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BALANCING CONSERVATION AND DEVELOPMENT

The Inherent Dilemma of Nature-Based Tourism and its
Impact, a Case Study on the Serengeti National Park,
Tanzania.

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BALANCING CONSERVATION AND DEVELOPMENT

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The Inherent Dilemma of Nature-Based Tourism and its Impact, a Case Study on the Serengeti National Park, Tanzania.

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"What we must face, all of us - poachers, tourists, farmers, conservationists and pastoralists - is the difficult truth that the land does not go on forever."

– Lota Melamari (Director General Tanzania National Parks)



Summary

The paper ahead aims to create the beginning of a nuanced dialogue towards nature-based tourism and its impact on ecologic, economic and societal terms. The Serengeti National Park in Tanzania will serve as its case-study to learn to understand how tourism impacts vulnerable regions such as the Serengeti and to work towards ways of finding sustainable solutions for the problems that it faces. Throughout the research, multiple experts and involved parties have been interviewed on an interview based on Pearce's (1989) impact measurement framework. In these interviews we have examined the scenarios of tourism completely stopping and letting tourism continue without interference, under the contemporary expectations regarding tourism as a whole. Within those interviews and the research, a consistent divide has been kept between three different dimensions; ecology, economy and society. From the different scenarios, of which neither are preferable when aiming for sustainable tourism, we have sought for solutions to make tourism nature-based tourism in Serengeti sustainable for all parties involved, with special regard to local communities. From the literature examination that took place before the real start of this research, a divide was spotted between those who characterize tourism as 'good'; good for the economy, good for the communities, good as legitimization for ecological protection, and those who think of tourism as 'bad': bad for indigenous lifestyles, lacking local revenue, bad for ecology. The attempt made in this research is to find a way between those extremes and look in to the real impact of tourism and the ways in which we can transform the problems in to solutions for everyone.

As the topic is highly complex, the first chapter will introduce tourism and nature based tourism. It explains how tourism grew in the last 50 years from a leisure spending for the elite, the poets and the merchants, to something so widespread that not going on holiday has become something as rare as not having a house or a car. Why this came to being and which direction it is taking is elaborately described in chapter 1. After this, in chapter 2, we discuss the research objective extensively. The research questions is formulated, asking how nature-based tourism can be continued sustainably in the future for all parties involved. Socially, this is a relevant question as there are large differences between those who carry the burden of tourism and those who capture the benefit. Recognizing this and working towards ways to improve this uneven skew is relevant for the entire society. Scientifically there has been a lot of research on nature-based tourism and Serengeti separately. Those researches focusing on Serengeti focus mainly on ecology, those on nature-based tourism, mainly on its cons. Creating a framework that tries to show more than just this, by adding multiple dimensions and an as-good-as-possible all round discussion, is an ambitious aim to fill this gap in knowledge and discussion. Chapter 3 provides insight in the theoretic background terms, elaborately going in to tourism, impact and finally the conceptual model on which hypotheses are formulated that underlie the assumptions of this research. In chapter 4 the methodology that is used is explained, focusing on the framework offered by Pearce and the implementation of this in the paper. The different interviewees are introduced in this chapter, as either experts in (bordering) fields or as directly involved actors in the Serengeti tourism industry. As in Pearce's framework, chapter 5 is solely devoted to providing the context in which the research takes place. Background information about Serengeti and the different dimensions are provided, as well as a historical and legal overview of the region. This chapter also contains elaborate explanation of the geographical context in which Serengeti exists, as the ecosystem does not consist out of just Serengeti, but multiple adjacent protected regions that even cross country borders in to Kenya. Chapter 6 will include the entire analysis of

the research, analysing four interviews with experts and summarizing and explaining the outcomes of the scenarios of stopping tourism and letting it continue without interference. Without spoiling anything – a follow-up is required to come after this, as both scenarios are rather deterministic in terms of the societal, ecological and economic wellbeing of the region and the local communities bordering this region. As such, chapter 7 follows with ameliorations that could mitigate the identified problems and divides them under two sub-categories of mitigation, Ecologic and Socio-political. These ameliorations are complementary and even necessary in combination with each other, yet they stem from strong government prioritisation and planning structures, where after in- and outside of the park, different measures can be taken. A final analysis of the ameliorations is offered in chapter 7.3, discussing in which way the ameliorations should be applied to enhance effectiveness and efficiency of the suggested changes. The research is concluded in chapter 8 in which all final conclusions are summarized and brought together; concluding mainly that stopping tourism in Serengeti would be devastating for the Tanzanian economy, the ecology and perhaps societies too, while continuing on this path has little better to offer. The region would in either scenario be so severely altered that neither situation would benefit Serengeti on the long run. The only possible conclusion thus is that serious steps have to be taken before things go wrong, urging authorities to take action in protection the Serengeti ecosystem, its population and the economy. Chapter 9 contains recommendations for further research and for implementation of solutions, and in chapter 10 the researcher reflects briefly on personal learning and difficulties within the research.

The research reads as the beginning of a broader discussion that needs to be led by Tanzanian authorities. Solutions as offered in this research must be planned and invested ⁷⁸ and as either other scenario might result in to violent conflict, ecologic degradation and economic downfall as a result of both. The impact of tourism on Serengeti is so significant that it cannot longer seen without it, and yet seeing it under the pressure of tourism today, it is time to make a change in order to be able to continue sustainably.

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Chapter 1: Introduction

§1.1 Humans and Nature

Planet earth is currently inhabited by over seven billion humans (worldometer, 2016), that all have their particular relationship with the planet. Although different people have different interactions with the planet, all people have in common that they are directly or indirectly dependent on what the earth provides. In the field of human geography and environment, we call this 'ecosystem services'; the planets life-support-system for the human species and all other forms of life (WHO, 2005). Ecosystem services vary from clean air, biodiversity and food-supply, to fuel, detoxification and various recreational services that are vital for human well-being. Although for many people these relationships might be indirect and displaced over space and time, the impact of humans on the environment and the dependency these same humans have on this environment, is undeniable (WHO, 2005). Humans depend on ecosystem services directly for water and food, and more indirectly for fuel, energy and to fulfil a psychological need for recreation (Kuenzy & Mcneeley, 2008). At the same time, humans severely impact the environment and its' ability to provide ecosystem services, through deforestation, land-, water-, light- and air- pollution, trampling and intensification of land and water use due to growing population rates (WHO, 2005). This paradoxical relationship of dependency and exploitation, is reason for tension between the environment and the human race.

Although there is tension, humans are intrigued by nature; travelling through and towards it, writing poetry and making art about it. While nature is in many ways a vital part of human life, it rarely takes such an explicit form as it does in modern day tourism, specifically the type that focuses on nature.

§1.2 Tourism & Nature-Based Tourism

Tourism is not a new concept – in ancient Rome, for example, elites traveled to cities like Pompeii and the isle of Capri for holidays. Travel for pleasure however, was historically linked to other quests such as pilgrimage, a pursuit of knowledge or profit or for the need of adventure and health. The development of large-scale tourism grew with the development of transportation, that allowed tourists to travel to locations by train or ship. With the rise of jet travel in the 1960's, cutting travel times, and increased private vehicles, tourism flourished and mass tourism began (Gmelch, 2004).

Tourism has become the largest industry in the world, looking at employment numbers and expenditures that account for 11% of the worldwide GDP. Within this industry, nature-based tourism is the fastest growing sector (Kuenzy & McNeeley, 2008). Nature-based tourism, tourism focused on experiencing nature directly, includes forms of tourism that are characterized as 'ecotourism' or 'green tourism' but nature-based tourism does not have a normative connotation to it, while the former do. Nature-based tourism activities can include wildlife tourism, coastal tourism (snorkeling, diving), mountain trekking, hiking etcetera. As for many people in the western world 'discovering the world' is one of the top life goals, many of the worlds' travelers choose to travel to countries far from their own to get back in touch with a side of nature not familiar to their own homes and environments (Kuenzy & McNeeley, 2008).

§1.3 Wildlife tourism

77 Wildlife tourism is a form of nature-based tourism that attracts those who seek that experience to explore a new ecosystem and all its inhabitants. While the name of this tourism would contain both flora and fauna focused visitors, in practice it is mostly fauna that wildlife tourists are interested in (Shackley, 1996).

Wildlife tourism can include coastal tourism, hiking and mountain trekking (Kuenzy & McNeeley, 2008) but also photographing, wildlife watching and occasional hunting (Shackley, 1996) are motives that fuel wildlife tourism. However, most wildlife tourism is meant to be unconsumptive of the nature itself.

The idea of wildlife in its unspoilt form, full of life and without other people interfering, is often what attracts tourists. Wildlife parks have often been constructed to social ideals of what wildlife and nature should look like. Tourism herein has been a critical factor for the legitimization of large land use decisions; often to support idyllic scenery, with high populations of large mammals.

76 The quality of the natural environment, or the unspoiltness of it, 3 plays a key role in attracting visitors to tourist destinations. The success of wildlife tourism is highly dependent of the ideas of wildlife and the international image surrounding these wildlife regions (Kaltenborn, Nyahongo & Kideghesho, 2011).

This thesis will focus on wildlife tourism and its' relationship with the land and the people surrounding it. To illustrate the different variations within wildlife tourism, a few examples are offered before singling out a region which will serve as a case-study for this research.

§1.4 Examples wildlife tourism

Wildlife tourism is particularly important as it often takes place in peripheral and vulnerable regions. Peripheral areas tend to be susceptible to the impact of globalization and restructuring of the economy. The economies of peripheral areas are often dependent on limited assets – such as specific agricultural output or tourism itself, which brings along poverty and makes these areas vulnerable to changes in demand. In addition, peripheral regions often lack control over decisions made about the regions themselves and experience a sense of alienation. (Hall & Boyd, 2005). Most areas that attract nature-based tourism by now have been constructed to idealized images of tourists of what nature should look like. This means that regulation and adjustments to these areas are done with the touristic perspective in mind. Tourism has been critical for the legitimization of land-use decisions to support idyllic scenery, often with serious impacts on the nature itself and its surrounding communities (Kaltenborn, Nyahongo & Kideghesho, 2011). While many decisions regarding conservation areas are often made at an international or even a supranational level, the effects of these decisions are often only to be felt in the regions themselves. At the same time, the fact that these areas are situated in peripheries, is exactly what attracts tourists, due to high aesthetic value of 'underdeveloped' and 'untouched' natural beauty.

55 Regions that attract these kinds of tourists are currently often found in emerging economies in Sub Saharan Africa, South East Asia, South America and the Pacific (UNWTO, 2015).

Examples of wildlife tourism can be found all over the globe – varying from coastal tourism at the Caribbean Islands (UNEP, n.d.), to climbing on to Mount Everest (Figuerola, 2015), to safari tourism in the Serengeti (Emerton & Mfunda, 1999).

The coastal tourism in the Caribbean Islands cause loss of precious underwater biodiversity due to many different, human induced, factors (UNEP, n.d.) while at the same time this tourism creates 13% of the total employment in the Caribbean and amounts up to 14,6% of the total GDP (WTTC Caribbean, 2015).

Many who climb Mount Everest for the thrill of mastering the highest peak in the world, litter it with garbage and human faeces and pollute the air in traffic jams at the foot of the mountain (Figueroa, 2015).

Furthermore, human activity adds to further deforestation and land degradation, allowed through political vulnerability in Nepal (Figueroa, 2015), but at the same time, Mount Everest tourism adds up to 8,9% to the total GDP of Nepal, and created over a million jobs (7,5% of the total) (WTTC Nepal, 2015).

In the Serengeti plains in Tanzania, safari tours aimed at spotting large mammals in their natural habitat, disturb living, feeding, breeding and migration patterns of the animals, while littering the region and preventing local communities from profit from the region (Emerton & Mfunda, 1999). However, in Tanzania, 14% of the GDP is formed by tourism, while 12.2% of jobs are in tourism, employing 1,3 million people (WTTC Tanzania, 2015).

What these situations have in common, is that these regions are surrounded by poor populations, that are for a large part dependent on the profitability of tourism and that the ecological regions tourists are visiting are fragile. Both the environment and the societies in these areas are vulnerable to the impacts of tourism.

As seen, the urge to travel back to nature, paradoxically brings along a large toll, that nature itself and surrounding communities are bound to pay. People become tourists to experience nature from close-by, but while doing that, they slowly destroy what they came for (Hall & Boyd, 2005). This paradox is reason for discussion with regards to the balance that needs to be found with all actors involved in mind.

Chapter 2: Research objective

Looking at the short assessment regarding nature-based tourism, the rise of it, and the vulnerability of the regions this type of tourism is directed to, is reason for discussion. These regions are vulnerable due to ecologic uniqueness and fragility, perseverant poverty and susceptibility and dependency on limited factors that make economies potentially unstable. In the regions at which nature-based tourism is directed, we see different scenarios that all exemplify vulnerability and well-meant touristic activity.

In this research, Serengeti National Park in Tanzania serves as most valuable to use as a case study. Serengeti is specifically vulnerable, large scale and, from the position of the researcher, relatively easy to research upon ⁶³ to experience in the region and contacts in the branch, specifically in Serengeti. Serengeti is situated in one of the least developed countries in the world, characterized as low income and heavily indebted (Data Development Analysis Division, UN, 2012), yet known for its high level of biodiversity and one of the rare locations where the Big Five (rhino, leopard, lion, elephant, buffalo) can be spotted, thus an attractive destination for wildlife tourists.

§2.1 Research Question

This research aims to create the beginning of a nuanced discussion of the impact of nature-based tourism in economic, socio-cultural and ecological dimensions, by conducting impact measurement research on the Serengeti region in Tanzania.

In order to reach this goal and as a stepping stone for finding solutions for the issues that arise with it, the following research question has been formulated:

How can nature-based tourism be continued sustainably in the future for all parties involved in the Serengeti region?

This question can be divided in to different sub-questions that will help to develop a well-rounded description of the impact caused:

What is potentially the future of Serengeti when all wildlife-tourism will be stopped?

Within this question, a divide will be made between different dimensions. The first is that of the natural environment of the Serengeti. The second is that of surrounding societies and communities. The third dimension will be focused on the economy of Tanzania and its inhabitants.

What is potentially the future of Serengeti when current tourism trends will continue?

Within this question, a divide will be made between different dimensions. The first is that of the natural environment of the Serengeti. The second is that of surrounding societies and communities. The third dimension will be focused on the economy of Tanzania and its inhabitants.

From the answers to these questions, this research aims to derive advice and recommendations that can further improve the balance between nature conservation and development with regards to tourism in the Serengeti and, possibly, other nature-based tourism attractions around the world.

§2.2 Societal relevance

Understanding the impact of nature-based tourism on both the environment and the rights and needs of communities alongside of these conservation areas is becoming of vital importance as a matter of social justice too. While conservation areas are vital to tourism and (often) environment, it can be destructive for local communities as their land-rights, or their heritage on land, often collide with (inter)national regulations – and the regulations usually win. While this is a complex topic that needs reasonable assessment and discussion of all aspects, these precautions are rarely taken in to account in the discussions surrounding nature-based tourism and therefore often put aside very one-sidedly. Tackling this issue, and creating serious, nuanced dialogue for solutions in society and science, should be a priority for both those who experience tourism as a burden and those who experience it as a blessing.

A simple google search on ‘nature-based tourism’, for example, provides numerous examples of sources like Sustainable Tourism Online, Tourism Australia and Texas Parks & Wildlife, that speak of nature-based tourism as ‘responsible’ (Texas Parks & Wildlife, n.d.), ‘sustainable’ (Sustainable Tourism Online, n.d.), while in no way the flipside of nature-based tourism is discussed. However, when speaking to scholars and reading in to literature as Kuenzy & McNeeley (2008) and an example from personal communication with Leroy (2016), there are many who feel as if these areas that nature-based tourism is directed to, should be exclusive to researchers and biologists, as to keep these areas safe from harm by tourists. Although there are many initiatives that aim for ‘responsible’ or ‘ethical’ tourism, such as that of the UNWTO, this is mostly focused on efforts individual tourists can make to travel responsibly, rather than that it enforces policy change on a larger scale (UNWTO, 2005).

With that said, the aim for this research is to be both theoretically as practically relevant. Theoretically to add to the overall knowledge and research regarding this topic, yet mostly practical as to help create a basis to find solutions for societies, governments and the international community to create understanding for the overall issue and further suggestions for policy change.

§2.3 Scientific Relevance

Now, while many great scholars have done elaborate research on impact of nature-based tourism, and even in Serengeti, the approaches vary and show a knowledge gap that this research hopes to fill. Eagles & Wade (2006), in their *Tourism in Tanzania, Serengeti Park*, focus mainly on visitor experiences and the factors contributing to satisfaction rates among tourists visiting Serengeti National Park. Similarly, Kaltenborn et al (2011), describe in *The Attitudes of Tourists Towards the Environmental, Social and Managerial Attributes of Serengeti National Park*, how tourists appreciate assets of the park and the meaning that these assets have for their chances of return. From the quantitative data that both Kaltenborn et al. and Eagles & Wade have collected, important conclusions can be derived to understand overall touristic viewpoints towards Serengeti and the importance of this point of view for managerial choices made in the park in the construction that it exists in now.

The World Travel and Tourism Council released, in 2015, a report on the economic impact of tourism in Tanzania called *Travel & Tourism: Economic Impact 2015 Tanzania*. However, this report is so general that

it can hardly be considered an all-round investigation of *impact*, but rather as a balance of numbers that make sense on a very global scale. The numbers in the Report refer to national statistics, and do not elaborate on the earning or the spending of the finance that plays a large role in this industry. Meanwhile, no other reports actually do so.

Also quite one-sidedly, Sinclair & Arcese (1995) in *Serengeti II: Dynamics, Management and Conservation of an Ecosystem*, focus on the park management and specifically the ecologic impact of the regime. Other aspects, such as the social and economic, are barely touched upon.

The more nuanced and elaborated reports, such as *Nature Based Tourism in Peripheral Areas: Development or Disaster?* of Hall & Boyd (2005), provide crucial insights in the dynamics of nature-based tourism and its impacts especially in these vulnerable areas. However, Hall & Boyd derive their research from a variety of examples that are researched by different scholars, and thus different lights are shed on the different topics. Also, the examples that Hall & Boyd use are mostly either based in Polar or Sub-polar regions or on marine tourism. The example of Serengeti could be an addition to the myriad of examples.

Another great example of nuance and elaboration is Emerton & Mfunda's (1999) *Making Wildlife Economically Viable for Communities Living Around the Western Serengeti, Tanzania*. This work is vital in understanding livelihoods and options regarding community involvement in Western Serengeti. Besides being directed solely at the Western Serengeti, Emerton & Mfunda's work is mainly focused on communities and their interaction with Serengeti and the practical implications of this interaction, it is vastly different from this research, that aims to create an insight to what solutions for nature-based tourism can be beneficial for all parties involved.

There are large differences between the ways in which scholars and media and travel-agencies have reported on this issue. With all the perspectives from previous research as the literature base to work from, the research formulated in §2.1 covers a knowledge-gap that starts creating a framework that gives a nuanced image of the impact and the future of this impact for the Serengeti while involving three different dimensions and different viewpoints. Complications that arise from the lack of a nuanced framework in both popular texts and scientific research, can be politically motivated legitimization of policy, that does thus not derive from the complete picture.

It is therefore that this framework has insufficiently been created by researchers so far, and must thus further be elaborated and nuanced upon by other scholars before being able to grant the support that policy needs for it to be efficient, effective and just.

§2.4 Case-study choice explanation

This paragraph serves to elaborate on the choice of specifically using the Serengeti region as a suitable case study for this research. As nature-based tourism is built on biodiversity, Tanzania stand out for its options for tourists to explore the wild (Eagles & Wade, 2006). Tanzania has been voted the best Safari destination in Africa, by scoring 4,8 stars out of 5 in a survey conducted under experts, tour operators, tourists and park authorities. These successes are mainly contributed to *Serengeti National Park and the adjacent Ngorongoro Conservation Area* (NBS, 2015). For Tanzania, tourism has great potential for economic growth and is thus an important national pillar. Tanzania is home to 20% of the overall wildlife in Africa and attracts visitors to

its extensive wildlife parks. The second largest, but most popular of these parks, is the Serengeti (Tanzania Tourism, n.d.).

Annually, Sub-Saharan Africa welcomes 34,2 million tourists, that mainly focus on nature-based tourism (UNWTO, 2015). From this total, Tanzania attracts 1,153 million tourists on an annual basis which covers 14% of its GDP with direct and indirect profits from the tourism sector (WTTC, 2015). Of these tourists, most are attracted to the natural assets of the country, divided upon beaches and wildlife parks. Number show that in 2012/2013 for example, almost one million tourists visited the national wildlife parks (TANAPA, 2013). Tanzania focuses on a tourism policy that is high quality, high priced and low density (Eagles & Wade, 2006).

As Serengeti plays a large role in nature-based tourism, and has a history in human-nature conflict, it makes a suitable case for research upon impact of this type of tourism. The conflict between humans and nature has been an age old tale, but became most evident when Serengeti received its status as a conservation area in 1928, when it started out as game reserve, set up by colonial rulers for hunting purposes. The rights of about 10.000 local Masaai were severely infringed, as they were displaced from their land and their rights limited. The human-nature conflict was, and is, the biggest threat to the Serengeti as a wildlife area. Population growth and poverty cause local communities to fall back on local resources through illegal hunting and habitat destruction. Land and water conflicts arise more frequently between park authorities and local communities, leading to severe tensions. With two million people bordering the Serengeti, the management of balancing tourism with the ecosystem and development, will be of crucial importance for the future of Serengeti (Emerton & Mfunda, 1999).

While Serengeti is for theoretical reasons a suitable case to use in studying the impacts of nature-based tourism, it is also practically a wise choice for this research. The researcher herself has spent her childhood in the 1990's in Tanzania and has travelled through Serengeti on multiple occasions. More importantly, mobilizing contacts in Tanzania would be made easier, as the researcher has family and friends still living in the country and thus a network of opportunity is opened more conveniently to actually work towards achieving the goals of this research.

Chapter 3: Theoretical Framework

The central approach that the research question will be answered with is Impact Measurement (Pearce, 1991) as a tool to understand the influence of nature-based tourism on the Serengeti region. Of course, different theoretical approaches and researches about the topics at hand in this thesis are important to take in to account. Because this impact is focused on socio-cultural, ecological and economic dimensions, we will elaborate on these dimensions and the relevant theory thereof. As basic concepts of being able to understand the research, the concepts of tourism, nature-tourism and wildlife-tourism are also further examined. Impact is the underlying, most broad theoretical concept that is used in this paper, that will be examined after understanding the concept of the rise of tourism overall.

As a critical analysis, some attention will also be paid to the approaches that have been created to benefit the development of local communities along with nature-based tourism as a whole. From this, the researcher hopes to be able to derive another solution that can further improve the relationship between nature-based tourism and local communities.

§3.1 Tourism

As mentioned before, tourism is the biggest industry in the world – acquiring 11% of the worldwide GDP and supplying millions of people, directly and indirectly, with jobs that vary from tourguides to builders (of hotels, roads etc) to rangers to housekeeping (Kuenzy & McNeeley, 2008). Although tourism as a concept is not new, it has become remarkably bigger since the 1960's, due to large changes in the modern world (Gmelch, 2004). In this paragraph, we will discuss those factors as contributors to mass tourism to be able to understand why certain forms of tourism have arisen. In this research we will be focused specifically on nature-based tourism, which in the Serengeti region takes shape as wildlife tourism, that is specifically focused on seeing and experiencing wildlife. Nature-based tourism is not only the most prominent branch of tourism in Serengeti (and Tanzania), it is also a highly sensitive form of tourism because of its remarkable conditions. What is remarkable about nature-based tourism, is that these regions are often located in peripheral and vulnerable areas. Often these areas are ecologically vulnerable, but further made more vulnerable by little economic development and little economic and political control of the people in these regions on the decision making process (Hall & Boyd, 2005). This is further increased by poverty, susceptibility of states and poor planning. While many regions qualify as peripheral, not all of them are also vulnerable. For example, when understood like this, we do find the Grand Canyon peripheral, but not extraordinarily vulnerable, as it is situated in a wealthy, developed state. Whereas Nakuru national Park in Kenya, is both peripheral as vulnerable due to surrounding poverty and little (state) regulation. Ironically, specifically the lack of development in areas such as Nakuru, creates the attraction of 'unspoiltness' of the wilderness (Hall & Boyd, 2005).

§3.1.1 Urbanization

In today's society, ecosystem services are hardly ever directly experienced for over half of people in most developed, and many undeveloped countries due to urbanized societies. In 2014, 54% of humans lived in cities (ESA, 2014). Cities are in many countries defined by a certain population density that differs from country to country, it is therefore difficult to give one specific definition (WHO, 2016). However, what puts

cities aside is that high population density, as is the case in most cities, changes peoples way of life. It allows them to get easier access to shared facilities, such as schools, healthcare, sanitation and many other social, cultural and economic services. This also means, that they are no longer primarily concerned with the production of goods, but mostly with the consumption. As most economic activities currently take place in and around cities, rural areas are increasingly neglected by their inhabitants and urban settlements are rapidly growing as expectations for 2050 reach a 66% of all human settlement to be in urban areas (ESA, 2014).

Most developed countries in Northern America and Europe have reached over 70% of urbanization rates and more and more people in specifically these areas have lost their initial connection with nature and the ecosystem and they long for a way to reconnect (Kuenzy & McNeeley, 2008). This is given shape by counter initiatives that, for example, bring the urbanized human and nature closer together, or that try to 'localize' the supermarket stocks. Another trend that urbanization fuels, combined with two other modern trends that will be elaborated upon at a later stage, concerns the specific preferences of travel. Modernized people search for the reconnection with nature in their travels. People idealize an image of what 'pure nature' is and try to find it elsewhere in the world (Kaltenborn, Nyahongo & Kideghesho, 2011). What caters this need is the industry of nature-based tourism, found mainly as a movement in the direction of the global south. While urbanization plays a large role in directing tourism to certain areas, it is important to first understand the rise of overall tourism, through the rise of the leisure industry and globalization.

§3.1.2 Paving the way for international travel

The rise in global pay (minimum-wage) and the more generous vacation days, that have become part of the Western neo-liberalistic industry, have given room for people to travel through air and larger distances over land, reaching other continents more easily than ever before (Gmelch, 2004). Although travel and tourism in itself are not new, the habit of travelling for so many people in the modern world, relatively is. Where tourism and travel used to be for the elite, the pilgrims and colonialists, by now it has been integrated to every layer of Western society. For every social and economic class, travel has become an integral part of life, while before the 19th century, only few people outside of the elite traveled for leisure reasons (Urry, 2004). By now, travel in the modern society, has become an important status marker, perceived not only as necessary for good health and happiness for all people, but also as obvious as owning a car or a nice house (Feifer, 1985). The importance of travel can already be seen in the sheer amount of people travelling for leisure purposes in, for example, 2015, where globally 1,2 billion people travelled internationally for leisure purposes. The numbers of arriving tourists for every region in the world have been growing with above-average numbers for six consecutive years (UNWTO, 2016).

With an increased amount of leisure time for people working in the neo-liberal system, and reduced inequality of income within households, international travel has become a possibility for many (Urry, 2004). Among the profiteers of the tourism industry are Airline companies, hotels and travel agencies, and many others.

§3.1.3 Globalization

In 2005, Francesco Fragialli, the General Director of the UNWTO, said "Tourism needs greater recognition by governments and development institutions for its capacity to generate economic, environmental and social

benefits [...] It is also a sector that promotes intercultural understanding and peace among nations [...] For poor countries and small island states, tourism is the leading export- often the only sustainable growth sector of their economies and a catalyst for many related sectors” (eTurbonews, 2005). In this statement, Mr. Fragialli emphasizes the meaning and value of tourism as a transnational and transcultural process with potential economic, environmental and social benefits for those involved. He also emphasizes the role that governments and development institutions play in the utilization of tourism. As an overall pillar supporting peace and understanding, Mr. Fragialli sees tourism as an important factor in improving the world.

The fact that tourism today is such a transcultural activity, has not always been the case. Together with leisure and urbanization, the process of globalization increasingly gives shape to tourism overall. Globalization, the increased interconnectedness and interdependence of peoples and countries, exists out of two different elements. For one, it describes the increased flow of goods, people, capital and services across international borders, and secondly the institutions and international policies that promote this flow (WHO, 2016). Through globalization, it has both been made easier for people to travel and maintain their assets in other countries, and institutions and policies are far more supportive of this international travel.

Neo-liberal politics and the rise of capitalism have given shape to globalization since the beginning of colonialism, but made a rapid increase since the end of the Cold War (Klay Kieh Jr, 2008). The acceleration of globalization is referred to as ‘new’ globalization. Throughout centuries, various efforts have been made in the economic, political, cultural and social realm to make the world more interconnected and easier to access in the light of capitalism and free trade. New globalization is the most expansive and technologically advanced state of globalization, which brings the world in a stage of time-space compression; a state in which the relationship between time and space is altered (Klay Kieh Jr, 2008). This state is induced by the rise of communication and information systems, such as the internet, increased cheap and easy travel, the global commodity chains of products, and the opening of borders and liberalization of cultures. In terms of tourism, the state of globalization that the world is in, makes long distance travel easier and far more accessible than before.

Although globalization is highly complicated and the increase of international travel is deeply connected with the development of the possibility of airtravel, declining costs of travel and other factors, for this essay it is most important to understand how globalization affects the accessibility of far-away destinations for tourists worldwide and specifically those with a background of wealth.

Globalization, the leisure industry and urbanization have had a severe impact on the rise of tourism and the specific shape that tourism takes. This shape of tourism is directed at ‘getting away’ and reconnecting with nature, in places away from home. As globalization and the rise of the leisure industry have created room for international travel, urbanization seems to have given it direction towards a particular type of tourism; nature-based tourism; tourism focused on getting in touch, or becoming one with nature (Kuenzy & McNeeley, 2008). In the following paragraphs tourism and nature-based tourism in particular will be described and explained in order to make clear what the characteristics are and the potential of the rise of this type of tourism.

§3.1.4 Growth of Tourism

Despite the issues that touristic travel to developing countries may bring along for local purposes, travel numbers to Africa and Asia and the Pacific have, since 2005, experienced the largest numbers of growth; respectively 5% and 6,2% per year (UNWTO, 2015). Currently, 45% of international tourism is directed towards emerging economies in Africa and Asia and the Pacific (UNWTO, 2015). Due to underdevelopment and lack of political and economic control on peripheral areas, they retain high aesthetic value that serves the development of nature-based-tourism (Hall & Boyd, 2005).

Tourism is expected to grow even further from 1,2 billion to a total of 1,8 billion travelers in 2030 with the biggest increase in travel towards developing countries (UNWTO, 2015).

The growth of tourism, further increasing population rates and the overall failure to make local communities and environments profit, or at least experience no harm from tourism, causes tensions that needs to be addressed throughout global structures, regional and national management systems and local communities.

§3.2 Impact

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An impact is a change in a given state over time as a result of an external stimulus (Hall & Page, 2014). The term itself implies that one thing affects another. In this particular research, we assume that tourism affects different aspects of society. Although the term 'impact' suggests a somewhat one-sided interaction, we use the term for the sake of understanding the interaction between tourism and different elements. With this, we mean that we do not just think of tourism as an affecting force, but also as an affected force, in interaction with local elements.

Traditionally, there is a divide between different dimensions of impact; economic, physical/environmental and social/cultural (Hall & Page, 2014; Pearce, 1991; Mathieson & Wall, 1982). These levels are quite diverse in nature, and give us the most nuanced and complete image of overall impact of tourism, that is why in this research, the same divide will be made. It is important to point out that in all these levels, the impact that is understood is never purely positive nor purely negative, as the perception of – any – impact, is dependent on ones' position, ideology and other beliefs (Hall & Page, 2014). As this paper aims to provide a nuanced representation of tourism and its' impact, the discussed impacts will also not be conclusively characterized as either positive or negative impact.

There are different ways in which the impact of tourism can be measured. Two important approaches in the impact measurement literature are the approaches of Hall & Page and Pearce. These measurements allow for multiple aspects and dimensions to be taken into account, giving room to formulate a well-rounded argument on the topic. Both these approaches will be compared, in order to find the most suitable approach for this particular research. Both Hall & Page and Pearce offer great insights in tourism as an influence on (peripheral) regions and impact studies. However, as their approaches to impact measurement are vastly different, only one of the approaches can be used in understanding the impact of tourism on the Serengeti region.

In the framework that Hall offers, impact on regions can be discussed in terms of 'carrying capacity'. Carrying capacity tries to seek for the balance between protection and use of an area; the level of recreation an area can sustain without reaching an unacceptable degree of degradation of both the area itself as the

recreational experience (Hall & Page, 2014). This framework is especially useful when assessing ecological impact of tourism on areas. On the basis of the process described in figure 1, an assessment can be made for the maximum amount of visitors a region can bare before (slowly) collapsing. Usually, the managerial strategies are set to the most vulnerable dimension.

Hall & Page (2014)	Pearce (1989)
<ol style="list-style-type: none"> 1. Specify management objectives or standards for the stage of the heritage resource to be maintained or maintained and the type of experience to be provided. 2. Identify current levels of use for a defined period. 3. Identify indicators for the biophysical, socio-cultural, psychological and managerial components. 4. Measure the current state of each indicator. 5. Identify apparent relationships between the state of the indicator and the level of use. 6. Make value judgements on the acceptability of the various impacts. 7. Determine a carrying capacity that is more, the same, or less than the current capacity 8. Implement management strategies that ensure the new carrying capacity 	<ol style="list-style-type: none"> 1. Examine context – environment, society, economy. 2. Forecast future if tourist development does not proceed/had not proceeded. 3. Examine tourist development. 4. Forecast future if development proceeds. 5. Identify in quantitative and qualitative terms differences between 2 and 4. 6. Suggest amelioration measures to reduce adverse impacts. 7. Analyse the impacts and compare alternatives. 8. Present the results. 9. Make a decision.

Figure 1. Approaches by Hall & Page and Pearce.

Although the strategy by Hall & Page can give us highly interesting results, the focus of it remains with the impact on the land by foreigners, and does not allow for the question of justice whether or not locals (should) benefit from the existence of a national park such as the Serengeti. The impact of tourism is in this theory very much quantified, which serves the purpose of easily set managerial strategies, but neglects the aspects of behavioral, social and unquantifiable changes that might be key in finding the balance between protection and recreation.

The framework that Pearce offers seems more qualitative, as it approaches the issue from both quantitative and qualitative sides, and allows for different forms of tourism to be used in the framework. Also, Pearce introduces the concept of context, making the analysis more integrated and complete. By approaching the situation with a prediction about continuations of certain trends, it allows us to examine the role of local communities clearer and more integrated with the other aspects of tourism.

The risk of this particular framework may be that it could lean too much on interpretation, more than the framework that Hall & Page have offered. As a counterweight, however, it can give us more of a nuanced, complete image of the risks and the mitigations that those regions affected by tourism, face.

§3.2.1 Ecological impact

Gmelch (2004), Dietz (2008), Sinclair (2000) and Kaltenborn et al. (2011), among others, have pointed out the dangers of nature-based- or wildlife- tourism specifically for the biological diversity and ecosystem of regions. While there are many examples of negative impact of tourism on the ecology of a region, Kaltenborn et al. (2011) show that tourism can lead to a rapid decline in wildlife through human interaction with the wildlife. Gmelch (2004) brings us many examples of how touristic activity in coastal areas often leads to declining wellbeing of the ecological system. She also offers examples from other touristic regions in which trampling of tourists and touristic interference leads to environmental degradation. Dietz (2008) sketches a very broad perspective on the relationship between man and nature and the risks that there are for ecology under influence of man. Sinclair however, has conducted specific research on the Serengeti region, with particular focus on the impact of humans to the ecology on the westside of the park.

To be able to understand the ecological impact of tourism, the environment must be examined in terms of its physical characteristics and the dynamics between these (Pearce, 1989), from thereon, the impact that humans make on this environment can be understood.

§3.2.2 Socio-cultural Impact

Social impact concerns the influence of tourism and travel on the value patterns, behaviour, community systems, lifestyles and livelihoods of local communities in surrounding areas of touristic regions (Hall & Page, 2014). The influences on the perceptions of local inhabitants can be seen in terms of extrinsic and intrinsic influences. While extrinsic influences stem from macro impulses, such as the type of tourism and the rate of tourist and locals, intrinsic influences stem from personal connections to tourism, the personal benefit the derange from touristic activities etc. The social costs of tourism will vary based on both the tourist and the host.

Gmelch (2004) describes some of the impact that both tourists have on local communities and vice versa. Kaltenborn et al. (2011) use culture to explain the influence of Western culture on protected regions. But, as Gmelch fairly points out, the experiences of local communities with regards to (foreign) tourists, differs from region to region and from tourist to tourists. With the variety of existing tourists, there is no way to generalize the stereotypes, expectations etcetera, that both tourists and locals have of each other.

In order to analyse socio-cultural impact of tourism, characteristics of the society must be taken in to account. Social and demographic characteristics need to be understood. Whether a local community is strong or weak also tells us something about how stable the community will remain under pressure of outside influences (Pearce, 1989).

§3.2.3 Economic Impact

To understand economic impact of tourism, one must start with understanding its importance. The size, diversity and vitality of the tourism industry is relevant, and it is important to see whether the national economy is reliant of a specific branch or if risks are more spread (Pearce, 1989).

Both Hall & Boyd (2005) and Emerton & Mfunda (1999) address the issues regarding the profit of wildlife and conservation for local communities surrounding these areas. Hall & Boyd specifically discuss the binary

situation of tourism either being disastrous for locals or it being a complete blessing, while Emerton & Mfunda search for overall ways to make tourism viable for local communities.

Neumann (1998) goes further into the effects of the establishments of national parks with regards to the local communities. In this argument he talks about national parks as establishments of colonialism that have claimed land from indigenous people, who, in the face of poverty and population growth, try to reclaim their land continuously.

§3.3 Nature-Based Tourism and Wildlife tourism

The concept of nature-based tourism is an important theoretical aspect that should be analysed with regard to the parties involved with regards to both development and nature conservation. Several authors have done research over the years about nature-based tourism, wildlife tourism, or its impacts in one way or another. Kuenzy & McNeeley (2008) and Hall & Boyd (2005) focus on nature-based tourism as a whole and Hall & Boyd on its role in peripheral countries specifically. Shackley (1996), Eagles & Wade (2006) and Emerton & Mfunda (1999) focus on wildlife tourism in particular. Emerton & Mfunda have focused on the Serengeti and have looked for ways in which wildlife tourism could be more economically viable for local communities in the north-west of the area in particular.

Kaltenborn, Nyahongo & Kideghesho (2011), have conducted very interesting small scale research on the needs and mental images of wildlife tourists particularly in the Serengeti area. This quantitative research, that elaborates on the image that touristic wildlife regions need, is particularly helpful for understanding wildlife tourism and the impact that Western tourists have on the shaping of wildlife conservation areas.

§3.4 Development and local communities

There are different approaches to the way that tourism, environment and development have been attempted to be successfully combined. C. Michael Hall (2007) in his pro-poor tourism description, writes of strategies in which tourism can directly benefit to poverty alleviation in developing countries. Another approach, that searches for balance between conservation and development are the Integrated Conservation and Development Projects, or ICDP, as described by Newmark & Houg (2000). ICDP approaches try to link conservation of ecological diversity in a protected area, with social and economic development outside of that area.

§3.5 Conceptual Model

Hopefully from answering the central questions in this research, a nuanced overview of the impact of nature-based tourism in the Serengeti which would start a discussion. It is expected that current nature-based tourism in the Serengeti is not sustainable and does not have a positive influence on the greater picture of Serengeti. See Figure 2.

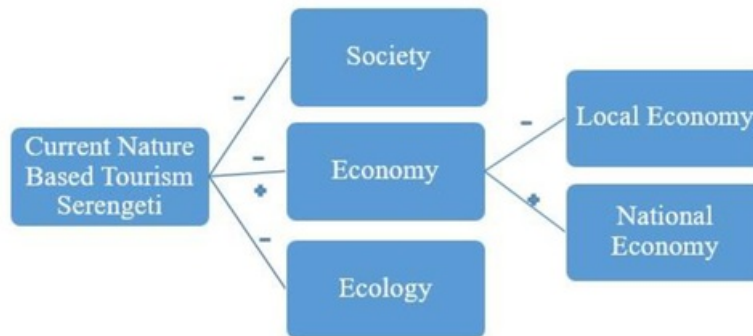


Figure 2. Conceptual Model

The following hypotheses underlie this scheme:

1. Current nature-based tourism in Serengeti is not sustainable.
2. Current nature-based tourism has a negative influence on the natural environment/ecology of Serengeti as it changes and alters the natural environment and increases pollution.
3. Current nature-based tourism has a negative impact on the socio-cultural wellbeing of local communities as their traditional ways have been limited due to the existence of the national park.
4. Current nature based-tourism will have both a negative and positive impact on the economic circumstances of involved parties, but will mostly benefit foreign parties or national authorities and will only bring (opportunity) costs to local communities.

From this conceptual model of the current situation in Serengeti on, this research focuses on working through these three angles in creating mitigations and solutions to the issues at hand.

Chapter 4: Methodology

This research will be based on a single instrumental case study; a qualitative research design aimed at exploring a bounded system through multiple sources of information (Creswell, 2007). The case that will be used in this particular research will be contained to a geographical region that is one of the most famous wildlife parks of the world: The Serengeti National Park in northern Tanzania. While this case is fascinating in itself, and will further be elaborated upon below, it is important to note that Serengeti will serve to illustrate practices of nature-based tourism that can potentially be used as an example as to show the implications of nature-based tourism as a globally distributed concern.

Serengeti is suitable as a case-study as its' nature-based tourism attraction is of prime concern of the Tanzania National Park Authority (TANAPA) as being an important factor in local and national development issues and nature conservation alike (Tanzania Tourism, n.d.). As Serengeti is surrounded by 2 million Tanzanian inhabitants, there are many examples to be found that show tensions between nature conservation development overall. Furthermore, as this research focuses on peripheral areas, Serengeti is situated in one of the poorest countries in the world (Worldbank, 2016).

As case-study analysis requires multiple sources of information, this research will base its content on document analysis and a variety of interviews. As the author has had some years of living experience in the region, and still has friends and relatives residing and working in the Serengeti area, finding contacts on the ground has been made relatively easy and thus practical. Although a personal network is in place, the interviews will be conducted through scientific analysis by making use of grounded theory as the tool for composing a nuanced understanding of the topic at hand.

The framework that will be used for measurement of impact, is that of Pearce, as discussed in the chapter on theory. In Figure 3, a brief overview is given regarding the steps included in the framework and the method that each step will be conducted by.

Pearce (1989); Framework research	Method
1. Examine context – environment, society, economy.	Literature research and analysis; throughout extensive reading through relevant literature, a context will be sketched, divided in to subsections regarding environment, society and economy for the regional situation. (Chapter 5)
2. Forecast future if tourist development does not proceed/had not proceeded.	Throughout interviews, a potential forecast will be created regarding the future of Serengeti when touristic development had not proceeded. This will be done through analysis of visions of different interviewees that are in some way knowledgeable of the region. The interviews will be specified on the 3 dimensions; environment, society and economy. This analysis will be conducted through applying grounded theory to the interviews. (Chapter 6.1)
3. Examine tourist development.	Through research of literature, trends in touristic development will be collected and summarized, as to be able to create a outline from which step 4 of this framework can be conducted. (Chapter 6.2)

4. Forecast future if development proceeds.	Throughout interviews, a potential forecast will be created regarding the future of Serengeti when touristic developments (as discussed in step 3) will continue. This will be done through analysis of visions of different interviewees that are in some way knowledgeable of the region. The interviews will be specified on the 3 dimensions; environment, society and economy. This analysis will be conducted through applying grounded theory to the interviews. (Chapter 6.3)
5. Identify in quantitative and qualitative terms differences between 2 and 4.	Results that have come from the interviews will be analyzed and differences between these situations will be discussed. (Chapter 6.4)
6. Suggest amelioration measures to reduce adverse impacts.	Deriving from both literature and the results of the interviews, different potential measures will be offered to reduce impacts of the outcomes. (Chapter 7)
7. Analyse the impacts and compare alternatives.	Based on the measured impact, the ameliorations (as discussed in step 6) will be compared to work towards final conclusions. (Chapter 7.3)
8. Present the results.	A conclusion will be drafted that will formulate an answer on the initial research question of this research: <i>how can nature-based tourism be continued sustainably in the future for all parties involved in the Serengeti region?</i> (Chapter 9)
9. Make a decision.	As this research is not aimed at decision-making, but rather on providing a stepping stone to do so, step 9 will not be completed.

Figure 3. Pearce Framework and method

§4.1 Interviews

The interviews that will be conducted with experts will be semi-structured and focused on experience and expectations. Throughout the interviews, the interviewer will try to get the perspective of the interviewees on steps two and four of the theoretical framework. The interviewees will be semi-structured as this leaves both room for the interviewer to prepare questions beforehand, as for the interviewees to have the freedom to express their views in their own terms (DiCicco-Bloom & Crabtree, 2006). In comparison to structured and unstructured interviews, the semi-structured interview is the most suitable form for this research, as the goal of the interview is to get qualitative data in the form of perspectives from a diverse group of people about a specific topic. With regards to unstructured interviews, the risk is high to lose focus, while fully structured interviews leave little room for interviewees to elaborate on topics and for the interviewer to follow trajectories deriving from the interview. As such, semi-structured interviews leave room for the interviewer to steer on to relevant side tracks that the interviewees happen to mention, when considered appropriate. An interview guide will be formulated in order to have some guidelines during the interview to make sure to find answers to the expectations of the interviewees of the situation regarding Serengeti when tourism trends (do not) continue (See Appendix 1). These questions will be open-ended, so that interviewees have room to answer the questions in their own way and will not be pushed in to directions (DiCicco-Bloom & Crabtree, 2006). Preceding the interview questions, the interview guide will contain an amount of background

information in order for the interviewees and the interviewer to make sure that the topic discussed is indeed relevant for the research and does not derive from assumptions made from either sides.

Experts are selected through a qualitative sampling method, as they have been selected with great care to contribute to the understanding of the local situation, the phenomenon itself and possible outcomes.

The interviews will be conducted on a one-on-one basis when possible as to make sure as much communication as possible is taken in to account for the final results. However, as the researcher will not have direct access to most individual interviewees, the interviews will take place over phone or Skype. As the interviewees are from multiple nationalities, they are free to speak in their own language if they please, to make sure expression is not lost in translation on either side of the communication. This is why two out of four interviewees speak Dutch in their interviews, instead of the English that is common in this paper. All explanations and graphs will be set out in English, yet quotes serving to illustrate a paragraph will not be translated.

These interviews will be processed in Atlas.ti through the data-analysis method of grounded theory. While there are some practical implications that discourage the author to use grounded theory, it is on the other hand one of the most effective ways of analysing large sets of data and obtaining a structured outcome. Grounded theory is meant to *create* a theory, instead of simply affirming theories or rejecting them (Creswell, 2007). In this research we aim to combine deductive and inductive research to create a new understanding of the specific topic. As there is a lot of theory at hand, from which a lot of knowledge can be derived from, this part of the research can be defined as deductive. However, to create the nuanced image that is aimed for, it is crucial to involve more inductive strategies, adding to the existing body of literature and creating room for discussion regarding this topic. To create such research, it has been decided to use grounded theory for the analysis of information collected through interviews in this research. While grounded theory is usually conducted without any previous literature study, it is in this case not practically possible to do so. The author will however be as objective as logically possible during the analysis to get the most nuanced understanding of the interviews.

§4.2 Interviewees

The four interviewees have been selected carefully to provide their views on the matters at hand will be introduced in this paragraph as valuable sources for this research. Combining and analysing their expert views on the issue, the author hopes to create a nuanced understanding of tourism and its impacts and solutions in Serengeti specifically.

Pieter Leroy

Prof. Leroy is a well-known professor at the Radboud University, specializing on the political sciences of the environment.

Jo Anderson

Mr. Anderson is a conservation biologist who has lived in Tanzania for the last twenty years, working in different regions and different branches. Throughout his career he has worked in ecotourism, environmental management and landscape conservation for the public and private sector and foreign development agencies.

Ethan Kinsey

Mr. Kinsey is an experienced safari guide and a tourism business operator in the Tanzanian National Parks and outside of them, as well as a third generation Tanzanian. He is currently pursuing a Masters degree in Biodiversity Conservation & Management through the University of London.

Steven Hollevoet

Mr. Hollevoet has a background in plant cultivation and tropical production and currently works for the Belgian Technical Operation in Kigoma, Tanzania. He has lived in Tanzania for over fifteen years, and has lived and worked in various countries in East-Africa throughout his career. He also enjoys hunting for sport, and as such has a special interest in ecology and the conservation of biodiversity.

§4.3 Analysis Interviews

The analysis of the material acquired through the interviews will take place through the software program Atlas.ti. Throughout this process, 'quotations' from the interviews will be coded as to have clear overview of the answers and the categorisation. The interview guide (See Appendix 1) has a clear division in questions, of which the first part focuses on the situation in which tourism in the Serengeti will be stopped, and the code attached to the answers indicating a prediction in that scenario will be coded with "ST" (Stop Tourism). The second part of the interview directs the conversation to the situation in which, with contemporary tourism trends in mind (See Chapter 6.2), tourism would continue to exist in Serengeti. The answers that give prognosis on this situation will be coded with "CT" (Continue Tourism).

Finally, the possible measurements and solutions to the sustainable continuation of tourism will be discussed. Those quotations of the interviews will be coded with "Solutions".

All interviews will be put in to one Text Document in Atlas.ti and the different interviews will be coded with the initials of the interviewee (for example, Jo Andersons interview will be coded with "JA").

From these standard divisions, all arguments will be coded in the different dimensions that are discussed in this research; Economic ("Econ."), Ecologic ("Ecol.") and Socio-cultural ("Soc."). As many arguments are not merely either one of these categories, there is room for double coding, that can further be discussed in the chapter on results. The solutions will be coded in the different dimensions as well, as to pinpoint of which character the potential solutions found are.

The codes discussed above; CT, ST, Econ. Ecol. and Soc., will form different so-called 'families' in Atlas.ti, as will the different codes and quotations per interviewee be grouped under the initials-codes "PL", "JA", "EK" and "SH". From here on, different arguments will be analysed and discussed when we arrive in chapter 6.

Chapter 5: Context Description

Serengeti comes from the Masaai word “Serengit”, translated to “The Endless Planes”. The Serengeti National Park is Tanzania’s most popular national park, located in the north of the country. The area covers 14,763 sq kilometres and is most popular for its abundant variety of wildlife and its annual migration of 1,5 million animals travelling 1000 km through the park on the search for fresh grazing (Tanzania National Parks, n.d.). Within and around the park live two million people, who have varying relations with the existence of Serengeti as a national park (Kaltenborn, B.P., Nyahongo, J.W., Kideghesho, 2011). Throughout the years, frameworks and attitudes from local communities towards the park have varied. In this chapter, the local context of society, economy and ecology will be elaborated upon.

§5.1 Society

As wildlife tourism centres around wildlife parks and regions that ‘protect’ local wildlife (Eagles & Wade), it is also important to see the other side of this protection. Through legal structures, local communities are restricted from utilizing what may have been traditionally their land. As park authorities have stated in the 1930’s, “the interests of flora and fauna must come first, those of man and belongings being of secondary importance” (Kideghesho, 2011). While this statement is officially, perhaps, outdated, it may still have some truth when looking at the system surrounding tourism and wildlife tourism in particular. As Neumann (1998) states that by imposing a European ideal on these wildparks, the establishment of national parks has displaced African meanings to them and took away material access to the lands. It is therefore a reasonable question to ask, if wildlife conservation is not a threat to local communities and only a blessing for tourists. This question is further put on edge as the need for material access from local community further intensifies as populations grow and poverty perseveres. This motivates a serious discussion regarding the political, social, cultural and economic impacts of national parks throughout the world and the tourism they attract. In the section below, we will address the conservation history of Serengeti, the local communities surrounding Serengeti and the legal frameworks.

§5.1.1 Conservation History

With its official status of national park in 1940, Serengeti is among the first conservation areas in sub-Saharan Africa and a true milestone in the preservation of wildlife species in Africa. Tanzania, or Tanganyika as the mainland of Tanzania used to be called, was initially colonized by the German and after World War I the country became a British Protectorate. The British in their reign decided upon the status of the land. Opposing local interests, Major Richard Hingston in 1930, advised to install three national parks in Tanzania; Selous, Serengeti and Kilimanjaro. The new statuses were granted on the basis that all three areas had relatively low value otherwise to the rulers of the empire; the little rainfall, the insignificant mineral deposits and the presence of Tsetse flies in Serengeti, was reason to claim it a national park, rather than an area of exploitation (Kideghesho, 2010). Hingston’s advice was deeply opposed by local authorities because of the lack of benefit for local parties and thus, destabilization of the colony. Despite these arguments, Hingston’s advice was reinforced by the London Convention on Flora and Fauna in Africa in 1933. The convention strongly opposed the ‘destruction behavior of Africans to wildlife’, and park-management stated that ‘the interests of flora and fauna must come first, those of man and belongings being of secondary importance’.

This led to considerable protests under native inhabitants, that depended on this land for their earnings and livelihoods. In the East of Serengeti, Maasai protested the new laws actively, and in the west, local Ikoma threatened to shoot rangers with poisoned arrows when caught interfering with their hunting activities.

In the late 1950's, Bernhard Grizmek, who was hired to do aerial counts of animals in Serengeti, suggested to relieve the Ngorongoro crater, south-east of the Serengeti, from certain laws, as to accommodate groups such as the Maasai in their local practices (Kideghesho, 2010).

The history of Serengeti can roughly be divided into three phases; protection and control, community-outreach, and integrated ecosystem conservation and development.

The first phase, stemming from the colonial times, was a phase of strict government control on these protected areas. Between the 1890's and 1974, different protected areas were established and a so-called 'island' regime was in place, prohibiting any unauthorized interference with the wildlife in these areas (MNRT, 1985). For local communities, this meant that they would be prohibited of any agricultural activities in these protected areas, the end of legal hunting and occasionally eviction from settlement in this region.

After Tanzania's independence in 1961, the regime slowly transformed, and from the mid 1980's, the approach shifted away from exclusion to a community-outreach approach. As the conflicts and tensions between authorities and local settlers were persistent, it was recognized that successful wildlife conservation would require the involvement, rather than the resistance, of local communities. This approach was not focused on the direct improvement of the benefits of wildlife for local communities but more on the communication with local communities, education, and understanding of the value of wildlife. Results from this communication could be taken into account in decision making processes.

From this approach evolved an extensive system in which conservation and development were integrated in the wildlife protection policies. Attempts started to be made in particular to finding ways of making wildlife economically viable for local communities. Revenues made in park activities, such as hunting profits were shared with districts affected by wildlife conservation, and a fund was set up to support these districts. While this phase has had a positive influence on the relations between the park and communities, it still did not compensate local communities effectively for their economic disability to develop (Emerton & Mfunda, 1999).

Until this day, local communities and wildlife managers are faced with the fact that the local costs of wildlife far exceed the benefits that they yield. The approaches so far are no solutions for the real economic issues that two million people on the edges of Serengeti face.

§5.1.2 Local communities in and around the Serengeti

Over two million people live along the edges of Serengeti (Kaltenborn, Nyahongo, Kideghesho, 2011; Kideghesho, 2010). Agricultural lands, goldmines, water bodies and wildlife have been major factors in the migration of people towards Serengeti. The population rates around Serengeti are high, and the increase of population in these areas exceeds the national average of 2.9% (Kideghesho, 2010).

Serengeti is habited by thirty different tribes, such as the Maasai, Ishyenyi, Ukuma, Ikoma and Kisii. While most tribes living in the west are agropastoralists, the Maasai in the east are purely pastoralists. Pastoralists are concerned with animal husbandry only, so they keep livestock and nothing else, while agropastoralists include crop cultivation together with animal husbandry. All these tribes claim their own history and heritage in the Serengeti region. The impact of these people is considerable, as it is estimated that between 1910 and 1990, the amount of land with intact original vegetation has declined from 30.000 square kilometres to only 18.000 (Kideghesho, 2010).

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While one of the challenges facing the Serengeti is the practice of illegal hunting, for many tribes hunting is motivated by both economic and cultural reasons. The members of the Ikoma tribe for example, make up as much as 40% of 'poachers' in the Serengeti (Kideghesho, 2010) – but as hunting has been a coping mechanism to fight crippling poverty and extensive land pressure due to population growth, it may be worth discussing whether the legal system surrounding Serengeti is not blatantly offensive to local communities.

Due to increasing populations on the borders of the park and rising numbers of tourists to Serengeti, the park has lost an estimated 40% of its ecosystem due to human impact; having animal and plant species grow extinct and increasing overall pressure on the existing ecosystem in the Serengeti (Sinclair, 2000). 38% of Tanzania's territory exists out of protected areas, this is one of the highest rates on earth. However, these areas were assigned to be protected when Tanzania was home to about 10 million inhabitants, which has now quadrupled to over 43 million people (Serengeti Watch, n.d.). As mentioned, two million of these people live in villages surrounding Serengeti (See figure 4).

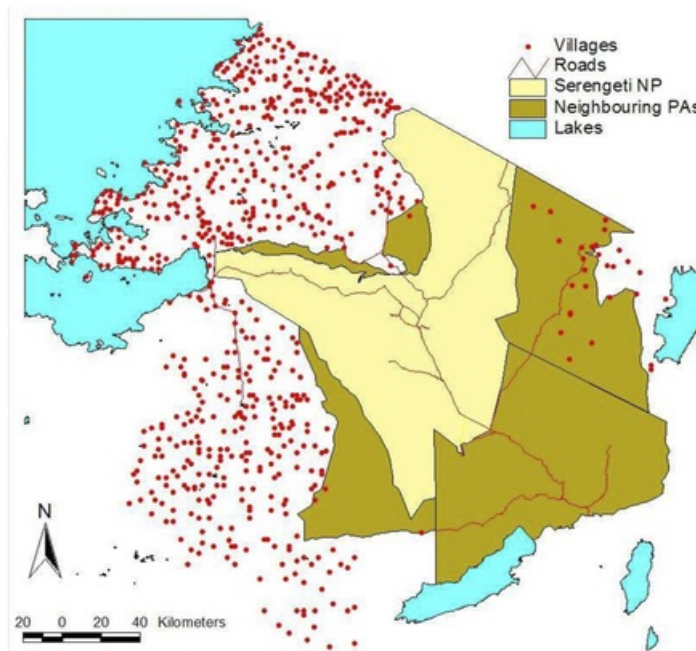


Figure 4. Villages surrounding Serengeti, Tanzania. (Serengeti Watch, n.d.)

The rising population rates in and around Serengeti also have as a consequence that there is an excessive increase on the pressure on land. Uses of land vary from the use of wood fuel, crop cultivation, grazing and

settlement, and are often uncontrolled and at the same time, uncontrollable under the circumstances of poverty. Without access to modern agricultural techniques, local communities in search for optimal crop production, are forced to annually expand to new land. Other options to wood as fuel are economically unfeasible for the poor, and thus leaves them with little alternative than to use wood at the expense of wildlife habitats (Kideghesho, 2010).

§5.1.3 Legal Frameworks

Serengeti has a 'national park' status, in contrast to other areas that are classified as conservation areas, national reserves or game reserves. For further understanding of the policies and processes underlying the tensions that occur between these regions and local communities, it is important to be aware of different legal structures.

Many of these wildlife conservation regimes, implemented by TANAPA and the national governments, overlay with agricultural needs. While these regimes are focused on the protection of land, tourism and wildlife, they are often insensitive to agriculture and stock farming of local communities (Emerton & Mfunda, 1999).

Some areas in Serengeti are under strict government protection. Legally, there are different forms of government wildlife protection, depending on the status of a region:

- National Park: This is the category that includes Serengeti National Park and allows no human residence or extraction of any national resources. National Parks in Tanzania are managed by TANAPA.
- Conservation Area (such as Ngorongoro): prohibits most consumptive wildlife utilisation, but allows some controlled pastoralist habitation and resource use. These areas are managed by a parastatal authority.
- National Reserve (such as Masai Mara): prohibits human residence or extraction of any natural resources. These areas are managed by a parastatal authority.
- Game Reserves (such as Maswa): allows for no human residence, but does allow for some consumptive uses of land, such as tourism-related hunting and game cropping. Game Reserves fall under the responsibility of the wildlife department of the ministry of Environment, Tourism and Natural resources.

Serengeti itself is thus under the authority of TANAPA, which is parastatal in itself too, and thus falls under the indirect authority of the national government of Tanzania.

§5.2 Environment

The ecosystem of Serengeti goes back over four million years, back to the beginning of human evolution. The most extraordinary asset of Serengeti is the largest annual migration of ungulates on the world. With an extraordinarily high amount of different ungulates, 28 different species, Serengeti holds herds bigger than any other on the planet. Evidence suggests that the ecosystem of Serengeti has been present in likely manners for over 1,5 million years, but it has not been static. Natural changes and human interventions have changed the ecosystem and new fauna have taken their place in the system, while others went extinct. By now,

conservationists have found that it is no longer sufficient to protect just single species, but that it is necessary to protect the entire ecosystem for the continuation of the ecosystem (Sinclair & Arcese, 1995).

Sadly, the attraction to certain species by tourists, is so strong that they overstep rules that are made to protect wildlife. This has in many instances caused a severe drop in wildlife, such as on the Galapagos Islands and in several parks in Kenya (Kaltenborn, Nyahongo & Kideghesho, 2011). Tourists tend to visit the most beautiful and unique locations, that are often extremely fragile. Local environments are degraded easily by these tourists, such as seen in Machu Picchu, where 500 barefoot Inca's have made room for 300.000 tourists in hiking boots, causing a monthly land slippage of 0,4 inches. Or when looking at a single cruise ship anchor dropping in a reef region, destroying coral reefs the size of 0,5 football field (Gmelch, 2004).

Due to many reasons fuelled by human population growth and poverty, such as overgrazing, deforestation and agricultural expansion, 65% of overall original wildlife habitat has been lost worldwide. This loss of habitat, has caused a dramatic decline in wildlife, which (mostly developing) states, are trying to conserve. But as wildlife conservation is expensive (around \$200-\$400 per square kilometre), and most states in emerging countries do not have the means nor the priorities to spend this kind of money on wildlife protection, it is difficult to save this habitat from poachers and those who rely on the potential use of land in this regions (Newmark & Houg, 2000). For example, in 1987, the Tanzanian budget for national parks was around \$3 per square kilometre, which is around 1/100 of the needed budget for sufficient conservation (Kideghesho, 2010).

Apart from the loss of habitat, environments are deeply polluted and natural resources are depleted by tourism – also, ironically by nature-based tourism. In the Grand Canyon, scenic helicopter flights add so much noise pollution to the region, that natural stillness can now only be experienced in one-third of the Canyon. Trekking groups in Nepal and around Mount Everest leave behind a trail of litter (Gmelch, 2004).

Wildlife and, thus, nature-based tourism, is so often located in the most vulnerable regions that are easily damaged and not easily protected against the wants and needs of (unknowing) tourists and their operators. While aiming to visit conserved regions, that are protected from human intervention and pollution, tourists degrade especially these areas. Regarding the Serengeti region, we will go in a bit more detail regarding the geography of Serengeti.

§5.2.1 Geography

The Serengeti ecosystem is surrounded mostly by natural borders. The rangelands in the north, the Loita hills and the Gol mountains in the East, the Eyasi escarpment in the south, and in the west by an area of cultivation, reaching up to Lake Victoria. The Serengeti ecosystem extends over 25.000 km², and has thus different vegetation types per region. The Serengeti national park exists out of wooded savannahs in the north, in the south-east treeless plains, while further to the east, closer to Ngorongoro, the terrain rises to massive highlands and woods (Emerton & Mfunda, 1999). The Serengeti ecosystem area also includes Ngorongoro conservation area, Grumeti Game Reserve, Masai Mara National Reserve, and other parks and reserves (See figure 5). Serengeti itself, however, stretches for 14,763 km² (TTB, 2016).

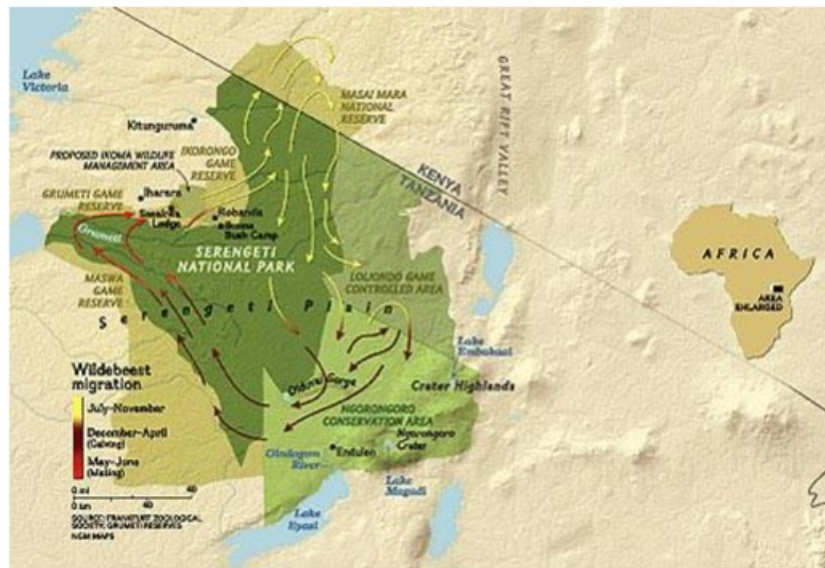


Figure 5. Map of Serengeti (National Geographic, n.d.)

Serengeti has a major conservation value as over 500 species of birds, 13 types of carnivores, and 28 different sorts of ungulates live in the region. This large amount of plains mammals have an important national economic value, as a source of tourism earnings (Emerton & Mfunda, 1999).

§5.3 Economy

Tanzania is a country that benefits from the tourism industry in terms of GDP and employment. 14% of the Tanzanian GDP comes from tourism income, and 1,3 million people are employed by it (WTTC, 2015). While it is on the 82nd place in the world when looking at GDP income from tourism, it is on the 30st place in terms of employment created by tourism. Tanzania thus has a high rate of employment related to tourism, and is for a part dependent of it.

From the 900.000 tourists that the Tanzanian National Parks attract, little over one third visit Serengeti National Park specifically, as numbers from 2012/2013 testify. TANAPA continues to invest in making experiences for tourists as exclusive as possible, by building hide-outs along rivers and creating 'VIP routes' for tourists to follow (TANAPA, 2013). As Tanzania's strategy for tourism is focused on high quality and high price, most accommodations in Serengeti qualify as 'luxury'. Of all the accommodations in Serengeti, 75% is qualified as 'luxury', with only eight tented camps that do not qualify so (ORD Group, n.d.). Throughout the park, tourism needs are facilitated by six lodges and 26 tented camps, of which all but 8 are qualified as 'luxury'. On the borders of the park there are a few lodges and campsites as well (ORD Group, n.d.)

From the tourists in National Parks, about 40% is domestic, and 60% foreign. From these foreign visitors, most come from the United States of America, the United Kingdom and Italy, above non-African nationalities. African visitors came mainly from Kenya, accounting for almost the same amount of visitors as those from the USA, Italy and the UK together. Over 71% of visitors come for purposes of holidays and leisure and stay for an average time of 10 nights in Tanzania (NBS, 2015).

About 58% of all tourists travel with 'tourist packages', spending an average of 372\$ per night, while those not traveling on packages spend about 201\$ per night. Most of the non-travel-package tourists are from neighbouring countries, rather than from overseas (NBS, 2015).

Chapter 6: Analysis

Throughout four interviews, 68 codes have been designed that have been divided in 11 different code 'families'. Those code families turned out to be divided upon the traditionally planned divides: Economy, Ecology, Socio-Cultural, Solutions, Continue Tourism and Stop Tourism. Yet five codes have been added as the showed to be relevant and convenient to use;

Contemporary; as much of the interviewees' information derived from contemporary knowledge on the current state of events in the Serengeti, this is a code family that bundles all current affairs discussed. Under this family are codes such as 'Factual', 'Land Use', 'Impact Tourism' and 'Impact Population'.

Local Communities; local communities were a much discussed topic, that overreached just a social or economic aspect of them, but in a much broader senses. Although all codes under Local Communities are also divided in one of the other families, it is relevant to bundle all information regarding local communities under one family for analysis.

Political/Government; many of either current situations, difficulties and solutions were placed in a political or governmental spectrum by the interviewees, it felt necessary to add this dimension as a relevant distinction between types of problems and solutions. Under this family are codes that refer to quotations in which some kind of political interference is required.

Interviewees; This family bundles the different codes of the interviewees ("JA", "EK", "PL", "SH") for convenience sake to be able to get broad overviews of their overall arguments.

Interview Process; in each interview there a basic part is included that provides the interviewee with information regarding the structure of the interview, these parts have been coded to the family 'interview process' as they do not provide any addition to the answers given by the interviewees.

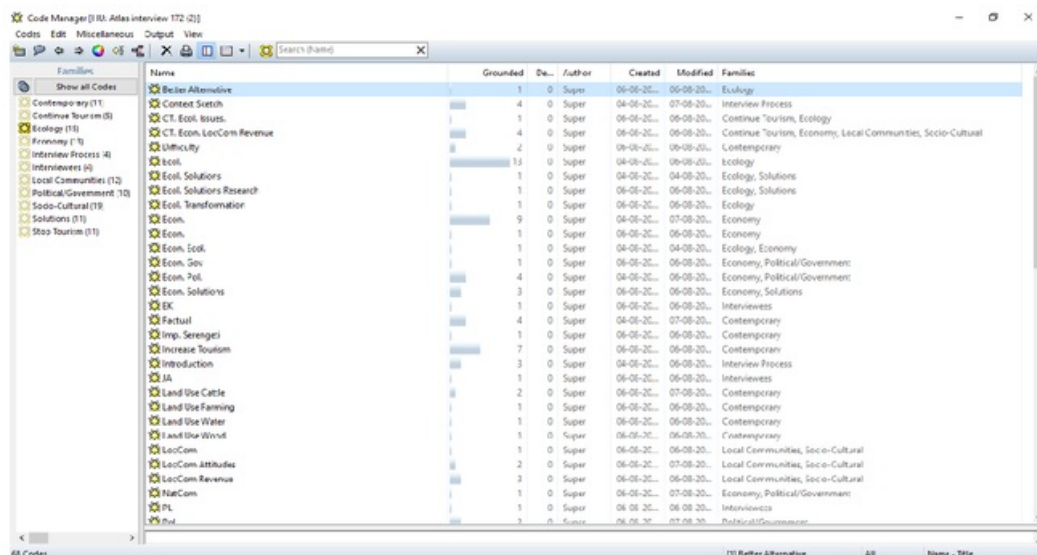


Figure 6. Screenshot Atlas.ti. Code Manager, August 8

§6.1 What if Tourism would be stopped right now?

§6.1.1 Ecology

As discussed before, many ecosystems that attract tourists are highly vulnerable and located in peripheral areas where local communities have limited economic and political power. The regions themselves often experience little economic development and, ironically, this is often exactly what attracts tourists to them. The lack of development, increased by poverty, susceptibility of states and poor planning creates what others experience as ‘unspoiltness’ (Hall & Boyd, 2005). Poor countries often have the ‘benefit’ of this unspoiltness (undeveloped-ness) of nature, but this does not seem to be able to feed, or in any way benefit, local populations as both the consumption and creation of tourism are subject to the wealthy (Hall, 2007). That is why it is reasonable to question whether or not it is better to stop touristic development overall, for ecological, socio-cultural and economic reasons. Degazettement, the stop of legal protection of a region, would be the alternative that is discussed.

Throughout the interviews, different arguments have been offered of which parts have been coded as so called “ecological” arguments. Most of them, however, are deeply intertwined with other arguments as well. Five out of eleven codes assigned to the Stop Tourism Family have an ecological character, varying between different land-use to protectionist arguments. All interviewees agree that the main effect of stopping tourism would be a dramatic change in the land-use of the park. While this change has a strong base in economic and socio-cultural reasons, in this paragraph we will focus on the ecological effects of this change. As Kidegesho (2010) has already explained, the communities in and surrounding the Serengeti are usually either farming communities or agropastoralists. The change that degazetting the Serengeti would bring along, has different effects on their use of land (J. Anderson, Personal Communication, July 19, 2016). Leroy, Hollevoet, Kinsey and Anderson agree that the land use would immediately become remarkably different, which has as a direct cause the disappearing protection policy of the region and comes out in different forms. In Figure 7 you can see how the different codes interact with each other.

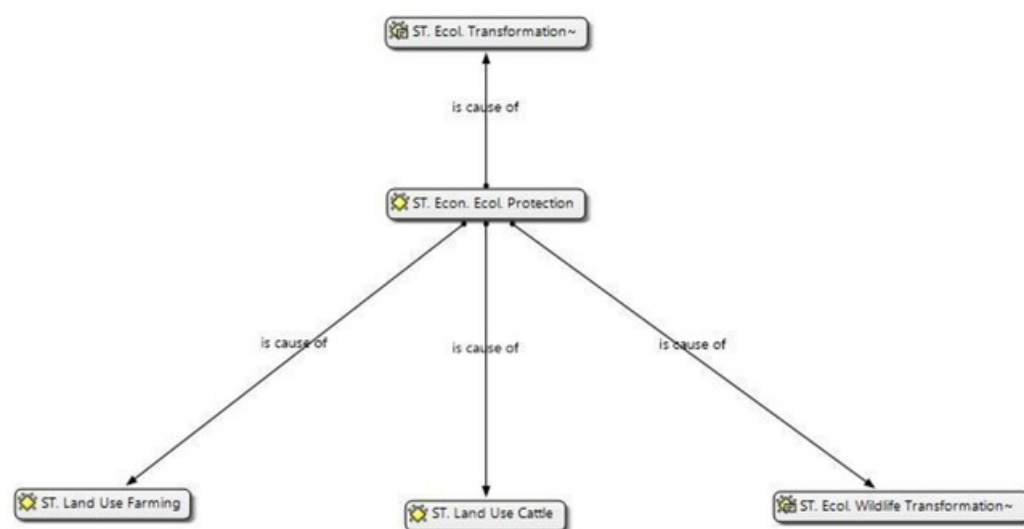


Figure 7. Network Ecology Atlas.ti

The ending of the protection regime of Serengeti national park will leave the people with no economic or other incentives to further sustain the natural assets that Serengeti national park holds now. As such, all interviewees agree that land will be quite immediately allocated as land for farming and grazing purposes. On the different sides of the park, this will have different impacts. Jo Anderson (Personal Communication, July 23, 2016) explains, that those living on the west and north side of the park, would immediately engage in agriculture and grazing purposes, on the east side it would be mostly focused on grazing. To make the area fit for these purposes, bush will be burned and savannah and scrubs converted to more appropriate grazing land (Jo Anderson, personal communication, July 23, 2016). Next to that, stopping tourism would have an immediate impact on the wildlife in Serengeti. As Anderson exclaims, large carnivores would be immediately killed because of the discomfort that they bring upon human life. All interviewees agree that, when the park is degazetted, wild animals will become victim of the end of the protection regime. Slowly but surely they will fall prey for poachers or be otherwise killed for the purpose of eliminating risk and inconvenience and/or animal produce such as meat, skin, ivory and bones.

§6.1.2 Socio-cultural

Would the Serengeti Park be degazetted, it would have various effects on different communities surrounding the parks, both in societies and in wealth (E. Kinsey, Personal Communication, July 19, 2016). On the west-side of the park we would see that tribes with a grazing culture would be able to further expand their grazing herds and, as such, would increase their wealth (J. Anderson, Personal Communication, July 23, 2016).

Anderson explains how, also on the east-side of the region, local communities would extend their farmland and acquire more land, experiencing the degazettement of the park as an ultimate win.

For communities surrounding Serengeti, degazettement would lead to more grazing land, larger herds, more farmland and more opportunities in terms of (fire) wood collection and water.

However, Leroy, Professor at the Radboud University, specialized on political sciences of the environment, defends that in his vision the stop of overall tourism would not at all benefit the ecology, nor local communities. As Leroy points out, stopping tourism will leave a large area of open land free for communities to seize. With the risk of local populists taking over and a power-struggle with regards to the division of land, Leroy sees risk for violent, armed conflict over land to arise when tourism would vanish.

His words are echoed by safari company owner Ethan Kinsey, who, although acknowledging the issues regarding tourism towards local communities and the environment, is too a believer that stopping tourism will only offer short-term solutions. With further pressing population growth, that is still predicted to continue, in the long term, the population will quickly catch up with this suddenly released land which may still lead to internal conflicts.

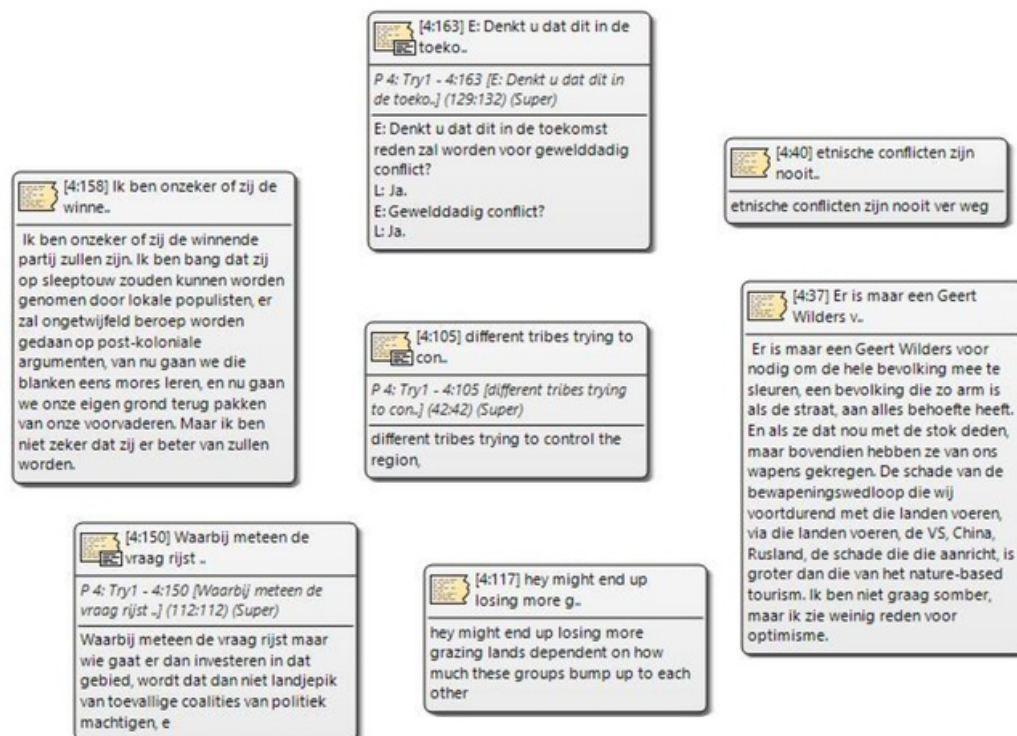


Figure 8. Quote Overview Conflict Code Atlas ti

§6.1.3 Economy

If tourism in Serengeti would stop, according to Pieter Leroy, that would be insurmountable for the Tanzanian economy. As we have established that Tourism employs about 1,3 million people in Tanzania and amounts for 14% of the GDP, the loss of Serengeti tourism in this picture would be something that Tanzania, and its people, would not be the beneficiaries of (P. Leroy, Personal Communication, July 12, 2016).

Although the peoples surrounding Serengeti, with special regards to the farmers and agropastoralists, will surely advocate benefit from the stop of tourism for their communities, there is discussion on whether or not it will benefit them in the long term. As 60% of park revenues, the income that TANAPA owned parks make, is immediately disposed to the national treasury, many social benefits are paid immediately from these revenues, such as payment of teachers in communities (J. Anderson, Personal Communication, July 23, 2016).

As a whole, regarding economy, we can speak of different scale levels. While all interviewees agree upon the fact that tourism is beneficial for Tanzania as a whole, and its population, there is some discussion on the effect that tourism has on the local communities. Kinsey (Personal Communication, July 19, 2016) sees that local communities benefit from tourism, but not enough. The examples of locally beneficial structures with regard to tourism are scarce, and often through sporadic employment opportunities in lodges, that trickle down on families and small-scale communities along the edges of Serengeti. In Kinsey's point of view, the stop of tourism would not have a significant impact on the communities, that would economically benefit more from the ability to graze their cattle and farm. Even more so, Kinsey believes that there would be opportunity for Masaai to capture some of the revenue of tourism when the park would be degazetted.

Anderson (Personal Communication, July 23, 2016) however, disagrees with the latter, and sees no opportunity for communities to remain benefitting from the wildlife when tourism would be stopped. Lack of infrastructure and outside interest would kill off overall revenue opportunities. On a local scale, he is, as are Hollevoet and Leroy (Personal Communication July 28; July 12, 2016), a bit more optimistic on the advantages that local communities gain through tourism. Anderson, Hollevoet and Leroy support the image through employment in lodges, a trickle-down effect in local communities does take place that further helps local communities to develop.

Stopping tourism, according to the interviewees, would be economically devastating for Tanzania, with no possibilities to compensate a loss of 14% GDP. However, on a local scale, local communities do have potential economic benefit to gain from degazetting the park.

§6.2 Current Trends Modern day tourism in the Serengeti region

Throughout the literature research so far, three trends appear to be very important when looking at tourism and assessing the potential future of tourism. These trends are shared with the interviewees, in order for them to better shape their perspective on the future of tourism for the Serengeti regions when these trends take their hold on Tanzania, too. The first of these trends is the expected growth in world-wide tourism as a whole in the nearby future. The UNWTO (2015) expects tourism to grow from 1,2 billion to 1,8 billion global travellers every year in 2030. Along with that, they have stated that in the current situation 45% of tourists travel to developing countries in Africa and Asia and the Pacific and that they expect the biggest increase in tourism to be in specifically these developing countries. These travellers, directed at less developed countries, are quite often, as in the case of Tanzania, attracted to the nature specifically. In Tanzania for example we see that five out of six tourists come to Tanzania to see the wildlife, rather than anything else (TANAPA, 2013). This statement is also supported by the UNWTO, that expects the larger part of the tourists who travel to Sub-Saharan Africa, to be nature-based (UNWTO, 2015).

Secondly, Tanzanian population is expected to increase at a high rate. The World Population Review (2016) expects the population to grow with 3% each year, having over 82 million citizens by 2030. Together with that, pressure on the land is expected to increase, as are the needs of people for water, fuel and food (Worldbank, 2012).

These factors combined can indicate a rising tension between tourism and the population, as 38% of the Tanzanian land is currently assigned to tourism purposes and thus falls under protectionist regimes, that do not allow for human residence nor extraction of natural resources from this land.

§6.3 What will the future of Serengeti when the tourism trends continue?

There are significant risks that come with the continuation of tourism in the Serengeti. Further increasing pressure that might be part of growing populations and uprising nature-based tourism can degrade ecology, the situation of local communities and even economy. However, tourism also brings opportunities: it legitimizes nature conservation as an economical asset, and, in best-case-scenario's, also generates income for local communities (Dietz, 2008). Remarkably, most of the quotes and codes linked to the continuation of tourism are linked to difficulties seen ahead, yet usually phrased as contemporary problems that will need

solutions in the nearby future. Only four codes have been specifically assigned to the code family 'Continue Tourism'.

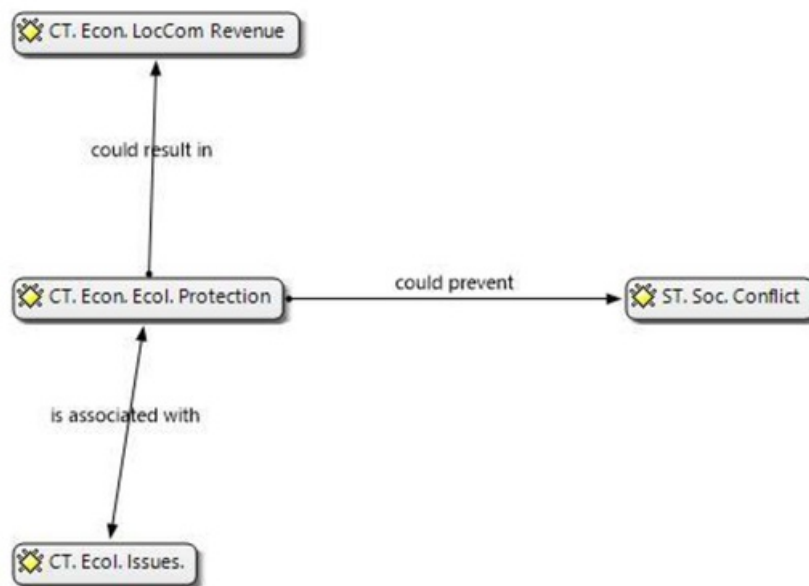


Figure 9. Code Overview Continuation Tourism Atlas.ti

The network seen in Figure 9 can be understood as the key building stones on which the arguments regarding the continuation of tourism are built. As tourism does provide economic incentive for ecological protection (CT. Econ. Ecol. Protection), this can, in the eyes of Kinsey (Personal Communication, July 19, 2016), Leroy (Personal Communication, July 12, 2016) and Anderson (Personal Communication, July 23, 2016) result in to potential revenue for local communities (CT. Econ. LocCom Revenue), while at the same time, all interviewees see that tourism will eventually lead to ecological disturbances in the region (CT. Ecol. Issues). A viewpoint introduced by Leroy and Kinsey is as well, that the continuation of tourism will very likely prevent large social conflict to break out in the region.

§6.3.1 Ecology

The experts, both in literature (Sinclair & Arcese, 1995; Kaltenborn, Nyahongo & Kidegesho 2011; Gmelch, 2004) and those interviewed, agree that tourism does have a negative impact on the ecology of the region. If tourism were to continue, significant risks would threaten the existence of Serengeti. However, when tourism will continue to grow steadily in the Serengeti region, ecologically, changes would, on the short-term, not be dramatic. One of the risks that the Serengeti does face in increasing intensity, is the destabilizing influence on Serengeti's ecosystem of the amount of touristic vehicles (S. Hollevoet, Personal Communication, July 29, 2016) that crowd the most popular regions in Serengeti. Ethan Kinsey (Personal Communication, July 19, 2016) regards the threat of non-local plant species, travelling on the wheels and feet of touristic vehicles as a severe threat to plant and animal species on which these plant species touch upon. All interviewees agree that tourism in itself harbors a threat for the Serengeti ecosystem, through the impact of pollution and interference in the natural ecosystem. From the code family "Continue Tourism", two out of five codes refer to ecological impact. However, the remaining of the protection policy on Serengeti will also have as a result that economic

incentives will stay in place to protect the area and its wildlife, potentially resulting in the successful conservation of the Serengeti (J. Anderson, Personal Communication, July 23, 2016; E. Kinsey, Personal Communication, July 19, 2016; P. Leroy, Personal Communication, July 12, 2016).

§6.3.2 Socio-Cultural

The continuation of tourism would be paired with maintaining of the protectionist regime over the Serengeti region; not allowing human residence or extraction of natural resources from the park. Continuing tourism will eventually have to deal with increasing population pressure from, especially, the west-side of the Serengeti (S. Hollevoet, Personal Communication, July 28, 2016). The land hunger, the need for farming and grazing land and living space, that will further increase with growing populations may lead to increasing ambivalence in the attitudes of surrounding communities towards the Serengeti (P. Leroy, Personal Communication, July 12, 2016). The ambivalence, already in place due to unclear economic benefits of the park for the local population (J. Anderson, Personal Communication, July 23, 2016) and the initial 'infringement' on indigenous peoples' rights stemming from 1928, may increase with more pressing needs of the population (P. Leroy, Personal Communication July 12, 2016). This ambivalence is even more so paired with difficulty in maintaining livelihoods in coexistence with wildlife and the lack of policy aimed at regulating this coexistence (S. Hollevoet, Personal Communication, July 28, 2016). Overall, all interviewees agree that the main difficulties in the future will stem from lack of involvement, economic benefit and understanding of the local population which will likely be cause for tension in the future.

§6.3.3 Economy

Looking at economic prospects for Tanzania and local communities, it is right to make a divide between those two scale levels. The interviewees are cautiously optimistic about the economic prospects, while all of them acknowledge the lack of benefit for local communities, to which the last paragraph also ties in. However, Jo Anderson (Personal Communication, July 28, 2016) for example explains how, although local communities might not benefit sufficiently directly, overall revenues of the tourism industry are invested in social benefits for the Tanzanian population, such as schooling and housing, the building of dispensaries and shops. He cautiously hopes to think that the Tanzanian government would continue to spend its revenues in a socially responsible way. Pieter Leroy (Personal Communication, July 12, 2016) is a bit more cautious in his optimism, doubting whether touristic revenues are actually spent on local tribes, or whether foreign exchange flows out of the country in to Western tourist companies. Ethan Kinsey (Personal Communication, July 19, 2016) sees how TANAPA hopes to increase tourist visitors in Serengeti and even sees potential for tourism

"So that money, we do know that that money helps Tanzanian economy, and if it increases we would hope that the government would continue to spend that money on services. So yes increasing these numbers at that level would immediately increase revenue and it would increase the delivery of services. What is much harder to understand is how the people living close to the national park feel about what benefits they receive. And the fact is they receive these benefits in a very indirect way, on education or health as a result of the treasury receiving that money.... So I imagine that a lot of people around the parts understand or feel that they really benefit from tourism, and increased tourism I don't think they feel like they would benefit from that either."

(J. Anderson, Personal Communication, July 28, 2016)

to be able to double in the future, while recognizing that this is only possible with good management and policies in place. All interviewees acknowledge an uneven distribution of burdens and benefits with regards to tourism, with certain burdens often placed on local communities in the form of opportunity costs, while little of the benefits of tourism, at least economically, flow back to these same communities. Regarding Tanzania as a country, the interviewees do recognize tourism as a vital, if not important, industry for the Tanzanian government as the Tanzanian people.

§6.4 Differences

§6.4.1 Ecology

While there is consensus over the negative ecologic impact of tourism, there is also a question whether or not this impact is any worse from the impact that would be created by degazetting the park for community benefit, as discussed in one of the previous chapters. What the interviewees seem to agree upon, is that the continuation of tourism in the Serengeti is the least of two evils. While tourism does have a significant impact, the ecology of the region and the wildlife living in Serengeti would be much more negatively impacted when the region would become subject to land-transformation in the form of land-use; the grazing and farming purposes discussed in chapter 6.1.1. Furthermore, continuation of tourism in the Serengeti will safeguard policy directed at ecology in the region, that will continue to protect wildlife and plant species.

In the scenario of a stop of tourism you will see great loss of wildlife and a dramatic change in the land-use of the region, expected to express itself in farming and grazing use. When tourism will continue, you do not see any of these changes, but rather an increased pressure that is exerted by touristic activity, leading to potential disturbances of wildlife and plant species.

Especially as tourism is expected to grow, policies should be put in place to manage the tourism streams and safeguard the ecological values and keystone species of the region. As these policies are barely in place in Serengeti, with no visitors cap, and in some regions even permitted off-road driving, this is something that is indeed threatening the ecological well-being of the region.

§6.4.2 Socio-Cultural

All respondents testify that local communities in and in the surroundings of the Serengeti do not benefit substantially, or enough, from the tourism revenues of Serengeti. Although there are existing efforts, such as Integrated Conservation and Development Projects (ICDP's) (Newmark & Houg, 2000) and Pro-Poor Tourism (Hall, 2007), that are supposed to help institutions and governments to make tourism more beneficial for local communities and the poor in particular, there are currently little to no incentives from government or other institutions to act out these strategies. Looking at the question from a socio-cultural point of view, the scenario of park-degazettement would shift the socio-cultural dynamic dramatically. As the land would be open to community use, communities would immediately utilize the land for farming and grazing practices. This could potentially result in to a variety of conflicts between those communities over land, water and other resources. Even more so, although some communities will definitely feel as if their wealth and status has approved, there is question whether degazettement would indeed benefit the local communities on the long run, as infrastructure and social benefits would wither after tourism would be stopped. The potential conflict that may arise is a serious concern too for local communities in the region.

However, as local communities feel as if they are barely benefitting from the tourism sector as it is right now, conflict between community and authorities may also be on the rise when this situation is further fueled by population growth and growing tourism. When tourism would continue, the issues of land and water pressure will remain and will, likely, further increase too. The already existing conflict between man and wildlife, that in the first scenario could be dealt with by killing off the wildlife, will in the scenario of continuation of tourism become more pressing for local communities.

Either scenario does not look good on the long term for communities living alongside of Serengeti. Pressure is bound to build up, even when the park would be degazetted. It is therefore important to make sure that before this pressure reaches dramatic heights, policies will be in place that ensure benefit of tourism for local communities and opportunities to balance out the burdens that the existence of the park enforces on those living on the edges of it.

§6.4.3 Economy

Economically, the end of tourism in the Serengeti would most likely be a disaster for Tanzania as a whole, although it might be considered an economic win for local communities surrounding the Serengeti. As local communities could expand farms and grazing herds, in their economic system this would mean a wealthier life and thus the preferred option. This ties in closely with the fact that, while government spending is suspected to actually provide local communities with economic and social benefits, most local communities do not see the direct benefit of tourism for their own livelihoods. So on the scale of the country, you see that Tanzania profits tremendously from tourism, acquiring 14% GDP income and employing 1,3 million people in the country. On the scale of local communities however, there is a restraining effect of the parks protective regime that leads to opportunity costs that local communities make in terms of the lack of farming and grazing ground that they can actually make use of. More so, the economic value that their ground has, is occasionally disturbed by interference from wildlife, such as elephants trampling farming ground and large carnivores preying on their cattle. The scales of economic value are in this way very much divided. Adding the fact that local communities are not informed sufficiently of the government spending and the economic value of tourism, as well as merely ad hoc decisions by TANAPA which occasionally provides dispensaries or schools for local communities from touristic revenues, there is a tension building in which local communities feel as if they are separated from the benefits that tourism brings.

In short, it can be understood that the scenario of stopping tourism would bring a temporary win for local communities surrounding Serengeti, as long as conflict does not arise, which is but the question when it comes to suddenly opened up land. On the scale of Tanzania, however, stopping tourism would be devastating, as it would be unlikely that the country could replace 14% GDP with any other sector. Given the infrastructure and the institutions surrounding tourism right now, of which a large part is due to the Serengeti, finding a fit to replace all of this would be considered close to impossible. When tourism would continue, it would still mean that local communities would feel as if they benefit barely from tourism, which is fair, as apart from the government spending towards their communities, they are barely involved in the tourism industry through employment or sales of their products. The touristic heart and its employees can at this point be found in the larger Tanzanian cities, such as Arusha, instead of closer to Serengeti's borders.

Regardless, there is potential to find a win-win solution, when communities surrounding Serengeti would be more involved in the touristic sector, as employees, as salespersons of crops and other goods and as owners of land and cattle that can live harmoniously with the Serengeti's wildlife and its ecosystem.

§6.5 Weighing the differences

When discussed with the interviewees, the topic was repeatedly called 'a dilemma' that was going to be difficult to solve. Neither alternative seems to look pretty when no interference is in place. Neither scenario is an option for the sustainable continuation of tourism in the Serengeti. Both scenarios at this point display to likely result in to conflict, either between communities surrounding Serengeti, between man and wildlife or between these communities and the authorities. This risk of conflict is based in different needs of different parties involved with tourism; economically, ecologically and socially. While we do see that continuing tourism would be the preferred scenario economically on the long run, we must also realize that a strong basis for conflict lies in the way that the economic profit is divided by both the country and touristic operations. Although we realize that upholding the ecosystem and its wildlife can only be done through a protection regime, we also see that it is this protection regime that will be at risk the more the population of Tanzania will grow. Socially, apart from the potential for conflict, questions arise whether locally successful livelihoods can only thrive when expanding herds and farming grounds, and whether the profit made through tourism should be more directed at those who do not have these opportunities due to the park.

Overall, the differences between the two scenarios are enormous, yet none are preferable to maintain a sustainable future for the park and its people.

Chapter 7: Amelioration: Which strategies are possible to sustainably continue tourism in Serengeti?

The interviewees have been very much focused on formulating future perspectives for the Serengeti and its nature-based tourism, which in all cases requires measures to make sure the future of Serengeti is sustainable. All interviewees have acknowledged the dilemma that the tourism in Serengeti is facing, and that the current situation in place should be subject to dramatic changes in order to let Serengeti tourism continue (See Figure 10).



Figure 10. Quotes Atlas.ti: change and the dilemma.

The interviewees do offer different potential ameliorations to manage the future of Serengeti, of which the most prominent ones will be discussed. Two sub-divides can be made in the requirements of policy change, of which one is focused on socio-political changes, implying measurements in policy and institutions initiated by government and authorities (Figure 11).

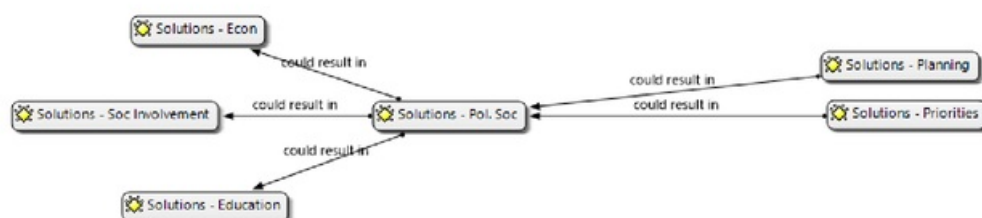


Figure 11. Network View Socio-Political Solutions Atlas.ti

In this branch of solutions, it starts with changes in planning and prioritisation of authorities, resulting in Socio-political measures that could result in economic measures and those of social involvement and education.

The second is not neglecting authorities, but is rather specifically focused on in-park changes with special regards to ecology, as explained in Figure 12.

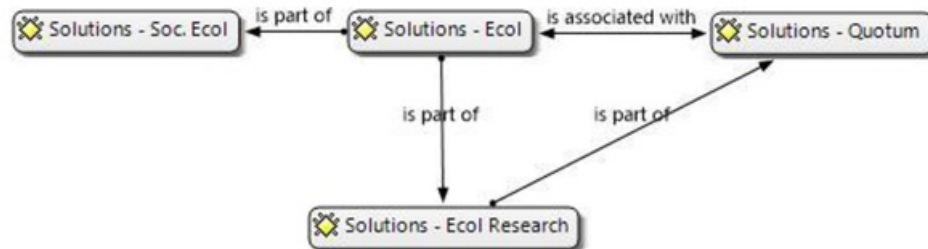


Figure 12. Network View Ecological Solutions Atlas.ti

The more ecologically focused solutions start from ecologically improving and maintaining Serengeti, and doing that through ecological research, that could potentially result in setting quota for visitors and vehicles, while also improving socio-ecological relationships.

§7.1 Socio-Political Measures

In the socio-political realm of events, many suggestions are at hand by the interviewees. Overall, Serengeti will mostly need policy change to be able to face the challenges that the future of Serengeti will bring. In order to safeguard this, policy change must start with planning and prioritisation of the government towards wildlife and all its features. As Hollevoet (Personal Communication, July 28, 2016) states; the Tanzanian government must start planning carefully and ahead, instead of reacting to problems when they have already taken place. Hollevoet pleads for using the prognoses that we have at hand regarding population growth, employment etc. to start planning for the needs of the Tanzanian population. Secondly, Hollevoet supports argues for the (re-)prioritisation of the Tanzanian government. While he has optimistically stated that Tanzania's new President, Magufuli, is much more involved with maintaining, preserving and improving wildlife than his predecessor, President Kikwete, he is doubtful whether the priorities of the government are as focused of the upcoming issues as they should be. In order to move towards real implementations of strategies, the Tanzanian government should at least have the priorities and the willingness to plan ahead to continue to more tangible steps.

As discussed, the main tension that lies in the future of Serengeti is that between man and nature, and the seemingly unfair distribution of burdens and benefits between all those involved. All interviewees urge for education to surrounding communities with the goals in mind of taking away NIMBY (Not In My Back Yard) feelings amongst local populations (P. Leroy, Personal Communication, July 12, 2016) and learning locals to understand both the current revenue of tourism, while introducing them to revenue possibilities with regards to this. Meanwhile, all interviewees agree that local communities do not benefit sufficiently, if at all, from the tourism industry in Serengeti – which is why understanding alone will not solve the problems that

Serengeti faces, but does contribute to it. To really get to the core of the problem, Leroy (Personal Communication, July 12, 2016) and Anderson (Personal Communication, July 23, 2016) agree that a solution must be found to distribute the benefits of tourism more fairly, also over those who primarily carry the burden of it. A solution to this could be, according to Anderson and Hollevoet, to involve communities in land-planning activities regarding the park and surrounding areas and involving communities more actively in tourism. This also requires to have clear land rights for families and individuals who own land in the surrounding communities. Kinsey adds, that while there are currently no incentives for lodges to employ people from local communities, setting these up on a government level could significantly improve the trickledown effect of tourism-employment to local communities.

§7.2 Ecological Measures

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Different ecological measures can be taken that safeguard the quality of the natural environment and the existing wildlife in the park. Mr. Leroy (Personal Communication, July 12, 2016) has recommended a cap policy on aspects such as the maximum amount of tourists, vehicles, hotel beds and other restrictive policies that can manage the ecological impact of tourism in the Serengeti. Kinsey (Personal Communication, July 19, 2016) recalls that there are no such policies currently in place. Through capping certain inflows of tourism, ecological risk can be limited to a certain amount. Tying in on that is Mr. Kinsey's (Personal Communication, July 19, 2016) approach of better flow of ecological research to policy decision-making processes. As there are multiple research institutes involved with the Serengeti, yet it is unclear to what extent this research has an actual impact on the policies made for Serengeti. Through ecological research, problems can be identified and solutions can be created, but at this point there is no clear feed of research in to the decision making of TANAPA. This policy creating should be fed by ecological monitoring and feedback, instead of the current motives that can roughly be described as increasing capacity and preservation (instead of improvement) of nature and wildlife.

Lastly, multiple interviewees have seen the tension between local populations and wildlife. As stated in chapter 6.1, wildlife would most likely be a very immediate victim of stopping the protection regime, as it is also an inconvenient factor to local populations. Large carnivores are a direct threat to human life, but other wildlife also impacts quality of life by possible destruction of farms and livelihoods in local communities. One solution that can be brought to solve this is the introduction of strategies that minimize the tensions between local communities and wildlife. Mr. Hollevoet (Personal Communication, July 28, 2016) offers a simple solution to at least investigate the possibilities of physical boundaries between man and animals. He also suggest platform creation for understanding and support of wildlife and its potential benefits for local communities as a whole. In Figure 13, you see some of the examples coming forward from the interviews which sum up the solutions that regard ecology in particular.

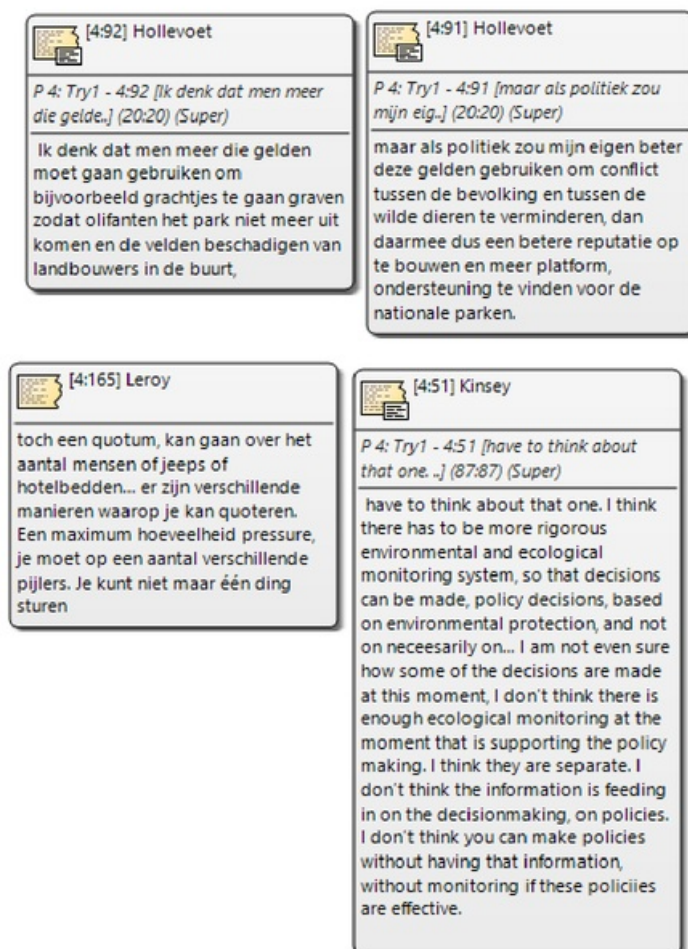


Figure 13. Quotes Ecological Solutions.

§7.3 Analyse impacts and ameliorations

The impact of tourism, as discussed so far, is enormously relevant for the country as a whole. Seeing what the stop or the uninterrupted continuation of tourism would do with the country and its communities indicates that touristic impact is there, that it is significant and that it is in need of amelioration to manage it. The solutions discussed in the previous paragraphs are of two different types: Ecological and Socio-Political. Suggested is to apply both forms of solutions to reach for optimal results. However, the starting point for amelioration is clear, starting from the government prioritising and starting up far-ahead planning processes for land development. When government acknowledges the impact and takes position to mitigate the issues that may arise from that, Tanzania can take a significant step forward in successfully managing tourism within its country. From there on, there are multiple options to lessen the impact and improve social attitude and relations between those involved. Primarily, it is urged for government and TANAPA to involve local communities in land planning, but also in potential benefit from tourism and education programmes towards wildlife and protection of the ecosystem. This should in every way be supported by legitimate ecological research and the outcomes of this should be applied in policy, but also in learning programmes.

The alternatives without any interference from the state will look chaotic and harmful for both the ecology of Serengeti and the people of Tanzania. Conflict and ecological degradation are going to be key perspectives in either scenario, without adequate interference.

Chapter 8: Conclusion

Throughout this research, we have sought to begin a discussion about nature-based tourism and its impact on ecology, economy and society in those areas that are subject to this kind of tourism. This research has been conducted throughout four in-depth interviews with experts and involved parties to the Serengeti tourism case, however, as these do not fully reflect the wide range of involved actors in tourism, nor that involved in Serengeti, the conclusions of this research must be understood in consideration of the limited amount of perspectives that are used to base these conclusions on. Being fully aware of this, the conclusions of this research seek to open up conversation on nature-based tourism and its' impact and relevance to Tanzania and the Tanzanian population. In order to achieve this, the following research questions have been formulated at the beginning of the study:

How can nature-based tourism be continued sustainably in the future for all parties involved in the Serengeti region?

This question has been divided in to different sub-questions, that address ecology, economy and society and that will help to develop a well-rounded description of the impact caused:

- *What is potentially the future of Serengeti when all wildlife-tourism will be stopped?*
- *What is potentially the future of Serengeti when current tourism trends will continue?*

Through different interviews and analysis of the data acquired through these interviews, answers have been found throughout the process. By discussing both sub-questions first, we will lead up to answering the main question of this research. Throughout this chapter, the halt of tourism will be discussed first, where after the continuation will follow and lastly the sustainable future of Serengeti shall be deliberated upon, with the potential measures that could ensure this.

When tourism in Serengeti would be put to a halt, it is very likely that this would result in to a very unwanted situation for Tanzania and its people. It has become clear that stopping tourism would very likely not address the social problems that tourism causes. The population growth and the tensions between man and nature cannot be dealt with on the long term by degazetting the park as a whole. Although local communities would likely support the idea of degazettement for grazing and farming purposes, it would also bring along serious risk for violent conflict to arise between tribes and communities fighting over land and other resources. At the same time, local communities would immediately take on the land and make it utilisable for them, by cutting down wood, burning bush, and killing the existing wildlife in the park. This would ecologically be disastrous, as the Serengeti ecosystem would be destroyed; likely resulting in to further consequences that could reach on a local, national, regional and global scale. There is no telling what exactly the consequences would be on the long term if an ecosystem this size would be swept away, yet the big change in itself is reason for concern. The Tanzanian economy would not be expected to recover from a loss of 14% GDP revenue, currently acquired through tourism. While many local communities do not immediately enjoy the benefits of tourism, much of the money earned through tourism is likely to be spent on community benefits and thus stopping tourism would decrease those benefits as well. Even more so, as many Tanzanians are employed through tourism and thus also finance their spending in cities and their own communities, the

trickledown effect of tourism-employment would also diminish. Overall, when tourism would be brought to a halt, the picture on both the short and long term does not look well, even though on the short term, local communities might advocate differently.

At the same time, the experts in literature and in the interviews agree that continuing tourism, with a rapidly increasing population and fast-growing (nature-based) tourism sector, would not result in to great prospects either. Growing tourism numbers may bring along more foreign exchange and spending in Tanzania, the current economic policies surrounding this income does not substantially benefit those who do carry the burden of tourism. That, combined with growing population rates and thus a bigger need for land, water, food and resources, will very likely lead to increasing tension of the Tanzanian population towards the regime. Furthermore, increasing tourism rates will bring along a large ecologic toll, if no measures are taken. More vehicles and tourists will disrupt the ecologic system in Serengeti and has potential to destroy it through harmful activity in the park and the introduction of unfamiliar plant species to a vulnerable ecosystem. However, the economic impact of Serengeti is so relevant for Tanzania as a whole, that the country would likely benefit greatly from larger numbers of tourists visiting Tanzania, at least on the short term.

Agreeing upon the tensions that both extreme situations bring along, there is need to indeed ensure ourselves of a sustainable way of continuing nature-based tourism in the Serengeti in a sustainable way for all parties involved. Not involving all parties will inherently lead to tension and conflict, resulting in far more drastic changes than necessary to be able to continue nature-based tourism safely and sustainably. The question does remain; how to do it? As many options have been offered through this research, the focus is on two kinds of solutions: ecological in-park improvement, and socio-governmental policy change. As such, it is suggested that within the ecological spectrum, TANAPA searches for ways to safeguard local communities from their struggle with wildlife to protect both sides of the conflict. Meanwhile, TANAPA is strongly urged to apply the knowledge gathered through elaborate ecological research in their policy decisions regarding the park, including the possibility that, when and if necessary, they could install caps on maximum amounts of visitors, vehicles or hotel beds with in the park. All this is to ensure the ecological prosperity of the park and to be able to continue to attract tourists to enjoy the beauty of the wildlife and the landscapes.

Within the socio-governmental practice, it is of vital importance that the Tanzanian government starts to prioritize wildlife improvement and management; not only for economic benefit, but also to prevent potential conflict and to maintain the ecosystem that Serengeti is. To be able to attain this, elaborate planning practices should be in place, that grow from knowledge on estimates of the developments the country will go through. With population growth comes land pressure and need for food and water as well as employment. Ideally, the Tanzanian government would do this by involving local communities in the planning process, as well as discussing land rights and ways of involving local communities in the tourism industry. Involvement could potentially be created by government incentives towards hotels and lodges to employ people from the surrounding communities of Serengeti or to have hotels and lodges get their supplies from these communities. Lastly, extensive education programmes should be set up to involve communities in wildlife, the importance of it, but also the opportunities that communities could seize for their own benefit. This education should start from an early age, including all generations in to sustainable wildlife management.

Sustainably continuing nature-based tourism in Serengeti in the future will not be an easy task, nor is it something that can just be waited upon until it succeeds or fails. The risks attached to nature-based tourism are too real not to deal with and too fragile to ignore. To ensure sustainable nature-based tourism that benefits all parties involved, requires hard work and dedication from Tanzania's government and TANAPA primarily, to create high standards to which law enforcement and park management should be bound to keep all tourists to. Only when action is taken, can development and conservation successfully be balanced.

Chapter 9: Recommendations

Throughout this research, a large information gap has become clear with regards to nature-based tourism and, specifically, its cashflows. Although there are plenty reports that state that this form of tourism generates income for a country like Tanzania, it is in no way specified what this generated income is spent on, how exactly it is earned and whether or not those who carry the burden of tourism, benefit of any of its profits. Furthermore, all kinds of numbers with regards to local profit and international exploiters are missing. Therefore it is one of the largest recommendations for this topic of research, to aim to improve transparency in cashflows regarding (nature-based) tourism worldwide.

Secondly, it is recommended to work towards a research that addresses the concerns of indigenous people regarding the issues that come with tourism. As this research has been conducted from afar, it has not been a possibility to approach the matter hands on in communication with the local communities. With regards to both community support and commitment, it is of vital importance to make sure local parties are heard in the matter of the Serengeti; in policy, politics and finance. As all respondents have testified that local communities do not benefit (enough) of tourism, and even do not have sufficient understanding of the benefit that they do have from this branch, local communities must be addressed even more so in the discussions in the future.

Thirdly, overall it is recommended to extend this research in to a much more elaborate set-up. As this research aimed to create an all-out overview of nature-based tourism, Serengeti and the solutions to the problems that would be found, that has been too much for just this paper. Extending this by doing in-field research, creating a broader amount of perspectives to take in to consideration on the case and having more local voices heard in the matter would significantly add to the literature, as there seems to be little of that.

Lastly, it must be recognized that, such as Mr. Hollevoet has mentioned, action must be taken before problems arise, and not after. Therefore I would strongly urge for the Tanzanian government³⁴ ANAPA, and the international community, to continue to strengthen policies for sustainable continuation of the Serengeti National Park, with special regards to the involvement of local communities and their role and opportunity in nature-based tourism.

Chapter 10: Reflection

Looking back at my research now, it is time to reflect on both the process as my personal development throughout it. As I started quite ambitiously, it took some serious effort for me to get down to the core of the problem, without making it as elaborate as I initially wanted. My proposal at first tried to cover simply every aspect of the issue that I have been discussing in this thesis. Sadly, due to time constraints and the goal of writing this thesis, does not make it possible to do this for the entirety of the complexity. My interest is broad and feels difficult to communicate without constantly trying to nuancing the things that I state. At times, I therefore feel that I have had to be more straight forward than I want to be. All things have many sides and complexities that can be taken in to account, yet in the reach of just this bachelor thesis and 6 months, there is simply not enough space to shine light on all of this.

Throughout the last months I have learned about my personal writing style and working style when constructing research on this scale. I need to write more to the point, more concise, and choose actively to leave things out. My planning for this work did not help much, as until July I had serious responsibilities next to writing my thesis. Although I made sufficient time for working on my thesis, it was difficult to really put my mind to it. After July 1st, things got more in to perspective and more focused. Still, by then I really had to get a lot of work done in a relatively short time.

After seemingly endless days of work however, I have sufficiently finished a research that is in my perspective far from perfect, but still a valuable contribution to both the body of existing literature, as my personal perspective on tourism and its implications. Speaking to my interviewees has given me a great experience in working and communicating with different kinds of people. The process of gathering interviews also boosted my networking skills.

Regarding the theoretical part of my thesis, reflecting on the strategies that I used, I have been relatively satisfied with the results of using these. The framework that I used for my impact analysis is a rather unconventional one, especially to use in interviews. Although it confused the interviewees at times, it was a very fascinating way of approaching the issue, and also lead up to interesting results. I wonder how differently the results would have been, would I have used a different theoretical framework. Because of that, although the results are interesting, I am doubtful of the validity of the results as they are much based on premises that can hardly be examined in every respondent. More so, although I have spoken to people with fascinating viewpoints, I hesitate to believe that through this research the entire picture is complete.

Although I am happy with the results of my research and relatively satisfied by the work that I put in to it, there is still room for improvement in both my personal working style, as the consistency of using theoretical knowledge and frameworks. Nevertheless, it has been quite an educational experience, teaching me about myself and drawing me back in to the theory of the academic world.

Sources

- 27 Creswell, J. W. (2012), *Qualitative inquiry and research design: Choosing among five approaches*, Sage Publications, Thousand Oaks, USA
- 14 Development Policy and Analysis Division, UN (2012), *World Economic Situation and Prospects 2012*, found on 21-5-2016 on http://www.un.org/en/development/desa/policy/wesp/wesp_current/2012country_class.pdf
- 32 DiCicco-Bloom, B. & Crabtree, B.F. (2006), *The qualitative research interview*, Medical Education, 40: 314–321, Found on 5-7 on <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2929.2006.02418.x/full>
- 36
- 19 Dietz, A. J., den Hertog, F.R.J., van der Wusten, H.H. (2008), *Van natuurlandschap tot risicomaatschappij: de geografie van de relatie tussen mens en milieu*, Amsterdam University Press, Amsterdam, The Netherlands
- 26 Eagles, P.F.J. & Wade, D. (2006), *Tourism in Tanzania: Serengeti National Park*, Bois et forets des tropiques; Ecotourisme et aires protegees, number 290 (4).
- 16 Emerton, L. & Mfunda, I. (1999), *Making Wildlife Economically Viable For Communities Living Around the Western Serengeti, Tanzania*, Evaluation Eden Series, Working Paper No. 1, Found on 25-06-2016 on <http://pubs.iied.org/pdfs/7794IIED.pdf>
- 65
- 48 ESA, United Nations (2014), *World Urbanization Prospects; 2014 Revision*, Found on 13-3-2016 on <http://esa.un.org/unpd/wup/Publications/Files/WUP2014-Highlights.pdf>
- Feifer, M. (1985), *Going Places*, MacMillan, London, United Kingdom
- 58
- 11 Figueroa, P. (2015), *Vanity, Pollution and Death on Mount Everest*, Found on 21-06-2016 on <http://ourworld.unu.edu/en/vanity-pollution-and-death-on-mt-everest>
- 54 Gmelch S.B. (2004), *Tourists and Tourism; A Reader*, Waveland Press, Long Grove, United States
- 18 Hall, C.M. (2007), *Pro-poor Tourism: Who Benefits? Perspectives on Tourism and Poverty Reduction*, Channel View Publications, Clevedon, United Kingdom
- 44 Hall & Boyd (2005), *Nature based Tourism in Peripheral Areas: Development Or Disaster*, Channel View Publications, Bristol, United Kingdom
- 25 Hall, C.M. & Page, S.J. (2014), *The Geography of Tourism and Recreation : Environment, Place and Space*, Routledge, Florence, USA

8
Kaltenborn, B.P, Nyahongo, J.W., Kideghesho, J.R. (2011), *The attitudes of tourists towards the environmental, social and managerial attributes of Serengeti National Park*, Tropical Conservation Science Vol.4 (2):132-148 http://tropicalconservationscience.mongabay.com/content/v4/11-06-27_132-148_Kaltenborn.pdf

3
Kideghesho, J. R. 2010. '*Serengeti shall not die*': *Transforming an Ambition into a Reality*, Tropical Conservation Science Vol. 3 (3):228-248, found on 21-5-2016 on https://tropicalconservationscience.mongabay.com/content/v3/10-09-27_228-248_Kideghesho.pdf

51
Klay Kieh Jr, G. (2008), *Africa and the new globalization*, Ashgate Publishing Company, Burlington, United Kingdom

43
Kuenzy, C., McNeeley, J. (2008), *Nature-based Tourism*, International Risk Governance, Council Bookseries Volume 1, 2008, pp 155-178

42
Mathieson, A. & Wall, G. (1982), *Tourism; Economic, physical and social impacts*, Longman, Harlow, United Kingdom

2
MNRT (1985), *Toward a Regional Conservation Strategy for the Serengeti: Report of a Workshop Held at Serengeti Wildlife Research Centre, Seronera, Tanzania*, Ministry of Natural Resources and Tourism, Government of Tanzania

10
National Bureau of Statistics (2015), *The 2013 International Visitors' Exit Survey*, Found on 22-05-2016 on http://www.nbs.go.tz/nbs/takwimu/trade/International%20Visitors'Exit_Survey_Report_2013.pdf

National Geographic (n.d.), *The Serengeti; map*, Found on 15-3-2016 on <http://ngm.nationalgeographic.com/ngm/0602/feature1/map.html>

31
Neumann, R. P. (1998), *Imposing Wilderness: Struggles over Livelihood and Nature*, Berkeley, University of California Press, USA

15
Newmark, W.D & Houg, J.L (2000), *Conserving Wildlife in Africa: Integrated Conservation and Development Projects and Beyond*, Oxford Journals, Bio Science, Vol. 50 No 7

ORD group, Destination marketing Africa (n.d.), *Serengeti National Park*, found on 5-5-2016 on <http://www.serengetinationalpark.com/tanzania/serengeti-national-park/serengeti-national-park-2>

57
Pearce, D.G. (1989), *Tourist Development*, Longman Scientific & Technical, Harlow, United Kingdom

Serengeti Watch (n.d.), *The Need for Serengeti Watch*, Found on 04-05-2016 on
<http://serengetiwatch.org/the-need-for-serengeti-watch/>

50

Shackley, M. (1996), *Wildlife Tourism*, International Thomson Business Press, London, United Kingdom

Sinclair (2000), *Ecological consequences*, Found on 15-3-2016 on
http://www.serengeti.org/main_footprints.html

30

Sinclair & Arcese (1995), *Serengeti II: Dynamics, Management and Conservation of an Ecosystem*, The University of Chicago Press, Chicago, USA

Sustainable Tourism Online (n.d.), *Nature Based Tourism*, Found on 19-07-2016 on
<http://www.sustainabletourisonline.com/parks-and-culture/nature-based-tourism>

TANAPA (2013), *Tourism Performance*, Found on 22-5-2016 on
http://www.tanzaniaparks.com/corporate_information.html#tourismperformance

Tanzania Tourism (n.d.), *Wildlife of Tanzania*, Found on 17-3-2016 on
<http://www.tanzaniatourism.com/en/tanzania/facts/category/wildlife>

Texas Parks & Wildlife (n.d.), *What is Nature Tourism?*, Found on 19-7-2016 on
http://tpwd.texas.gov/landwater/land/programs/tourism/what_is/

The East African (2014), *Tanzania Revisits Loliondo hunting reserve plan*, Found on 21-5-2016 on
<http://www.theeastafrican.co.ke/news/Dubai-royals-plan-Loliondo-hunting-reserve/-/2558/2530532/-/11vgt1u/-/index.html>

TTB, Tanzania Tourist Board (2016), *Serengeti*, found on 5-5-2016 on
<http://www.tanzaniatouristboard.com/national-parks/serengeti/>

24

UNEP (n.d.), *Tourisms impact on reefs*, Found on 22-6-2016 on
<http://www.unep.org/resourceefficiency/Business/SectoralActivities/Tourism/Activities/WorkThematicAreas/EcosystemManagement/CoralReefs/TourismsImpactonReefs/tabid/78799/Default.aspx>

56

UNWTO (2005), *Brochure: The responsible tourist and traveller*, found on 17-7-2016 on
<http://ethics.unwto.org/sites/all/files/docpdf/responsibletouristbrochureen.pdf>

23

UNWTO (2016), *International tourist arrival up 4% and reach a record 1,2 billion in 2015*, World Tourism

35

Barometer, Volume 1, 2016 [Digital Version] Found on 18-3-2016 on
http://cf.cdn.unwto.org/sites/all/files/pdf/unwto_barom16_01_january_excerpt.pdf

64

Urry, J. (2004), *The Tourist Gaze*, Sage Publications, London, United Kingdom

53

Waisien, K. (2012), *Can Tanzania Afford 100 million citizens in 2035?*, Found on 9-8-2016 on

<http://blogs.worldbank.org/africacan/can-tanzania-afford-100-million-citizens-in-2035>

WHO (2005), *Ecosystems and Human Well-being*, Found on 13-3-2016 on

<http://www.who.int/globalchange/ecosystems/ecosys.pdf>

46

WHO (2016), *Trade, Foreign Policy, Diplomacy and Health: Globalization*, Found on 13-3-2016 on

<http://www.who.int/trade/glossary/story043/en/>

Worldbank (2016), *Data: Urban Development*, Found on 13-3-2016 on

<http://data.worldbank.org/topic/urban-development>

Worldbank (2016), *Data: GDP per capita*, Found on 13-3-2016 on

http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?order=wbapi_data_value_2013+wbapi_data_value&sort=asc

Worldometer (2016), *Real Time World Statistics (13-3-2016, 15:49)*, Found on 13-3-2016 on

<http://www.worldometers.info/>

World Population Review (2016), *Tanzania Population 2016*, Found on 08-08-2016 on

<http://worldpopulationreview.com/countries/tanzania-population/>

79

WTTC (2015), *Travel & Tourism: Economic Impact 2015 Caribbean*, Found on 22-6-2016 on

<http://www.wttc.org/->

[/media/files/reports/economic%20impact%20research/regional%202015/caribbean2015.pdf](http://media/files/reports/economic%20impact%20research/regional%202015/caribbean2015.pdf)

WTTC (2015), *Travel & Tourism: Economic Impact 2015 Nepal*, Found on 22-6-2016 on

<http://www.wttc.org/->

[/media/files/reports/economic%20impact%20research/countries%202015/nepal2015.pdf](http://media/files/reports/economic%20impact%20research/countries%202015/nepal2015.pdf)

41

WTTC (2015), *Travel & Tourism: Economic Impact 2015 Tanzania*, Found on 17-3-2016 on

<https://www.wttc.org/->

[/media/files/reports/economic%20impact%20research/countries%202015/tanzania2015.pdf](http://media/files/reports/economic%20impact%20research/countries%202015/tanzania2015.pdf)

Appendix 1: Interview Guide

Interview Guide Bachelor Thesis Eef van den Berg

Impact Tourism Serengeti

Pt 1.

Explanation: Thesis tries to create a nuanced image of tourism and its impact in the Serengeti region specifically. Throughout this interview, I will discuss some background facts regarding the Serengeti and tourism, and will ask you in different parts about your predictions and expectations of it. As you have proven to be knowledgeable of, at least, the ecological side of this topic, it is vital to include a point of view like yours to create a nuanced image. There are no rights and wrongs, just your perspective that matters for the interview.

Background:

There is a peculiar relationship between nature and tourism – especially in the form of tourism that we call ‘nature-based’, tourism. Many people travel to areas in the world that are unspoiled, such as the Serengeti in North-West Tanzania. These areas are often ecologically and socio-economically vulnerable and located in countries that have little state regulation and are structurally struck by poverty.

The Serengeti region is one of the locations on earth that attracts vast amounts of tourists every year. About 1,2 million tourists visit Tanzania annually, of which about 1 million visits the Serengeti National Park. As Serengeti is home to 20% of African wildlife, brought together by 500 species of birds, 13 types of carnivores and 28 different sorts of ungulates.

Serengeti, a 25.000 sq. km area, has become a protected region in 1928, when colonial rulers set up the region as a ‘game reserve’ for hunting purposes for the wealthy. Apart from Serengeti, they labelled 38% of the country to be protected areas. Back then, Tanzania had about 10 million inhabitants, while by now the country has over 43 million. The pressure on land has therefore increased, as growing populations bring a bigger strain on natural resources and space.

When Serengeti became protected, the rights of many indigenous people were infringed, as they were displaced and their rights on the land limited. The status of national park does not allow any human residence or extraction of natural resources, thus tribes who had traditional heritage in this region, were denied of it.

These tribes vary from pastoralists to agriculturalists to hunters, and many of them aim to have their cattle grazing the plains. The Ikoma, one of the tribes, amount to 40% of the hunters that hunt animals in Serengeti, and have traditionally lived this way.

Apart from this, the tourism industry in Tanzania secures 14% of the GDP income and brings employment to 1,3 million people in the country.

With two million people bordering the Serengeti, the management of balancing tourism with the ecosystem and development, will be of crucial importance for the future of Serengeti

Q1. Knowing this, I would like to ask you to share with me some thoughts of yours. What, do you think, would have happened if tourism in Serengeti would stop right now?

Q2. What do you think this would mean for the ecology of this region?

Q3. What do you think this would mean for the economy of this region?

Q4. What do you think this would mean for the society in and surrounding this region?

Pt. 2. Seeing current trends in tourism:

- Tourism is expected to grow from 1,2 billion to 1,8 billion travellers in 2030.
- The biggest increases are for multiple reasons expected to be in nature-based tourism in developing countries.
- The Tanzanian population is expected to grow rapidly in the coming years as well.

Q5. What is your prognosis of what will happen to Tanzania and Serengeti when these trends continue?

Q6. What do you think this will mean for the ecology of this region?

Q7. What do you think this will mean for the economy of this region?

Q8. What do you think this would mean for the society in and surrounding this region?

Pt 3.

Q9. Looking at the differences, which of the two scenarios, in theory, would have your preference?

Q10. Why this scenario?

Thank you for your cooperation.

Thesis Human Geography, Planning & Environment - Eef van den Berg

ORIGINALITY REPORT

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SIMILARITY INDEX

%**5**

INTERNET SOURCES

%**3**

PUBLICATIONS

%**4**

STUDENT PAPERS

PRIMARY SOURCES

1

eprints.utm.my

Internet Source

<%**1**

2

data.iucn.org

Internet Source

<%**1**

3

tropicalconservationscience.mongabay.com

Internet Source

<%**1**

4

Submitted to Napier University

Student Paper

<%**1**

5

www.sailing-whitsunday.com

Internet Source

<%**1**

6

Encyclopedia of Tourism, 2016.

Publication

<%**1**

7

www.diva-portal.org

Internet Source

<%**1**

8

Submitted to University of Pretoria

Student Paper

<%**1**

9

Submitted to University of New South Wales

Student Paper

<%**1**

10	Submitted to University of Sheffield Student Paper	<% 1
11	Submitted to Western Governors University Student Paper	<% 1
12	www.happytoursug.com Internet Source	<% 1
13	Submitted to Radboud University Student Paper	<% 1
14	Submitted to International Institute of Social Studies - Erasmus University Rotterdam Student Paper	<% 1
15	Submitted to University of Stellenbosch, South Africa Student Paper	<% 1
16	195.202.82.11 Internet Source	<% 1
17	Submitted to Sheffield Hallam University Student Paper	<% 1
18	vuir.vu.edu.au Internet Source	<% 1
19	aissr.uva.nl Internet Source	<% 1
20	Worldwide Hospitality and Tourism Themes, Volume 5, Issue 4 (2013-09-07) Publication	<% 1

21	Internet Source	<% 1
22	Submitted to PFH - Private Hochschule Goettingen Student Paper	<% 1
23	Submitted to Laureate Higher Education Group Student Paper	<% 1
24	Submitted to Aberystwyth University Student Paper	<% 1
25	www.bournemouth.ac.uk Internet Source	<% 1
26	www.wildlife-conservation.org Internet Source	<% 1
27	researchbank.rmit.edu.au Internet Source	<% 1
28	Submitted to University of Greenwich Student Paper	<% 1
29	Submitted to University of Wales, Bangor Student Paper	<% 1
30	www.nina.no Internet Source	<% 1
31	www.wcstarusha.org Internet Source	<% 1
32	media.proquest.com Internet Source	<% 1

33	duepublico.uni-due.de Internet Source	<% 1
34	www.bio.ntnu.no Internet Source	<% 1
35	Vilkman, Katri, Sari H. Pakkanen, Tinja Lääveri, Heli Siikamäki, and Anu Kantele. "Travelers' health problems and behavior: prospective study with post-travel follow-up", BMC Infectious Diseases, 2016. Publication	<% 1
36	Submitted to University of Stirling Student Paper	<% 1
37	www.travelnotes.org Internet Source	<% 1
38	repository.tamu.edu Internet Source	<% 1
39	Submitted to University of Bedfordshire Student Paper	<% 1
40	Submitted to Southampton Solent University Student Paper	<% 1
41	Wu, Lingling, Junyi Zhang, Qingchang Lu, and A. B. M. Sertajur Rahman. "Tourist adaptation behavior in response to climate disasters in Bangladesh", Journal of Sustainable Tourism, 2016. Publication	<% 1

42	Submitted to University of Derby Student Paper	<% 1
43	Submitted to University of South Australia Student Paper	<% 1
44	Submitted to Australian National University Student Paper	<% 1
45	Submitted to 8936 Student Paper	<% 1
46	Colgan, Sarah, Kate Faasse, Leslie R Martin, Melika H Stephens, Andrew Grey, and Keith J Petrie. "Perceptions of generic medication in the general population, doctors and pharmacists: a systematic review", BMJ Open, 2015. Publication	<% 1
47	africaid.com Internet Source	<% 1
48	Submitted to University of Brighton Student Paper	<% 1
49	dot.state.nm.us Internet Source	<% 1
50	Submitted to University of Hertfordshire Student Paper	<% 1
51	Submitted to University Of Tasmania Student Paper	<% 1

Submitted to University of Teesside

52

Student Paper

<% 1

53

Submitted to University of College Cork

Student Paper

<% 1

54

books.unilife.edu.au

Internet Source

<% 1

55

www.science.gov

Internet Source

<% 1

56

www.edb.gov.hk

Internet Source

<% 1

57

dspace.stir.ac.uk

Internet Source

<% 1

58

Submitted to Walford Anglican School for Girls

Student Paper

<% 1

59

www.afforum.org

Internet Source

<% 1

60

lauda.ulapland.fi

Internet Source

<% 1

61

diva-portal.org

Internet Source

<% 1

62

eprints.utas.edu.au

Internet Source

<% 1

63

natureconservation.pensoft.net

Internet Source

<% 1

64	umu.diva-portal.org Internet Source	<% 1
65	economics.expertjournals.com Internet Source	<% 1
66	www.rsijournal.eu Internet Source	<% 1
67	www.odi.org Internet Source	<% 1
68	novadis.no Internet Source	<% 1
69	etheses.whiterose.ac.uk Internet Source	<% 1
70	ir.library.illinoisstate.edu Internet Source	<% 1
71	ria.ua.pt Internet Source	<% 1
72	imuna.org Internet Source	<% 1
73	www.strategiimanageriale.ro Internet Source	<% 1
74	lib.euser.org Internet Source	<% 1
75	www.rebe.rau.ro Internet Source	<% 1

76

Internet Source

<%1

77

www.crctourism.com.au

Internet Source

<%1

78

openaccess.dogus.edu.tr

Internet Source

<%1

79

Tuladhar, Sushant. "Impact of the Great Earthquake-2015 on Hospitality Industry of Nepal", The Gaze Journal of Tourism and Hospitality, 2016.

Publication

<%1

EXCLUDE QUOTES

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EXCLUDE

BIBLIOGRAPHY

OFF

EXCLUDE MATCHES

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