be fostered (Sadoff and Grey, 2002).

It should be mentioned that all of the four types of benefits presented above have the potential to occur in any shared river basin. There is no hierarchical order between them in respect to the magnitude of the possible benefits. How important the different benefits are will be a result of costs, physical opportunities, as well as in which way the riparian states are cooperating. (Sadoff and Grey, 2005).

3.6 Barriers to Cooperation

Each river basin and each state are unique by its culture, socioeconomic factors, geography, biology and so on. Consequently the potential for cooperation between states and for possible benefits this can bring is also unique. There are opportunities for development and benefits for all states, basins and transboundary water cooperation between states. It is therefore crucial to identify these benefits. In addition, it is also important to identify the potential obstacles that might hinder the realization of the benefits (Jägerskog and Zeitoun, 2009).

The literature and discipline used for this thesis says little about the barriers to cooperation in transboundary water management. In other disciplines, however, more have been written on the subject. Cypher and Dietz (2004) describe the different barriers to a country’s economic development. According to them, the challenges for a development analyst are to try and map all of the largest barriers, which might occur and thus hinder the development of a country. The reason for such importance of mapping is that it will lay the groundwork for effective measures that public policies can try to remove or reduce (Cypher and Dietz, 2004). Cypher and Dietz differ between two main types of barriers; internal and external barriers.

Internal barriers can involve that there is an insufficient infrastructure, income is unevenly distributed, the role and level of the financial markets, the development stage of the education system and the ideological and religious views. Furthermore,

internal barriers also include the degree of democratic processes, the extent of corruption and the level of market failures.

External barriers can be a result of transnational or multinational companies control over resources, the functions of international financial institutions, international trade, states interests and power in international politics and the economic systems and policies of other states. All states, including developed nations, face both internal and external barriers that can act as obstacles to continued development (Cypher and Dietz, 2004).

From what the background research of literature for this thesis has shown, there is little written about barriers to cooperation in transboundary waters. The impression that little has been written about barriers to transboundary water cooperation are being supported by Claassen and Granit (2009). According to them, there has been written a lot on transboundary river management, but little on barriers to cooperative development. (Claassen and Granit, 2009). Furthermore, Claassen and Granit (2009) argue that the Barrier Analysis also can be used for identifying different obstacles for development in transboundary river basins.

On a general basis, it is difficult to say whether it is the external or the internal barriers that are the biggest obstacle to development. It all depends on the circumstances around, as well as the characteristics of, a state and situation. The relative impact of external and internal barriers cannot be presumed a priori. However, it must be understood and studied in each changing and specific circumstance (Cypher and Dietz, 2004). Claassen and Granit (2009) argue that barriers, which hinder development in a transboundary river basin, most often are external with a few internals now and then. Claassen and Granit also present some examples of barriers that can exist in a transboundary river basin. For this examples see box 1.

Box 1. Examples of barriers to cooperation in transboundary river basins.

Barriers to cooperation
in transboundary river basins.

1. *A high level of inequality between riparian states (e.g. GDP per capita)*
2. *Major differences in political systems (e.g. authoritative vs. democratic)*
3. *A strong geopolitical influence in a basin by certain states*
4. *Difference in riparian state religious views and ethnic composition*
5. *A large difference between riparian states legal systems*
6. *Difference in access to investment markets by riparian states*
7. *The existence of civil strife in a basin*
8. *Different and/or low levels of in-country infrastructure*
9. *The absence of regional cooperative frameworks, e.g. Regional Economic Commissions or Transboundary waters institutions.*
10. *A basin that is closed i.e. with limited water resources or water quality constraints.*
11. *Limited in-country capacity to manage water resources and to effectively participate in regional cooperation.*

Source: Claassen and Granit, 2009

Riparian nations have a tendency not to address standing barriers for cooperative management and development. The reason for this might be sensitivity of addressing distinctions in economic and political power within a river basin. (Claassen and Granit, 2009). Nevertheless, it is essential to identify and assess the greatest barriers to development in a transboundary region. It is important for riparian states or other stakeholders to identify economic, environmental, social or political barriers to be able to be able to create effective strategies to avoid those barriers, or at least minimize their effect on the cooperation within a basin. The Barrier Analysis is a valuable supplement to the normal feasibility study to ensure that the implementation of a project is as effective and good as possible (Claassen and Granit, 2009).

3.7 Lessons Learned about Transboundary Water Management

Elinor Ostrom, author of the book, *Governing the Commons*, argues that in order to foster governance of natural resources, rules need to develop over time. Measures for conflict resolution should be available, and duties in maintaining the common resource and benefits, from exploitation should be balanced (Ostrom, 1990). It is not

possible to use a “one-size-fits-all” approach in transboundary basin management. Nor are there any clear guidelines for how the stakeholders such as NGO’s, governments, interest groups, water users, communities and private sectors should involve themselves and cooperate (Schreiner et al, 2010).

Possibly the most essential part of international water cooperation is that the cooperation should not be seen as a goal in itself. On the contrary, the cooperation should serve and meet the goals of the actors involved. In other words, the cooperation should bring benefits by existing, not being the only benefit by its existence. Thus, a cooperation process started at a lower level between two states can end up in blooming into intertwined and complex cooperation at an international level. For this to be possible, the cooperation needs to be fair in the sense of benefit and cost distribution. Cooperation is most effective when there is equality in the decision-making, participation and power between all parties involved. Although, not likely lack the necessary institutions the optimal approach to the management of transboundary water resources would be an integrated use of the resources where all of the actors involved gaining equally or fairly from the resources (Jägerskog and Zeitoun, 2009). Further, to reach the goals set by a treaty it is vital that the states actually fulfil their obligations set by the treaty. It is not enough to merely declare rules and principles in an agreement. The agreement must be operationalized through an actual implementation of it. The process of operationalization is one of the keys to success in cooperative management of transboundary river basins (Shadoff et al 2008). It is important that states think carefully through the possible gains from transboundary cooperation and weigh them up against the possible economic, political or environmental downsides that such cooperation can bring (Jägerskog and Zeitoun, 2009). Hopefully, the benefits of cooperation will outweigh its downsides and thus lead the state to go from unilateral to bilateral action. The basket of benefits provided by the transboundary collaboration will in most cases serve as a motor for effective management of shared resources.

Chapter 4. RESEARCH METHODOLOGY

4.1. Research Strategy

The purpose of this study is to present and describe the process of development of the Kikagaro/Murongo Hydropower Project. Hereunder goes surrounding influences from different institutions, international agreements, transnational relations, environmental regulations, electricity markets, role of the developer, political and economical interests of states, the region and lender. In order to find out how each of the mentioned, and several others, instances affect the development of the Kikagati/Murongo Hydropower Project I needed to go in depth and get familiar with the technicalities of how each the influences are connected to the project.

Consequently it was most appropriate to use the qualitative research strategy and interview people from key institutions and organizations connected to and affecting the project when I did my research. Also, as the aim of my study is to understand the processes around the Kikagati Hydropower Project, the design that was the most relevant for me to use is the Case Study approach. The main ambition of the case study is to describe a case, which might be a person, social phenomena, an organization, social community or an institution. The researcher is to bring out the essentials of the case and describe as well as reconstruct it in the best possible way. (Flick, 2009) The case study examines a phenomenon in the phenomenon's real-world framework (Yin, 2011). According to Stake (1995), it might be intrinsic in the sense that it looks at a distinctive case that is worthy of being studied on its own right, and even though it is covering only one particular situation it still allows the making of unusual insights warranting its study.

As I chose to look at only one instance the case study design was the most suiting for me to use. There are several reasons to why I chose this design for my thesis. Mainly, it allowed me to look at the essentials as well as describe and understand the case in detail. I wanted to go in debt when trying to understand and explain why the processes around the Kikagati/Murongo Hydropower Project are the way they are and by this present a real life example of transboundary water management. In other

words, this thesis aims on being an intensive and detailed analysis of one single case, which is the Kikagati/Murongo case.

4.2. Qualitative Method

I wanted to collect rich data that helped me see the process around the development of the Kikagati/Murongo Project through the eyes of the respondent, therefore the qualitative strategy and hereunder the interview was the most suitable for this study. Qualitative research strategy aims at using words, generating theory, looking at individual's interpretation of the world and how individuals construct the social reality around themselves in order to collect and analyze the data. Hence, it has an inductive view of the relationship between theory and research; it has a contrasting stance to the natural scientific model of research; and it implies that social properties are outcomes of interaction between individuals (Bryman 2012). In this manner it is arguable that the researcher needs to see through the respondents eyes in order to create a theory

When thinking about concepts and theories in regard to the qualitative strategy, the first is narrowed down as the researcher is collecting and analyzing the data, while the latter is created after collecting and analyzing the data (Bryman 2012). Theory is treated as something that comes out of the collection as well as analysis of the data. In other words, the researcher allows theoretical ideas to be a product of the data he or she has collected and analyzed

Qualitative research strategy often opens for a lot of explanation in regard to the research field. There are no encoded formats on the social world. This gives qualitative research strategy flexibility and limited structure. In addition to this, a great deal of descriptive detail is often provided, something that probably stems from the high use of the question “*why*” in this strategy. Related to this is the tendency the qualitative strategy has to observe social life as a set of processes and patterns that unfold over time.

For this study, qualitative research strategy was relevant for me to use for several reasons. Firstly, I wanted to go in depth and get a broad picture of how the project

developed and what has affected the development. I wanted to find out how the negotiation between the states of Uganda and Tanzania have been taking place and most importantly, how these negotiations are affecting the development of the future hydropower plant. Furthermore I wanted to look at the historical background of the Project. In sum, I needed to collect rich and thick data about the development of the Kikagati-Murongo Hydropower Project.

4.3. Interview

Interview can shortly be described as a method of data collection that usually facilitates direct communication between two, or a group of, people, the interviewee(s) and the interviewer(s). This communication finds place either face to face or at a distance through telephone or the Internet. In addition, an interview enables the researcher to obtain information, opinions and feelings from the respondent using interactive dialogue and questions. In this way the researcher is able to collect rich data that makes it possible for her/him to see through the eyes of the respondent(s) (Mathews and Ross, 2010). In this study, I have used the semi-structured style of interview. I have also performed both face-to-face interviews as well as online interviews.

4.3.1. Semi-structured interview

In a semi-structured interview the researcher has a list of questions with specific topics that she or he wants to cover during the interview. Being semi-structured, this form of interview gives the respondents a great deal of leeway on how to answer. The researcher has an interview guide that is followed throughout the interview.

The questions in the semi-structured interview are not necessarily asked in the same order as they are placed in on the interview guide. The interviewer might even ask additional questions that he or she find suiting to ask in respect to the conversation. However, all of the questions on the interview guide will be asked, and in more or less the same wording from interviewee to interviewee. The interview process is to a high degree flexible, though not as flexible as in the completely unstructured interview. The semi-structured interview has a degree of structure, at the same time as

it allows for room to pursue topics of particular interest to the interviewees (Bryman, 2012).

When conducting interviews for my research on the Kikagati/Murongo Project, it was important to me to have a clear overview of what I was going to ask my interviewees about. At the same time, I did not want to have a too strict structure in fear of missing out of interesting information the respondent provides when allowed to talk freely about the subject I ask questions on. When interviewing, I allowed the interviewees to answer my questions and discuss the topics in their own way, using their own words. Further on, I followed a set of topics and questions for each interview. However, I found it necessary to introduce topics and questions in different ways and orders for each of the interviews I conducted. I also found it necessary to slightly adjust the interview guide so that it would fit with the person and organization I was interviewing. The reason to why I did so was that I interviewed people working at different places that had different relationships to the Kikagati/Murongo Project and had different areas of knowledge and experience.

4.3.2. Online interviewing

I used the semi-structured face-to-face interview only when conducting information in Uganda and in Norway. Ideally, I would wish to be able to collect semi-structured interviews from respondents in Tanzania as well. However, as my resources for research are limited both in respect to time and money, I was able to perform face-to-face interviews only in Uganda. My supervisor supported this decision. When it came to conducting information from the Tanzanian side I decided that the online interviewing through e-mail could be a good way to get information.

Online interview through e-mail builds on the use of computers and the Internet for communication between people. This tool for interviewing enables the researcher to reach his respondent no matter of the distance between them (Mathews and Ross 2010). In my case, it was able for me to conduct information from respondents in Tanzania while being in Norway.

On the practical level, online interviewing will be organized differently from face-to-face interviewing. Semi-structured interviews are normally run in one meeting with the interviewee and a set of questions is prepared in advance. In an online interview, you could try to do the same by sending a set of questions to participants and asking them to send back the answers. But this comes closer to the situation of sending out a questionnaire in a survey than to the situation of a semi-structured interview (Flick, 2009). To avoid this, I chose to send each of the online respondents a description of my study prior to asking them whether they wanted to answer my questions. To my delight, all of them found my project both interesting and important. As my respondents complied with answering some questions to benefit the study, I chose to send only 3-4 questions to start with. The reason to this was that I did not want my respondents to get tired from answering everything at once. This might have caused them to only answer briefly on each question in order to finish the interview as fast as possible. It should also be mentioned that I informed my respondents that I would follow up with some more questions later. After I got answers back from my respondents, I followed up with 2-3 additional questions. This process was repeated until all my questions were answered. In this way the data collection became more interactive than if I just would have sent all the questions at once.

Even though, as stated, I would have preferred to interview each and every one of my respondents face-to-face, there are positive sides to online interviewing as well. Face-to-face interviewing might be more spontaneous than online communication, but the latter allows the participants to reflect on their answers more than the former (Flick, 2009).

There are, however, some limitations to the online interviewing. Online interviewing is a kind of simulation of real world interviewing and spontaneity of verbal exchanges is replaced by the reflexivity of written exchanges. Non-verbal or paralinguistic elements of communication are difficult to transport and integrate. Finally, the application of this approach is limited to people ready and willing to use computer-mediated communication or this kind of technology and communication or this kind of technology and communication in general (Flick, 2009). The last is not a problem for my sample since all of my interviewees have jobs where they have to work with computer-based tools every day. A problem that appeared in my case was that some

of the respondents where slow to answer. This created delays in the progress with my research and writing. Nevertheless, I eventually got replies from all of my respondents and I am satisfied with the result and that none of them decided to abort their response to me.

4.4. Sampling and Informants

The issue of sampling is about the decision on which persons the researcher wants to interview and from what groups these people come from. Sampling decisions in qualitative research are often taken on a substantial level rather than on an abstract and formal level. The sample in qualitative research is often based on purposeful decisions for a specific case rather than random sampling, such as in quantitative research strategy (Flick, 2009). The purposive sampling has to do with the selection of units that have direct relevance to the research questions (Bryman, 2012) In my case, the sample is selected purposively in respect to the case of my research, the Kikagati-Murongo Hydropower Project.

4.4.1. Sampling process

The Norwegian developer, TrønderEnergi, helped me with establishing contact with many of the respondents for this research. This was very convenient, as they have been involved in the project for quite some time now, and thus had many contacts to provide for the research. I explained what actors I wished to get in touch with, and TrønderEnergi came with suggestions of who might be the best to contact in that regard. I was provided with many contacts in governmental organizations in both Uganda and Tanzania. Additionally, TrønderEnergi were helpful and sent the potential respondents a description of my study and a short description of my academic background and interests with the study.

TrønderEnergi has been involved in Uganda and Tanzania for several years now, and have therefore established stable contact with the actors related to the Kikagati/Murongo project. To have them introducing me to these actors was of great help for me and my research, especially since my goal was to speak to as many respondents as possible within the short timeframe of my stay in Uganda.

Additionally, most of my informants are busy people with little time to spare for things besides work. Thus, it is assumable that it would have been more difficult for me to get interviews with them if TrønderEnergi had not asked on my behalf.

The informants within the Tanzanian authorities, on the other hand, I contacted directly and without the help of TrønderEnergi. In addition to contacting informants as described above, I used the snowballing sampling technique. This technique is also referred to as network sampling. The name of this method is based on an analogy to the way a snowball increases in size. It first starts of as a small ball, but increases in size as you roll it and it pick up more snow. This method proved to be very useful for my research, as it helped me get in touch with interesting respondents involved in the Kikagati/Murongo project. As the number of people involved in, and having knowledge about, the project is limited, the networking/snowball sampling technique helped me to explore the network of actors involved in the project. In other words, I used the help of the informants I was already in touch with, to get in touch with new informants.

4.4.2. The Informants

Key informant for this study has been the Senior Director for International Business Development in TrønderEnergi, Inge Stølen. A key informant is someone with good knowledge on the topic that can help the researcher to get familiar with the study environment. However, there is a danger of relying too much on one key informant. According to Bryman (2012) the researcher risks to see the world solely through the key informants eyes and thus the research might become biased. Therefore, I have shown great awareness to the danger of bias during the research process and writing of this thesis. In addition to the key informant in TrønderEnergi, I have interviewed a representative of the subsidiary company of TrønderEnergi in Uganda, TronderPower Ltd. Furthermore, I was lucky enough to meet, and interview, the representative for the initial developer of the project, China Shan Sheng's Elaine Kiew.

The total number of interviews conducted on the Ugandan side is seven, and five in Tanzania. The major difference between the interviewing in Uganda and Tanzania, it that I interviewed respondents in Uganda personally, while my Tanzanian

interviewees were contacted by e-mail. In addition to the Ugandan and Tanzanian authorities, I interviewed representatives from East African Community and the Nile Basin Initiative. These interviews were also conducted by e-mail. The interview with the general manager for the Norwegian-African Business Association in Oslo was, on the other hand, conducted through a face-to-face interview. Thus, in total I have conducted 11 face-to-face interviews, and 7 online interviews. See *Appendix A* for more information on my informants.

4.5. Documents as Sources of Data

Besides using different forms of interview as sources of data, I also used several types of documents. Some of them were provided to me early on, while others I had to wait a fairly long time to get. This was a factor that slowed down my progress within the research. The documents I have used in this study are a Memorandum of Understanding to facilitate the development of the project, a Power Sales and Sharing Agreement, The Treaty for the Establishment of the East African Community, EAC Protocol on Environment and Natural Resources Management, Feasibility study and Environmental Impact Assessments (EIA) for the project, the Bilateral Agreement between Uganda and Tanzania and reports from meetings in the Joint Technical Committee for the Kikagati/Murongo project.

Within my research, I valued the possibility of using documents for several reasons. Using documents as data is more than simply analyzing text. Documents can be thought of as standardized pieces of work, in so far as they appear in specific formats such as: reports, case, notes, drafts, diaries, statistics, certificates, judgments, letters, expert opinions, contracts, drafts or birth/death certificates (Wolff, 2004). If a researcher wants to understand the nature of documents, she or he needs to stop considering them as static, pre-defined and stable artifacts. The researcher must see documents as networks of action, fields and frames (Flick, 2009). Additionally, the use of documents containing information about the Kikagati/Murongo Hydropower Project allowed me to go further than the perspectives of members in the field. The protocols, agreements and documents I used are not merely a simple representation of facts or reality. They were produced by someone, for some intent and type of use.

Documents are much more than just facts written down, they are also means for communication (Flick, 2009).

4.6. Reliability and Validity

As my study of the Kikagati/Murongo Hydropower Project is a qualitative case study, some researchers would argue that the questions of reliability and validity are not as important as they would be if this were a quantitative survey of a large sample. Kvale (1996) on the other hand says that ignoring the impotents of reliability and validity could lead to a “*subjective relativism where everything can mean anything*”. In fact, there are concepts surrounding this thematic that apply to qualitative studies. These concepts are surrounding the question of trustworthiness of the study. Truth in qualitative research can be found through credibility, transferability, dependability and conformability of research (Bryman, 2012).

In respect to validity and reliability in this study, it was important that I measured what I had intended to. In this case, it was important that I collected data that answered my questions about the start and the development of the Kikagati/Murongo Project. In this research, I do not intend to generalize the results of my data-collection to the rest of the world. Nevertheless, I focused on having a match between my initial research question, my observations and my collected data. Just as important is the ability of the study to be replicated by other researchers (Bryman 2012 p. 392).

Halloway and Jefferson (2000) argue that interviewers who are using qualitative methods too often assume that their participants are painting a picture of the reality within a situating, exactly the way it is. This is an assumption with two major problems. Firstly, the *transparent self-problem*, when the researcher is assuming that participants know themselves and why they do what they do. Secondly, there is the *transparent account problem*, which has to do with the researcher assuming that participants are “*willing and able to tell this to a outsider*” (Hollway and Jefferson, 2000).

During the data collection for this research, I have had access to reports and abstracts of the Joint Technical Committee, as well as project related documents. In addition to

being important sources for information, these documents have given me the possibility to "cross-check" the information I have received from my respondents. Based on this cross checking, I have discovered few minor gaps between what some of my respondents have said and the official documents. This affected the reliability aspect. What I consequently chose to do in those particular cases was to use the official documents as the trustworthy and reliable information.

4.7. Ethics

To hold a high ethical standard is considered to be one of the most important aspects in research. Ethics can be viewed as sets of rules by which people and whole societies maintain moral standards in their lives. The same goes for the research. In social sciences the informants are human beings with feelings, beliefs and opinions that the researcher must treat with care (Mathews and Ross, 2010). Research should be made and designed in a way that ensures the integrity and quality of the study, and ensures that none of the participants in the research are harmed in any way (Mathews and Ross, 2010). Semi-structured interviews are often applied to extract people's feelings, opinions and experiences. These types of interviews are often used as part of research design that contains the interviewing of small groups of people who are selected as respondents because of their knowledge and expertise. Thus, I had to make sure that my respondents were well informed about their rights, and that I had their permission to use their responses in my thesis. Additionally, in several of the occasions where I used a recording device during the interview, I had to first ask for permission to use such a tool. I explained that it would make it easier for me to transcribe the interviews and get more essence of details from the interview.

A part of the documents I have had access to, are documents I have received from my informants. Documents provided by the developer, TrønderEnergi, such as feasibility study and the environmental impact assessment have great economic value. In order to get access to them, I have had to sign a non-disclosure agreement. Practically, I do not have the permission to publish the whole documents with the overall context within them. Nevertheless, I have had the possibility to use part of them to actively site from. I have additionally received documents from other informants as well. Some of them, I have gotten under the condition of not publishing them as a whole. I

have taken these preconditions seriously, as I view ethics as an important part of research and do not want to put my respondents in any difficult positions.

4.8. Data Presentation

To simplify the analytical work, all of the interviews were categorically gone through. The classification of the content in each of the interview made the empirical work with presentation of data easier and clearer. All, but two, interviews have been conducted in English. The two remaining interviews were done in Norwegian, and translated into English by me. I will in the following chapters present my empirical findings and analyze and explain them as I go along

Chapter 5. HISTORY OF THE PROJECT, THE EAC AND AGREEMENTS

In this and the next chapter I will present and analyze my empirical findings. What I present is based on both my interviews and the analysis of documents mentioned in chapter four. In this chapter I start by giving a presentation of the key elements in the history of the project. Thereafter I describe the role of the East African Community in the project. In the end I will present the framework and agreements surrounding the project.

5.1. History of the Kikagati/Murongo Hydropower Project

The history of the new Kikagati Hydropower Project started in 2005 when the Chinese company, China Shan Sheng Uganda International Co. Ltd, needed electricity to power the tin-mines and smelters they were operating in the area close to Kikagati. China Shan Sheng got to know about the old hydropower station that had been situated in the area from locals. This old hydropower station had capacity of producing 4MW, and was demolished under Idi Amin's rule over Uganda, in the war between Uganda and Tanzania in 1979.

After discovering the old power station, the Chinese company was quick to apply for permit from the Ugandan authorities to do a feasibility study of the site. The outcome of the feasibility study showed that there was a possibility to construct a hydropower plant with 10MW installed capacity. The power generated was first and foremost intended to supply the tin smelters and mine. The excess power, not needed by the mining industry, could potentially be sold on the Ugandan market. Due to the Chinese developer not needing more than 10MW, the potential of the power plant was not optimized.

After the feasibility study was completed, the Chinese developer applied for an environmental permit, a water permit and a license to run a 10MW power plant from the Ugandan authorities. These permits were given, and it looked as if the construction project was ready to be started. However, the Chinese developer did not

take into account that this hydropower project is situated on a river that flows across the border of Uganda and Tanzania. Having communicated with only Uganda, the Chinese developer had not applied for permit to use water, environment or land from the Tanzanian government. This was soon going to create major complications for the developer and the development of the project.

The only way a foreign entity can be allocated with land for investments purposes in Tanzania is if the foreign developer registers the entity with Tanzania Investment Centre (TIC). The requirement for being able to register a foreign entity, and thus get to develop the entity within Tanzania, is to have minimum threshold of capital in the country. According to TIC the foreign investment had to be not less than USD 300 000 (EAC/JTC, 2010a). There was not of interest for the Chinese developer to register the hydropower project in Tanzania. China Shan Sheng also feared double taxation if they registered the company in Tanzania

”China Shan Sheng had the perception that since both states are part of the EAC, it should be sufficient to ask for permissions from only one of the states. But when time went on, the Tanzanian authorities said they are still a sovereign state and the project needs to be registered in Tanzania as well. This is something the Chinese developer did not see the logic in. They thought it was not practical and not necessary to have the project registered in both countries.” - Abu Moki, MEAC.

Moki states that Tanzania pointed to their sovereignty as a state in spite of the membership in the EAC. This enlightens the lack of communication between the two states that share the river the power plant is to be built on. Uganda gave permission to the developer when in reality they should have consulted with Tanzania first. This placed the developer in some sort of a mediating position between Uganda and Tanzania. China Shan Sheng believed that it was not their role to get the two states to agree with one another, as their mission was solely physical and technical development of the HPP. However, the developer participated in several meetings between the two states and sometimes almost functioned as a mediator between the tow states, whose mission was to get the two parts to agree. According to Elaine Kiew, this was not an easy task.

“There were a number of meetings. At times I experienced them as overwhelming. There were a high number of delegates from both Tanzania and Uganda that participated in these negotiations and where I as a representative for the developer became situated in the middle of the non-agreeing parties. Something that was particularly frustrating for me was that every time it seems as if we were getting closer to something that looked like an agreement on one meeting, a new problem would have been brought up at the next meeting”. - Elaine Kiew, China Shan Sheng.

Even though the developer tried to help the parties to agree, every time it looked like an agreement was about to be made the negotiations fell apart as new problems emerged in replacement of old ones. This resulted in great pressure being put on the developer, who in the first place should not have gotten the role as a mediator.

Figure 3. Project site. Remainings of the old Kikagati Power Station seen from the Ugandan side.



5.1.1. TrønderEnergi takes over

Even though China Shan Sheng initially thought it would be enough to apply for a permit with only one of the countries, they still conducted and handed in an Environmental and Social Impact Assessment to the National Environmental Management Council (NEMC) in Tanzania. The Impact Assessment got approved in Tanzania. Nevertheless, the approval of the Impact Assessment did not mean so much for the development of the project since the company was not registered there. Thus, China Shan Sheng got no way with the land allocation for the project. In addition where there many outstanding issues left.

Eventually, the management of the Chinese company began to run out of patience and will to continue with the HPP. Additionally, their lender withdrew from the project, as it was taking too long to settle for an agreement. In the beginning of 2009 the Chinese developer decided to let the project go and to sell it. The Norwegian Electricity Company, TrønderEnergi, and the Norwegian Investment for Development, Norfund fund bought the project.

Soon after the Norwegian developer bought the licence to Kikagati, the Ugandan authorities and the Electricity Regulatory Authority (ERA) approved the required documents. In addition to the licence of the project, TrønderEnergi also took over the environmental and water-usage permissions issued by the Ugandan government.

Towards the end of 2009, the consortium of TrønderEnergi and Norfund had fully taken over the project and established the Company, Kikagati Power Company Ltd. As TrønderEnergi became the main actor within implementation of the hydropower project, the company will further on in this paper be referred to as the developer.

An optimization study of the project site was done not long after TrønderEnergi bought the HPP from China Shan Sheng. A joint venture of the consulting companies, Scott Wilson and Norplan, were appointed for the job of investigating the capacities of the project site. The result of the study was completed in 2010. The outcomes of the optimization study showed that the possible installed capacity of the power plant was 16MW instead of 10MW as the initial feasibility study showed (Koksæter, 2011). Fallout of the optimization study also recommended a few changes in the design, but there were no changes in the design or size of the dam. In addition it was discovered

that the topographic survey conducted in the previous feasibility study had slightly overestimated the fall in the river. Due to this, in the new study, the reservoir was estimated to cover approximately 25 per cent more land than accounted for in the initial feasibility report (Koksæter, 2011).

On the background of the new feasibility study done by TrønderEnergi, it became acknowledged that the HPP had optimization potential up to 16MW. Now that the developer had learned that the capacity of the project was vaster than initially assumed, there was need for a new license. Therefore, TrønderEnergi created a “Change of Scope Report” which would be given to the Ugandan authorities along with application for license. *“The previous developer, China Chan Cheng, thought they could transfer their licence to the new developer. Unfortunately this is not the way it works. ERA told the new developer that they had to reapply for the license. This process took quite a long time.”* - James Philip Sembeguya, ERA. As the process of acquiring a new license took some time, TrønderEnergi had to be patient

In addition to the “Change of Scope Report”, the developer handed in a revised version of the Environmental Impact Assessment (EIA) to the National Environment Management Authority (NEMA) in Uganda. A new EIA was also given to the Tanzanian Environmental Authorities in 2011.

TrønderEnergi approached the development of the project and the formalities around it differently than China Shan Sheng. The Norwegian company acknowledged that in order for the project to become realized there was a need for registration in Tanzania. Thus, in 2010 TrønderEnergi began the process of registering their company with the Tanzanian authorities. This was a process the previous developer saw as unnecessary, as both Tanzania and Uganda are members of the EAC.

The major distinction between the approaches of the two developers is that the first developer started by treating the HPP as a unilateral project, while the second developer approached it as a bilateral project. Thus, a dialogue between the Tanzanian authorities and TrønderEnergi began. The plans for the project were presented and laid forward before the Tanzanian government officials. This was an important leap

forward in the process form being seen as a unilateral project in the beginning to becoming a bilateral hydropower project.

In 2010, the new developer participated for the first time in a meeting with the Joint Technical Committee (JTC). The JTC was appointed in 2008 by the two countries Ministers of Energy and was comprised by high technical officers from both Uganda and Tanzania (EAC/JTC, 2010b). Its major role was to facilitate the developer in carrying out the investment and addressing outstanding issues. The committee has held several meetings to iron out the issues and provided information required as per the developer's needs.

The Joint Technical Committee as an institution played an important role in the beginning of the HPP. The largest benefit provided by the JTC was that this institution created clearness in regard to different tasks that needed to be done and most importantly, who should be working on those tasks. Joint technical committee helped TrønderEnergi to understand with whom they needed to communicate. At times the committee would take the initiative to gather and facilitate meetings so that parties that needed to be communicating got to do so. This was especially helpful in the initiation phase of the project. However, as the project continued the JTC, from the developer's point of view, gradually lost its importance. At times, Inge Stølen says, parties who perhaps had other ideas or wishes for how the project should develop used the Joint Technical Committee as a tool to slow down the development of the project. Especially, Tanzanian representatives have often caused delay rather than progress by participating in the JTC meetings. *"Tanzania has indeed been very effective in sabotaging decisions within the Joint Technical Committee. For instance, they don't send the state attorney at the meetings in the JTC, but rather people that do not have real decision power. It is only after the meetings have taken place that the state attorney set his influence on the reports. This has led to unstable negotiations and postponement of cases that need to be gone through."* - Inge Stølen, TrønderEnergi.

As the progress of the development in negotiations and planning of the project continued, the JTC was used against its purpose for slowing down the progress. Nevertheless, the institution still is an essential tool for the development of the

Kikagati/Murongo project and it must be regarded this way. The parties should see the JTC as an institution that can steer the project in the right direction. At the same time it is important that JTC is not misused or sabotaged by one or both of the parties for gaining interests other than for the progress of the HPP.

5.1.2. The 2011 Ugandan election

2011 was an election year in Uganda. According to Inge Stølen in TrønderEnergi, the process of election put a hold to the development and decision-making around the Kikagati/Murongo project. Many spheres became politicized and few actors dared to proceed with the development of the project, as they feared that the government would hit down on them. The new parliament was very aggressive in their search for and fights with corruption. This led people within administrative positions in Uganda draw back so that the government would not suspect them of involving themselves in corrupt actions. Those who continued to make decisions risked being called in to the parliament to answer for and explain their actions. All of this led to slow progress for the HPP on the Ugandan side. Moreover, the CO for the Ugandan regulatory, ERA, had to leave his position after making a decision, which fell unpopular with the parliament. The new CO who was hired introduced “REFIT”, a new way of calculating the purchase agreements between produces and off-taker.

”As the developer, we where frustrated over this new agreement. REFIT gives very little economic return to us as the developer. It is almost not profitable for us. It is also illustrated by the fact that there have not been drawn any new agreements in respect to electric power on a commercial basis after this agreement was implemented. We put our trust in that ”GET FIT” will make the project profitable for us.”– Inge Stølen, TrønderEnergi.

A new arrangement of what developers should get paid per KWh produced, ”REFIT”, is making things difficult for TrønderEnergi and other power producers as the profits will be close to nothing based on this agreement. What TrønderEnergi in the mean time is hoping for is that the new arrangement of “GET FIT” will help them survive the market in Uganda. ”GET FIT” is a donor-based arrangement that has a goal of increasing the energy production in developing countries. The main aspect of “GET FIT” is that economic support is given directly to the developer. This leads to the

possibility of the developer/producer being able to sell inexpensive energy and making profit at the same time (Fulton et. al, 2011). A pilot project will be introduced in Uganda, where developers of smaller hydroelectric power plants will receive economic support from donors. These are project that would not have been possible to implement without this kind of support (Deutsche Bank, 2013).

5.1.3. Land acquisition for the project

The election in Uganda slowed many processes down in respect to the development of the project. Nevertheless, in the same period a lot was accomplished on the Tanzanian side. In the beginning of 2011 the registration of Kikagati Power Company Ltd. in Tanzania was finalized. Simultaneously, the survey for valuation for Tanzanian land acquisition was also completed. On the Tanzanian side, land for the project had to be acquired from a number of local landowners which had to be properly compensated. In Uganda, the Electricity Company, UETCL, was the main landowner. It has also been mentioned in several of my interviews with Ugandan Officials that it was easier for the developer to get land in Uganda than in Tanzania.

The process of acquiring land in Tanzania has been challenging for TrønderEnergi as the ground owners are the local people. To buy “village land” and transforming it to “land for development” is a process that needs to be approved in the State House in Tanzania. This framework of law is meant to serve as a protection for the local people so that large land areas are not acquired against their will. An example of such an acquisition could have been if a local chief simply would sell off land even though the rest of the village did not approve of this. Consequently, the developers land acquisition for the project had to be approved in State House, a process which has been time consuming.

The question of land acquisition was not easy in Uganda either, this in spite of land belonging to the state owned company, UETCL. The reason behind this was that no one in UETCL dared to sell land to TrønderEnergi, fearing that it might look like corrupt acts. After a new parliament was elected, a series of investigations and interrogations started. A consequence of these interrogation rounds was that TrønderEnergi had problems with acquiring land. *“UETCL was clearly afraid of*

selling government land to a foreign company, especially without any requirements. Thus, UETCL presented a number of suggestions that were not acceptable for us. We would not have gotten an approval from the lender with those kind of purchase suggestions.” - Inge Stølen, TrønderEnergi. The demands from the Ugandan authorities put forward in respect to TrønderEnergi buying land were too ambitious. These demands have caused a lot of back-and-forth in discussions between UETCL and TrønderEnergi in regard to land acquisition.

Yet another important part that needed to be decided upon prior to the beginning of construction was the border demarcation between Tanzania and Uganda. The current border is situated in the centre of the river. As a result of construction of the hydropower station, the natural border might be changed. Thus, a more solid demarcation of border was required. *“The boundary between the two countries had to be demarcated to avoid a shift as a result of the disturbance of the water flow”*- Kasindi Malale, TANESCO. The process of demarcation was done by hiring of a land measurer to pinpoint exactly where the border is situated. By doing this, it is possible to know exactly where the divide between Tanzania and Uganda is, even if the Kagera River changes its geographical setting.

Despite delays caused by the 2011 election in Uganda, Tanzania and Uganda managed to sign a Memorandum of Understanding (MoU) September 9th 2011. This was an important step forward for the progress of the Kikagati/Murongo project. Even though the MoU is not a final and legally binding agreement, it still created many guidelines for the continuation of the project.

5.1.4. Year 2012 and 2013

The signing of the Memorandum of Understanding was, as stated, a large step in a positive direction for the Kikagati/Murongo project. However, there was significant need for an agreement that could bind the parties judicially to follow through with what they had promised to do for the project. There was need for a bilateral agreement. Such an agreement was initiated after the signing of the MoU.

In 2012, the parties had come to the final rounds with the making of a bilateral agreement. The main attributes of this agreement were going to look into sharing of benefits and responsibilities, modalities of power exchange from the project to the two Partner States and ownership of the project's assets after the expiry of the contract with the private developer.

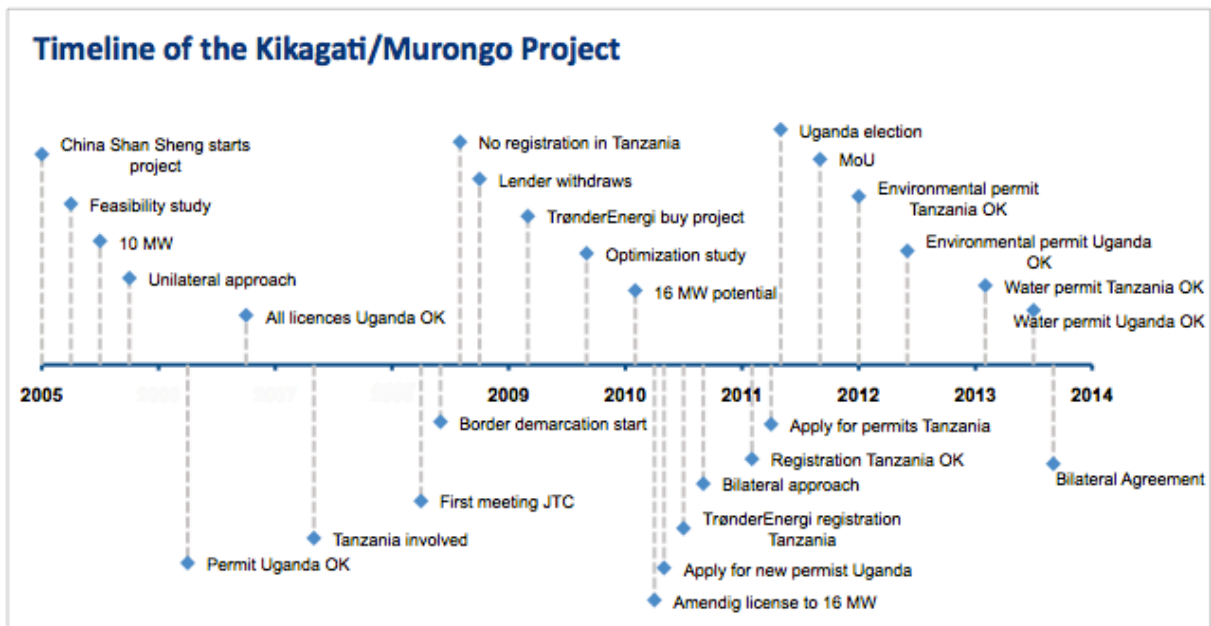
Many actors have described the creation-progress of the bilateral agreement as challenging. Main reason to this is that it has been difficult to get the parties to meet. It has especially been challenging to get people with real decision power to attend the meetings. *"It has also been very hard for the ministers to meet. Very often when they have agreed to meet, something else must be prioritised first"* – Atama Gabriel, Ministry of East African Community Affairs, Uganda. The consequence of meeting being put off all the time has been a major delay in the finalization of the bilateral agreement, and thus, effective progress for the project.

The constant postponement of meetings between delegates from Uganda and Tanzania has led to not only a slow making of the bilateral agreement, but also several failures of getting both of the states to sign on the finished agreement. *"We were supposed to have signed the agreement on a minister meeting on the 16th of January 2013, but unfortunately it was called off. Now, I think we will sign it first and then send it to Tanzania for them to sign it to. After that signing everything will be in order and the construction can begin"* - Atama Gabriel, Ministry of East African Community Affairs, Uganda. Because of all the delays, the plan of having a signing meeting was called off. The plan was changed in to just have it signed as fast as possible. However, this way of signing the agreement was also taking quite a long time, and without the signature of both parties on the bilateral agreement, the implementation of the project cannot begin.

For the developer, 2012 was a year of acquirement of permits such as water permit and the environmental permit from both Tanzania and Uganda. Agreements in regard to getting permits had been made in advance with both of the states. In this regard, Tanzania demanded that TrønderEnergi, in addition to having registered in Tanzania, made an environmental impact assessment with focus on the Tanzanian side. In January 2012, the impact assessment was approved and an environmental permit was

issued. The water permit was given to the developer in February 2013. On the Ugandan side a new environmental permit was given in June 2012. As for the water permit, Ugandan authorities wanted to coordinate this with the Tanzanian authorities. Nevertheless, this was not done and the water permit for the Ugandan side were given in July 2013.

Figure 4. Historic timeline of the Kikagati/Murongo Hydropower Project



5.2. East African Communities Role in the Kikagati/Murongo Project

China Shan Sheng was of the believe that since both Tanzania and Uganda are a part of the East African Community, it would be sufficient to just register the project in one of the countries. They believed that as long as the project was located within the sphere of the EAC, everything would be handled as if they were one. However, it turned out that it was not as easy as they first assumed. The EAC has not yet reached deep integration and the states consider themselves to be fully sovereign. Despite this, The East African Community has played an impotent roll in the Kikagti/Murongo project. In the following I will give an introduction to the EAC and their roll in the project.

The East African Community is an intergovernmental organization that was originally established in 1967, dissolved in 1977, but then re-established again in 1999. Today, the EAC consists of five states. These are the states of Kenya, Uganda, Tanzania, Rwanda and Burundi. It is however the former three of the mentioned states who are the main signatory powers of the treaty while the latter two states became members eight years after the EAC was established. The headquarters of the organization is situated in the Tanzanian city, Arusha (EAC, 2013)

The main vision and mission of the EAC is to contribute to binding the members states closer together, and in this way improve the quality of life of the respective citizens living within their boundaries. These goals can be achieved through political unity, prosperity, shared security, stability as well as political, cultural and social integration across borders. Furthermore, the core values of the EAC are stated as; Accountability, Unity in Diversity, Transparency, Professionalism and Teamwork (EAC, 2013).

As an example of cooperation taking place within the East African Community, one could point to the Customs Union established in 2005 as well as the Common Market established in 2010. As of today, the further aims of the Community are establishment of a Monetary Union and in future an East African Federation.

5.2.1. The Treaty for establishment of the East African Community

The treaty for the EAC was composed in 1999 and formally ratified in 2000. It is now signed by all the five member states. It is determined to strengthen the social, cultural, economic, technological and other ties between the involved states (EAC, 2007). What is noteworthy in regard to the Kikagati/Murongo hydropower project are the Articles 101, 111, 114 and 128, which have to do with energy, natural resources management, environmental issues and natural resources, management of environment and strengthening of the private sector. These Articles are functioning as legal EAC frameworks for the project. See box X.

However, this framework is too wide in order to be able to cause some specific action in the Kikagato/Murongo Project. Consequently, the involved parties in the project do not get any specific guidelines on what they should do from the treaty.

“We have a treaty within the East African Community, but it is too broad. It does not give any details. All countries have signed it, but it only says that partner states should cooperate in the monitor affairs and infrastructure issues. It does not say anything about how they should do so,” – Abu Moki, Ministry of East African Affairs. The Articles are presented as they are stated in the amended treaty in the tables below.

Box 2. EAC Treaty Articles affecting the Kikagati/Murongo Hydropower Project – article 101 and article 111

Article 101 - Energy

1. The Partner States shall adopt policies and mechanisms to promote the efficient exploitation, development, joint research and utilization of various energy resources available within the region.
2. For the purposes of paragraph 1 of this Article, the Partner States shall in particular promote within the Community:
 - a. *The least cost development and transmission of electric power, efficient exploration and exploitation of fossil fuels and utilization of new and renewable energy sources;*
 - b. *The joint planning, training and research in, and the exchange of information on the exploration, exploitation, development and utilization of available energy resources;*
 - c. *The development of integrated policy on rural electrification;*
 - d. *The development of inter-Partner State electrical grid inter-connections;*
 - e. *The construction of oil and gas pipelines;*
 - f. *All such other measures to supply affordable energy to their people-taking cognizance of the protection of the environment as provided for by this Treaty.*

Article 111 – Environmental issues and natural resources

1. The Partner States recognize that development activities may have negative impacts on the environment leading to the degradation of the environment and depletion of natural resources and that a clean and healthy environment is a prerequisite for sustainable development. The Partner States therefore:
 - a. *Agree to take concerted measures to foster co-operation in the joint and efficient management and sustainable utilization of natural resources within the Community;*
 - b. *Undertake, through environmental management strategy, to co-operate and co-ordinate their policies and actions for the protection and conservation of the natural resources and environment against all forms of degradation and pollution arising from developmental activities;*
 - c. *Shall provide prior and timely notification and relevant information to each other on natural and human activities that may or are likely to have significant trans-boundary environmental impacts and shall consult with each other at an early stage; and*
 - d. *Shall develop and promote capacity building programs for sustainable management of natural resources.*

(EAC Treaty of Establishment, 2007)

Box 3. EAC Treaty Articles affecting the Kikagati/Murongo Hydropower Project – article 101 and article 111.

Article 114 – Management of Natural Resources

1. For purposes of Article 111 of this Treaty, the Partner States agree to take concerted measures to foster co-operation in the joint and efficient management and the sustainable utilization of natural resources within the Community for the mutual benefit of the Partner States.

Article 128 – Strengthening the Private Sector

1. The Partner States shall endeavor to adopt programs that would strengthen and promote the role of the private sector as an effective force for the development of their respective economies.
2. For purposes of paragraph 1 of this Article, the Partner States undertake to:
 - a. *Encourage the efficient use of scarce resources and to promote the development of private sector organizations, which are engaged in all types of economic activity, such as, the chambers of commerce and industry, confederations and associations of industry, agriculture, manufacturers, farmers, traders, and service providers and professional groups;*

(EAC Treaty of Establishment, 2007)

5.2.2 The EAC Protocol on Environment and Natural Resources management

The EAC protocol on environment and natural resources is a document that is yet to be ratified. Two out of three of the signatory states have signed the protocol, which was drafted in 2005. The only state holding back as of today with the signature is Tanzania. *“The protocol is to this day not ratified. It becomes effective when all the countries ratify it. Since it was signed in 2006 before Rwanda and Burundi were in EAC, it is only Kenya, Uganda and Tanzania that are supposed to ratify it before it becomes binding on all members. However, so far it is only Kenya and Uganda that have ratified it. Tanzania is yet to ratify”.* - Peter N. Kinuthia, East African Community Secretariat. As soon as Tanzania signs the document, it will be ratified and put into force. The fact that Tanzania not yet has ratified either this protocol, or the bilateral, agreement point in the direction of hesitation and unwillingness to enter into binding over-national agreements within the EAC.

The aim of the protocol, when ratified, is to oversee the development activities that might have adverse impacts on the environment leading to degradation of natural resources and environment. Partner states of the EAC will be determined to fulfill the

responsibility of making boundless efforts to prevent environmental degradation. Furthermore, the states in EAC must enable and uphold sustainable development for the good of the present and future generations. This will only be achievable through involvement of stakeholders like NGO's, civil society, private sector and the public in environmentally sustainable development of the socioeconomic sphere (EAC, 2005).

In regard of water management the protocol. The protocol also has own an article related to water management. In terms of the management of shared water recourses paragraph 2 under article 12 on Water Resources Management is of special interest. It says as follows; "*The Partner States shall utilize water resources, including shared water resources, in an equitable and reasonable manner.*" This is the same as the core principle in the 1966 Helsinki Rules and the UN Convention of 1997.

It is believed that the ratification of the protocol might have optimizing effect on the transboundary cooperation between the states involved. This protocol will be another guideline which tells how the EAC states should act in different circumstances, and transboundary projects such as the Kikagati-Murongo Project, will be able to run more smoothly than without such a protocol. "*It is important to make sure that the entire legal framework is in place... We must make sure to operationalize the protocol on environment and natural resources in order to make transboundary cooperation more effective*" - Waiswa Ayzika Arnold, National Environmental Management Authority (NEMA). Thus, optimization of regional cooperation in the area is desired by several states. However, there are some states that are more careful with entering into an encompassing cooperation. The reason might be that there is fear of losing some of the sovereignty.

Waiswa Ayzika Arnold also claims that not being able to use the protocol has been a great challenge. "*The major challenge the project has faced is that Tanzania has never ratified the protocol of natural recourses from East African Community*". - Waiswa Ayazika Arnold, National Environment Management Authority (NEMA)

5.2.3. EAC's role in the Kikagati/Murongo Hydropower Project

Although the framework for cooperation is too broad in order to be truly effective for the Kikagati/Murongo Project, the EAC has been involved in the project in several ways. According to the Senior Energy Officer in EAC, Peter N. Kinuthia, the Community has contributed to the project through facilitation of meetings of the Joint Technical Committee, drafting, legal input and facilitation of signing of the Memorandum of Understanding. Additionally, the EAC has reminded the states if they delayed their parts of action. Article 101 in the Treaty has made it possible for the EAC to interfere if the negotiations have slowed down to a minimum or stopped.

“This framework enabled EAC to intervene in the project when the two countries were unable to proceed at bilateral level” - Peter N. Kinuthia, East African Community Secretariat.

East African Community has additionally been involved in the creation of the Bilateral Agreement. All of the communications between the two countries has been going through the East African Community Secretariat. *“EAC has been facilitating the process. All information sharing goes through the East African Community Secretariat, something which has also made the process take longer, but this is what we agreed to do”* - Atama Gabriel, Ministry of East African Community Affairs.

According to Peter N. Kinuthia in the EAC, one of the biggest challenges for the project has been to get the two states involved to cooperate and see the project from the same perspective. Additionally it has been challenging to get the states to have the same sense of urgency in relation to getting the project going and eventually finished. Atama Gabriel points at the way EAC is structured as one of the challenges the project has faced. Instead of using the agreements within the Community, it was often necessary to use the national laws of the two states. *“Because of the way the EAC is structured, it has been a very challenging process. The main problem was issues related to land, water permit and the content of the EAC treaty in the negotiation. It was agreed that land would be handled under national laws, not by the community, and the laws related to this are very different”*- Atama Gabriel, Ministry of East African Community Affairs. Said in other words, not being able to use the framework of the EAC in the best way has forced the two states to use their own laws. Something which has complicated the process.

5.3 The Memorandum of Understanding between Tanzania and Uganda for the Development of the Kikagati/Murongo Project

According to several actors involved in the Kikagati/Murongo HPP, the frameworks of the EAC have been too wide to have a direct impact on the relatively slow progress, and sometimes standstill, for the project. Thus, when the Memorandum of Understanding came to place, an important progress for the decision-making, in regard to the project, was made.

A Memorandum of Understanding, also referred to as a MoU, describes bilateral or multilateral agreements between states. Nevertheless, even though both of the states agree on what is stated within the MoU and sign the document, they are not legally bound by it, as it has no juridical role. Still, a MoU is considered as binding, only not to a legal level (Businessdictionary, 2013).

The Memorandum of Understanding between Tanzania and Uganda, hereafter referred to as the MoU, is an agreement between Uganda and Tanzania on jointly facilitating the operations and development of the Kikagati/Murongo Hydropower Project along their shared border. Thus, the MoU shall govern the joint development and operations of the Project within Uganda and Tanzania and on their common border. The MoU was signed 9th September 2011 on the sidelines of the 23rd Meeting of the EAC Council of Ministers. However, as stated, this is not a legally binding document and it is therefore encouraged, in the MoU, that Uganda and Tanzania creates a legally binding bilateral agreement on which they can base the development and operation of the hydropower project. The document also says that the duration of the MoU is until a bilateral agreement is coming to effect.

The MoU document commits Uganda and Tanzania to promote transmission and development of electric power and other measures to supply affordable energy to their respective citizens while making sure that all activities connected to this process are environmentally sound (MoU, 2011).

The objective of the MoU is first and foremost to ensure sustainable use of the water to be exploited in the development and eventually operation of the hydropower

project. Furthermore, it is important to ensure a nondiscriminatory distribution of the benefits that comes from the project. This includes both employments and produced electricity. Additionally, the mentioned development of the project must be in thread with the objectives of the MoU at the same time as the environmental laws of both of the states as well as all relevant regional regulations are respected. Since the flow of the river might shift due to construction of the dam, the MoU states that Uganda and Tanzania need conduct a border demarcation to define the common boundary for where the project will be situated. In addition to this, there must be facilitated provision and utilization of the land required for the project as well as provided necessary support for expeditious implementation of the project (MoU, 2011).

As for the obligations to be undertaken by Tanzania and Uganda in the light of this memorandum, they both have committed themselves to five agreements that are identical to both sides. These agreements are:

1. *Facilitate the Study on the environment and social impact assessment.*
2. *Co-operate in the demarcation of the common boundary at the Project cite.*
3. *Facilitate provision and utilization of the land required for the project.*
4. *Facilitate provision of water rights permit to the developer.*
5. *Perform any other duties as may be agreed upon by the parties.*

(MoU, 2011, p. 3)

The MoU aims on securing several aspects, which are of urgent character to the development of the Kikagati/Murongo project. Firstly, there must be an efficient and sustainable project for the mutual benefit of the people of both parties. Secondly, it is desirable to minimize the negative environmental and social impact to the environment and the project area. Thirdly, there must be an enhanced social and economic integration of the parties. This third aspect is covered more broadly in article 7 of the MoU. It says that he Parties shall further strengthen their partnership within the framework of the East African Community and shall maintain close collaboration and regular consultation with regard to the project and other matters of common interest (MoU, 2011)

The Memorandum of Understanding also emphasizes at several points that the states should be more active in supporting the developer rather than having the developer as

the engine of the project. *“The main drive force to push the project forward has been the developer. The two countries have been working together to facilitate the developer. It is also written in the MoU that Tanzania and Uganda should work together and support the developer.”* - James Banabe, Ministry of Energy and Mineral Development.

The Memorandum of Understanding marked an important leap forward in the progress of decision making around the project. Nevertheless, as the MoU is not legally binding, there was great need for a bilateral agreement; it is, as mentioned, stated in the MoU that such an agreement must be created. Because, only a bilateral agreement allows the developer to finalize the project

5.4 The Bilateral Agreement between Uganda and Tanzania for the Development of the Kikagati/Murongo Project

A bilateral agreement is a contract between two states that obliges the involved states to perform what they had promised in the agreement. The bilateral agreement between Tanzania and Uganda on the development of the Kikagati/Murongo Mini-Hydropower Project is, in contrast to the Memorandum of Understanding, a legally binding document, which constitutes what the involved parties have bound themselves to. Through this bilateral agreement, it becomes easier for the involved states to develop the hydropower project they have agreed to cooperate on (Clearpointlaw, 2013). The bilateral agreement between Uganda and Tanzania is a document many people within the hydropower project have been waiting for. Although the project started with the Chinese developer in 2005, it was treated as a unilateral project that naturally did not seem to need a bilateral agreement with another state. After some time with trying and failing the project became the matter of two states and naturally, there was need for a binding legal document such as a bilateral agreement. Nevertheless, even though TrønderEnergi took over the project in 2009, the bilateral agreement was not in place until second half 2013.

“The partner states should have had an agreement right from the start of. An agreement or a MoU from the beginning of explaining how the land will be accessed,

how the power will be shared and so on. This was not the case whit this project because most of the things came later on” - Abu Moki, Ministry of East African Community Affairs.

Many of the interviewees for this research have proclaimed that there was a lack of framework and guidelines from the start of the project. Several of them have said that it has been difficult to get started with the project without a legal document that provides order in how the development should take place and what the different parties where supposed to do. Thus, many say that it would have been a lot easier if there were a bilateral agreement, or at least a MoU, in place from the start.

“Things could have been simpler if the framework of development of the project was to be developed before implementation, and various tools and instruments harmonized and agreed by both the two governments and its organs. Thereafter, development of the project could be undertaken as per the agreed framework”.
Anastas P. Mbawala, EWURA.

When looking back at what could have been done differently, in respect to preparations prior to the project, many of the interviewees in this study have said that one of the first things they would have done was to get the bilateral agreement in place. Additionally, they would have involved Tanzania from the start of the project. Furthermore, several of the respondents say that the developer should have been involved at the final stage of the project, when all the legal and practical aspects were in place.

“First after having a bilateral agreement whit Tanzania, I would advertise the project and giving the license to a private developer. The reason for this is that it first would make the development of the actual project go much faster. Second, it would make cross-border issues much easier. The governments take care of all the negotiations between the countries and the private developer focuses on the project only.... I would not have given out any licenses to developers without having secured a bilateral agreement whit Tanzania first. The lack of such an agreement has been the number one reason for the delay”. - James Philip Sembeguya, Electricity Regulatory Authority (ERA).

In 2013 the bilateral agreement was finished. This agreement will govern the development and implementation of the Kikagati/Murongo 16MW hydropower project. With the Bilateral agreement in place, there exists a legally binding framework and guidelines for the continuation of the project.

When signed by both parties, the agreement will symbolize and underline that they have agreed to take cognizance of the commitment by the members of the EAC under article 101 to promote sufficiently prized electric power to the people in the area. Environmental friendliness and sustainability are strongly connected to this point. Thus, any activity connected with the hydropower project must be of a sustainable and environmentally friendly character (Bilateral Agreement, 2013). As for the licenses and permits issued by the two states to the developer, the agreement states that the parties need to agree on modalities of the subsequent ownership five years before they expire.

In regard to registration of the project, the bilateral agreement says that there must be a registration of activity in both Uganda and Tanzania. In this way, the agreement ensures that the project is treated as a bilateral entity. As stated earlier, when TrønderEnergi took over in 2009, one of the first actions they did was to register as a developer of the project in Tanzania. Now that this practice is stated in the agreement, registration of activity in both states is mandatory for the developer. This will also apply to any new developer if the present developer decides to withdraw from the project.

Further on, the bilateral agreement states that there should be a sufficient flow of information between the parties. In practice this will mean that if one of the parties wishes to gain some information from the other party, there should not be a practice where gaining of such information should be denied by the information holding side. This part of the agreement is especially meaningful since miscommunication and some times lack of communication at all has led the project to develop rather slowly.

The bilateral agreement also mentions that resolution of disputes between Uganda and Tanzania should be resolved rapidly. By signing the agreement, the parties have committed themselves to agree that if a dispute should arise between them, the parties

should in good faith try to resolve this dispute by no longer than ninety days from the breach of the dispute. However, if the dispute is not settled after ninety days the parties can take the case to the EAC Court of Justice for mediation. This part means that the bilateral agreement has an effective enforcement mechanism, something which makes it more than just a symbolic piece of paper.

According to a large number of the involved actors, this agreement should have been in place prior to the initiation of the hydropower project. If such an agreement would have been in place prior to the beginning of the project, it probably would have taken much less time. Largely, the bilateral agreement can be understood as both a framework and a set of legally binding guidelines, which Uganda, Tanzania and the developer must follow in order to finalize and optimize the Kikagati/Murongo project. A large part of the agreement is dedicated to the case of power sales and sharing, which will be an important aspect when the power plant is constructed.

5.5 The Power Sales and Sharing Agreement

The Power Sales and Sharing Agreement is the third main contract between Uganda and Tanzania, after the Memorandum of Understanding and the Bilateral Agreement, which has to do with the Kikagati/Murongo Hydropower Project. This is a practical contract that aims at fair distribution of the electrical power that will be generated when the power station starts operating. In addition, the Power Sales and Sharing Agreement gives guidelines on practical technicalities like how different kind of compensation will be handled, how billing will be done, reading of meters, inspection of the power station, what happens when the developers license expires and so on. Although the last points are important, I will in the following sections focus on how Tanzania and Uganda will distribute the generated electricity among themselves.

5.5.1 Lack of power evacuation infrastructure

As of today, Tanzania lacks enough infrastructures in forms of power lines to be able to take up its share of the power produced by the planed Kikagati Power Station. This means that there is not enough capacity to take up their 50 per cent of the produced

power. There is only the town of Murongo that will be able to take up and utilize the electricity that will be produced. The area around Murongo has not yet been electrified and by today there are no power lines leading to Murongo. *“As a part of the compensation to the Tanzanian government, TrønderEnergi will set up a 33kV power line from the hydropower plant to the town of Murongo.”* – Inge Stølen – TrønderEnergi. With this power line in place it is estimated that the town of Murongo, and the nearby settlements, has capacity to take up 2 MW. This means that 6 MW remain untaken and have to be used by the Ugandan side until Tanzania has the capacity to take up the electricity and use it.

5.5.2. The electricity market

Something that has complicated the work on finding a solution to the above listed problem and the work with the creation of the Power Sales and Sharing Agreement, is the way the power-markets in Uganda and Tanzania are structured. In these nations, the electricity market is regulated (Mazer, 2007). Practically, this means that UETCL and TANESCO are the only ones buying from the producers and sells to the consumers within the national borders. Electricity is considered a physical item that cannot be bought and sold freely. This is a contrast to markets such as the Scandinavian where electricity is considered an economic entity that can be sold freely within the respective market. The electricity market in Scandinavia is deregulated, which means that there is a mutual wholesale market, “Nord Pool”, where electricity can be bought and sold as on a regular stock market. The purpose of a deregulated wholesale market is to run distribution of electricity as efficiently as possible. For this market, the main prerequisite is the equal condition and disposition for all the users (NVE, 2008). The electricity markets in Tanzania and Uganda function differently in regard to the deregulated market in Scandinavia. *“...we have the reasonability for the single buyers. This means that we buy from the power generators and sell to the consumers. We are also the one negotiating the power purchase agreements with the power generators”.* - Valentine Katabira - Uganda Electricity Transmission Company

As mentioned, Tanzania does neither have infrastructure in the area within which the Kikagati Hydropower Station will be situated, nor are they capable of utilizing the

whole part of their share of the power produced by the power station. Because electricity is a physical entity within a regulated market, it is not possible to transfer the rest of Tanzania's electricity share from another area in Uganda where there might be enough transfer capacity between the states. Consequently, the decisions process on what to do with the share Tanzania is not able to take up has been challenging.

5.5.3. The fundament of the Power Sales and Sharing Agreement

The Power Sales and Sharing Agreement builds on the Power Purchase Agreement (PPA) and the Bilateral Agreement. By July 2013, it is still only a draft and the contents within it are subjects to negotiation between the involved parties. *“In addition to the Bilateral Agreement and the PPA there will also be an agreement between UETCL and TANESCO, called a Power Sharing and Sells Agreement. When the Bilateral Agreement and the Power Purchase Agreement are finished, the Power Sales and Share Agreement can be rightfully made. The Power Sales and Sharing Agreement must be built on the two mentioned documents...all technicalities are going to be defined in this agreement”* - Valentine Katabira, UETCL.

The Power Sales and Sharing agreements is a contract between UETCL and TANESCO on the rights to purchase and sale the power produced when Kikagati Power Station starts operating. The main theme of the contract is that TrønderEnergi will sell to UETCL and TANESCO will buy from them. *“UETCL is the one buying the power from the developer but TANESCO have the right to buy 50 percent of it from UETCL. This is something that will be stated in the Power Sales and Sharing Agreement. The agreement will also say how we will share the power, and say how we will be compensated if we are doing some administrative duties like billing”*. - Valentine Katabira, UETCL. The process of sales and sharing needs to be done fairly between the involved parties. Thus, there is a need for an agreement that states exactly how the power-sharing process should be done.

Article 7 within the Bilateral Agreement is of special importance to the creation of the Power Sales and Sharing Agreement. The contents of this article are listed in the box 4.

Box 4. Article 7 of the Bilateral Agreement.

Article 7. Commercial Operations

7.1 The Uganda Electricity Transmission Company Limited (“UETCL”) shall be the lead off-taker of all the energy produced by the Developer and shall enter into a Power Purchase Agreement with the Developer.

7.2 The Tanzania Electric Supply Company Limited (“TANESCO”) shall participate in the negotiation of the Power Purchase Agreement (PPA) between UETCL and the Developer. UETCL shall give TANESCO at least a twenty one (21) day notice of the dates of these negotiations. The Parties and the Developer shall agree upon the venue of the negotiations.

7.3 The tariff for the purchase of electric energy produced by the Developer shall be as agreed upon in the Power Purchase Agreement.

7.4 The Power Purchase Agreement between the Developer and UETCL shall recognize the equal sharing of benefits to be derived from the project and in particular the equal sharing of the power to be generated from the project between The Republic of Uganda and The United Republic of Tanzania represented in the Power Purchase Agreement by TANESCO as an equal sharing partner for the resource.

(Bilateral Agreement, 2013)

5.5.4. Only one Power Purchase Agreement

As mentioned in the section about the Bilateral Agreement, the developer set a clear demand that there would be only one Power Purchase Agreement. If this demand is not met, the Developer would not continue the project as the lender who finances the project set a claim that there shall not be more than one off-taker. The reason behind this demand is that the risk within the project will increase if there were more than one off-taker.

The decision of having only one off-taker was not something Tanzanian authorities felt comfortable with. *“Government of Tanzania was uncomfortable to enter into an agreement when the PPA is signed with UETCL and its utility TANESCO is “buying” without any involvement in the PPA for its 50% share”*. Anastas P. Mbawala, EWURA. As a result of the decision to have only one PPA and one off-taker, the Tanzanian authorities became somewhat sceptical and uncomfortable to agree to such a contract. Another factor that caused difficulties for the negotiation of the PPA is the

definition in respect to the size of the power station. The reason to why this has been challenging is that Uganda and Tanzania are operating with two different definitions of what a small hydropower plant is. *“In Uganda anything below 30 MW is a small project and therefore tariff is fixed by the Regulator. In Tanzania small projects are up to 10MW. In short there are different framework in the two states.* Valentine Katabira - Uganda Electricity Transmission Company.

Even though Tanzania and TANESCO are not off-takers and do not have a PPA, the process of negotiation in the creation of the PPA between UETCL and the developer has been open for Tanzania to follow. *“TANESCO has participated in negotiating the draft of Power Purchase Agreement between the developer and the buyer”.* Kasindi Malale – TANESCO. This is also something that is stated in the Power Sales and Sharing Agreement. It says that Uganda and Tanzania will jointly negotiate the PPA with the Developer. Even though UETCL is the main off-taker, and the one that is to facilitate the payments to the developer, both parties shall together discharge their obligations under the PPA. In reality TANESCO has not been equally involved in the negotiation of the PPA as UETCL. Despite TANESCO not being an equal part in the negotiation of the PPA, this is an arrangement the parties after a while, at least the Ugandan side, considered as a satisfying solution. *“When it comes to the power sales and sharing agreement Tanzania is also a part in the deal. Tanzanians weakness is that they are not a full part in the negotiation of the PPA. On the other hand this has been ok for Tanzania, and TANESCO has functioned as an observer part”.* James Philip Sembeguya -Electricity Regulatory Authority (ERA) -

Although the Power Sales and Sharing Agreements is still merely a draft, there are many important concepts and guidelines within this document. In practice, the Power Sales and Sharing Agreement will govern the sales and sharing of the net electrical output that is to be generated by Kikagati Hydropower Station. There will be equal sharing of the net electrical output and payment arrangement for the power to be delivered to Uganda and Tanzania. As mentioned, UETCL is the partner holding the PPA with the Developer while TANESCO has played the role as an observer. This means that UETCL is obligated to take up all of the power produced by the Developer. TANESCO will then again buy the part of their share they are able to take up from UETCL. TANESCO will be making monthly payments to UETCL for the

electricity they are able to take up. Also, the parties agree that they have the same priority of supply from the Developer and that neither of them will cause the reduction of power-supply to the other party for reasons of meeting other supply obligations to its customers (Power Sales and Sharing Agreement, 2013 DRAFT). If, however, UETCL is not able to take up all of the power produced by the developer and TANESCO has enlarged its capacity to take up energy, TANESCO will have the first opportunity to buy the power at the agreed rate from the Developer.

5.5.5. The tariff

When it comes to the tariff the parties are going to pay for the power purchase, the Power Sales and Sharing Agreement states clearly that the charge for the electricity received by TANESCO in any month pursuant to this contract, the tariff shall be as agreed between the parties and the Developer. Additionally, the tariff shall be adjusted annually using US CPI index as provided in the PPA. As for the energy charge, it will be paid by TANESCO to UETCL in respect to the number of kWh of power delivered to TANESCO during the month as recorded by TANESCO's billing meter in addition to the effective UETCL tariff applicable for that period of time. There will additionally be an administrative charge for invoicing TANESCO and for doing the routine maintenance on the TANESCO feeder portion within Uganda. The amount of this administration charge is subject to agreement between the parties.

Chapter 6. THE NBI, PERSPECTIVES AND COOPERATION

There are a number of factors and technicalities affecting the Kikagati/Murongo project from within. The history and timeline of the project pointed to several aspects that have affected its development. Documents and agreements such as the Memorandum of Understanding, the Bilateral Agreement and the Power sales and Sharing are products of as well as tools for further steering of the project. I will continue with presenting some external factors affecting the project, the parties perspective on the project and the cooperation between them.

6.1. Role of the Nile Basin Initiative

The Nile Basin Initiative is a regional intergovernmental partnership between states connected to the River Nile. The NBI seeks to develop the Nile in a cooperative way, promote regional security and peace in addition to sharing substantial socio-economic benefits. The Nile Basin Initiative was officially established in February 1999 (Swain 2011). Nowadays, the organization consists of ten member states and one observer state. These states are Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania, and Uganda. Eritrea is an observer (NBI, 2013a).

The partnership within the Nile Basin Initiative is guided by a shared vision. This vision is “*to achieve sustainable socio-economic development through equitable utilization of, and benefits from the common Nile Basin Water Source*” (NBI, 2013a). The common belief is that the member states can achieve greater benefits through cooperation and interdependence rather than through competition.

Nile Basin Initiative has developed a set of objectives, which are listed below.

- 1. To develop the water resources of the Nile basin in a sustainable and equitable way to ensure prosperity, security and peace for all its peoples.*
- 2. To ensure efficient water management and optimal use of the resources.*
- 3. To ensure cooperation and joint action among the riparian countries, seeking win-win gains.*

4. *To target poverty eradication and promote economic integration.*

5. *To ensure that the program results in a move from planning to action.*

(NBI, 2013a)

The Nile Basin riparian's has also during the last decade been working on an agreement called the Cooperative Framework Agreement (CFA) (Mekonnen, 2010). The goal with this agreement is to achieve a permanent institutional and legal framework that is based on the vision mentioned above. It has been challenging to reach an agreement, as the last year's negotiations have not led to any successful outcomes. This is because Egypt and Sudan have opposed themselves from complying to an agreement in fear of loosing their privileges and rights to the water they got the rights to during the colony rule of Britain (Swain, 2011).

In spite of disagreements, in may 2010 five states, Ethiopia, Kenya, Rwanda, Tanzania and Uganda, decided to sign the CFA. The year after Burundi joined in and signed it as well. The Democratic Republic of Congo has also showed its support for the agreement, but has not signed it yet (Salman, 2013).

6.1.1. The Kikagati/Murongo project in the Nile Basin

Kagera River is forming a part of the upper Nile Basin. *"The Kagera River basin is normally subjected to the regulations of the Nile Basin Initiative."* - Jackson Twinomujuni, Ministry of Water and Environment. The fact that Kagera is subjected to the regulations of Nile Basin makes it mandatory to register it within the NBI. By having the Kikagati/Murongo Hydropower Project registered in NBI the member states of NBI can evaluate the project. In cases like this, Egypt's claims to have a lot to say, because of their agreements from the colonial time. The other Nile riparians have after they acquired their interdependence disputed Egypt's right to have more to say than the others when it comes to the Nile. Their main argument is that now that they are independent states, they do not oblige the rules from the colonial time. Thus, Egypt's claims are unrightfully seen in the light of the current political circumstances, namely that they as sovereign states have not been a part of an agreement that gives Egypt a "right to the Nile" (Mekonnen, 2010). Still, Egypt continues to assert their right to control large parts of the water through the 1929 Nile Waters Agreement. In

the fourth paragraph of this agreement following is stated; *“Except with the prior consent of the Egyptian Government, no irrigation works shall be undertaken nor electric generators installed along the Nile and its branches nor on the lakes from which they flow if these lakes are situated in Sudan or in countries under British administration which could jeopardize the interests of Egypt either by reducing the quantity of water flowing into Egypt or appreciably changing the date of its flow or causing its level to drop”* (Nile Treaty 1929 in Salman, 2013). In principal, this agreement gives Egypt veto decision power in all projects upstream in the Nile (Tvedt, 2004).

Another agreement that has led to large contradictions between Sudan and Egypt on one side and the rest of the Nile riparians on the other is the 1959 Nile Waters Agreements. This agreement states that the total annual flow of the Nile should be 84 km³ measured at Aswan and located 55.5 km³ to Egypt and 18.5 to Sudan (Swain 2011).

Kikagati/Murongo project has not been subject to any objections from any of the Nile riparians. *“The project is registered in the NBI, and none of the member states have objected against it”* - Inge Stølen, TrønderEnergi.

Furthermore, the Kikagati/Murongo project differs from other project by that the NBI has not been participating in the development of the project. Usually, Nile Basin Initiative is involved in development of projects such as the Kikagati/Murongo HPP through NELSAP (Nile Equatorial Lakes Subsidiary Action Program). *“NELSAP are involved in regional projects as implementing agency for the preparation phase (studies), or for the implementation phase,”* - Desire Nzayanga, Nile Basin Initiative. The reason for NELSAP not being involved in this project is that the East African Community already was involved when the Nile Basin Initiative got to know about the project. *“Uganda asked NELSAP to help developing the project. NELSAP discussed this with EAC in the coordination meeting of the Regional bodies /entities involved in the development of the regional projects. We wanted to be involved in the Kikagati project, but we stopped the initiative and did not follow up the project when we noted that EAC as a sister organization was already involved”.* - Desire Nzayanga, Nile Basin Initiative. There has not been a need for the NELSAP to go in

to the project since the EAC already has been involved and helped it along. *“Two regional organizations could not be in charge of the same project, it would have been duplication of efforts.”* - Desire Nzayanga, Nile Basin Initiative.

6.2. Upstream and Downstream Relations

As mentioned, the Kikagati Power Station is situated in the Kagera River, which is a part of the Nile Basin. All new projects that use the water in the basin must be reported into the Nile Basin Initiative. After new projects are reported into the Nile Basin Initiative all of the existing projects are given notice of the new project. For the Kikagati/Murongo-project this means that new projects will be given notice about in good time before they are initiated.

For new projects upstream, the Governments of Uganda and Tanzania will be warned and given the opportunity to object on behalf of the developer if the development of the new upstream project will have negative impacts on their production. *“We can either get compensation from the developer of the new project as a condition for environmental permission, as we then become a direct third party downstream, or the Government of Uganda can allow us to increase the tariff to economically compensate for the lower production”* – Inge Stølen, TrønderEnergi.

The fact that Tanzania and Uganda each have a 50 per cent share of the power produced by the Hydropower Station is important for the ensuring of having enough water flowing in to the power station. *“Uganda and Tanzania have each 50 percent share in the power generated and will therefore make sure that the power station receives enough water. When it comes to the way other countries, for instance Rwanda, is utilizing the water it is something that must be agreed on by the EAC.”* - James Banabe, Ministry of Energy and Mineral Development.

When it comes to the conditions downstream, it has been important to make sure that no negative effects will follow from the construction of the Kikagati/Murongo HPP on the countries located below in the stream. There is now known that there will be close to no negative effects from the construction of Kikagati/Murongo HPP. *“As for*

the downstream, Kikagati being a run-of river scheme it may not have significant effects on the downstream users”. Kamugenyi Luteganya – NEMC.

There does currently exist a plan for one hydropower project upstream from planned Kikagati Power Station. The project is called Rusumo Falls and will have 90MW installed capacity. Additionally, there will be built a storage reservoir for Rusumo Falls Project (World Bank, 2013e).

Rusumo falls will affect the other states the most in it initiation period. When the reservoir is filled for the first time the amount of flow downstream will be reduced. However, if filling of the reservoir takes place during the rain season and only part of the flow is impounded, it may be achievable to fill Rusumo Reservoir without severe impact on Kikagati. Though, if all of the flow were to be impounded at Rusumo, only the flow from the intermediate catchment, approximately 30 per cent, would reach Kikagati (Evans, 2009). This would most probably result in reduced generation by Kikagati Power Station during the impoundment period of the reservoir. Additionally, even if the reservoir could significantly increase evaporation losses, the seasonal regulation, provided by the reservoir, is likely to result in a net increase the long-term average generation by Kikagati (Evans, 2009).

6.3. Environmental Aspects of the Project

When it comes to environmental aspects of the project there have been done a number of Environmental and Social Impact Assessments, by both the first and the second developer. What all of the assessments have in common is that none of them show a risk of environmental and/or social damages as a result of construction of the hydropower station (Kagoda et al, 2006; Laugen et al, 2011; Ndyabarema et al, 2011). In most of the cases, the impact on environment and social sphere is minimal/none to low negative or low positive. In some cases, there has been medium negative and medium positive impact on the surrounding areas of where the power station is to be situated. These results are harmonising and being reflected by what the respondents of interviews done in the study has said.

Few people have been worried about environmental and social damages due to the development of the project. The following statement from Waiswa Ayazika Arnold in NEMA summarizes this point of view: *”From the EIA there are not so much impacts. If there are any impacts to the environment, it is impacts that is known to mini hydropower.”*

Figure 5. Project site. Surrounding area seen from the Ugandan side.



6.3.1. Predicted impacts

Even though the impacts by the project are expected to be minor, it is still important to mention what effect the development of the power station will have on the surrounding areas, seen from an environmental and social perspective.

One of the positive outcomes of the project is expected to be increase in fish production as a result of increased invertebrate ranges, creation of employment, and general economic empowerment. Additionally, there might be an increased habitat for hippos (Ndyabarema et al, 2011).

The negative impacts on the biodiversity and the ecology of the river are described as minimal or small. One of the most frequently mentioned negative impact is increased sedimentation, noise and vibrations during the construction phase.

Furthermore, a possible increase of malaria might occur as a result of construction of a reservoir covering approximately 50 acres (Ndyabarema et al, 2011). This reservoir will increase the breeding sites for mosquitoes.

Another negative impact that is given attention to, within literature and governmental sphere, is the land area that the project will be taking up ”*There have been some minor issues on the Tanzanian side of the border. Issues related to compensation for land etc.*” - Waiswa Ayazika Arnold - NEMA. The infrastructure of the power plant and the reservoir will be taking up some land area. On both sides of the river a few people are cultivating crops. In addition to this, two households on the Tanzanian side will be directly affected by the construction. These households have to be relocated to another place when building of the hydropower station will take place. Lands, which are privately owned or are established by longtime cultivation, have to be compensated (World Bank, 2013f; Laugen et al, 2011). Additionally, to the compensation for land and households, established perennial crops had to be surveyed and compensated for. The compensation needed to correlate with the currently valid local compensation rates (Laugen et al, 2011).

6.4. The Contact Between the Parties

When focusing on the relation between the Ugandan and Tanzanian side in this project, it is important to have in mind that there was no contact between them prior to the initiation of the project. During the beginning of the Kikagati/Murongo project, in 2005, the project was called *The Kikagati Project*, and was seen as a unilateral hydropower project belonging to Uganda and the Chinese developer. This means that Tanzania, who also owns territory and the resources the power station would be based on was not included. Based on these circumstances, the contact between the developer and the Ugandan side went on as in a regular domestic matter. The communication was in this case happening between the developer and the domestic actors within Uganda with direct legal, political and socioeconomic meaning to the project. When Tanzania became involved in the project, the number of actors the developer had to

communicate with doubled. Moreover, when Tanzania became involved in the project Uganda had already gained knowledge and information that needed to be shared with Tanzania. *"Uganda have been sharing information regarding the project with Tanzania. Relevant institutions and authorities from both parties have been involved into bilateral discussions and issuance of requisite certificates and permits for environmental issues, water and land uses which are necessarily issued by the referred institutions and authorities from both Tanzania and Uganda."* Samuel I. Mgweno, Ministry of Energy and Minerals.

Naturally, communication became the key for enabling of progress with the project. There are many actors who have to give licenses and approve plans in order for the Kikagati/Murongo project to become realized. Ministry of Energy and Minerals/ Mineral Development are the primary responsible actors in energy projects. ERA and EWURA are responsible for granting licenses. The Ministries of Water is responsible for giving water licenses. NEMA and NEMC are responsible for approving environmental impact assessments and granting environmental permission. UETCL and TANESCO are the state owned Ugandan and Tanzanian electricity companies responsible for sale and purchase of produced power. All of them have to agree in order for the Kikagati/Murongo project to become finalized. Hence, it is clear that a unilateral approach to this project is all but the right way to go.

The Kikagati/Murongo Hydropower Project is the first project of its kind in Africa. The project represents the first case where a developer is responsible for the planning and construction of a power station situated on a river shared between two states. In this context, it was natural that there would be some difficulties and challenging situations in the progress of the project. Especially challenging was the lack of possibility to use the framework of the East African Community, as it was too wide to have a practical effect on the project. Moreover, the contact and communication between these states has been varying and at times difficult. Communication flows have moved in complex webs between the involved actors. An explanation of how this interaction took place, and overview of who did what, is presented below.

6.4.1 EAC – the facilitator

East African Community Secretariat has facilitated the project. At an early stage in the project it became decided the EAC was the right institution to have the role as facilitator. Practically, this would mean that all of the official contact and information exchange between the involved actors would go through the secretary of the EAC in Arusha. Nevertheless, this does not imply that *all* of the communication between the involved parties went through the East African Community. The different institutions in Uganda and Tanzania, as well as the developer often communicated directly with one another. However, all of the *official* information exchange, especially related to decisions, had to go through the EAC.

6.4.2. Ministries of EAC, a liaison between the parties.

The ministry of East African Cooperation/Community Affairs have served as connection enablers and contact points in the project. *“Ministry of East African Cooperation is involved in the Kikagati/Murongo Hydropower Project as a coordinating Ministry for all East African Community issues... According the Treaty Establishing East African Community, all communication must be pass through the Ministries responsible for EAC Affairs. In this regard, Ministries of EAC (Tanzania and Uganda) are the link between two utilities and the Developer”* - Abdillah Mataka, Ministry of East African Cooperation. Thus, the ministries have had the responsibility of collecting and forwarding information and communication between the parties and the developer.

One of the major challenges for these ministries has been that they don't have enforcement or influencing power within the decision-making progress. Likewise, the large number of cases the EAC Ministries are involved in represents a challenge. Health, infrastructure and energy are only some of the cases the ministries are involved in. All the decisions are made through relevant ministries in the respective countries. The Ministries of EAC's role is merely to coordinate with the EAC Secretariat and the other EAC Ministries. According to Abu Moki, many of the countries involved in the East African Community, and their respective ministries, are thinking and acting very nationalistic and protective. Consequently, this results in interests of each individual state to triumph over the collective interests in achieving

collective goods. Naturally, this leads to no common goals being achieved at all. The mentioned tendency is something the Ministries of EAC is trying to change. *“We have put a lot of effort in implementing the feeling that we are a community. We should say we are East African, we should think East African. It is give and take in the spirit of East Africanisme”* - Abu Moki – Ministry of East African Community Affairs.

According to the developer, the Ministries of EAC in the two countries have been helpful when there has been need for faster progress in some situations. However, at occasions, the two ministries have been forces for slowing down progress rather than speeding it up. *“The EAC Ministries has been the liaison used to make thing go faster. They have been helpful. However, sometimes the ministries have been used to slow the speed of the progress down. For example, if one of the parties does not like the direction the project is taking, they simply contact their EAC ministry and ask for a new meeting to change the decision they did not like.”* – Inge Stølen, TrønderEnergi
Thus, the parties have occasionally used the ministries, and their role as liaisons, to slow down or change the development of the project.

6.4.3. Ministry of Energy and Minerals, the overarching decision maker

The Ministries of Energy and Minerals in Uganda and Tanzania have been the main actors taking decisions and allowing for things to happen and thus, the project to develop. These ministries have been the highest representatives on major meeting in regard to the project. Additionally, the ministers have been the main receivers and senders of information concerning progress of the Kikagati/Murongo project. *“It is primarily the Ministry of Energy in the two respective states that have been responsible for the contact between the states”* – Inge Stølen, TrønderEnergi. Additionally, the Ministry of Energy and Minerals in Uganda partially functioned as a liaison to Tanzania on behalf of the developer. *“We have been representing the government of Uganda in meetings whit Tanzania. We have been the main link to the Tanzanian government, especially when the developer has had some problems”* - James Banabe - Ministry of Energy and Mineral Development

6.4.4 ERA and EWURA, the regulators

ERA and EWURA are in charge of regulating the whole electricity industry in their respective countries. Any issue to do with electricity generation, transition, distribution and so on are administrated by them. They are the ones giving licenses to projects, and permits to developers. As the project went from being uni- to bilateral, the need for communication between the regulators increased. *“This involved explaining to them what is going to happened, give them all the information the developer had given us and sit in negotiation together whit them”*. - James Philip Sembeguya , ERA. Thus, EWURA and ERA have been information providers as well as regulators.

ERA is the institution giving out licenses. *”Despite the Kikagati project being a transboundary project shared between two states, the whole installation and everything to do whit generation will be within Uganda. Therefore the developer needs to go to ERA to seek for permission trough the licensing process.”* - James Philip Sembeguya, ERA. In this way, it might seem that Uganda sees itself as the main stakeholder as the installation and everything to do with generation will be situated within Ugandan borders.

”Tanzanian parties including regulators had no clear mandate in the project, as the license was to be issued by Ugandan regulator, under the laws of Uganda.” Anastas P. Mbawala, EWURA. Although, EWURA accepted that ERA was the institution to give the license to the developer. Thus, the project did not get delayed even more than it already was. *”EWURA were called into the project discussions when some regulatory issues have been handled by ERA including licensing plan. EWURA, for the sake of progress agreed to the terms of licensing the Developer, be involved in the remaining discussions and review of various applications approvals, jointly or separately”* - Anastas P. Mbawala, EWURA.

6.4.5. UETCL and TANESCO, negotiating the Power Sales and Sharing Agreement.

As mentioned earlier, UETCL and TANESCO have been the main actors in the negotiations and development of the Power Sales and Sharing Agreement. Valentine

Katabira describes this agreement as challenging in the beginning. However, the further the parties came on the agreement, the easier it was to cooperate and create something both of them could agree on. *“Initially it was going very slowly. In the beginning they were maybe a little a little suspicious, but now we are cooperating well. I expect the next projects, like Nzongezi, to go much easier”*. Valentine Katabira, UETCL. Even though the cooperation is now going better than it initially did, there are still difficulties for the progress. The most pressing issue in this regard are tied to the fact that the parties meet too seldom. Thus, there are few occasions to discuss the contents of the Power Sales and Sharing Agreement. Additionally, meetings that are set up in advance have been cancelled as one or both of the parties suddenly has something disturbing their work schedule.

6.4.6. The Ministries of Water, giving out the water permits.

Naturally, for a hydropower project like this, it is impossible to only have permission to use only half of the water. Therefore, the Ministries for Water in both of the states have been in dialogue on the theme of giving out permissions for use of water to the developer. On the time they were going to give permit, they thought it would be enough if Uganda gave the water permit for their land and Tanzania for their land. But this did not turn out to be the case. *“Now it was not just longer a discussion about rights for water, but about the right for the water resources and all the benefits coming out of water. Therefore it became more complicated than if it was entirely a discussion about water.”* Jackson Twinomujuni – Ministry of Water and Environment. Like Jackson Twinomujuni points out, in addition to the question of water rights, there were a number of other aspects within the influence sphere of the two Ministries of Water that needed to be negotiated. Consequently, water permits could not be given before the other aspects had been negotiated and cleared out.

6.4.6. NEMA and NEMC, dialogue over environmental permits

NEMA and NEMC are mandated to revive and provide decisions on Environmental Impact Assessments. The encounters between them have been described as challenging and deficient. Initially NEMA had approved the project without consulting Tanzania and NEMC. After a while, the developer realised that they

needed to get a permit from Tanzania as well. It was therefore necessary for the two utilities to start cooperating.

The two organizations arranged several meetings where many important issues concerning progress of the project got discussed. *“NEMA and NEMC have discussed and agreed on how to issue environmental clearance for the transboundary project; the two authorities have also consulted each other before approval of environmental reports prepared in accordance with each country's legal requirement”*. - Kamugenyi Luteganya, NEMC

Tanzania required a new EIA study to be done, even though Uganda had approved the EIA and given the licence. *“This would have been avoided if Tanzania had ratified the Protocol on Natural Resources from the East African Community.”* - Waiswa Ayazika Arnold, NEMA. If they had ratified it, Waiswa believes that the approval from NEMA under the protocol would have been sufficient.

According to Waiswa Ayazika Arnold, the parties have not been able to use the Protocol on Environment and Natural Resources, as NEMC has not been willing to go by any other rules than the domestic laws of Tanzania. This inability of using the Protocol created additional obstacles for the progress of the project. *“It has been difficulty to work with NEMC. NEMA is willing to go by the provisions by the protocol, but NEMC is not willing. They say they must follow their national laws. This means that the developer has been wasting a lot of time, duplicating the same process on the Tanzanian side.”* - Waiswa Ayazika Arnold, NEMA.

However, it should be noted that as the developer decided to upgrade the planned potential in terms of power production from 10MW to 16MW, NEMA had to reevaluate the environmental permit and eventually give the developer a new one. As the developer worked out a Change of Scope Study, the project needed to go through a new round of consideration with the authorities and eventually get a new clearance. This time, however, NEMA used much longer time to grant the permission than they used the first time. *“The lack of clarity made Tanzania run the process according to their national laws instead of giving input on the transboundary solution. Therefore Uganda had to restart the process. NEMA expected to be the one giving the license in*

consultation with NEMC.” - Waiswa Ayazika Arnold, NEMA. Thus, NEMA blames the transboundary process and NEMC for it taking much longer time with granting the developer an environmental permission. It must be mentioned that NEMC only followed the guidelines agreed upon and clarified in advance. Poor communication between the parties and bureaucratic problems within NEMA seems to have slowed down the process of giving the environmental clearance.

Figure 6. Official contact

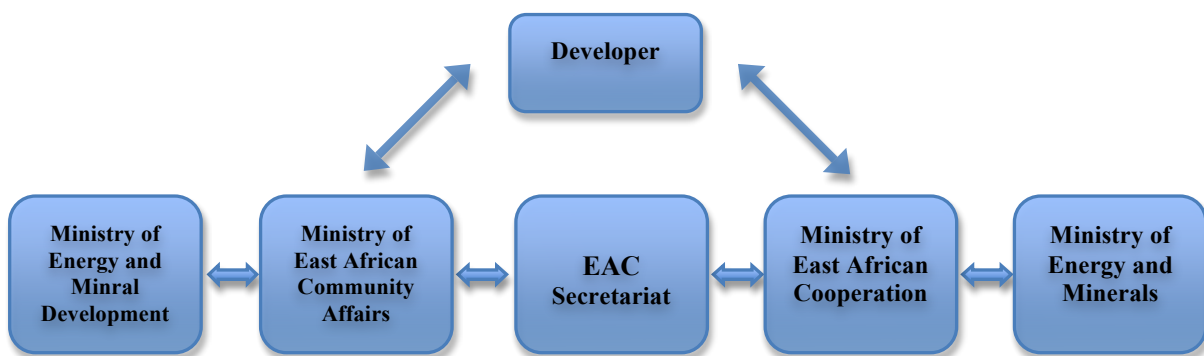


Figure 5 shows how the official contact between the parties has been taking place. The institutions of NEMA and NEMC, ERA and EWURA, UETCL and TANESCO, and the Ministries of Water have given information through their state’s Ministry of Energy or Ministry of EAC. The unofficial contact has on the contrary not been following the same pattern as it has gone across organizations and national boundaries.

Through the entire process of development of the Kikagati/Murongo hydropower station, numerous actors have been involved. All of these actors have had an official opinion and direct connection to the decision-making. At times, the number of actors involved, and the lack of good communication between them, has served as a major obstacle for the development of the project. Thus, it might be reasonable to assume that the progress would have gone much faster if there were fewer parties involved.

6.5. The Parties Perspective on the Project

The Kikagati/Murongo Project was, as mentioned above, initiated in Uganda, without Tanzania being involved. This despite the river, which plays the key role in the project, is being a shared resource of the two states. It can look like the Ugandan authorities did not think thoroughly through in advance of initiating the process that the resources they based the project on are in fact shared with their neighbor state. This was something the first developer, China Shan Sheng, learned the hard way after they too did not think it would be necessary to involve Tanzania. The reason to this was part the fact that both Tanzania and Uganda are members of the EAC, and that the Ugandan authorities told the Chinese developer that everything would be all right. *“The Ugandan government said that they believed everything would be “ok” in concern with Tanzania. I have the impression that ERA and the rest of the institutions was not aware of that it would be so difficult as it was.”* - Elaine Kiew, China Shan Sheng. Kiew believes that ERA and the other institutions in Uganda underestimated how difficult it could be to get Tanzania to approve the project. The thought of underestimation by the Ugandan authorities, shared by Elaine Kiew, can be supported by James Banabe’s explanation for why Uganda did not involve Tanzania from the beginning of. *“It is a learning process. The power plant was going to be situated in Uganda and we didn’t expect much resistance. In the next project on the river, Nzongezi, we will involve them from the start hear and their views before we do anything more”*. James Banabe, Ministry of Energy and Mineral Development.

It was thus clear that a shared resource was the key element in a project maneuvered by *one* country and a developer they had an individual agreement with. An explanation for this way of thinking in regard to involving Tanzania is that Uganda might have overestimated the importance of the majority of the infrastructure being facilitated on their territory. Additionally, it was Uganda who was supposed to use the generated electricity, thus the authorities might have thought that it was of no concern to Tanzania. The general thought seems to have been that Tanzania *would not be interested* in utilizing the recourse in the river, since it on the Tanzanian side is located in a very remote area.

6.5.1 Different perspectives

The Ugandan way of handling the project from the start led to Tanzania becoming skeptical and drawing back from it. *"The approach also caused some suspicion and mistrust at the beginning."* - Peter N. Kinuthia, East African Community Secretariat. The practice of not involving Tanzania from the initial phase of the project has had several effects. First effect, the Tanzanian side has felt overrun by the Ugandan. This has led to the second effect, namely that Tanzania does not see itself as an equal part in the project. Third effect was that Tanzanian authorities believed that they would not benefit from the project at all. *"The Tanzanians were very sceptical and did not think that they would benefit from the project at all. They had the impression that Uganda was going to use their recourse without Tanzania getting any benefits"*. - James Philip Sembeguya, ERA.

"The project appears to belong to one country, Uganda, and Tanzania appears to be an invitee. The initial processes were dealt with the Uganda authorities. They were notwithstanding the fact that water is a shared resource and the structures, dam and reservoir, are on both sides." – Anastas P. Mbawala, EWURA. By not being involved from the beginning, Tanzania was not able to have a say in aspects such as how the project should be carried out and financed. According to Samuel Mgweno in the Ministry of Energy and Minerals, the Tanzanian authorities were unhappy with Uganda having agreed on the project with a private developer.

"Tanzania is of the opinion that a project from shared resource should be implemented under Public Ownership and public mode of funding so as the parties involved have freedom to decide modalities of power evacuation, ownership and management of the generating facility and means of recovering the cost of the project without any external influence as for the case it is with the developer in between Tanzania and Uganda who has to protect her interests on expense of certainty and trust among the parties." Samuel I. Mgweno - Ministry of Energy and Minerals.

This has made the timeframe of the project expand even longer, resulting in the third party, the developer, being negatively affected. As already mentioned, China Shan Sheng had to let the project go with this as one of several reasons. Also TrønderEnergi has had many challenges in regard to developing the project because of the states finding it difficult to reach agreements. *"One of the effects is that the parties have to come to an agreement with too many compromising terms which takes*

longer to conclude and agree on thus the project implementation is being delayed, even worse the project becomes at jeopardy of being thrown away should the parties fail to reach such compromise. As it stands, the specific effect is the project is being delayed to be implemented and subsequently the cost of the project will significantly rise. The current developer might as well loose interest in the project.” Samuel I. Mgweno, Ministry of Energy and Minerals. All of this might result in TrønderEnergi loosing their patience, and eventually, interest in going further with the project.

According to Samuel Mgweno, the project should have been carried out as a Public Ownership, where Uganda and Tanzania stood together in the development of it. This practis is the same as Tanzania plans on using in a cooperative hydropower project, Rusumo Falls, with Rwanda and Burundi (Baringanire, 2013). In this way, one could have avoided demands from developer on manners such as the wish of having *only one PPA*.

In regard to the Kikagati/Murongo project, Tanzania has positioned itself as rather skeptical and reticent. The managing director at NABA, Eivind Fjeldstad, explains this by pointing to Tanzanian history with socialism, where general skepticism towards private investors has been common. *“The year’s whit socialism may also be an influential factor that makes Tanzania more sceptical to private foreign investments”* - Eivind Fjeldstad, NABA. This factor is most likely playing an important role for the Tanzanian authorities. In this way, it is reasonable to assume that Tanzania would have wanted the project to be a Public Ownership, which they together with Uganda could have developed. Nevertheless, despite their scepticism, Tanzania has engaged to support the project and the developer through the Amended Treaty for the Establishment of East African Community.

The Ugandan side has perceived that the Tanzanian authorities have been dissatisfied with how the project was initiated, carried out and handled. *“Tanzania felt that they should have been involved from the start. I have the impression that Tanzania felt Uganda had gone to fast whit the new developer, and that we all ready had done so much when we come to them and just expected that they should approve everything without any objections.”* - James Philip Sembeguya, ERA.

James Banabe describes this exact same reaction of the Tanzanian authorities. According to him, they have been slow and very cautious on agreeing on anything Uganda has put forward in respect to the project. *“Since the project started without Tanzania being a part, it was hard to get Tanzania involved. They were saying; how could you start without us on board, how could you give the developer a permit when we are not involved”*- James Banabe, Ministry of Energy and Mineral Development. Thus, it is clear that Tanzania would have wanted to be involved from the start. When Tanzania first became involved, a lot was already done on the project. What they were particularly dissatisfied with the fact that most of the station infrastructure would be situated on the Uganda side. *“They also had an issue with the location of infrastructure. They thought some of it could be spread. They thought that maybe the powerhouse across the river on the Tanzanian side, and maybe the intake weir and the forbay on the Ugandan side.”* - James Philip Sembeguya, ERA.

6.5.2. Incentives and reasons to cooperate

Despite many obstacles and barriers to overcome in the beginning, the project has served as a motivating factor for the bilateral cooperation between Uganda and Tanzania. Many of the actors connected to the project have acknowledged that the project has led to cooperation, and cooperation is the key to using the shared water resources and gain benefits from the river. *“The resource is shared. Without cooperation no one country can develop and use the resource. So one of the motivations to cooperate is to be able to utilize the resource.”* Kasindi Malale, TANESCO.

The fact that the hydropower project contributes to the production of electricity and at the same time the use of potential in the river has been stated by many of the involved actors. To ensure that the local populations, living near the HPP, will get electricity is highly important for both Tanzanian and Ugandan authorities. Both of these states have a deficit of electricity, while the demand for it is high. For Uganda, who in contrast to Tanzania is able to take up its whole share of the energy produced by the project, the factor of electricity has been a very important motivator. *“Uganda needs power and we have a plan to have a certain amount of power in the system by a certain date.”* - James Philip Sembeguya - Electricity Regulatory Authority (ERA). *“I*

hope the project can happen soon because the demand for power is growing faster than the supply.” Valentine Katabira – UETCL.

In addition to more power being fed into the main grids, the area around the Power Station will benefit from it. *“This Project when implemented will benefit villagers near the Project area from Tanzania and Uganda”.* - Abdillah Mataka - Ministry of East African Cooperation. Thus, the project will lead to an increase in the electrification and in the development rate in the area around where the Power Station will be built. *“The project will give power and make sure that the local villages near by are being electrified.”* - James Banabe, Ministry of Energy and Mineral Development. This will especially be important for the areas on the Tanzanian side of the border. On the Ugandan side of this area it is fairly more developed. There are all ready some infrastructure, and the supply of power there is more credible. The Tanzanian side of the border, at the point where the project is located, is described to still be really underdeveloped. *“Espesially on the Tanzanian side, where they yet don’t have power, they will benefit from the project. Places like Murongo will be electrified, and therefore benefit directly from the project.”* - Valentine Katabira, UETCL. Electrification of the Murongo area has also been one of Tanzania’s main motivation factors in the project. *“The project is expected to be part of a strategy for electrification of parts of the Kagera region which have no access to the national main power grid. Therefore Tanzania is motivated through the convenience of access to electricity for particular rural areas.”* - Samuel I. Mgweno, Ministry of Energy and Minerals. The project is also described as the best solution for the electrification of the Murongo area. *“The project is considered as the best solution for electrification of the Murongo town compared to getting supply from the existing network”* Anastas P. Mbawala, EWURA.

The features of the HPP, which is a rather small by size, is being described as something positive *“A small local power plant like this will also create a more stable power supply to the area. Even if you get detached from the main grid, you can still supply the area with power.”* – Valentine Katabira – UETCL. Detachment from the main grid is not unusual. Thus, and a local power plant like Kikagati/Murongo will make the area less vulnerable to such detachment.

Power production is not the only benefit that is produced by the Kikagati/Murongo hydropower project. Cooperation, mutual understanding and dependence between both authorities and local people of Tanzania Uganda are also outcomes of the project.

”The number one positive thing is that the local communities are cooperating very well because they know they have something in common which is to the benefit of them.” - Jackson Twinomujuni , Ministry of Water and Environment.

The local people, and their attitudes towards the project, are being described as positive and welcoming. According to an Environmental impact assessments conducted by NEWPLAN for TrønderEnergi in 2011, the local people living near the area of the planned hydropower station became happy over the announcement of the project. For the people on the Tanzanian side, the project is being described as the only way they can get electricity. On this background, the development of, and eventually accessibility to, electricity has been important for the development of the project. The Project has therefore been assigned a high intrinsic value (Ndyabarema et al, 2011). *“The positive thing include good cooperation with the neighbors and also utilization of the resource improve the life of the people of the two countries especially those living in the vicinity of the project”* – Kasindi Malale, TANESCO. This cooperation is even described, by the local people, as a factor contributing to peacefulness for the area in the years to come.

It might also play a part in keeping the area peaceful and avoid conflicts.” James Banabe, Ministry of Energy and Mineral Development.

In addition to what is stated above, the Kikagati/Murongo Hydropower Project has contributed to the better understanding for the management of states shared water recourses. Many experiences have been gained from the project. Thus, the parties are better prepared for solving issues and cooperating over transboundary resources in the future.

6.5.3. The partner states involvement in the project

The level of involvement in the project has varied a lot for Tanzania and Uganda. Since Uganda has been the initiative taker in regard to starting the project, it is natural

that it has been the most involved and participating state. According to Peter N. Kinuthia, Uganda has a greater sense ownership and urgency in the project than Tanzania. *“Uganda has greater sense of ownership and urgency on the project. Uganda has undertaken similar projects of small hydropower. This is only complicated by the location, its trans-boundary nature. Uganda is committed to develop as many small hydropower projects as possible under Energy for Rural Transformation program through the Rural Electrification Authority”*. Peter N. Kinuthia, East African Community Secretariat.

It is easier for Uganda than Tanzania to utilize the electricity that will be produced by the HPP. Additionally, the project was initiated as a unilateral entity of Uganda, leaving Tanzania out in the beginning. This has made the Ugandan authorities more tied to the project. In a way, they have a stronger sense of ownership towards it than Tanzania does. *“Tanzania came into the project because Uganda started it. They do not have the same drive and sense of urgency as Uganda. Tanzania wants to share electricity from the project on a 50-50 basis even though the area is currently not connected and demand would be much lower than that.”* - Peter N. Kinuthia - East African Community Secretariat.

An interesting aspect presented by Kinuthia is the difference in why and how the countries are acting within the project. According to him, Uganda is the main initiators, the action taker. Tanzania is on the other hand merely responding to Uganda’s actions. *“Tanzania is more reactive to the issues on the project than Uganda.”* - Peter N. Kinuthia - East African Community Secretariat.

Samuel I. Mgweno shares much of the opinion Peter N. Kinuthia has. Additionally, he says that Tanzania will become more involved in the project when the necessary agreements will be in place. Nevertheless, according to Mgweno, Tanzanias engagement in the project will most likely not be at the same intensity level as Uganda’s. *“Uganda have had a more undertaking in terms of preliminary works for identification and preparation of the project. However, subject to mutual agreements between the parties, Tanzania will get more involved. Though, not necessarily to equal or surpass as Uganda’s involvement.”* - Samuel I. Mgweno, Ministry of Energy and Minerals.

Chapter 7. BARRIERS AND BENEFITS

The two previous chapters have presented the empirical background and analysis of the Kikagati/Murongo Hydropower Project. In this chapter, parts of the previously presented empirics, theory and analysis will be discussed and given a more thorough attention and reflection. Firstly, the barriers of the project will be presented. Secondly, close attention will be given to the benefits produced by the project.

7.1. Barriers to the Project

In this section, the barriers to development and progress of the project will be presented and discussed. The section will take point of departure in the general barriers for cooperation in transboundary basins, presented by Claassen and Granit (2009). The section also includes some more case specific barriers, which have occurred in the Kikagati/Murongo case. When this is said, it is important to add that several of the barriers, which complicated the progress of Kikagati/Murongo project, also are evident for other transboundary water management projects.

- **Absence of a suitable regional cooperative framework.**

One of the main barriers to the project has been the lack of a suitable regional framework that could be used for the implementation of the project. Claassen and Granit (2009) argue that absence of this kind of framework, or a Regional Economic Commission, makes transboundary water management more difficult as there are no clear guidelines and rules to follow for the involved parties. For the case of the Kikagati/Murongo project, a framework and relevant institutions were in place. However, these frameworks and institutions were due to several reasons not easy to use. The hydropower station will have a so-called *run-off the river* design, which has no large reservoir where the water is collected in massive amounts. The reservoir that will be constructed will only take hours to fill, and after it is full it will not affect the water flows downstream. Consequently, this is the reason to why none of the states in the Nile River Basin, like Egypt, have objected to the project and taken it to a higher level within the NBI. There is no need in objecting since the project will not affect

any of the riparian states negatively. The Nile Equatorial Lakes Subsidiary Action Program, on the other hand, wanted to be involved in the Kikagati/Murongo project and in this way contribute to coordination of the project. The NLSAP have been involved in overseeing the implementation of other regional bilateral and multilateral projects (NBI, 2013b) and wanted to do the same with the Kikagati/Murongo project. However, when the NLSAP found out that their sister-organization, East African Community, was involved in the project, they reckoned that it was unnecessary for them to involve themselves as well.

East African Community has a treaty that involves the utilization of shared natural resources. This is, however, too broad and only *encourages* the neighboring states to cooperate. Additionally, the EAC has the protocol on natural resources. In reality, however, it has no effect, as it is not ratified. In addition to not being ratified, the protocol is somewhat wide in its formulations. Nevertheless, the protocol gives much more detailed guidelines than the Treaty for the Establishment of the East African Community do. Additionally, when the protocol is ratified, it will function as a convenient tool and framework for future transboundary water management projects. The reason to why it will function as a tool is that even though new projects will have to have new project specific agreements, the protocol will be a good help on the way to fast development of a project.

- **Inexperienced facilitator**

The East African Community Secretariat has, as mentioned, been the facilitator of the project and had the responsibility for overseeing its implementation. A problem for the organization has been the issue of frameworks, which were not possible to use for the project. In this way, one can say that the EAC has been constrained. Furthermore, EAC is a rather new and inexperienced organization, and parts of it are still under development. The last issue has been brought up by several of the respondents in the research for this thesis. Two of my interviewees have a rather synoptic view that summarizes a lot of what seems to be difficult with the EAC. *“East African Community looks good on paper, but does not really work in reality”* -Busingye Annicent, TronderPower Ltd. The opinion is that the EAC is a good idea in theory, but it does not work quite that well in reality. No matter how strong the will is to make it work in reality, the EAC struggles to be successful. *“There is a strong will to*

make the EAC successful, but at the moment the EAC looks better on paper than in reality” - Eivind Fjeldstad, NABA. Thus, as the organization becomes more mature and experienced, it might work better than it currently does. Consequently, this inexperience and dysfunctionality of the facilitator has made the Kikagati/Murongo project suffer. It would probably have been easier for the project if the EAC was deeper integrated and experienced. Additionally, the fact that Tanzania has been reluctant to involving itself completely in the organization has not made thing easier.

- **Power asymmetry between the states in the project**

Power asymmetry means that one state because of culturally, historically, economically, militarily reasons etc, is more powerful than the rest. (Shlomi, 2009). The differences in these factors are rather small between Tanzania and Uganda, and therefore have no effect on the project. Thus, seen from this perspective, the power relations between Uganda and Tanzania are equal. However, the fact that Uganda initiated the project without involving Tanzania has led to a power asymmetry in the sense of involvement, feeling of ownership and control over the project. In the beginning, Uganda, along with the developer, had the possibility to steer the project in any direction they wanted. Also after Tanzania joined, Uganda treated the project as if it was solely theirs. The Ugandan authorities made the Tanzanian part feel that they had merely been invited in on the project, not as if they were an equal part to it. This again created dissatisfaction among Tanzanian authorities and lead to a strained environment for negotiation in the beginning.

The treatment of the project as unilateral is something that contravenes to what is agreed on in the Amended Treaty for the Establishment of the EAC. For as paragraph 1 in article 111 on Environmental Issues and Natural Resources says *“The Partner States; Shall provide prior and timely notification and relevant information to each other on natural and human activities that may or are likely to have significant trans-boundary environmental impacts and shall consult with each other at an early stage”*. Furthermore, paragraph 1 in article 114 on Management of Natural Resources states that the partner states within the EAC should cooperate in the utilization of their natural resources. *“For purposes of Article 111 of this Treaty, the Partner States agree to take concerted measures to foster co-operation in the joint and efficient management and the sustainable utilization of natural resources within the*

Community for the mutual benefit of the Partner States”. Thus, even though Uganda has signed this agreement, the authorities in Uganda have omitted to follow it.

It still seems as if Uganda is the party that has the largest sense of ownership and commitment to the project. This can be illustrated by even the common name of the project. The official name of the project is the *Kikagati/Murongo Hydropower Project*. By using the whole official name, which is the names of a Ugandan and a Tanzanian city, the project sounds more like a bilateral venture. An interesting fact that can be added here is that when collecting research material on the Ugandan side, all of the respondents called the project *Kikagati*. None of them used *Kikagati/Murongo*. This can partly be explained by the detail that the power station will have the name *Kikagati*. Nevertheless, the use of the *Kikagati* when talking about the whole project, and not just the power station, gives the impression that Uganda sees itself more as an owner of it. This is something the Tanzanian side does not appreciate.

The fact that there will be only one PPA, which will exist between Uganda and the developer, is an additional factor that undermines Tanzania as an equal party in the project. Moreover, as Tanzania is not able to take up and use its entire share of the energy produced by the station, makes the share of the benefits appear as unequal.

Despite the above mentioned, the balance of power in the project has become more equalized. Uganda depends on Tanzania’s approval and signature on negotiated agreements. However, as the Tanzanian side has to build a power line before they can take up their entire share of the energy, they are not in a hurry to get the project finalized. Uganda, on the other hand, has the capacity to take up its whole, in addition to Tanzania’s, share thus they are more in a hurry to get it finished as soon as possible.

- **Differences in the riparian states legal framework**

When it became clear that it was not possible to use the framework provided by the EAC, the solution became to use each of the two involved states national legal framework. This practice made it more difficult for the developer, as all of the licenses and permissions had to be applied for twice. The respondents described this as a very demanding and challenging process, both for them and especially for the

developer. Especially the Ugandan respondents have argued that at least in the cases surrounding environmental questions should have gone by the Protocol on Natural Resources. The Tanzanian authorities, on the other hand, have said that they were not interested in using the Protocol and they would rather go by their own domestic rules. Even though this has caused the project to take extra long time, the Tanzanian authorities had the complete right to act that way, as the protocol was not ratified and thus not endorsed.

The use of two different legal frameworks has not only made the process take longer, it also complicated the question of land allocation of the project. The reason to this is that the laws on this issue differ in Uganda and Tanzania. This particular issue was mentioned in the Memorandum of Understanding, where it says that the partner states should assist the developer in getting land for the project.

- **Extensive bureaucracy**

From a political hold, the project has been cleared and had full support for a long time. An abstract of the 5th Joint Technical Committee meeting on the Development of the Kikagati/Murongo Project describes two field visits, and meetings, during 2008. On both of these meetings, officials from both technical and political departments of Tanzania and Uganda were present. On both of the meetings, the project was supported by each of the parties. The Tanzanian Minister of Energy and Minerals and the Ugandan Minister of Energy and Mineral Development led the meeting on 31st of August 2008. They pronounced that the Political Leadership from both countries had given their clearance been encouraging the project. It was now, the Ministers said, up to the technocrats to finalize the project (EAC/JTC, 2009).

It is on the bureaucratic and technical side the project has taken long time. This was described by one of the research respondents. *“The good wills from all parties are there. The only problem is that there are too many involved on different levels, something that makes the process time consuming.”* - Jackson Twinomujuni, Directorate of Water. Many people with different opinions have had to interact and try to come to common conclusions. The fact that this is the first hydropower project that Uganda and Tanzania are working together on has naturally made it more time consuming. Additionally, the bureaucracy in East Africa is known for being

comprehensive. *“The bureaucracy in East Africa can be a great challenge for foreign companies that are investing in one or more of the countries in the region. It may be very slow and frustrating”* - Eivind Fjeldstad, NABA. This is something the developer is aware of and familiar with. In advance of the Kikagati/Murongo project, Trønderenergi had performed another hydropower construction, *Bugoye*, further north in Uganda, in the area of Kasese. The development of this project, from initiation of planning to start of construction, took merely two years. Consequently, as the developer had made good experience from the Bugoye project, they expected the Kikagati/Murongo project to be similar on the complexity scale. *“With good experiences you expect it for the next project as well”*. Busingye Annicent, TronderPower Ltd. Ministry of Energy and Minerals Development in Uganda has additionally stated that it was expected for a project such as Kikagati/Murongo to go faster than it has. *“I would say that the expected preparation time for a project like this is around three years. This because one need to get water permits etc. from two countries”*. – James Banabe, Ministry of Energy and Minerals Development. Simultaneously Annicent admits that the developers expectations were probably too high, based on the previous project in Bugoye. *“The expectations might have been high and it was probably also unrealistic to believe it would go much faster than it has. The bureaucracy is slow and government employees are taking their time”*- Busingye Annicent, TronderPower Ltd. There is however still reason to believe that projects like Kikagati/Murongo will go faster in the future. Several of the respondents have supported this thought. The reason to this optimistic view for future projects is that many experiences have been learned from this project. Thus, it is expected that future projects of this type, and especially collaboration projects between Uganda and Tanzania will go faster than this project has.

Several of the barriers described above can probably be perceived as small and easily resolvable when compared to the barriers that have been present in the work with the Nile Basin Initiative or water negotiation in Euphrates and Tigris (see Dauody 2009; Tvedt 2010). It is nevertheless important to say that even though many of the barriers to the Kikagati/Murongo have seemed small in comparison to other project, they still have had a major effect on the progress of the project. Some of these effects and barriers could most likely have been avoided if there had been done an analysis of them in the beginning of the project

7.2. Benefits from the Project

Sadoff and Grey (2002) present four categories to analyze benefits from cooperation in transboundary river management. These categories are best suited for mapping possible benefits in cases where the parties have a fully integrated basin approach. The agreements and cooperation on the Kikagati/Murongo project are merely a bilateral cooperation between Uganda and Tanzania. Still, the framework of four categories of benefits gives useful guidelines for mapping benefits for this project as well. Thus, this section will now look at the Kikagati/Murongo project in the light of the four categories presented by Sadoff and Grey (2002). As some of the categories have been thoroughly presented earlier, the following discussion will only touch upon them briefly.

7.2.1. Benefits to the river

- **Increased focus on the river**

The project is primarily concerning the construction of a 16 MW hydropower station. Thus, all of the agreements and negotiations are mainly focused on reaching this exact goal. The Bilateral Agreement only says that the parties should base the development on article 101 of the Treaty for the Establishment of the East African Community. This article says that the parties should develop the least cost energy at the same time as they are protecting the environment

The Memorandum of Understanding, which was created earlier in the project, says that the development and progress of the project should be done in a way that has the least damaging effects on the environment around the power station. However, none of these agreements says anything about the environmental aspect in the Kagera River as a whole. The respondents never brought up this aspect during the interviews for the research. However, this is of no surprise, as the main goal with the project is to construct a hydropower station.

The geographical area the project will be situated on is thus limited. At the same time, there is reason to believe that projects such as this one will serve as examples to show that there is a need for agreements that regulate common natural resources. An

increased focus on this theme will most likely contribute to a faster ratification of the EAC protocol on Natural Resources. The Protocol has focus on using natural resources in a way that does not lead to environmental degradation. (EAC Protocol on Natural Resources, 2005). Additionally, a cooperative framework is created, under the influence of NELSAP. This framework will have the focus on joint management of the Kagera River Basin. The reason for creation of this framework is to improve the living-situation for the local people, simultaneously as the environment is protected and taken care of (NBI, 2013c).

7.2.2. Benefits from the river

- **Electricity generation.**

The most obvious benefit from the project is the electricity generation. Kikagati will, compared to Bujagali Hydropower Station with an installed capacity of 250 MW (World Bank, 2007), seem like a rather small power station with its 16 MW installed capacity and an estimated annual production of 101 GWh (Koksæter, 2011).

However, there is a great demand for more cost effective electricity in both Uganda and Tanzania. A possible way of covering this demand is to increase the production from thermal power plants. These power plants are very costly to run and create a high emission of CO₂. In this context, the Kikagati power station is an important contribution to meet the market demand.

- **Electrification of villages that have yet not been electrified.**

In the area around where Kikagati Station will be constructed lacks electricity. Especially on the Tanzanian side, people do not have any electric power. The access to electricity is important for the development of a society. The Kikagati/Murongo project will lead to the area around the power station becoming increasingly more electrified than they have been before. This will lead to economic development and growth in the region. It must however be mentioned that even though the Murongo area will be electrified, it does not necessarily mean that the local people will have electricity delivered to their homes. As there is a lot of poverty in the region, the electrification of homes will not be on the top of the list over priorities of the local

people. This can be seen from the fact that on the Ugandan side of the Kagera, the power grid and supply is all ready fairly well developed. Nevertheless, only eleven per cent of the population in the area is connected to the power grid (Ndyabarema et al, 2011).

- **Stable electricity supply.**

The Kikagati/Murongo project is, in similarity to other small hydropower stations, located in a rural area (ERA, 2012). Thus, these small stations play an important role in the electrification of rural areas. To get detached from the main grid is well prevalent in both Uganda and Tanzania. In this manner small and local power stations like Kikagati will give a more stable power supply to the local rural areas. Consequently, the electricity supply in the area will be more stable. This means that the Kikagati power station will lead to a more stable power supply in the Kikagati/Murongo area.

- **Small increase in the fish stock**

Even though there will not be constructed a large reservoir in connection to the Kikagati power station, there will be constructed a smaller dam. The construction of the dam will create a small reservoir behind it. With this as background, it is claimed that the small reservoir connected to the Kikagati will lead to an increase in the aquatic invertebrate ranges. This again means that there will be more fish, and higher fish production (Ndyabarema et al, 2011).

As of today, fishing in the area is done on a dietary supplement basis. Occasionally, the fish is sold at local markets and in smaller stores (Laugen et. al., 2011). An increase in the fish stock, although probably not be so big, will therefore have a positive effect on peoples dietary supplement as well as to an occasional extra income.

7.2.3. Benefits because of the river

- **Play a role in keeping the area peaceful**

Several of the respondents mentioned the cross-border cooperation between the local people as a great benefit of the project. The project led the people to cooperate, and extend as well as better their relations. The local people in both Uganda and Tanzania have a shared interest, which is the finalization of the project. In the collection of the research material, it even was mentioned that this local cooperation across the border would contribute to keeping the region peaceful.

The area on which the power station will be constructed was during the war between Uganda and Tanzania in the late 1970's a turbulent area (Kiribedda, 2010). After the fall of Idi Amin, however, the area became a lot calmer and more peaceful. Nevertheless, in the following years, there have been several reports of minor conflicts occurring in the Kagera Basin area. These conflicts are mostly revolved around use of natural resources and land (Ogol, 2013). Now and then, these conflicts even become transboundary. An example of such a conflict might be pastoralists and illegal emigrants crossing the border with a large number of livestock. This has led to conflict, as local people on one of the side argue it leads to degradation of forest and grazing land. (Ogol, 2013). Laws and regulations for these kinds of events do exist, weak institutions and insufficient planning makes them ineffective. Thus, more focus on the area and an increase in the development rate as a result of electrification will contribute to strengthening these institutions, and in turn the laws and regulations connected to them. Even though the area is not particularly turbulent, will a strengthening of these institutions contribute to keeping the area more peaceful in the years to come.

7.2.4. Benefits beyond the river

- **Improving the bilateral relations between Uganda and Tanzania.**

The bilateral relation between Tanzania and Uganda is considered as good and friendly. This view was supported by several of the respondents for this research. Through the EAC an even more tight and intertwined relation between these states is

being fostered. Even though the EAC has been the facilitator, it has been up to Tanzania and Uganda to do the practical encounter and cooperation. The project would not have progressed if it had not been for the willingness of the states. The negotiations have not been easy. However, now that the project is starting to come into its final stage, and eventually will be finalized, the relations between the two states have become better and more positive. Many of the respondents have supported this tendency. Thus, the bettering and strengthening of the bilateral relations between Uganda and Tanzania can be seen as an additional benefit of deriving from the project.

- **Strengthening the development of the East African Community**

The Kikagati/Murongo project has suffered from the fact that the EAC has not yet reached deeper integration. The East African Community, on the other hand, has had great benefit from working on the project, as it has become more experienced through this progress. Several actors have argued that the EAC is better on paper than in reality. The major issue in the case of Kikagati/Murongo is that the frameworks of the institution have been too loose in order to be implemented. Nevertheless, there are many good thoughts behind the EAC, and in the future it might become a strong and effective institution. On the way there, projects such as the Kikagati/Murongo project will help the EAC to improve its implementation capacity and ability.

An analysis of possible benefits from the project might have shown the parties that there are other benefits of such a project besides the gain of electricity. This might have made the parties see that there is more than one benefit deriving from the project. Consequently, the willingness to cooperate in order to finalize the project might have been greater.

Chapter 8. CONCLUSION

This thesis has had focus on describing the Kikagati/Murongo Hydropower Project from the initiation of the project to the point of a final agreement. By having such a focus, this research has given a real life example of the realities of transboundary water management.

The main research questions were followed and answered through out this thesis, in order to address the project in the best possible way. These questions were *1: What role have the different actors in the project played, and how have they affected the project. 2: What challenges have there been for the project? 3: What is the motivation for the states to cooperate and reach an agreement?*

The three previous chapters of this research have shown that there have been a number of actors involved in The Kikagati/Murongo Hydropower Project. None of these actors have had any experience with projects like this before. A project like this has a broad dimension and many different institutions involved in it. Moreover, these institutions have had their own views and opinions on how the project should evolve, and what was best for its development. Some of the institution and actors changed their views as the project evolved and negotiations were being carried out. Consequently, this led to agreements, which had previously been made, to fall apart and be renegotiated. This background created loads of frustration not only for the developer, but also for all of the other actors involved in the project. Moreover, some of the actors involved would likely say that the delay in negotiations made the project take significantly longer time than it should.

There is no doubt about that the number of actors involved, as well as their lack of experience, created challenges for the project. Nevertheless, the greatest of challenges is probably that the project was initiated as a unilateral Ugandan project. This background has complicated the negotiations with Tanzania, as they at times have felt as not an equal part in the project. Besides from this, the progress of the project has been further complicated by lack of usable frameworks. Thus, the national laws of the two states had to be used. This made it necessary for the developer to duplicate the

process in order to acquire necessary permissions.

Despite the challenges within the project, the parties have continued the work towards reaching agreement. For the developer, the motivation to continue with the project is economic gain. As for the partner states, the main motivation is to cooperate on the production of electricity in order to being able to cover the rapidly growing demand. Further on, it has been mentioned that the Kikagati/Murongo project will lead to a stable power supply in the region as well as electrification of areas previously not electrified. This has eventually uncovered a number of additional benefits of the project. These are benefits such as increased focus on the river might lead to a better environmental protection of it, stable and reliable access to electricity will lead to socioeconomic development and last but not least strengthening of the bilateral relationship between Tanzania and Uganda. The facilitator, East African Community's lack of experience and implementation ability has been an additional obstacle for the progress of the project. Nevertheless, the project has contributed positively in a way that has strengthened the EAC for the future. It must also be mentioned that an analysis of possible benefits from and barriers to the project should have been done prior to the initiation of it, so that it would have been easier to carry the project out.

Based on the Kikagati/Murongo project, it is possible to make three points that can be applied to other transboundary water management projects. The primary point encounters solely when commercial actor is involved, while the remaining two, can be applied to all cooperative transboundary water managements.

- *There should be regional cooperative framework in place before giving out licenses to private developers.*
- *The states should behave like they are equal partners.*
- *The benefits from cooperating should be perceived to be fair.*

Transboundary water management can be a lengthy and challenging process. It involves negotiation between sovereign states, often with separate or conflicting interests. This is something everyone concerned with transboundary water should be aware of and have in mind, also private developers, like those who have been

Involved in the Kikagati/Murongo project. If there is little time or patience with initiating the project, the importance of making sure there is a solid framework to develop the project within is essential. In other words, a framework with good enforcement mechanisms, and that can be used, must be in place.

To conclude with Albert Einstein's words, "We can not solve problems by using the same kind of thinking we used when we created them." This is true for transboundary water management in general, and for the Kikagati/Murongo case in specific. Transboundary river management encompasses the importance of being able to go beyond thinking national, towards thinking transnational. Despite the cooperation on shared water resources often being motivated by national benefits, it is important to acknowledge that many of the benefits possible to gain are reachable only through cooperation with other states. This was not the case for the Kikagati/Murongo project in the beginning as Uganda decided to run it as a unilateral project. This created dissatisfaction for the Tanzanian authorities. However, when cooperation was established, and a common dialogue was in place, the involved parties have reached a solution everyone can consider being satisfying.

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APPENDICES

Appendix A

List of informants

Ugandan Officials		
Abu Moki	Assistant Commissioner for Economic Affairs	Ministry of East African Community Affairs
Atama Gabriel	Principal Infrastructure Officer	Ministry of East African Community Affairs
James Banabe	Acting Commissioner for Energy Resources Department	Ministry of Energy and Mineral Development
Jackson Twinomujuni	Assistant Commissioner, Water Resources Use, Planning and Regulation	Ministry of Water and Environment
Waiswa Ayazika Arnold	Director Environmental Monitoring & Compliance	National Environment Management Authority (NEMA)
James Philip Sempeguya	Statistician	Electricity Regulatory Authority (ERA)
Valentine Katabira	Manager, Operation and Maintenance	Uganda Electricity Transmission Company Ltd (UETCL)
Tanzanian Officials		
Abdillah Mataka	Assistant Director, Economic & Social Infrastructure Division	Ministry of East African Cooperation
Samuel I. Mgweno	Energy Engineer	Ministry of Energy and Minerals
Kamugenyi Luteganya	Environmental Consultant	National Environmental Management Council (NEMC)
Anastas P. Mbawala	Director of Electricity	Energy and Water Utilities Regulatory Authority (EWURA)
Kasindi Malale	Principal Engineer	Tanzania Electric Supply Company Limited (TANESCO)
Other		
Inge Stølen	Senior Director, International Business Development	TrønderEnergi
Busingye Annicent	General Manager	TronderPower Ltd
Peter N. Kinuthia	Senior Energy Officer	East African Community Secretariat
Desire Nzayanga	Program Officer Power Projects	Nile Basin Initiative
Eivind Fjeldstad	Managing Director	Norwegian-African Business Association (NABA)
Elaine Kiew	Former project manager	China Shan Sheng Uganda International Co. Ltd

Appendix B

Selection from interview guide

(Question addressed to all government officials.)

- In which way have (organization) been involved in the Kikagati/Murongo project?
- This is a transboundary project. How have you been cooperating with (organization/organizations) in (Tanzania/Uganda)?
- Seen from the (organization) side, what will you say have been the biggest challenges/difficulties related to this project?
- Can you also point at some benefits from the project?
- The project first started in Uganda without Tanzania being involved from the beginning of. In which way has this affected the project and the negotiations between the two states? What specific effect would you say this had on the work with the Project?
- A project like this might be both challenging and rewarding. Can you please specify the motivation for (Tanzania/Uganda) to cooperate and the mechanism behind the cooperation between the two states?
- How will you evaluate (Tanzania's/Uganda's) involvement in the project compared to (Tanzania/Uganda)? Both in a historical context and in the future.

Appendix C

Memorandum of Understanding



MEMORANDUM OF UNDERSTANDING

BETWEEN

THE UNITED REPUBLIC OF TANZANIA

AND

THE REPUBLIC OF UGANDA

(For the Facilitation of Development and Operation of
Kikagati/Murongo Hydropower Project)

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PREAMBLE

This Memorandum of Understanding (hereinafter referred to as "MOU") is made this ^{9th} day of ^{September} Two Thousand and Eleven between the United Republic of Tanzania represented by the Ministry of East African Cooperation and the Republic of Uganda represented by the Ministry of East African Community Affairs (hereinafter referred to as "**Parties**").

WHEREAS the Parties are desirous of jointly facilitating the development and operations of the Kikagati/Murongo Hydropower Project (hereinafter referred to as "**the Project**") along their common border; and

WHEREAS the Parties have put in place a joint technical committee to oversee the implementation of the Project.

COGNISANT of the commitment by the Partner States of East African Community under Article 101 of the Treaty for the Establishment of the East African Community to promote the least cost development and transmission of electric power and all such other measures to supply affordable energy to their people taking cognizance of the protection of the environment.

REALIZING that the Project is listed as one of the priority projects under the East African Community Cross-Border Electrification Programme.

CONSIDERING that the Parties have held meetings where decisions on the way forward have been made and documented.

NOW THEREFORE THE PARTIES HERETO AGREE as follows:



ARTICLE I

Scope of the Memorandum of Understanding

This MOU shall govern the joint development and operations of the Project within The United Republic of Tanzania and the Republic of Uganda and on their common boundary.

ARTICLE 2

Objective of the MoU

1. To ensure sustainable utilization of the water resource to be exploited in the development and operations of the Project.
2. To ensure equitable distribution of benefits accrued from the Project including, but not limited to, employment and power supply.
3. To ensure conduct of Environment and Social Impact Assessment satisfactory to the Parties in line with respective Environmental Laws.
4. To ensure that the terms and conditions of the development and operations contract comply with the objectives of the MoU.
5. To ensure that the development complies with all relevant laws and regulations applicable in the region and within territories of the Parties.
6. To ensure that the demarcation of the common boundary between the Parties is completed at the proposed site for the Project.
7. To facilitate provision and utilization of the land required for the Project.
8. To provide the necessary support for the expeditious implementation of the Project.



ARTICLE 3

Obligations to be undertaken by The United Republic of Tanzania

1. Facilitate the Study on the Environment and Social Impact Assessment.
2. Co-operate in the demarcation of the common boundary at the Project site.
3. Facilitate provision and utilization of the land required for the Project.
4. Facilitate provision of water rights permit to the Developer.
5. Perform any other duties as may be agreed upon by the Parties.

ARTICLE 4

Obligations to be undertaken by The Republic of Uganda

1. Facilitate the Study on the Environment and Social Impact Assessment.
2. Co-operate in the Demarcation of the common boundary at the Project site.
3. Facilitate provision and utilization of the land required for the Project.
4. Facilitate provision of water rights permit to the developer.
5. Perform any other duties as may be agreed upon by the Parties.



ARTICLE 5

Outputs

1. An efficient and sustainable project for the mutual benefit of the people of both Parties.
2. Minimum negative environmental and social impact to the environment and the Project area.
3. Enhanced social and economic integration of the Parties.

ARTICLE 6

Consultation and Exchange of Information

The Parties shall further strengthen their partnership within the framework of the East African Community and shall maintain close collaboration and regular consultation with regard to the Project and other matters of common interest.

ARTICLE 7

Implementation of the MoU

Subject to Article 2 of this MoU, the Parties shall make appropriate arrangements including executing or cause to be executed bilateral agreements or any other agreements with a view to ensuring the satisfactory implementation and ownership of the Project.

ARTICLE 8

Amendment

This MoU may be amended by the mutual written consent of the Parties.



ARTICLE 9

Duration

This MoU shall last for the duration of the Project subject to the prospective Agreements coming to effect.

ARTICLE 10

Dispute Resolution

The Parties shall amicably settle all disputes arising out of or in connection with this MoU or its interpretation.

ARTICLE 11

Notices and Addresses

Any notice or request under this MoU shall be in writing. Such notice or request shall be deemed to have been duly given or made when it shall have been delivered by hand, mail, or fax to the Party to which it is addressed or made at such Party's address specified below or such other address as shall be hereafter notified in writing.

For The United Republic of Tanzania:
The Permanent Secretary
Ministry of East African Co-operation
P.O. Box 9280,
Dar-es-Salaam, Tanzania
Fax No: +255 22 2120488/2127488

For the Republic of Uganda:
The Permanent Secretary
Ministry of East African Community Affairs
P.O. Box 341,
Kampala, Uganda
Fax No: +256 41 4348171/256327




ARTICLE 12

Entry into Force


This MoU shall enter into force upon signature by the duly authorized representatives of the United Republic of Tanzania and the Republic of Uganda.

IN WITNESS THEREOF the Parties append their signatures on the day and year mentioned above.


For and on behalf of the United Republic of Tanzania

Name: HON. SAMUEL J. SITTA (MP)
Title: MINISTER FOR EAST AFRICAN COOPERATION
Signature: 


In the presence of

Name: DR. STERGOMENA L. TAX
Title: PERMANENT SECRETARY, MINISTRY OF EAST AFRICAN COOPERATION
Signature: 

For and on behalf of the Republic of Uganda

Name: RT. HON. ERIYA KATEGAYA
Title: FIRST DEPUTY PRIME MINISTER AND MINISTER FOR EAST AFRICAN COMMUNITY AFFAIRS
Signature: 

In the presence of

Name: MRS. EDITH N. MWANJE
Title: PERMANENT SECRETARY, MINISTRY OF EAST AFRICAN COMMUNITY AFFAIRS
Signature: 

Appendix D

Bilateral Agreement



BILATERAL AGREEMENT

BETWEEN

THE REPUBLIC OF UGANDA

AND

THE UNITED REPUBLIC OF TANZANIA

ON THE DEVELOPMENT OF THE KIKAGATI/MURONGO MINI-HYDRO
POWER PROJECT

This Bi-lateral Agreement is made this 16th day of April, 2013

BETWEEN

The Republic of Uganda hereinafter represented by the Minister of Energy and Mineral Development on the one part.

AND

The United Republic of Tanzania represented by the Minister of Energy and Minerals on the other part.

Whereas

- a) The Parties have a trans-boundary hydroelectric power site with a development potential of 16MW along their common border on river Kagera at Kikagati/Murongo;
- b) Taking cognizance of the commitment by the Partner States of East African Community under Article 101 of the Treaty for the Establishment of the East African Community to promote the least cost development and transmission of electric power and all such other measures to supply affordable energy to their people taking cognizance of the protection of the environment;
- c) The Parties entered into a Memorandum of Understanding dated 9th September 2011 in which key milestones were laid out to facilitate the development of the 16 MW mini-hydro power plant at Kikagati/ Murongo;

Pursuant to Article 7 of the Memorandum of Understanding and the directive of the Sectoral Council on Energy of the East African Community at its 7th meeting, the Parties have developed this Bilateral Agreement
NOW IT IS HEREBY AGREED as follows:-

Article 1: Scope of the Bilateral Agreement

This Agreement shall govern the development, and implementation of the Kikagati/ Murongo 16 MW hydropower project, taking into consideration the equitable use of the resources of Kagera River and the establishment of an institutional mechanism for the monitoring of the project and generation and transmission facilities during commercial operations.

Article 2: Project Description

The project will be constructed at Kikagati/Murongo and is a diversion type power station comprised of dam built across the river, water intake and canal, fore bay, power house, auxiliary plant and tail water canal and a switchyard ("generation facility"). The dam consists of overflow section and retaining section. There shall

be separate feeders ("transmission facility") for the evacuation of power to each party.

Article 3: Project Developer

The project shall be developed by an independent power producer known as Kikagati Power Company Limited ("the Developer") duly registered in the Republic of Uganda and in the United Republic of Tanzania or such other entity or firm that may be agreed upon by the Parties in the event that the Developer withdraws from the development of the project. Either party at own discretion to carry out due diligence investigations on the overall capability of the developer to implement the project.

Article 4:- Term of Concession

The Developer shall have a concession to build operate and transfer the generation facility on the said site to the parties after the same period as the PPA and the License.

Article 5:- Ownership of the generation facility

- 5.1 Upon expiry of the term of the concession, the project shall revert to the Parties.
- 5.2 Five (5) years prior to the expiry of the term, the Parties shall meet and agree on the modalities of the subsequent ownership, operation and maintenance of the facility.

Article 6: Permits, Licensing and other Pre-commissioning Protocols

- 6.1 The Parties agree that the Developer, at its sole cost and expense, shall: acquire and maintain in effect all consents required from all public sector entities with the jurisdiction over the Developer in order to enable it implement the project.
- 6.2 The Parties may provide the Developer with such assistance as the Developer may reasonably request.
- 6.3 The Parties agree that the Developer shall obtain the permit to carry out feasibility studies from respective authorities of both Parties to develop the project and generation license from the Electricity Regulatory Authority (ERA), Uganda, with the consent of the Energy and Water Utilities Regulatory Authority (EWURA), Tanzania.
- 6.4 The Parties shall approve schemes and single line diagrams relating to evacuation of power from the project to ensure that the Developer implements the most optimal interconnectivity, recognizing that each Party shall require separate feeders for the evacuation of power.

Article 7:- Commercial Operations

- 7.1 The Uganda Electricity Transmission Company Limited ("UETCL") shall be the lead off-taker of all the energy produced by the Developer and shall enter into a Power Purchase Agreement with the Developer.
- 7.2 The Tanzania Electric Supply Company Limited ("TANESCO") shall participate in the negotiation of the Power Purchase Agreement (PPA) between UETCL and the Developer. UETCL shall give TANESCO at least a twenty one (21) day notice of the dates of these negotiations. The venue of the negotiations shall be agreed upon by the Parties and the Developer.
- 7.3 The tariff for the purchase of electric energy produced by the Developer shall be as agreed upon in the Power Purchase Agreement.
- 7.4 The Power Purchase Agreement between the Developer and UETCL shall recognize the equal sharing of benefits to be derived from the project and in particular the equal sharing of the power to be generated from the project between The Republic of Uganda and The United Republic of Tanzania represented in the Power Purchase Agreement by TANESCO as an equal sharing partner for the resource.

Article 8: Power Sharing and Sales Agreement

- 8.1 UETCL and TANESCO shall enter into a Power Sharing and Sales Agreement ("PSSA") in which the said utilities shall equally share all the electric energy that is sold by the Developer to UETCL.
- 8.2 TANESCO recognizing that UETCL bears all the risks of being the main off-taker with the Developer, where TANESCO is unable to off-take electric energy or part thereof under the PSSA, it shall grant UETCL the right to look for alternative market for the said electric energy at no cost.
- 8.3 In the event that UETCL is unable to take its share of the electric energy produced by the generating facility, and TANESCO has the capacity and is capable of taking UETCL's share or part thereof, TANESCO shall be accorded first opportunity to purchase the power at the applicable rate as determined in accordance with clause 7.3.
- 8.4 The tariff for the purchase of electric energy under the PSSA shall be the same tariff as between UETCL and the Developer with a charge for administrative costs to be agreed upon by the utilities.

Article 9:- Institutional Mechanism

- 9.1 The Parties shall establish a joint Project Steering Committee comprising of five (5) members from each Party or such a number as the Parties may agree. The Committee shall be responsible for overseeing the implementation of the project.

- 9.2 The PSSA contemplated in Article 7 shall provide for a mechanism for the joint overseeing of the operations of the generation facility following the commissioning of the facility.

Article 10:- Exchange of Information

The Parties shall exchange information amongst themselves on matters relating to this Agreement. Any Party requesting for information from the other shall not be unreasonably denied such information.

Article 11:- Taxes

For purposes of the project, each Party shall grant the Developer tax incentives in accordance with the applicable laws of the Parties.

Article 12:- Support to the Project

The Parties shall upon reasonable request by the Developer use their good offices to support the Developer's performance of its obligations to undertake the project. By agreeing to use their good offices to support the Developer's efforts, the Parties shall not relieve in any way the Developer of its obligations or potential liability under this or any other agreement.

Article 13:- Liability

In the event of any claim being successfully made by the Developer in connection with the project in particular, or the concession in general, the Parties shall share the liability. Where the act or omission giving rise to the claim is wholly or partly attributable to one party, the Party shall bear the liability accordingly.

Article 14:- Resolution of Disputes

- 14.1 The Parties agree that if any dispute or difference of any kind whatsoever concerning the implementation of the project or the provisions of this Agreement or breach, the Parties shall attempt (in good faith) to settle such dispute in the first instance by mutual discussions between the Parties within ninety (90) days from the day on which the said dispute arose.
- 14.2 Where the dispute cannot be settled within the period stated above, any Party to this Agreement may refer the dispute to the East African Court of Justice (EACJ) for arbitration.

Article 15:- Addresses for Notices

Any notice, communication, request or correspondence required or permitted under the terms and conditions of this Agreement shall be in writing, in the English language (it being understood that any such communication or paper in a language

other than English shall be of no force or effect), and shall be (a) delivered personally, (b) transmitted by facsimile and either (i) recipient acknowledges receipt to sender or (ii) sender delivers to recipient a transmission confirmation; or (c) sent by courier service, with delivery receipt requested, to the following addresses:

If to: **The Republic of Uganda:**

Address: The Permanent Secretary
Ministry of Energy and Mineral Development
Plot 29/33 Amber House, 2nd Floor
P.O Box 7270
Kampala, Uganda
Telefax No.: +256 41 4 230 220/4 234 732

If to: **The United Republic of Tanzania:**

Address: The Permanent Secretary

Ministry of Energy and Minerals

P.O Box 2000
Dar es Salaam.
Telefax No.:+255 22 2120799

Article 16:- Miscellaneous Provisions

16.1 Amendments

Any, amendments to this Agreement shall be in writing and signed by duly authorized representatives of both Parties

16.2 Confidentiality

Each of the Parties shall hold in confidence all documents and other information, whether technical or commercial, relating to the project that is of a confidential nature and that is supplied to it by or on behalf of the other Party. The Party receiving such documents or information shall not publish or otherwise disclose them or use them for its own purposes (otherwise than as may be required by it, its professional advisers, or potential or actual investors to perform its obligations under this Agreement or to any expert or arbitrator appointed pursuant to the terms of this Agreement).

16.3 Counterparts

This Agreement may be executed in two (2) or more original copies and each such copy may be executed by each of the Parties in separate counterparts, each of

which copies when executed and delivered by the Parties shall be an original, but all of which shall together constitute one and the same instrument.

16.4 Language

The language for the purpose of administering this Agreement, including any expert proceeding or arbitration hereunder shall be English.

16.5 Good Faith

In carrying out its obligations and duties under this Agreement, each Party shall have an implied obligation of good faith.

IN WITNESS WHEREOF, the duly authorized representatives of the Parties hereto have caused this Agreement to be signed in their respective names as of the day, month and year first above mentioned.

**FOR AND ON BEHALF OF THE GOVERNMENT OF THE REPUBLIC
UGANDA:**

Signature: *[Handwritten Signature]*
Name: Irene Mulyoni
Title: Minister of Energy & Mineral Development

WITNESSED BY:
Signature: *[Handwritten Signature]*
Name: F.A. KABAGAMBE-KALISA
Title: PERMANENT SECRETARY

**FOR AND ON BEHALF OF THE GOVERNMENT OF THE UNITED
REPUBLIC TANZANIA:**

Signature: _____
Name: _____
Title: _____

WITNESSED BY:
Signature: _____
Name: _____
Title: _____