

# Economic Development versus Biodiversity Conservation

– An argumentation analysis of the natural resource  
management of Lake Naivasha, Kenya

*Petter Nordvander*



# **Economic Development versus Biodiversity Conservation - An argumentation analysis of the natural resource management of Lake Naivasha, Kenya**

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## **ABSTRACT**

Lake Naivasha, Kenya faces degradation despite the implementation of a co-management plan. There are competing demands on the lake's natural resources from different key actors. An argumentation analysis was conducted upon texts on the key actors' official websites regarding the natural resource management of Lake Naivasha. The main identified 'argumentation thesis' was that the lake needs to be exploited for economic development, while the major contra argument was that the lake's biodiversity needs to be preserved. Pro arguments and contra arguments were often emphasized with pictures on the websites. More research is needed to achieve understanding of how integrated management which involves competing actors could be successful.

**Key words:** argumentation analysis, natural resource management, African lakes, competing demands.

## **Foreword**

First of all I would like to thank Doctor Örjan Bartholdson (SLU) and Helen Arvidsson (SLU) for making it possible for me to write my master thesis at the Department for Urban and Rural Development, Swedish University of Agricultural Sciences (SLU), Uppsala.

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Any misinterpretations or inaccuracies in this master thesis are completely my own fault and responsibility.

I hope you will enjoy your reading.

*Petter Nordvander*

Uppsala, September 4<sup>th</sup>, 2014

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# 1 INTRODUCTION

## 1.1 Competing Demands on Lake Naivasha's Natural Resources

Lake Naivasha is the second largest freshwater lake in Kenya, located in the Rift Valley 90 kilometers northwest of Nairobi (Republic of Kenya, 2012: 1). The most important economic activities around the lake are the floriculture industry, eco-tourism, local fisheries, and the livestock industry (Gherardi et al., 2011: 2593; Republic of Kenya, 2012: 25). From these activities Lake Naivasha faces a growing demand on natural resources and environmental services (Mireri, 2005: 89).

The fisheries at Lake Naivasha are important for local livelihoods and it is estimated that fishery offers employment for about 1,000 people (Kundu et al., 2010: 15-9). Lake Naivasha is a popular eco-tourism site (Harper et al., 2011: 89-95) and the lake attracts both domestic and international visitors (Republic of Kenya, 2012: 28). The lake is also important for electric power generation and about 15 % of the electric power in Kenya is generated here (Mireri, 2005: 89).

The area around the lake is well known for being the floricultural center of Kenya (Harper et al., 2011: 91). The cut flower industry at Lake Naivasha constitutes for about 70 % of the flower industry in Kenya (Mireri, 2005: 89). The floriculture industry has resulted in a rapid increase in population, mainly due to work migrants (Becht and Odada, 2006: 278) and in year 2005 it was estimated that some 250,000 people lived in the vicinity of the lake (Commission on Revenue Allocation, 2009: 31).

Lake Naivasha deteriorates despite the implementation of a co-management plan which aimed to ensure sustainable use of the lake's natural resources (Harper et al., 2011: 91). The lake suffers from extensive water extraction, degraded water quality, poor waste management from Naivasha town, and insufficient control of invasive plant and fish species (Becht and Odada, 2006: 293; Mireri, 2005: 93). Small-scale agriculture and deforestation disturb the inflow of water to Lake Naivasha and cause changes in the landscape around the lake, which makes it vulnerable to flooding and soil erosion (Republic of Kenya, 2012: 21). 'Poor cultivation practices' pollutes the water when pesticides and other chemicals from the surrounding farms are applied (ibid).



Picture 1: Lake Naivasha, April 25<sup>th</sup>, 2013. Picture by Petter Nordvander.

The different economic activities have competing demands on the lake's natural resources along with a growing population in towns and informal urban settlements (Republic of Kenya, 2012: 2). Gherardi et al. (2011: 2586) add that there are also conflicts between economic development and conservation issues. The natural resource management actors of Lake Naivasha are diverse and sometimes have conflicting interests which makes the natural resource governance of the lake a great challenge (Republic of Kenya, 2012: 34). There are actors on a local, a national and an international level which makes the governance even more complex (ibid). On top of this there is an inequitable distribution of resources, power, and inadequate legal enforcement for monitoring the governance of Lake Naivasha (Republic of Kenya, 2012: 36-7).

## **1.2 Meeting Lake Naivasha: Aim and Research Questions**

In April 2013 I travelled to Kenya together with a group of students on a global development field course and during the field course we visited Lake Naivasha. The purpose of the visit to Lake Naivasha was to learn about natural resource management dilemmas. On our visit we went on a boat ride on the lake and I quickly realized why the lake is important for eco-tourism with fish eagles in the sky, hippos in the water, and flamingos feeding on the river banks.





Picture 2: Fishing boats and tourist boats at Lake Naivasha, April 25<sup>th</sup>, 2013. Picture by Petter Nordvander.

During our stay at the lake we met several of the lake management actors and these actors have different exploitation objectives. For instance we visited a local fish market and a large-scale flower farm. The complexity of the management of Lake Naivasha became obvious to me and this awoke my curiosity of the natural resource management dilemmas of the lake. Lake Naivasha was to me more special and interesting than the other places we visited. The reason for this was the abundant wildlife, the beauty of the lake, and the same time its situation of degradation.

The overall objective of this thesis is to improve the understanding of the natural resource dilemmas of Lake Naivasha. To improve this understanding, the aim is to conduct an argumentation analysis of the natural resource management of Lake Naivasha from the texts on the key actors' official websites. More specifically the following research questions emerge:

- Which are the key actors of the natural resource management of Lake Naivasha?
- Which 'argumentation theses'<sup>1</sup> can be identified on the actors' websites and what 'argumentation thesis' is central for the argumentation?
- Which arguments are used in the actors' narratives to support the 'argument theses'?

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<sup>1</sup> The statement that is argued for is just called 'thesis' by Björnsson et al. (2009). In this document it is called 'argumentation thesis' to clarify towards 'master thesis'.

## 2 MATERIAL AND METHODS

### 2.1 Material: Data Collection

A field course in global development in Kenya, April, 2013<sup>2</sup> serves as a source of inspiration for this master thesis. The study is limited to Lake Naivasha and its basin, and the natural resource management actors' official websites on the Internet have been used to as empirical data. The official websites are useful since they convey a message how these actors want to present themselves in relation to the management of Lake Naivasha. The target of the argumentation analysis is hence texts communicated on the identified actors' official web-sites.

The articles for the introduction were found in Scopus, Primo, and Web of Science (Scopus, SpringerLink, and Cambridge Journals Online) between January 4<sup>th</sup> and February 12<sup>th</sup>, 2014. The following key words were used: *Lake Naivasha*, *management*, *natural resources*, *Kenya*, *lake*, *basin*, and *institutions*. The next step was to identify key actors of natural resource management of Lake Naivasha. The Lake Naivasha Management Plan (Republic of Kenya, 2012) was an entry point for the identification of the actors in the natural resource management of the lake. The official websites of the actors mentioned in the Lake Naivasha Management Plan (ibid) were visited. On the actors' official websites links to other actors were found.

An Internet search was made with these key words: *Lake Naivasha*, *management*, *natural resources*, and *flower industry*. This gave hits on websites that contained listings of prominent cut flower producers in Kenya. These websites are mainly HortiNews (2014), Kenya Flower Council (2014a), the Embassy of the Republic of Kenya in Japan (2014), and The Guardian (2011). The information of these websites was helpful to identify the main actors in the cut flower industry.

Some actors that were considered to have a key role in the natural resource management of Lake Naivasha did not have adequate information about the lake on their website. This was the case of Kenyatta University and the University of Nairobi, both Nairobi located universities. These two universities seem to perform extensive research especially on the ecological state of Lake Naivasha. None of them though presented themselves in relation to Lake Naivasha and are thereby excluded in the analysis.

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<sup>2</sup> The *field course in global development, natural resources and livelihoods* was collaboration between the Swedish University of Agricultural Sciences, Uppsala and Kenyatta University, Nairobi. The field course sought to give the students an understanding of ecological, social and economic circumstances that affect rural development and natural resource management.

Some organizations representing local actors do not have official websites. Other actors have websites but these websites lack adequate information regarding the management of Lake Naivasha. That was the case of the Lake Naivasha Growers Group, an umbrella organization with members of the local cut flower industry, whose website was closed down. The fact that all the key actors are not included in the analysis is a drawback of this study. For example are not some of the local people represented, such as the fishermen, and two mentioned Kenyan universities which perform research at Lake Naivasha.

The identification of key actors was made parallel to the study of theory between February 18<sup>th</sup> and March 17<sup>th</sup>. The introduction writing process and the study of the different actors gave an insight in which information regarding Lake Naivasha that was available on the different actors' official websites. The texts for analysis could hence be retrieved in two days, on March 18<sup>th</sup> and 19<sup>th</sup>, 2014. There are no ethical aspects to consider regarding the empirical material since it is collected from official websites available on the Internet. The only ethical consideration made in this master thesis is that no company names are given related to the pictures from the flower farms taken on the field course in April, 2013. Furthermore no picture shows any people from the field course.

## **2.1 Argumentation Analysis: Some Terminology and the Use of the Method**

There is a certain terminology in argumentation analysis. This sub-chapter shortly introduces some of the terminology and shows how the argumentation analysis was conducted.

An *argument* is a statement of a point of view and is used to persuade someone or a target audience of a certain view, thought or value (Boréus and Bergström, 2005: 89-92). An *argumentation* is a succession and an exchange of arguments (ibid) and metaphors are often used for emphasis of arguments (Lakoff and Johnson, 1980 in Boréus and Bergström, 2005: 92). The act of argumentation is often described as a 'battle' where the actors fight for their arguments and to persuade other people or win the target audience's sympathy (ibid). Boréus and Bergström (2005: 115) argue that some information in texts is not explicit but instead implied. The interpretation and analysis of this implied information could be a central part of the argumentation analysis (ibid).

An *argumentation analysis* could serve as a relevant tool in qualitative research for the understanding of how texts are used to convince people to a certain idea (Boréus and Bergström, 2005: 89). An argumentation analysis offers the researcher a method to evaluate arguments and illustrate whether arguments are good or bad (Björnsson et al., 2009: 11). The argumentation analysis is a way to deepen the researcher's perception and understanding of an issue (Björnsson et

al., 2009: 19). Boréus and Bergström (2005: 89) state that from a rhetorical perspective, the argumentation analysis mainly deals with *logos*, which means the logic and rationality behind arguments. The other two perspectives in rhetoric are *ethos* (character, guiding beliefs, and ethics) and *pathos* (strong emotions and empathy) but these are not included in an argumentation analysis (ibid). Since the argumentation analysis concentrates on *logos*, it misses the dimensions of *ethos* and *pathos* which is one of the the study's drawbacks (Boréus and Bergström, 2005: 131). To counteract this, one can include the argumentation analysis in a wider rhetorical study of the study subject (Boréus and Bergström, 2005: 131). This though, will not be done in this master thesis.

The analysis method in this master thesis is the *pro et contra method*, in which the researcher identifies and establishes a thesis from arguments and statements, and evaluates the *force of evidence* in the thesis and arguments (Boréus and Bergström, 2005: 95). The method has got its name after the two types of arguments (Björnsson et al., 2009: 22; Boréus and Bergström, 2005: 101). The *pro arguments* work *for* a stated thesis or an argument, and the *contra arguments* which work *against* the thesis or an argument (ibid). Björnsson et al. (2009: 31) distinguish between *factual* and *normative* theses or arguments. The factual statements are related to facts while the normative statements are related to values and beliefs (Björnsson et al., 2009: 31).

A definition of *force of evidence* could be (translated and adapted after Björnsson et al., 2009: 22-3): “the force of evidence in a pro argument or contra argument to a thesis is a measure of how good the reasons are to accept or neglect the thesis”. A good argument for or against a thesis has strong force of evidence in relation to the thesis (Björnsson et al., 2009: 22). The force of evidence of an argument is evaluated from its *durability* and *relevance* (Björnsson et al., 24). The durability and relevance are assessed on a scale with five grades: ‘very low’, ‘low’, ‘moderate’, ‘high’, and ‘very high’ (Björnsson et al., 2009: 23).

Björnsson et al. (2009: 24) define *durability* as the degree of trust we have of an argument. If the argument is unrealistic it scores low on the scale. If an argument is durable, relevant or has a strong force of evidence, it has scored more than moderate on the scale (Björnsson et al., 2009: 23). The credibility and plausibility of an argument determine its durability and this is the researcher's task to do this. Of course the arguments also need to be relevant for the thesis or the other arguments (Boréus and Bergström, 2005: 134).

The *relevance* of an argument is its ability to stick to the matter (Björnsson et al., 2009: 13). An argument could have a high level of durability but low level of relevance and it has hence a low level of force of evidence (Björnsson et al., 2009: 12-3). To achieve a high level of force of

evidence, the thesis or argument need to be both durable and relevant (ibid). The total sum of strength in arguments for or against a thesis increases the more arguments there are and the stronger they are (Björnsson et al., 2009: 49).

The procedure of the argumentation analysis in this master thesis was adapted after Björnsson et al. (2009: 135), and Boréus and Bergström (2005: 146) and structured as follows:

1. Read the texts and get acquainted with them.
2. Identify the argumentation thesis.
3. Find the arguments for (pro arguments) and against (contra arguments) the argumentation thesis and organize them from which order they are at in relation to the argumentation thesis. Not formulated or implied arguments need to be identified.
4. Evaluate and 'grade' the arguments and their durability and relevance.
5. Weight together the force of evidence among all the arguments individually and as a sum.
6. Evaluate pro arguments and contra arguments against each other. Lastly, evaluate the force of evidence of the argumentation thesis.

This procedure was conducted on website texts about natural resource management of Lake Naivasha and the next chapter presents the results from the analysis.

### 3 RESULTS

This chapter first shortly describes the identified key actors included in this master thesis. Secondly the chapter will present the main argumentation thesis and the analysis of arguments.

#### 3.1 The Key Actors of the Natural Resource Management of Lake Naivasha

The figure below illustrates the natural management actors that are included in this master thesis.

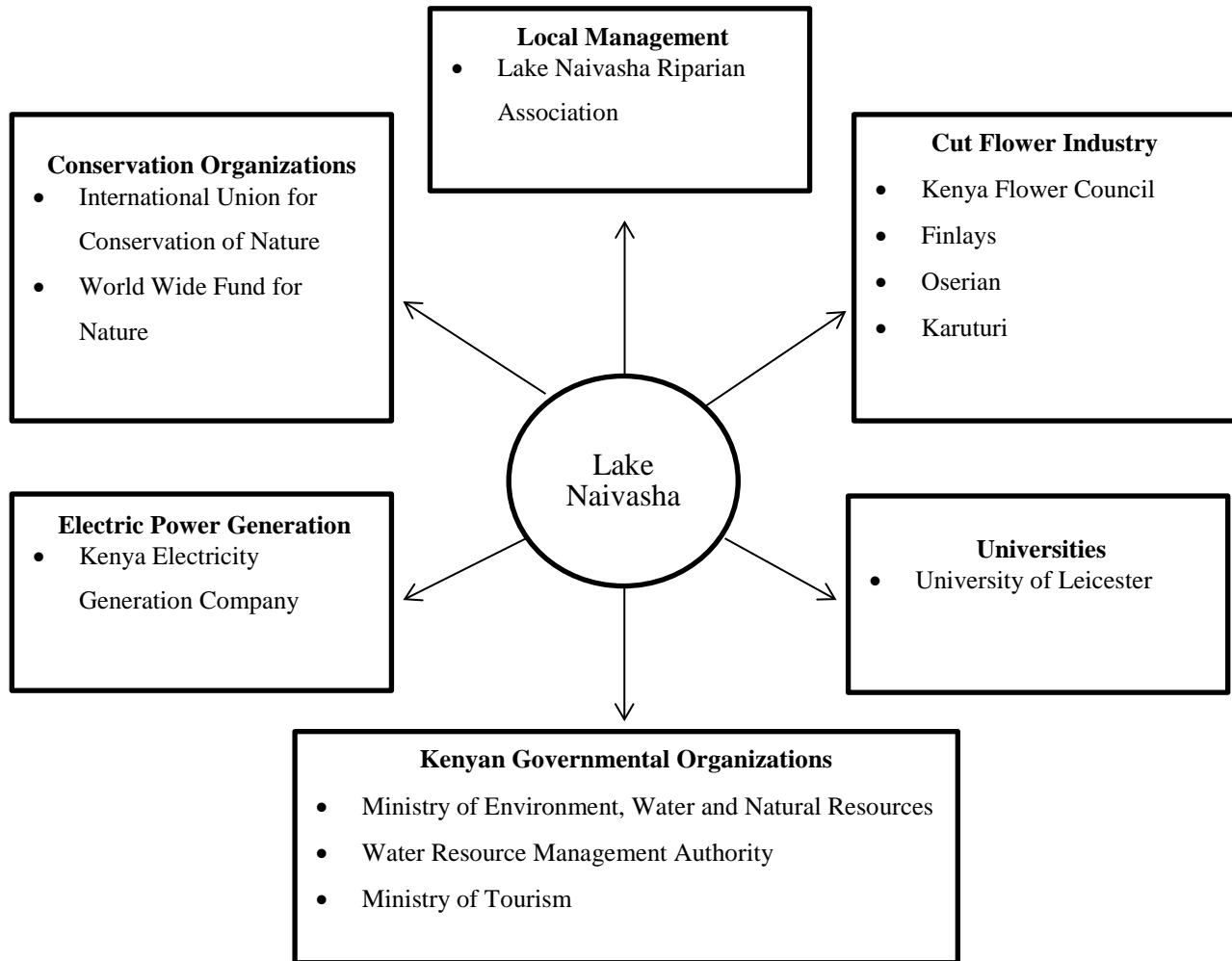


Figure: The key natural resource management actors of Lake Naivasha.

The *Lake Naivasha Riparian Association* is an umbrella organization which since year 2004 is responsible for the management of Lake Naivasha (Harper et al., 2011: 99). The organization consists of local companies, Kenya Wildlife Service, the municipality of Naivasha, Kenya Electricity Generating Company and the International Union for Conservation of Nature (International Union for Conservation of Nature, 2003: 12-3). The *University of Leicester* scientist David Harper has performed research at Lake Naivasha for some 30 years (University of Leicester,

2014). Harper's long time research at Lake Naivasha has made him a spokesperson of the ecological state of the lake and several organizations refer to Harper and his research (ibid). The *International Union for Conservation of Nature* is a worldwide organization with both governmental and non-governmental members (International Union for Conservation of Nature, 2014a). The organization is involved with conservation, development schemes and projects (ibid). Another world wide conservation organization is the *World Wide Fund for Nature* with the objective to conserve biodiversity (World Wide Fund for Nature, 2014).

The *Kenya Electricity Generation Company* is the largest producer of electricity in Kenya (Kenya Electricity Generation Company, 2014a) and the production at Lake Naivasha consists of geothermal electricity production (Republic of Kenya, 2012: 30). The three largest cut flower producers in Kenya are *Finlays*, *Oserian* and *Karuturi* (The Guardian, 2011) and quotes from all three of them are used in this master thesis.

The Kenyan *Ministry of Environment, Water and Natural Resources* is responsible for overall management of the environment and mineral resources in Kenya (Republic of Kenya, 2013). The Kenyan *Water Resource Management Authority* is the Kenyan governmental authority which is responsible for management of water resources and their distribution, quality and supervision (Water Resource Management Authority, 2013a). The Kenyan *Ministry of Tourism* determines and administrates policies regarding the tourism sector in Kenya (Ministry of Tourism, 2013a). The ministry is responsible to coordinate tourism development in Kenya (ibid).

## **3.2 The Argumentation Analysis**

### ***3.2.1 Introduction to the Argumentation Analysis***

An overview of the argumentation thesis and the arguments will first be given to simplify the reading of the chapter. The argumentation thesis and arguments will then be presented one by one with a quote from one of the natural resource management actors to relate it to the empirical material. The quote's context on the specific website will also shortly be described. The analysis starts from an argumentation thesis that Lake Naivasha and the land around it should be used for cut flower production and electric power generation for the sake of Kenya's economic development.

Table: Overview of the argumentation thesis, pro arguments and contra arguments.

		<i>Durability</i>	<i>Relevance</i>
<b>ARGUMENTATION THESIS (T)</b>	<b>Lake Naivasha should be used for cut flower production and electric power generation.</b>	Moderate	Very high
<b>T: Pro argument 1</b>	<b>Electric power generation is central for economic development in Kenya.</b>	Very high	Very high
<b>T: Pro argument 2</b>	<b>The cut flower industry provides employment and livelihoods for many people.</b>	Very high	Very high
Contra argument	The degraded ecological state of Lake Naivasha puts all these livelihoods at risk.	Moderate	High
<b>T: Pro argument 3</b>	<b>The cut flower industry significantly contributes to Kenya's GDP and foreign exchange.</b>	Very high	Very high
<b>T: Pro argument 4</b>	<b>Kenya offers a favorable climate and low costs for cut flower production and labor.</b>	Moderate	Very high
Contra argument	The cut flower industry violates worker rights.	Moderate	High
<i>Contra-contra argument</i>	<i>The cut flower producers provide a safe work environment for workers.</i>	Moderate	High
<b>T: Contra argument (C)</b>	<b>The biodiversity of Lake Naivasha need to be conserved to be able to provide ecosystem services.</b>	High	Very high
Contra-contra argument	The producers exploit the lake but contribute to and are are involved in conservation.	Low	Very high
<i>Pro-contra argument</i>	<i>The lake's wildlife and biodiversity need to be conserved to provide opportunities for tourism.</i>	Moderate	Moderate
<b>C: Pro argument 1</b>	<b>The involved actors have a moral responsibility to conserve the lake.</b>	High	High
Contra-pro argument	The cut flower producers and the electric power producer contribute to the local community.	Low	High
<b>C: Pro argument 2</b>	<b>The cut flower producers perform poor water management which degrades the water quality.</b>	Moderate	High
Contra-pro argument	The producers use water saving methods and follow environmental regulations.	Moderate	Very high
<i>Contra-contra-pro argument</i>	<i>The leading companies follow the environmental regulations but others do not.</i>	High	Very high



**Argumentation Thesis (T): Lake Naivasha should be used for cut flower production and electric power generation which leads to economic development.**

The thesis is based upon the pro arguments by Kenya Electricity Generation Company and the cut flower industry actors, and it serves as a starting point for the argumentation analysis. It is formulated as a normative thesis since it reflects a certain view of how Lake Naivasha's natural resources should be used.

**3.2.2 Pro Arguments for the Argumentation Thesis**

There are four identified pro argument for the argumentation thesis (T). This sub-chapter presents them and the related contra arguments.

**Pro argument 1 for the thesis: Electric power generation is central for economic development in Kenya.**

*“KenGen [Kenya Electricity Generation Company] is charged with managing all the public power generation facilities in the country. The company generates about 80 % of the total country power output.”* (Kenya Electricity Generation Company, 2014b).

The visitor of Kenya Electricity Generation Company's website gets a 'production emphasized' impression. The company's slogan is *“Energy for the nation.”* (Kenya Electricity Generation Company, 2014a) and most pictures on the website are of production facilities such as windmills and geothermal plants with steam originating from the facilities.

This factual argument strongly contributes to the force of evidence for the thesis. Both durability and relevance is very high. Few can argue against that electricity is central for a country's economic development and this becomes evident since no contra argument against this argument can be found on other actors' websites. There are though environmental consequences from the electric power production and The Republic of Kenya (2012: 30) mentions chemical waste and air pollution from the geothermal industry.

**Pro argument 2 for the thesis: The cut flower industry provides employment and livelihoods for many people.**

*“It is estimated that over 500,000 people (including over 90,000 flower farm employees) depend on the floriculture industry.”* (Kenya Flower Council, 2014b).

The Kenya Flower Council's web page goes in green and the logotype is a flower with the text "*Environment Friendly.*" (Kenya Flower Council, 2014c). The banner picture is of a smiling mother with her son and the text: "*The community benefits of floriculture include enhanced healthcare.*" (ibid). There is also a picture with farm worker in a greenhouse field. The green theme of the website clearly aims to emphasize the 'environmental friendliness'. "*Kenya Flower Council growing responsibly.*" and "*Protecting and Conserving Nature and Environment.*" are examples of slogans used by the organization (Kenya Flower Council, 2014c).

Similar factual arguments can be found on several other websites. The argument is very high in durability as well as relevance. Also the critics to the cut flower industry acknowledge the importance of the cut flower industry as an employer.



Picture 3: Large-scale greenhouse for roses, Lake Naivasha, April 26<sup>th</sup>, 2013. The picture is not related to the Lake Naivasha Riparian Association.

Picture by Petter Nordvander.

**Contra argument to pro argument 2: The degraded ecological state of Lake Naivasha puts all these livelihoods at risk.**

*"Lake Naivasha... is flower farming's epicenter. The lake is on the point of ecological collapse. It could soon become little more than a turbid, smelly pond, threatening the livelihoods of over 300,000 livid around its shores."* (International Union for Conservation of Nature, 2010).

The text is related to a picture of a red rose as a symbol of the final product, and there is also a picture of giraffes as a symbol for African wildlife. The International Union for Conservation of Nature's website otherwise contains pictures of endangered animals and beautiful landscapes to emphasize the conservation message (International Union for Conservation of Nature, 2010).

This contra argument draws upon the degraded environmental status of Lake Naivasha. The argument is highly relevant. The argument's durability is moderate since the International Union for Conservation of Nature uses a fallacy with the words "*ecological collapse*" and the metaphor "*turbid, smelly pond*" makes it harder to objectively evaluate the argument.

**Pro argument 3 for the thesis: The cut flower industry significantly contributes to Kenya's Gross Domestic Product and foreign exchange from exports.**

*"The local horticulture and tourism are substantial foreign exchange earners, and Naivasha is the hub of flower production for export from Kenya."* (Finlays, 2011a).

*"3 % of the national GDP [Gross Domestic Product] is from the horticulture sub-sector while 1.6 % is from the flower industry. Horticulture is one of the top foreign exchange earners for the country..."* (Kenya Flower Council, 2014b).

The text from Finlays' website is taken from the description of the integrated management project 'Imarisha Naivasha – Arise Naivasha' (Finlays, 2011a). Along with the text, there is a picture of Lake Naivasha in a 'romantic' way with the sun shining through the clouds as saying that it is time to come through the clouds and 'arise'.

As with the first pro argument, there are no contra arguments to this pro argument expressed on the actors' websites. The numbers support the argument which hence is very much durable and relevant.

**Pro argument 4 for the thesis: Kenya offers a suitable climate, and low costs for cut flower production and labor.**

*"...the developing countries... have now emerged as major producers and exporters. The main drivers for this... are favourable climate conditions for cultivation, and lower production and labour costs."* (Karuturi, 2011a).

The visitor of Karuturi's website meets pictures of green and lush crops such as grains, fruit and vegetables (Karuturi, 2011b). The company's logotype is a globe with the text "*Global Presence*."

*Global Success.*” (ibid) and the business image is strengthened with a picture of the founder and managing director, a smiling man in a suit.

The relevance of the argument very high since these basically are the motives for having the cut flower production in Kenya, combined with the access to water at Lake Naivasha. The durability suffers from that the argument goes against moral issues, for example that people in a low-income country as Kenya are in great need of jobs and then easily considered as ‘cheap labor’.

#### **Contra argument to pro argument 4: The cut flower industry violates worker rights.**

*“But beneath the graceful expression of love the roses convey and the lucrative business flower production is, there is the hidden cost little known to many: environmental degradation, socio-economic imbalance, blatant human rights violation, and adverse health consequences for workers.”* (International Union for Conservation of Nature, 2010).

This is an example of an argument with normative features. The statement aims to generate emotions and relates to ‘hidden’ sides of the cut flower production with drastic consequences such as *“blatant human rights violation”*. This weakens the durability to moderate since a normative argument like this needs to be backed up with factual evidence which is missing in this text. The statement is relevant towards the pro argument but only targets the worker rights, not the other two aspects of the pro argument (climate conditions, and production costs).

#### **Contra-contra argument for pro argument 4: The cut flower producers provide a fair and safe work environment for flower farm workers.**

*“Oserian supports 3,000 plus employee dependents. It provides the complete welfare of nearly 4,600 employees in health, housing, education and entertainment. Oserian offers a safe work environment for the workforce. Operating a 48 hour working week, Oserian pays the highest floricultural wages in Kenya.”* [Adapted from bullet points] (Oserian, 2014a).

*“The company is an equal opportunity employer and adheres strictly to the International Labor Laws, the Kenya Labor Laws and the International Standards AS 8000 on Social Welfare and several codes of conduct.”* (Oserian, 2014a).

Also Oserian’s website goes in green and the Oserian logotype is a ‘golden’ rose (Oserian, 2014a). The quotes are taken from Oserian’s Corporate Social Responsibility webpage. The text *“Socially Ethical.”* overarches three pictures of small children holding roses as a symbol of the local

community's benefits from Oserian's business. On one of the picture a mother is holding her child and the text "*equal opportunity employer*" relates to this picture as a symbol of gender equality.

If a company argues like this it could have a good record of sound personnel politics, but it is possible to generalize from this statement? The relevance in this contra-contra argument is high but the durability is moderate due to the issue of whether it is representative for the cut flower industry. "*The highest floricultural wages in Kenya*" does not necessarily means that the salaries are good.

### **3.2.3 Contra Arguments to the Argumentation Thesis**

This sub-chapter presents the one major contra argument against the argumentation thesis and the supporting pro arguments and statements.

**Contra argument to the thesis (C): The biodiversity of Lake Naivasha need to be conserved to be able to provide ecosystem services and maintain its wildlife today and for the future.**

*"The very fragile balance of the ecosystem is very close to reaching the tilting point of where the lake can no longer sustain the water demands that the catchment settlements and the surrounding industries and agricultural operations are putting on it."* (Lake Naivasha Riparian Association (2014a)).

The Lake Naivasha Riparian Association's website has a water, wildlife and water habitat theme, and by this it heavily transmits a conservation message (Lake Naivasha Riparian Association (2014a)). There are picture of water fowl, monkeys and antelopes, and every now and then there is a picture of local fishermen (ibid). These pictures symbolize the beauty of the nature and romanticize the local community and closeness to the lake and nature.

In similarity to the argumentation thesis, this contra argument is normative since it represents a view of how Lake Naivasha should be used. Even though the Lake Naivasha Riparian Association uses a fallacy with the wording "*tilting point*" which makes the objectivity more difficult, the durability is high and the relevancy very high since it is supported by strong pro arguments which we will see later in this sub-chapter.

**Supporting statement 1 for the thesis contra argument (C): There is a long history of degradation of Lake Naivasha.**

*“The lake's ecology has been seriously damaged in the past four decades by the pressures put on it by a population that has increased 20-fold... the best outdoor laboratory for studying human impact on ecosystems that there is.”* (University of Leicester, 2014).

This text is taken from a press release on the University of Leicester's website with a picture of the interviewed researcher David Harper out in the field at Lake Naivasha (Harper is a prominent Lake Naivasha researcher as mentioned before). The banner picture is a pencil as emphasizing the university and learning, and here the University of Leicester uses its authority as a research institute to promote how the lake should be managed.

This statement aims to explain why the ecological state of Lake Naivasha is the way it is. The metaphor of *“outdoor laboratory”* lessens the relevance of the statement. The fact that the population has increased is a contribution reason for the degradation on the lake is a generally accepted since many people moved in due to work in the cut flower industry which has made the pressures even harder on the lake.

**Supporting statement 2 for C: Conservation of biodiversity is important for economic development.**

*“The [Lake Naivasha] Basin is a unique wetland of international importance which supports key ecological and socio-economic activities. The Water Allocation Plan [an integrated management plan from 2011] addresses the inherent competition in water resource limiting situation between the need to protect the environment and basic human rights of access to the water resources, and consumptive use of the resource for economic development.”* (Water Resource Management Authority, 2013b).

*“...water – a key component in achieving economic, ecological and social well-being.”* (World Wide Fund for Nature, 2013).

The Water Resource Management Authority has the logotype of a hand which captures a water drop and a cloud with green 'treelike' background that illustrates nature (Water Resource Management Authority, 2013b). On the organization's website there are pictures of community projects to emphasize the importance of water as a natural resource for local communities.

The World Wide Fund for Nature (WWF) text is capture from a webpage which describes an integrated management plan which involves the WWF (World Wide Fund for Nature, 2013). Close to the text there is a picture of hippo, which is an animal that is associated to Lake Naivasha. The webpage also contains several pictures of endangered animals. Some of them are often associated to the WWF such as tiger, panda, elephants and rhinos. A few of the pictures transmit a ‘cute’ image, for instance a tiger cub, probably to win the website visitor’s sympathy.

The second supporting statement captures one of the major problems Lake Naivasha faces which is that it seems important to exploit the lake for the development of economy and local societies. At the same time, it seems vital to maintain a level of biodiversity to make sure that the lake and its basin offer ecosystem services for the survival of the lake and the continuation of development for the surrounding societies.

**Supporting statement 3 for C: The lake has an ecosystem which is sensitive to influences and exploitation.**

*“Lake Naivasha is a Ramsar site [wetland considered to have international importance] recognized as an ecologically fragile ecosystem... The lake’s catchment... was under severe stress manifested by dry rivers, loss of biodiversity, decreasing lake water levels and increased siltation.”* (Ministry of Environment, Water and Natural Resources, 2013).

The Ministry of Environment, Water and Natural Resources’ website is rather neutral in its tone. The quote above is taken from a Nairobi conference description and the text is accompanied by a picture of a politicians and development workers attending the conference.

The quoted statement is backed up with factual consequences of what has happened to the lake and how the ecosystem has been degraded. Both durability and relevance is very high in this statement due to this.

**Contra-contra argument to C: The electricity producer and the cut flower producers contribute to, and are are involved in conservation.**

*“Mother Nature is very close to our hearts and conservation of her resources forms an integral part of our business plans. We carefully craft and execute measures to protect and replenish natural vegetation, use best cultivation methods for soil conservation and adopt mechanized farming practices and state-of-the-art technology to improve yield and productivity.”* (Karuturi, 2011c).

*“Its [the Oserian Wildlife Conservancy’s] success of has enabled both wildlife and communities to prosper... The OWC [Oserian Wildlife Conservancy] is a vital refuge for wildlife displaced as result of increasing human population and industrial development, and holds a significant proportion of the region’s wildlife.”* (Oserian, 2014b).

The Oserian text is from the Oserian Wildlife Conservancy, a conservation and ecotourism company (Oserian, 2014b). The website has pictures of wildlife and local communities, for example a banner picture of a tropical bird on the Oserian Wildlife Lodges’ website along with the text *“Discover the Serenity and Beauty of Our Sanctuary”* (Oserian, 2014c). On this website there is also a picture with local people with a sign thanking the Zwager family (the founders of Oserian) for their work (ibid). It seems important for Oserian Wildlife Lodges to show that is not the same as the ‘ordinary’ Oserian. The visitor gets the impression that it is a pure conservation and eco-tourism project.

On their ‘regular’ website, Oserian uses metaphors and slogans to a great extent. Examples of these are *“The Oserian Dream.”*, *“Oserian Farm Kenya, place of peace.”*, and *“Happy Valley with Flowers.”* (Oserian, 2014d). Other examples are *“Giving Children a Brighter Future”*, *“Providing Water, Sustaining Life.”*, and *“Empowering the Society”*. (Oserian, 2014e).

Both Oserian and Karuturi use the contribution to conservation of nature and wildlife to legitimize their business. Calling nature *“Mother Nature”* could be seen as insincere and we do not know what Karuturi means by *“use the best cultivation methods”*. These texts likely aim to make the website visitor believe that Oserian’s and Karuturi’s businesses do good things for the local societies. We furthermore do not how much the companies actually contribute to conservation or the local societal development, which can be made to a little or great extent. The texts do not tell. Oserian has the Oserian Wildlife Conservancy as a tourist attraction which gains the company revenues. This lessens the trustworthiness and the durability of the contra-contra argument, even though the relevance of this argument is very high.

**Pro-contra argument for C: The lake’s wildlife and biodiversity need to be conserved to provide opportunities for ecotourism and community-based tourism.**

*“In Kenya, the environment and tourism have always been inextricably linked... Wildlife in particular has always served as one of our major tourist draw cards, and the resultant revenue has played a major role in the great priority placed on wildlife preservation in Kenya.”* (Ministry of Tourism, 2013b).



The banner picture on the Kenyan Ministry of Tourism's webpage (2013b) is of people in a safari car watching elephants. This webpage clearly shows that wildlife is a way of marketing Kenya to tourists. There is also another picture of two playing elephants, a picture of two chairs and a table in a sunset, imaging a paradise in nature. The website's front page shows a picture of a lion, which symbolizes the importance of wildlife for tourism in Kenya.

This is another normative argument since it transmits a point of view of the natural resource management of Lake Naivasha. Tourism gives employment opportunities, but we do not know to what extent. This argument seems like an argument with lower relevance than the ones that to conserve Lake Naivasha due to ecological reasons and the opportunities for tourism could be seen as a result of conservation efforts.

**Pro argument 1 for C: The involved actors have a moral responsibility to conserve the lake.**

*"Biodiversity is fundamental to address some of the world's greatest challenges such as climate change, sustainable development and food security."* (International Union for Conservation of Nature, 2014b)

*"It is our responsibility to protect our resources for the future and not to destroy it now."* (Lake Naivasha Riparian Association, 2014a). *"The LNRA [Lake Naivasha Riparian Association] members are its [Lake Naivasha's] custodians and are charged with a moral responsibility for ensuring its survival for future generations."* (Lake Naivasha Riparian Association, 2014b).

This webpage of the International Union for Conservation of Nature (2014b) has some conservation stereotype pictures, for example a hummingbird as a symbol of tropical wildlife and a picture of a person petting a leopard.

The argument to preserve nature for coming generations is common when it comes to sustainable development. Here is again a fallacy argument, this time it is the usage of strong words like *"destroy"* and *"survival"*. It could be seen as the actors who are not 'with' the Lake Naivasha Riparian Association and its work in ensuring Lake Naivasha's survival, are 'against' the organization. In this text it is related to immoral deeds and selfishness and this normative argument is hard to evaluate objectively. Both the durability and relevance suffer from this but are still high.

**Contra-pro argument: The cut flower producers and the electric power producer contribute to the local community.**

*“The company continues to dedicate a part of its profit to social responsibility activities aimed at enhancing the living standards of those living close to its installations and all Kenyans in general. Areas of focus include education, provision of water, environmental conservation, support to sporting activities, peace building, culture, and health care provision.”* (Kenya Electricity Generation Company, 2014c).

The text is taken from the Kenya Electricity Generation Company’s (2014c) ‘CSR’ webpage. There is a picture of a suit-dressed company representative handing out a diploma or scholarship to a student. This is closely related to the text that profits from the company benefit the local community and the use of schools and students as beneficiaries is well-thought through since education is a well-known way to alleviate poverty.

This argument is similar to the one that the electric power producer and cut flower producers are involved in conservation. The contribution to the local society makes the argument highly relevant but we do not know how much they contribute and if that makes up for their exploitation of the lake. The purpose of the website text is to make the reader that the company is fair and justifying their business by contributing to poverty alleviation in local societies. Thus the durability is low.

**Pro argument 2 for C: The cut flower producers perform poor water management which degrades the water quality and lower the water levels in the lake.**

*“Over the past 20 years, Lake Naivasha has been seriously degraded by over-abstraction of water. The blame has invariably been put onto flower farmers, who use irrigation to grow the roses that adorn the vases in our homes... Flower growing is claimed by many to have caused irreparable damage to the lake.”* (University of Leicester, 2014).

*“Poor management of water and wetland resources not only destroys the environment we depend on but also hinders economic development, leading to a loss of livelihoods.”* (International Union for Conservation of Nature, 2014c).

The International Union for Conservation of Nature’s (2014c) message is emphasized with a picture of a child drinking water with its bare hands from a lake. It seems as the cut flower industry has greatly been blamed for the degrading water quality and there does not seem to be any doubt that the cut flower industry is a major consumer of water for irrigation. In this statement, the University of Leicester (2014) exacerbates the blame on the cut flower industry which makes the objective

evaluation of the argument harder. The durability in this statement is hence moderate even if the relevancy is high. The fact that water is fundamental for economic development is generally accepted.

**Contra argument to pro argument 2 for C: The producers use water saving methods and follow environmental regulations.**

*“On our own and on our suppliers’ farms, every effort is made to improve the water efficiency by minimizing water use, improving rainwater harvesting and storage and recycling whenever possible. These measures are all designed to limit the amount of water taken from vulnerable sources.”* (Finlays, 2011b).

*“To meet all the basic environmentally sound and socially acceptable practices at the local and international level, the company initiated the implementation of ISO 14001:2004 standards.”* (Kenya Electricity Generation Company, 2014d).

Finlays call the webpage *“Sustainability”* and the text is put along with a picture of smiling children in school (Finlays, 2011b). There is also a small picture of a tree along with text about climate change. The message that Finlays cares about sustainability is also emphasized with a picture of a smiling female flower worker with flowers in her hands (ibid). The same theme can be found on Kenya Electricity Generation Company’s webpage (2014d) where there is a picture of a Kenyan who is planting a tree and in the background one can see a sign with Kenya Electricity Generation Company’s name on it. Tree planting as a sign of caring for sustainability is apparently also a way to market the companies.

The relevance of the argument is very high but the durability is moderate. For instance we do not know what Finlays means with *“every effort”*. Kenya Electricity Generation Company’s quote could be seen as a bit more trustworthy since it is backed-up with facts and the implementation of ISO 14000 [Environmental Management System] standards. But the ISO 140001 standards do not seem to imply any requirements for performance. There is also the issue of generalization since we do not know how the other producers act.

### **Contra-contra pro argument 2. The leading companies follow regulations but others do not.**

*“Whilst the leaders in the industry comply with internationally recognized social and environmental standards there are a few who do not, pay little attention to waste management and water use efficiency, and don’t care how much damage they do to the lake.”* (University of Leicester, 2014).

This argument is closely related to the former argument which makes the relevance very high. The trustworthiness could be seen as higher since the statement is more objective by saying that the cut flower producers are not ‘all bad’. The durability is decreased slightly by the statement that some *“don’t care how much damage they do to the lake”*, but is still high.

#### **3.2.4 Evaluation of the Argumentation Thesis**

The argumentation thesis has moderate durability and very high relevance. The relevance of the argumentation thesis is very high, mainly due to very high relevance in the pro arguments. The force of evidence is to some extent enhanced due to a very high durability in some of the pro arguments. The major pro argument is that the electricity production and the cut flower industry are important for local and national development.

The durability of the argumentation thesis is moderate for several reasons. For instance, the pro argument that Kenya offers a favorable climate and low costs for production and labor drags the durability down. The arguments that the electricity producer and the cut flower industry contribute to conservation and local societies, is also a contributing factor. As mentioned before we do not know much they actually contribute. The cut flower industry’s use of slogans and pictures for backing up the arguments drags the durability down. The website visitor gets the impression that the exploitation of the lake is compensated by the companies’ contribution to conservation and development of local societies. This simplifies the natural resource dilemmas Lake Naivasha faces and could make the cut flower consumer or other website visitors to belittle the severity of the dilemmas. It might hence be harder to objectively evaluate the exploitation of the lake.

The major contra argument to the argumentation thesis is that the lake needs to be preserved to be able to provide ecosystem services now and in the future. The contra arguments to the argumentation thesis are fewer but have strong force of evidence due to both high durability and relevance. Also the thesis’ contra arguments are emphasized with pictures of nature and wildlife which makes it more difficult to evaluate the arguments objectively. The contra argument that the

lake needs to be conserved for the sake of tourism is evaluated as moderate. Despite this, the contra arguments have high durability and very high relevance when weighted together.

Tom summarize, one could say that both the argumentation thesis and the major contra argument have very high relevance and convincing arguments. The contra arguments have high durability compared for moderate durability in the argumentation thesis. But this does not mean that it is easy to reject the argumentation thesis. Several pro and contra arguments are convincing and this likely reflects the situation of the tough competition between the actors and their different needs of Lake Naivasha's natural resources.

## **4 DISCUSSION**

### **4.1 The Major Findings of the Study**

This master thesis suggests that there are two major views of how Lake Naivasha's natural resources should be used. The first one could be called 'economic development', a development mainly run by industries as the electric power generation and the cut flower production. The second view is that Lake Naivasha's biodiversity should be conserved, and hence could be called 'biodiversity conservation'. Both views have arguments with strong force of evidence which means that they have high durability and relevance.

The 'economic development' actors (mainly the Kenya Electricity Generation Company and four major actors in the cut flower industry) argue that their business is good for local and national economic development, for example through employment opportunities and export revenues. Except this, the actors also contribute to conservation of biodiversity and water resources in general but wildlife in particular.

The 'biodiversity conservation' view basically states that the degrading ecological state of Lake Naivasha needs to be reversed and improved, and that the lake's biodiversity needs to be preserved. The cut flower industry is partly for the degradation of the lake but is at the same time recognized for being a major employer and contributor to Kenya national economy. The actors arguing for 'biodiversity conservation' are primarily international conservation organizations and local management. The Kenyan governmental ministries are more neutral except pointing out that Lake Naivasha needs to be conserved, but they also acknowledge the lake's importance for economic development.

Many arguments in general are supported by website pictures and themes to work for their cause and to emphasize the arguments. The different actors in general show how they contribute to welfare of local communities, nature and wildlife.

## **4.2 The Study's Limitations and Strengths**

The key actors included in this study are those with official websites which contain information about the management of Lake Naivasha. As mentioned in the material and methods chapter, some key actors are excluded. One could also question whether the texts included in the analysis are representative for the actors and the arguments. Here is when the role of the author comes in. It is through the author's mind, perceptions, and impressions the argumentation analysis has been made.

Björnsson et al. (2009: 127) write that there is a risk of misinterpreting the arguments and what they really are, especially since arguments often are latent. There is a risk that this has happened in this master thesis. The description of websites and their pictures in this master thesis counteracted this since pictures are used to emphasize a certain message. The message and arguments should hence become more evident but some arguments were still to some extent latent in the texts. Another author perhaps would have identified other arguments and chosen other texts to represent them. An argumentation analysis is all about interpretation and this master thesis illustrates the author's interpretation of Lake Naivasha.

Björnsson et al. (2009: 27-8) argue that the durability of an argument often is determined by the pre-understanding and knowledge of the researcher. This is especially evident when it comes to certain terminology but there was not much technical language in the texts since they it is website material and needs to be understandable for the public. The only case when this happened was regarding Kenya Electricity Generation Company and its technical specifications of the production facilities. These texts have therefor been excluded from the empirical material.

The different key actors also had different amount of texts regarding Lake Naivasha on their websites. The most representative texts have been sought in the data collection process. The website analysis could have been combined with interviews of key actors and local people to obtain a higher degree of validity. Interviews with the key actors could have given a different result. The choice of using official websites as empirical data though probably gave a wide scope of the analysis.

The main objective of the master thesis was to improve the understanding of the natural resource dilemmas of Lake Naivasha. It appears like the argumentation analysis approach has not been conducted on the Lake Naivasha settings and there was hence a need for this in the quest to

understand the key actors and their motives of the management of Lake Naivasha. So has this thesis improved the understanding of the natural resource dilemmas of Lake Naivasha? Yes, to some extent. This study shows that there are two major views of how the natural resources of Lake Naivasha should be managed. This study also shows that official websites are an important communication and marketing channel for management actors and to understand the messages on websites helps to understand the actors and what they want to achieve.

To conduct an argumentation analysis on official websites seems only to be done to a limited degree and that makes this study somewhat unique. This master thesis argues that official websites become more and more important for actors and organizations to market themselves. The master thesis also shows that pictures are important to support a certain message or argument. The argumentation analysis of official websites could hence have a crucial role to understand natural resource management in the future.

This study gains more credibility by having the ‘roots’ in a field course at Lake Naivasha. That gives the author an enhanced impression and understanding of the natural resource dilemmas the lake faces.

#### **4.4 Concluding Words**

From a managerial perspective it is important to be aware of the conflicting interests regarding Lake Naivasha. The more the different actors can be understood, the more successful the management can be. The conclusion of this thesis is that the greatest challenge of the natural resource management of Lake Naivasha is how to integrated management when the actors have competing management motives and objectives. More research is needed to improve the understanding of how this could be achieved.

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