

How to stop the African elephant Population from extermination



Photo: Lina Jansson, Tarangire National Park, March 2006

- Causes
- Achievements
- Consequences

Abstract

Humans' hunting for ivory has had a serious impact of the African elephant population. Ivory has throughout history been a symbol of manhood and status. As the market of ivory expanded to the rest of the world, the market demand for ivory became higher than what the elephants could manage to provide. In the 1980's, the African elephant population was threatened by extension and it was reduced with 50 percent in ten years. For this reason, CITES placed the African elephant population under a ban, which made it an illegal act to trade ivory and other elephant parts.

Keywords:

Elephant, Ivory, Poaching, Population, CITES, Ivory market, Appendix, Tanzania

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Abbreviations

AWF -	African Wildlife Foundation
BIDS-	Bad Ivory Trade Database
CITES -	Convention on International Trade in Endangered Species on Wild Fauna and Flora
ETIS -	Elephant Trade Information System
TIRE –	Ivory Trade Review Group
LCES –	Law Convention on Endangered Species of wild flora and fauna
MIKE -	Monitoring the Illegal Killing of Elephants
TANAPA –	Tanzania National Parks
TEP –	Tarangire Elephant Project

Wordlist

CITES Appendix I - Species that are threatened by extinction

CITES Appendix II - Spices that necessarily are not threatened by extinction, but needs restrictions

CITES Appendix III - Species that needs to have rules and laws, to prevent them from exploitation

Stockpiles – Ivory that is being storage, in large amounts

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1. Introduction

1.1 Background

Elephants are one of the world's high standing animals. Humans are elephant's biggest threat, as they have throughout history hunted elephants because of their ivory. No other animals are a threat to them. The calves can be vulnerable but they are often well protected by the herd. In modern history, ivory has been a source for trade between states. There has been an economic profit in ivory trade and buyers often come from Europe, America and Asia¹. Elephant population has decreased in such a dramatically way that the population had a struggle surviving.

In 1980's price of ivory was high, which lead to increased hunting and a large part of the population diminished in a short period of time. At the same time people got knowledge of the situation and demanded that something had to be done². The African elephant was considered to be threaten by extermination by CITES (Convention on International Trade in Endangered Species on Wild Fauna and Flora) and was places in Appendix I in 1989. There was now illegal in trade and sell ivory and other parts of elephant.

In 1997, Zimbabwe, Botswana and Namibia was allowed by CITES to have a one-sell of ivory to Asia under regulated forms and supervision by CITES³.

1.2 Purpose

In this essay my purpose is to study how to prevent the African elephant population form extermination. I will see what achievements are done to prevent further reduction in the population. To get a deeper and historical insight I will also study how the African elephant population has developed and changed throughout history, dramatically so due to hunting.

I will see how the illegal hunting in Africa has developed since the CITES ban in 1989 that made trade with ivory illegal. The ban has contributed to a larger elephant population in some countries, as intended. However, there is a human-wildlife conflict for farmers living near wildlife reservation, and which I will demonstrate with examples from the Tarangire National Park, Tanzania.

¹ Ross, Doran H, 1992

² Thornton and Currey, 1991

³ www.worldwildlife.org

2. Theory background

It is difficult to find theories for this problem and situation. But, I have chosen two theories that complete one and other in different aspects of this problem. The first theory consists of the trust that different parties has during a conflict and where the attitudes in the conflict is of vital importance for the outcome. The second theory is a risk assessment analysis on specie extinction.

To compete these theories I have made three different hypotheses for this essay.

2.1 Cooperation and Competition

Professor Morton Deutsch, was born in 1920, developed the theory in 1949. He is specializes in social justice, group dynamics, cooperation and competition and conflict resolution. He is somewhat a pioneer in conflict resolutions⁴.

However, in 1989 has the theory been elaborated by David W. Johnson, Professor of Educational Psychology⁵.

The theory is divided in two ideas: One that relies on the independence of the different participates when a goal is given in a situation. The other part is what kind of actions that are taken by the people involved.

During a conflict the most important are that substitutability, attitudes and inducibility approaches.

Substitutability: Depending on human's actions it is important to see other needs, that is wished needs to be fulfilled. Collaborations are of high priority if a person wants to succeed with goals and wishes. Substitutability teaches people to accept activities from other in order so that they also can achieve their goals. On the opposite negative substitutability consists of rejection, people does not see others needs, just there own.

Attitudes: Natural selection has proven that living flora and fauna can respond to positive or negative environment. Animals can be harmful towards objects and circumstances. The attitude is of vital importance for the outcome, positive or negative. The positive attitude like "we are for each other", "we benefit one another". The negative attitudes are "we are

⁴ <http://en.wikipedia.org>

⁵ <http://education.umn.edu>

against one another”, “you are out to harm me”⁶. There is important which attitudes a human has.

Inducibility: It is important to accept that there is a conflict of interest, and be ok with that. On the opposite, negative inducibility is to obstruct or reject the interest that the other one has. People wants to help another that helps you, but not to somebody that you do not gain anything from. If you do not get anything in the situation, you can feel more of a rejection towards them.

This theory consists of different predictions, which interactions that happen between negotiating interactions as a result of their conflict of interests.

Here follows different cooperative relations that can occur in different ways

1. "Effective communication" Ideas are verbalized, people pay attention to each other gets ideas and are influenced of other members.
2. "Friendliness, helpfulness, and less obstructiveness". The member expresses in discussions and tend to be generally more satisfied with the group and its solutions.
3. "Coordination of effort, division of labor, orientation to task achievement, orderliness in discussion, and high productivity" works in existing cooperative groups.
4. "Feeling of agreement with the ideas of others and a sense of basic similarity in beliefs and values, as well as confidence in one's own ideas and in the value that other members attach to those ideas, are obtained in cooperative groups."
5. "Willingness to enhance the other's power (knowledge, skills, resources)" desire to achieve others goal and needs. The other one can also enhance from your information and benefits.
6. "Defining conflicting interests as a mutual problem to be solved by collaborative efforts facilitates recognizing the legitimacy of each other's interests and the necessity to search for a solution responsive to the needs of all." This will probably limit the conflict interests⁷.

⁶ Deutsch and Coleman, 2000

⁷ Deutsch and Coleman, 2000

Competitive process will likely have the opposite result.

1. Communication is impaired, when the two parties has desire to misleading the other one. They cannot trust the other one, and believe that they are being told false information.
2. "Obstructiveness and lack of helpfulness lead to mutual negative attitudes and suspicion of one another's intentions. One's perceptions of the other tend to focus on the person's negative qualities and ignore the positives."
3. The parties are depended on the other ones progress in the work, they duplicate on and other.
4. "The repeated experience of disagreement and critical rejections of ideas reduces confidence in oneself as well as the other"
5. The parities want to archive power only in there own work, and minimum the power to the other.
6. The reality and competition towards one and other contributes to that there only can be imposed by one side on the other. This can lead to use of coercive actions both physical, violence and threats. The competition has turned in to a power struggle or matter or moral.

When a conflict is escalating, it is easy to look on the other opponent as an evil enemy. It is important to knowledge the others needs on the same extent of your own. Taken in consideration the others needs and desires⁸.

2.2 Population Vulnerability Analysis

Michael E. Soulé and Michael E. Gilpin conducted PVA (Population Vulnerability Analysis) theory.

The theory was first proposed by Mark Shaffer in 1981. The theory was first addapted for managers problems that accured by grizzly bears.

It is a risk assessment for specis that has a risk to extinct, to evaluate this risk the theory uses ecological facts together with statistics. This theory evaluates the consecquences and positiv trend factors, that the population are exposed to.

⁸ Deutsch and Coleman, 2000

In 1986 Gilpin and Soulé included more definitions and elaborated the theory.

To determine PVA, there needs to be an answer to a lot of different questions, also needed are data, important species characteristics.

This theory also estimates the minimum viable populations (MVPs)⁹. It separates four different sources, that can distinguish the population; demographic, genetic, environmental and catastrophes. The population vulnerability analysis describes the population phenotype (PP), which consists of morphology, physiology and behavior patterns.

PVA uses in risk assessment, to calculate if a species

PVA asks the following are questions for determining measures in population growth and is all combined when a population future is determined.

-  What variation of sizes is there in the population?
-  What shapes and patterns exist in the population?
-  What is the history of reproduction?
-  What disease resistant does the herd has?
-  Are there metabolism and any metabolic efficiency?
-  How has the behavior changed?
-  Has the population migrated in the past and what habitat selection has it had?
-  How has the environment quantity and quality been?
-  Has there been any change in resources and interaction with other species?
-  What disturbance exists?
-  Has the population has any patch distribution, metapopulation structure and fragmentation? What is the age, size, sex and growth structure in the population?
-  Is there any variation in individuals, within or between patches?

These questions together with data and important species characteristics, determine a species PVA.

⁹ Beissinger and McCullough, 2002

2.3 Hypothesis



Due to the CITES regulations it has a significant meaning for the elephant population on what level the ban is placed



The attitudes on ivory trading is of vital importance, how the problems are approaches in different countries



The elephant population is negative affected by the wildlife-human conflict between farmers and elephants

3 Methodology

Mainly used material for this essay consists of secondary data, books, articles, and official reports.

I visited Tanzania in three weeks during March 2006. In this visit there were conducted semi-structured groups interviews with different people. We interviewed local people who lived within the migration corridors to Tarangire National Park Mamire Village and Minjinga Village. We also had the opportunity to go with a Game warden on one of his working days. We made two visits to Tarangire National Park where an interview with a tourist manager were conducted. We had an interview with a volunteer at American Wildlife Foundation.

Even though this essay is mainly consist of secondary data, I have gotten so much information and experience during this visit that I never could have got from any other experience, books and reports.

3.1 Source criticism

It is important to note that the interviews with local farmers were conducted with an interpreter. It is also important to have the knowledge that the numbers and statistic of the elephant population in this essay is an estimating, it is difficult to have an exactly measure of the population.

4. Historical view

The elephant can be considered a symbol of animal kingdom. The elephants in Africa can enrich human's ways of living in food and material. But at the same time they can be rivals in resources and create problems by destroying and eating crops.

4.1 About the elephant

There are two species of elephants, the Asian elephant, *Elephas maximus* (genus *Elephas*) and the African elephant, *Loxodonta Africana* (genus *Loxodonta*). The African elephant has two sub species, the bush African elephant (*Loxodonta Africana africana*) and the Forest Africana elephant (*Loxodonta Africana cyclotis*). The big difference in the two species is that African elephant has larger ears, is taller and heavier than the Asian elephant)¹⁰.

The ancestors of these elephants inhabited Tethys Sea 50-60 million years ago. They survived difficult environments and different variations of climates, long time ago time occupied every continent. The elephants are like most animals exposed to Darwin's natural selection, the strongest survive. The elephants are social and the youngsters will learn from the matriarch, who is the oldest and has the most knowledge. Calves are not only tended by their mother but by the whole group¹¹.

Males leave the herd when they have reached maturity, often by the age of thirteen. However, the females are expected to stay with the herd until they die. Elephants spend up to eighteen hours every day in search for food and a herd can travel 5-10,000 km a year in search of food, as they have to eat 70-150 kg food and drink 75-150 litres every day¹².

¹⁰ Ross, Doran H, 1992

¹¹ Ibid.

¹² Ibid.

4.2 Environment and ecology

The Elephants has an important role in ecosystem. They have the ability to convert savannah and woodlands to grasslands. This has created opportunities for other species to evolve in macro and microenvironment¹³.

They have the ability to dig in dry riverbeds and create water sources for themselves and other species. Ecosystems can collapse when elephants, for some reason, migrate from one area to another. Other species depend on elephant's ability to change and improve the ecosystem¹⁴.

Elephants like to grind their teeth against tree bark, grass and branches. Some even like to push down big trees¹⁵. Because they are tall they can alert smaller species in their herds when it is danger ahead and help to protect them¹⁶.

4.3 Tusks

Elephants usually have two tusks, but they can also have three or even seven. Three quarters or two thirds of the tusk is visible, rest of the tusk are in the elephants cranium. Tusks are an important tool for elephants and are mostly used for digging for salt, roots and in water. They also use them to fell trees and branches, mark trees, protection and they are believed to be a symbol of status to other elephants.

The longest measured tusks has been 326.4 cm and the heaviest have weight total 102.7 kg, the older an elephant is the bigger the tusks gets. Hunting has had huge impact on the weight of the tusks. Data from the nineteen century shows that in the 1930's average tusk weight around 14 kg, in 1960's 10 kg and in the late 1980's 3 kg¹⁷.

¹³ Ross, Doran H, 1992

¹⁴ <http://www.naturehaven.com>

¹⁵ Ibid.

¹⁶ Ross, Doran H, 1992

¹⁷ Ibid.

4.4 Hunting

Elephant's history is represented with power and rituals, and is somewhat a symbol of the African history. Poaching goes a long way back in history, in Olduvai Gorge. There has been remaining in Tanzania from 500,000 years ago of, what is to believe, stone tools together with bones of elephant, specie *Elphus reckii*, who today are extinct¹⁸.

Hunting has been a test of manpower in many cultures in Africa, and the most respectful way was to hunt only with a single hand. A more common way was hamstringing, where the hunter comes from the elephant backside and rap it in tendons using an axe or sword. This method makes it easier for the hunter to take care of the animal after the death. But the most common way of hunting was in groups, where the elephant is surrounded by a large group of hunters. At the same time a couple of hunters distract the elephant and the rest of them try to kill it with a long and heavy spear. Sometimes hunters started a fire around the elephant so it became trapped¹⁹.

Hunting has been a way for farmers to protect their fields with crops. At the same time the African population has grown bigger, their cultivation has invaded on the elephant's natural space. This has resulted in elephant invaded field lands in search for food. To protect their crops farmers have killed elephants because they do not know any other method to protect their crops.

In the seventeenth-century, hunting started to became a problem for the African elephant population. Although hunting started to become a problem for the African elephant population, the elephant population was not affected in the big amount that it could have been. It was still hard for humans to kill an elephant with the tools that they had for their disposal such as axes, spears and arrows. It was when hunters got access to European firearms combined with a market for ivory in Asia, America and Europe, that threat to elephant population started to become an issue. That is why hunting for ivory is more a value of indication of Euro-America then African values²⁰.

4.5 Ivory trade

In the sixteenth-century the first international market was established in Guinea's coast up to Cape Verde Island in. In these times ivory trade started to become a bigger market when the

¹⁸ Ross, Doran H, 1992

¹⁹ Ibid.

²⁰ Ibid.

Dutch and English came to Sierra Leone. They became rivalry to each other in export ivory from the coast of Guinea, which led to a massive exploitation of the elephant population²¹.

Lack of ivory made the price go up tenfold in the late eighteenth century. There was an enormous demand for ivory. Therefore the price got up in the large extent that it did. Euro-America market mostly wanted ivory to combs, piano keys and billiard balls. High price rates led to massive hunting in the northern parts of Africa. At this point hunters started to use firearms, but the traditional hunting methods such as poison arrows and traps never were abandoned. For locals hunting became an attractive market when the price became higher.

In the nineteenth-century the ivory export had been located to Cameroon. In the later half of the nineteenth-century, trade in ivory had shifted to west central Africa. Southern Africa was not main source of ivory, but that did not stop the Europeans in search of elephants there. Elephant population started to distinguish when African and European hunters were triggered by each other in finding ivory, and with the consequences that by the end of the nineteenth-century population was close to decimated²².

It is difficult to appreciate the amount of ivory exported in the nineteenth-century. Ivory was mostly taken from large elephants, which resulted in elephants that survived hunting, was small and young.

Colonial government started to build and administrate wildlife protection areas to elephants as well to other wildlife animals from uncontrolled hunting. Hunting started to become a tourism safari attraction for Americans and Europeans. Elephant population started to grow bigger in the beginning of the twenty-century.

Ivory export began to increase again by the 1930's to the 1960's. In 1970's human started to be aware of the massive hunting and ivory export and there started to be an issue and fear of what this could lead to. There are measures that the elephant population was minimum 1.3 million in the 1979 and in 1980 there was fewer than 1.2 million. Ivory prices were higher and this was most appealing to young African men, who had economical problems. This led to more massive hunting and by 1980's elephant population was reduced increasingly, it was now back to the low population that Africa had in the 1910's²³.

²¹ Ross, Doran H, 1992

²² Ibid.

²³ Ibid.

5. Cites convention

The convention on International Trade in Endangered Species on Wild Fauna and Flora (CITES) was established in July 1975. The purpose was to have an international convention that could regulate the trade with wild fauna and flora to protect the species from extinction. CITES has 169 member states in June 2006²⁴.

5.1 Appendix

CITES has developed three different Appendix for the flora and fauna to be categorized in.



Appendix I are species that have threats to extinction. Trade is not allowed except for exceptional situation, but most trade is strongly forbidden.



Appendix II consists of species that is not necessarily threatened by extinction but still needs restrictions to not become extinct.



Appendix III is for species that needs to have rules and laws by the authority to prevent their exploitation²⁵.

5.2 The African elephant was not included

When the CITES convention in ivory first began, the ban was regulated to the international trade on Asian elephants, and the African elephant was listed in Appendix II in 1976. This did not work as well as the parties had thought, the elephant population was still dramatically being reduced. Ivory Trade Review Group wrote a report that the listing in Appendix II did not give the result that CITES were expected, that it was a “weak management and enforcement capacity²⁶”.

²⁴ www.cites.org

²⁵ Roles, 1997

²⁶ Ibid.

5.3 Struggle to get African elephant included

Tanzania has played a big part to get the African elephant to Appendix I. March 10, 1989 Tanzania's government supported the ban and appealed to the rest of the world to do the same. They said that it was important to support the ban, when the population still existed.

Tanzania government argued that the only way that ivory poaching stop was of a world ban and that all the markets was shut down. In the broadcast TV-news John Suchet said "The African elephant is literally fighting for survival against the poachers who are shooting it into extinction to satisfy people's desire for ivory²⁷".

In the footage to this, they showed ivory of an elephant baby that was 6 inch long compared to what the poachers used to hunt ivory that weight 66 kg. The search of ivory had gone to the extent that the only way to get hold of ivory was to kill baby elephants. This report got enormous reactions. USA was on Tanzania's side, and together they would co-signatory propose the ban to CITES.

The following weeks more countries and organisations stood by the ban. Lausanne held the CITES meeting that would decide the outcome of the Appendix one proposal in October.

The vote's results were four abstentions, eleven against, and seventy-six in favour²⁸.

5.4 One-time sale

The ban started in 1989, and was between 1989 and 1999. 1997 CITES agreed to move Zimbabwe, Botswana and Namibia to Appendix II, when they no longer had the biological criteria that Appendix I requires²⁹. This allowed them to have one-time sell of ivory under regulated forms to Japan. This sell was carried out in April in 1999, and contained approximately 50 tones of ivory.

Zimbabwe, Botswana and Namibia wanted to have further sale in 2000 but this was not adapted by CITES. South Africa wanted all African elephants to move from Appendix I to Appendix II, but this was not approved by CITES. However South Africa wanted to transfer their elephant to appendix II, with zero quota of there ivory, this was adopted by CITES. In 2002 Zambia had suggestions to sell their stockpiles and transfer to

²⁷ Thornton and Currey, 1991

²⁸ Ibid.

²⁹ Edwards, 2001

Appendix II. Kenya and India wanted to transfer all African elephants that were in Appendix II to Appendix I.

5.5 CITES programs

MICK and ETIS work under CITES and their task is to observe the elephant population and give reliable source to CITES, so they can make decisions based on reliable fact. They also evaluate earlier decisions that CITES has made and evaluate result or lack of result that regulations have had on elephant or management.

5.5.1 MIKE

MIKE (Monitoring the Illegal Killing of Elephants) was initiated by African elephant range states and CITES agreed to MIKE in the 10:th meeting in Harare 1997³⁰. The main purpose was to conduct elephant population survey every 2-3 years. They use database management and analysis and look for trends in the illegal hunting process. MIKE works in 29 African states in monitoring and enforces decisions, to make the long-term management of the elephant population as good as possible³¹.

There are also programs involving population growth of Asian elephant, because there are many states involving in the program. Data that have been found varied, in some regions there has been a lack of data and in some regions there has been successfully investigations. There is a complicated and difficult task and it is quite expensive. Estimations have been at \$US13 million³². But this program is believed to be new and it can likely have an important role in upcoming decision-making. Another aim is to understand the main threats to elephants, and to get a better understanding how the population is changing.

5.5.2 ETIS

ETIS is similar to MIKE but the difference is that ETIS analyses trends in illegal trade and administer the illegal trade of elephant products and ivory³³.

ETIS is a major source to some decisions made at CITES meetings, it is used as a reliable source in the meetings. ETIS has big tasks in monitoring trends in illegal trade, and is the world's leading tool in observes illegal trade³⁴.

³⁰ Hunter and Nigel, 2004

³¹ <http://www.cepf.net>

³² Travis, 2005

³³ Hunter and Nigel, 2004

³⁴ www.traffic.org

6. Elephant population

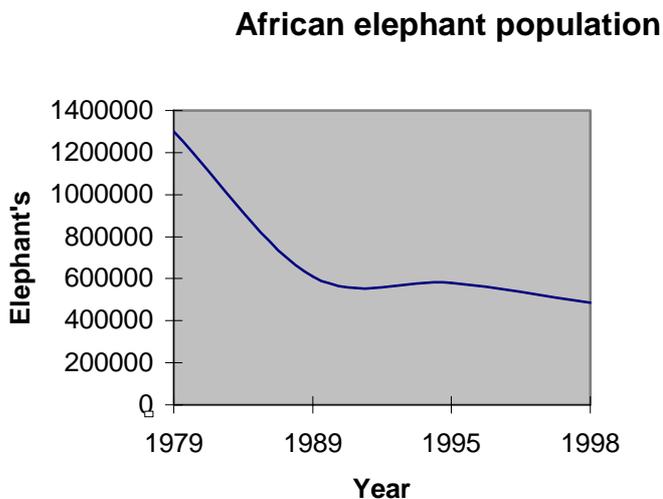


Figure 1³⁵

African elephant population has in a short period of time dramatically dropped. In 1979 there was 1,300,000 African elephant, when the ban began in 1989 there were about 609,000 elephants, and the population had declined with 53%.

In 1995 the population had reduced to 579,532. The elephant population has reduced once more in 1998 down to 487,345 elephants. African elephant population has approximately reduced with 62% from 1979 to 1995³⁶.

6.1 Similarities with Asia

The dramatic reduction of the population largely depends on poaching. In the future habitat loss and human influence will probably become a big influence in population growth, this are the main threats besides poaching. Asia has had problems just like the once that probable can face Africa in the near future.

Asian elephants do not have as large tusks as African elephants and is therefore not as a big target for poaching. It is important that Africa looks and evaluates the problems and answers that have faced Asia, and learns what they have done right and wrong. Because it looks like Africa are going to face the exact same problems with habitat loss and more problems in the human-wildlife conflict³⁷.

³⁵ Barbier and Burgess, 1990

³⁶ Travis, 2005

³⁷ www.worldwildlife.org

6.2 Succeed countries

Countries like, Namibia, Zimbabwe and Botswana that has succeed and has successfully controlled poaching and managed and developed a healthy and growing population³⁸. They were transferred down to Appendix II in 1997³⁹. South Africa was transferred in 2000. Botswana, Namibia and Zimbabwe were granted by CITES to have a one-time sale to Japan.

Botswana had 51,000 elephants in 1987, and has now an elephant population of 120,000 elephants. Since the ban in 1989 they have management strategies and successful wildlife conservation⁴⁰.

South Africa had 5,000 elephants in 1987 and today there are 13,000 elephants. South Africa has managed to eliminate poaching from Kruger National Park. The elephant population has got opportunities to safely grow bigger.

³⁸ Ibid.

³⁹ <http://www.hsus.org>

⁴⁰ <http://www.american.edu>

7. Ivory market

7.1 Japan

Ivory in Japan has for a long time represent luxury, it was mainly imported from China in the sixteenth-century. In 1640's Japan stopped and closed their ports to distant ships and the ivory import was closed. Japan opened their import again in the eighteenth-century and the ivory was now increasing.

End of the nineteen-century Japan imported eight tones of ivory every year, mainly from India. Japan started to trade ivory with Africa in 1920's and fifty-one tones of ivory was yearly imported.

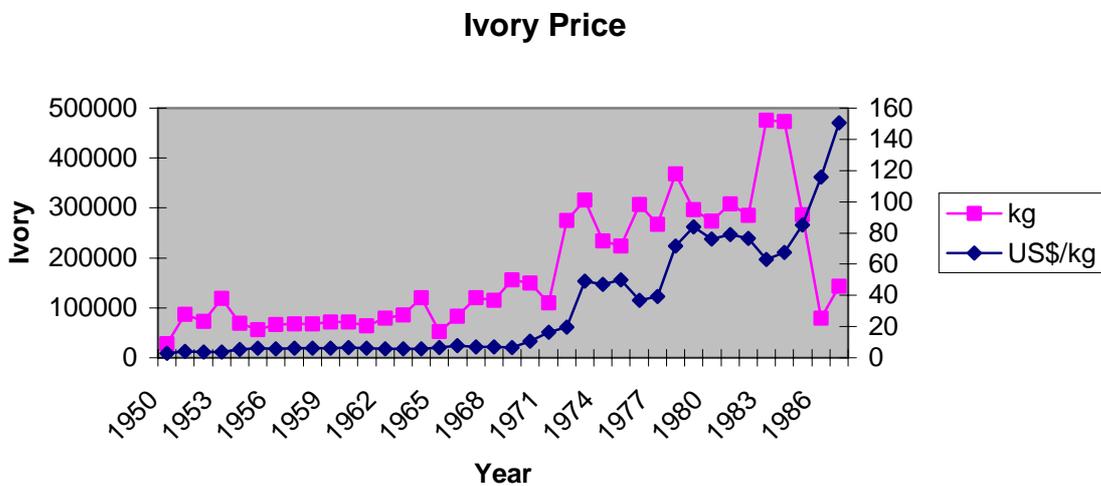


Figure 2⁴¹

In the 1950's trade with Africa had proceeded thirty years and Japan imported seventy tones of ivory each year. Japan proceeds to be the largest country of ivory import, the next thirty years. They started to implicate stronger regulations, although there was no legal imported ivory to Japan after the ban in 1989, stockpiles at this time were estimated to 100 tones⁴².

Although ivory trade was drastically reduced (181 tones in 1989, 82,5 tones in 1990 and 70 tones in 1991) there was still a large demand for ivory⁴³. The demand was still high and there was little ivory to get hold on, which could have lead to increasing illegal ivory import. Their willingness to pay was high and there was a lot of money that the illegal market could gain.

⁴¹ Barbier and Burgess, 1990

⁴² <http://animallaw.info>

⁴³ Ibid.

The older generation appreciates the value in personal owning ivory, especially hanko (signature seals), it is estimated to be half of the market of ivory that is imported to Japan. The younger generation values elephant population higher than owning ivory, and believe that jewelry made of ivory are old fashioned⁴⁴.

Law Conservation on Endangered Species of wild Flora and Fauna (LCES) was adopted 1992 and applied tusks as well as items. Every tusk that is imported to Japan has to have a certificate card and be registered in Japan wildlife research Center, if there are any fee or penalty they are given out by LCES.

Individuals involving with ivory trade who do not have a license can get a penalty fine up to \$4500. False certification cards can give a fine up to \$1800. It is estimated that there are to 50.000 outlets selling ivory, most small businesses. The state has problems with inspections, in 1999 there only were 200 businesses inspections. This is not enough, if they want to have control of over the market. This has lead to opinions declare that Japan do not take the ivory trade seriously⁴⁵. There is more to wish for in the law enforcement and control over the illegal ivory sell.

During the ban Zimbabwe smuggled ivory worth \$90 000 to Japan in 1997⁴⁶. CITES allowed in 1997 a one-time sale of ivory to Japan from Zimbabwe, Namibia and Botswana, which took place in March 1999⁴⁷. Under this one time-sale it was sold over 50 tones ivory, worth \$5 million⁴⁸. They argued that sustainable use of ivory was possible and that they could maintain ivory trade without influence the elephant population.

Asia and especially Japan was the largest consumers of raw ivory between 1979-1988, Japan imported 32% of all the ivory in the world trade⁴⁹.

7.2 USA

USA has law and restrictions to import ivory and makes it easy to find loopholes. People are legally allowed to take in ivory the USA that is antique, older than 100 years. The problem is that it is difficult to see any difference between relative new and old ivory without forensics equipments. This makes it possible for legal commercial import of ivory.

⁴⁴ Edwards, 2001

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ <http://www.worldwildlife.org>

⁴⁸ Maharaj, 2002

⁴⁹ Edwards, 2001

It is also legal to sell ivory that was imported before February 4, 1977. It is possible to by false documentation, the ivory is legal imported either by being imported before 1974 or that it is antique. Legal important ivory can be sold and the authority does not have anything to do with ivory regulations in any way.

It is also legal to import ivory from African tusks that have been sport hunted in Africa. This ivory is legal imported as a trophy and is not allowed to be sold. Annually there are about 400 tusks that come into USA legally this way⁵⁰.

Between 1997-2001 USA legally imported ivory worth \$US 164,8 million⁵¹. The easiest way in getting hold on ivory is the Internet auction company e-bay, it consist of large amounts items of ivory. This has lead to a huge market and easy access to get hold on either legal or illegal ivory. If illegal ivory is discovered in large scales the punishment is either fine or prison. If there is a small scale illegal ivory trade the punishment is not much, they are only told to give up their ivory items.

⁵⁰ <http://www.hsus.org>

⁵¹ Travis, 2005

8. Ivory today

Volume of African raw ivory export

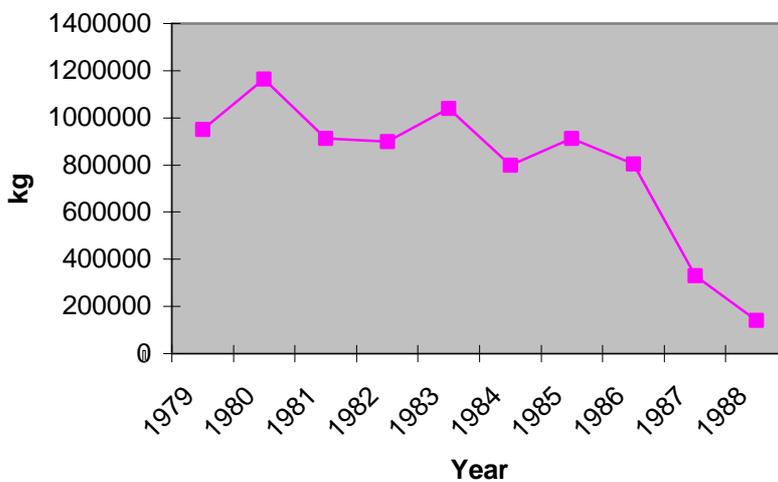


Figure 3⁵²

During the 1980's the ivory export from Africa was quite high. It is shown in this illustration, that the ivory export significantly dropped before the ban began.

But the ban of ivory trade has not had the effect that it was meant to have in the last years. There are indications that illegal poaching has increased in some parts of Africa⁵³. The ivory price worldwide has fallen, but there are indications by ETIS that there has been an increasing trend in the illegal market since 1998. To address this trend there has been increasing focus on stockpiles, have larger protected areas and managing elephants so that the conflict with humans decreases⁵⁴. Since 1995 illegal ivory trade has increased, every year there is up to 4000 elephants poached to meet the market demand⁵⁵.

There is a new way in tracking down illegal ivory by using DNA from elephant dung and skin biopsy. This has been taken from 16 different African countries in 28 locations. This information has created a genetic map, with information from tusks origin. In research of test sample, 80 percent of the locations were accurate within 600 miles⁵⁶. This method can determine where the ivory comes from. With this information states and officials can use the information to have stricter restrictions, and a more closely lookout for poachers. If the price for ivory would get higher, there would be a more hunting. People that do not have money would see the economical profit in selling ivory⁵⁷.

⁵² Barbier and Burgess, 1990

⁵³ www.worldwildlife.org

⁵⁴ Ibid.

⁵⁵ Pegg, 2004

⁵⁶ Ibid.

⁵⁷ Maharaj, 2002

9. Tanzania



Elephants have created problems when they have destroyed and eaten crops, which lead to a policy in elephant control in 1920's. Elephant population had grown bigger especially in protected areas in 1950's, this lead to concern on how the ecosystem would be damage. 1970's poaching started to become a problem in the whole country. Poaching continue to spread out and affecting the elephant population more seriously⁵⁹.

Elephant population in Tanzania dramatically reduced between the beginning and end of the 1980's.

⁵⁸ <http://www.thabelatravel.com>

⁵⁹ Blanc et. al, 2002

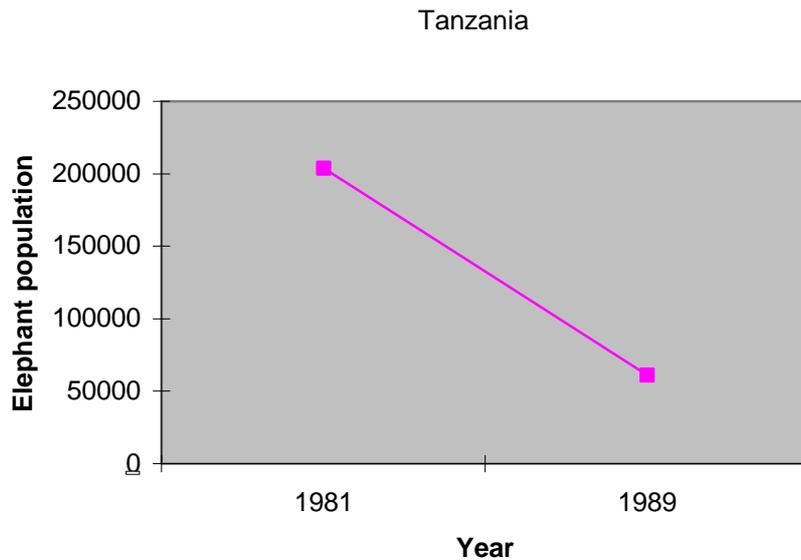


Figure 5⁶⁰

The change came in 1989, when the government of Tanzania introduced “Operation Uhai” a campaign to stop hunting with help from police and army. This was an imported step towards the elephant population stability in Tanzania.

Tanzania is today one of the leader countries in protected areas in the world. They have 12 national parks, 34 game reserves and 38 game controlled areas. Tanzania has a total protected area of 28%⁶¹.

Elephant’s are one of the wildlife animals that create most problems for the farmers, therefore is the wildlife-human conflict such a big problem. Elephant’s mostly eat maize crops, but also rice, cashew nut, millets and peas⁶².

9.1 Tarangire national Park

Tarangire National Park area is 2850 km²⁶³, it is the fifth largest national park in Tanzania and is located in the northern parts⁶⁴. Tarangire has a high diversity of animals such as zebra, leopard, lion, giraffe, buffalo, impala and waterbuck.

Tarangire has various climates, the dry season is between June and November, short rain season, November to January and a longer rainy period between February to May⁶⁵.

⁶⁰ Barbier and Burgess, 1990

⁶¹ Blanc et. al, 2002

⁶² Baldus and Hahn, 2001

⁶³ Interview Tarangire National Park

⁶⁴ Bigurube, 2003

During the rainy season most of the animals migrate outside the park and are depending on food and water supply outside to survive⁶⁶.

Elephant population has increased in the last decades, but in the last five years the population has grown dramatically⁶⁷.

9.1.1 Safari hunting

Safari hunting is allowed in Tarangire National Park. To keep the different wildlife populations on certain amounts, are there legal to hunt a certain quote. There are different amount depending on which animal it is and how the population has developed. This quota can be killed by the game warden, but also by safari hunters. These safari hunters have to have the game warden with them, and it is a financial resource to the park⁶⁸. In 1998-1999 the yearly quota elephants that were allowed to shoot were hundred elephants. If a safari hunter kills an elephant they are allowed to take parts of the animal as a trophy⁶⁹.

9.2 Human-Wildlife conflict

When the ban was established in 1989 and numbers of elephants were increasing, problems with human conflict increased as well. Elephants need habitat, food, water and shelter, which lead to a conflict. In some areas elephant's are despise by humans, because they destroy a lot of there investments.

9.2.1 Problems outside the park

Outside the park elephants are causing problems. There has been an increasing population growth nearby the park. Humans who live near and closely to the park are having problems with especially the elephants. But other animals such zebra and giraffe as well, this has created a conflict between humans and animals.

The wildlife has to have migrated corridors to walk between reservations. When humans block many of their routs with agriculture and households, has this created a conflict over the land. The main reason why it is important to maintain migration corridors are that, in the wet season the wildlife must be abele to have access to food outside the park area⁷⁰.

⁶⁵ Valeria et. al, 2000

⁶⁶ www.wsc.org

⁶⁷ Interview Tarangire National Park

⁶⁸ Interview Game warden

⁶⁹ Valeria et. al, 2000

⁷⁰ Valeria et. al, 2000

Elephant population is growing bigger inside the park and humans have come to live and cultivate the land nearby park⁷¹. This have created problems for the farmers, when elephants move, in search of food and the migration corridors are fewer and hard to find. There are shown obvious footprints of elephants in the field with crops, elephants create huge problems for farmers. One farmer estimates that elephants destroy one third of the crops⁷².

Buffer zones from the park are about 100 feet's and that is not enough for the farmers to avoid elephant's conflicts.

9.2.2 Crop protection

To protect the crops from elephants, framers use a bell with a high sound to scare it of. If that is not working they use a big flashlight, and in some cases farmers use a gun with plastic bullets. They are allowed to shoot the wild animal but only if it dies. It needs to be killed, if the animal survives and goes back to the park, it is illegal. Farmers can also phone a park ranger for help, bur many times it takes so long for them to come, sometimes 24 hours. When they finally comes the elephant has already has disappeared and is long gone⁷³.

There is a possibility for farmers to put up electric fences, but this is an economical issue, farmers cannot afford this. There are no economic compensations for the farmers by the government if a wildlife animal destroys their livelihood. One farmer wanted Tarangire National park to expand their area because the closer the farmers are to the park, the more help and benefits there were could benefit from⁷⁴.

9.2.3 Before the cultivation

Before humans started to locate and cultivate land nearby the park, elephant's could walk freely. The land area was a part of their natural habitat. When farmers now cultivate crops, there is a natural behaviour for them to eat it⁷⁵.

⁷¹ www.worldwildlife.org

⁷² Interview, Mamire range

⁷³ Ibid.

⁷⁴ Interview, Game Warden

⁷⁵ Ibid

9.3 Poaching

There was well organized hunting during the 1970's and 1980's⁷⁶. Since then, elephant population has been under relative good control compared to the previous decades. Tarangire has had more effected controlled areas in the park since the ban⁷⁷.

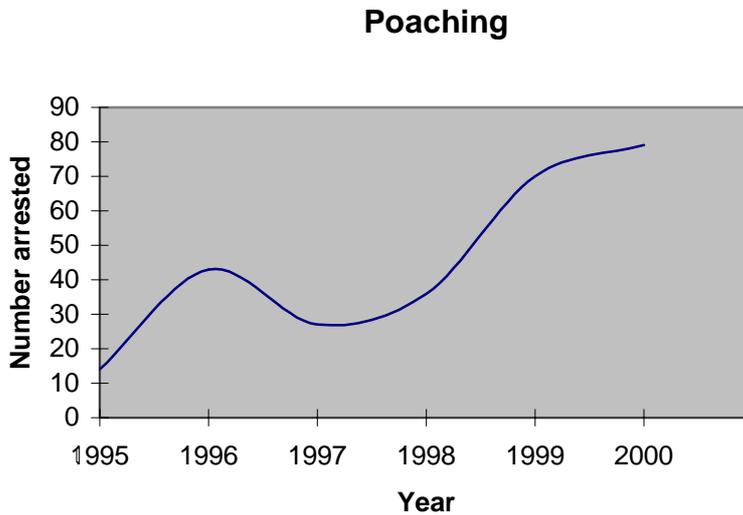


Figure 6⁷⁸

9.4 Tarangire Elephant Project

Tarangire Elephant Project (TEP) tries to create a sustainable relationship between wildlife animal and humans. Dr. Charles Foley created TEP, he works together with his wife Lara and Tanzania National Parks (TANAPA). Their main task is to gather information on elephants in Tarangire ecosystems⁷⁹.

TEP has studied the Tarangire elephant population since 1993 and has identified 1000 elephants via photo. Elephants are depended on migrated routs and there is a threat to maintain them, when there is a growing human population outside the park. It is of vital importance to keep and not close any more migrated routs.

Permanent loss could increase human-wildlife conflict when farmers have agriculture closer to the park. It can also contribute to, ecological difficulties, when the land that used to belong to wildlife does not exist anymore. The project fallows elephant families

⁷⁶ www.africanconservation.org

⁷⁷ Bigurube, 2003

⁷⁸ Ibid.

⁷⁹ www.africanconservation.org

and bulls and keeps track of their births and deaths. The project also collaborates with local communities and tour operators to protect elephant areas.

TEP tries to find a way to solve the human-wildlife conflict. They are trying methods that are not so expensive to prevent elephants from destroying cultivation. They are working together with villagers and the park managements⁸⁰.

⁸⁰ www.wcs.org

10. Stockpiles

After the ban ivory stockpiles (ivory that is being storage, in large amounts) has increase, just in case if the ban sometime stops and ivory becomes legal to sell again. It costs to maintain them, the piles must have humidity, which protects the ivory from drying out. Since there is an economic value in the ivory it is protected by guards⁸¹. Stockpiles with ivory that has been hunted before the ban, and of elephants that have died of natural causes, are legal to maintain.

CITES have taken the point of view, that if a country has information that can prove that ivory sales will not affect the illegal killing of elephants. They are allowed to sell their stockpiles under supervised regulations⁸².

There is legal to sale ivory from stockpiles before 1989, traders are not required to have permits that show if the ivory is legal or illegal. This has caused problems in determine if the ivory comes from stockpiles before 1989 or is illegal imported mostly from Africa.

In 1998 had African states together minimum of 462 tons ivory on stockpiles, which are estimated to 46 million dollars⁸³.

10.1 Burundi

Burundi is a small country between Tanzania and Zaire. In 1980's, before the ban Burundi only had one elephant, after a few years later in 1986 the population had grown so much that they had 23.000 tones of ivory⁸⁴. In 1987 they are believed to have imported 87 tone of ivory to their stockpiles.

Burundi is not a range state of African elephants, the stockpiles are likely to been imported⁸⁵. There is no way of knowing if the stockpiles are being replaced and the illegal trade with Asia is still going on. But with new technology there is a possibility to determine where the illegal ivory is coming from⁸⁶.

⁸¹ Edwards, 2001

⁸² www.news.bbc.co.uk

⁸³ <http://www.watchtower.org>

⁸⁴ Barbier and Burgess, 1990

⁸⁵ Maharaj, 2002

⁸⁶ Pegg, 2004

10.2 Kenya

Kenya took an important step, protesting against stockpiles by burning all of theirs. This is an important demonstration and allows them to be a role model for other countries. Kenya wanted other country to take action and stop the trade once and for all⁸⁷.

10.3 South Africa

South African authorities in Kruger national park say that they have managed their reservation well. South Africa has increased their elephant population from 8,000 in 1987 to 13,000 elephants today. They believe that have done what was asked from them, and that they are being penalizes because other countries haven done the same that they have.

South Africa, Botswana, Namibia and Zambia have stockpiles together with 90 tones of ivory that they want to sale to Japan under a one-time sale. They also want to sale 13 tones of ivory annually⁸⁸.

⁸⁷ www.bwesa.co.za

⁸⁸ Maharaj, 2002

11. Analysis/Discussion

The African elephants population has throughout the history been determined by many factors. Factors like population size, reproduction, disease resistant. These factors have shaped the population today there are only two elephants species left, which have survived the historical obstacles.

The elephant has changed the behavior for other animal's survival chance and been key species in the ecosystem. The biggest obstacles that the elephant population has today in surviving are the humans.

CITES has regulations and criteria for three different levels in the Appendix. Depending on how threatened the elephants is, and how well managed the country has been to protect the population.

If a country has succeeded and managed to take control over the population growth, they can be placed down a level in the Appendix. In the Appendix II regarding elephants, countries have the right to sell ivory under regulated and organized forms to other countries approved by CITES. It is still important that countries that have been placed down to Appendix II still have a supervision method on the population. If a country has been moved down to Appendix II, and the population is dramatically reduced it may be placed up in Appendix I again. This is not a sustainable situation. A country that has been placed down has to prove that they earn Appendix II and that they have control over the population.

It is still important that those countries that have had a successful population growth, and still there maintain management methods.

During the ban stockpiles have been a way to store tusks from elephants. There are often large stocks and they are stored for a reason. If they are moved down to Appendix II, there is a possibility to sell them. Ivory trade will be an issue a long way in the future as long as stockpiles exist. As long as countries want to sell ivory, and believe that they will get it sold in the future, they will keep it stored.

When stockpiles are increasing they send out a message that CITES is only temporary and as soon as they have a growing elephant population they can sell their stockpiles in the future. Countries that store tusks believe that the market will still exist in the future, and when they are allowed, they will sell it.

From an economic point a view, this is correct and countries want to earn money from an existing market that. But if countries want to have a sustainable elephant population growth in the future, this is not acceptable.

There is a risk that when it is legal to sell ivory from stockpiles, this is not enough to satisfy the market. This can lead to that the illegal hunting will rise again.

It is of vital importance that Kenya burns their stockpiles, as a demonstration and role model for other countries that still wants to proceed with ivory sell. There are also important to demonstrate to the whole ivory market, that they do not accept this kind of trade.

In 1976 CITES placed the African elephant under Appendix II. If they would have placed it directly in Appendix I, there is a possibility that the elephant population would have been different today. Appendix II did not work as well as they thought. They gave countries a chance to regulate and control the market themselves. This did not work out as well as CITES hoped it would.

CITES hade to take more actions and control to save the elephants. This can be important to remember when countries suggest that all African elephants should be moved to Appendix II. I think that this has shown that there is a need for an organization like CITES to have control and set boundaries. There needs to be regulations and control over the populations as long as there is a market for ivory.

CITES placed African elephant to Appendix I, to stop the dramatically reduction of the population. The market and demand for ivory in the western parts of the world reduced. Hunting is also declined, the ban had a positive influence on the ivory market. Even if poaching has increased, there is still important to proceed with the ban. In the future it is important that CITES, finds new ways against the illegal ivory. To keep up with illegal hunting today and in the future, new technology needs to be addressed.

Asia is a large consumer of ivory, and there are many small businesses that sell ivory. Asia needs to have a more supervised and inspected market, if there is any chance to track down the illegal shops.

When CITES allowed a one-time sale, it was placed in Asia. Where there still was a high demand for ivory. But this caused problems, and leads to confusion by locals. Asian inhabitants were not aware that it was just, a one-time sale, they had different information.

It is important that, if CITES are going to have a one-time sale, that everybody are informed and aware of the situation. If people think that it is legal to purchase ivory again, there is a risk the poaching will increase once more.

USA allowed trading with ivory within the country before the ban, this has caused problems. Americans are also allowed to bring in ivory to the country as a hunting trophy. They are not allowed to sell it, however, there are no supervised controls for people can easily sell their items on e-bay. To make it legal to sell ivory that was hunted and pursued before the ban, contributes to difficulties in finding the illegal ivory.

The elephant population has dramatically reduced in a very short time. Even if there now is a regulation that monitors the ivory market both legal and illegal. However, it still is going to take a long time before the population comes up to the amounts, that it was in the early eighties.

As it have been shown it does not take long time to seriously harm a large population, to the level that it are being threatened to existent.

What factors and approaches can determinates a successful elephant population growth:



When the population is growing, it might be slowly, but it still growing.



When all countries elephant populations have been placed in Appendix II or even Appendix III



When human realize that ivory is something that belongs to elephants and is not ours to purses.

I think that it is a combination of all three, but the most important and the most influence has the last one. If there is no market for ivory, it does not matter which Appendix the elephant is placed under.

CITES work is far from over, I believe it is just the beginning. What the future will hold is difficult to say. But CITES Appendix I have just been in progress for African elephants since 1989, and there has been amazing result. There are still things to be addressed, but the most dramatically reduction that happened in 1980's has stopped. The main problems now are attitudes and poachers.

There is a possibility that new technology is necessary to find illegal ivory, technology that can determine the exact source ivory comes from. DNA may be a solution, but it still needs future investigations. It is imported that all countries adapt the newest and modern technique in search of illegal ivory trade.

It is of vital importance that organizations like CITES, will continue to set boundaries and regulations. But when CITES in the future allows one-time sales, there is a risk that the attitudes towards ivory are going to change. This can have catastrophic outcome. If the attitudes change, this can lead to a more demanding market. There is a possibility that hunting will become an attractive market once more and that we jeopardize the sustainable viability of elephant population.

It is necessary that all trade with ivory will be stopped. CITES has to make new regulations in Appendix II, so that the growing elephant population is safe. There should also be regulations to make it illegal to stock ivory. This gives signals to countries that further sale is not going to happen. This sends out clear signals to the ivory market as well, that everybody knows what regulations there are.

Elephants need space to have their ecological needs fulfilled. Tarangire national park is not big enough for their elephants. Their natural habitat is depended on the other side of the reservation area.

Since the ban, the elephant population has successfully grown bigger in Tarangire. At the same time migration corridors have reduced. This has caused problems for human and elephants, human's lives closely to the park and the existing migration routes. This has caused human-wildlife conflict's to increase. The closer human's move to the reservation, the more damages does the wildlife do to the crops.

Elephants have had land outside the park long before the human came and cultivate the land. They could walk around freely and where their habitat needs was fulfilled. They need habitat space as a part of their movements.

If the humans have taken over their natural habitat space it is obvious that the elephants are going to eat crops that are in front of them. They are depended on food outside the reservation there are not borders that keeps the elephants away from the crops. One resolution can be to put up fences that separate humans from elephants, but this is not economical possible for farmers in Tanzania. Most farmers feel resentment towards elephants that destroy their livelihood. If farmers would get economical compensation from the state or national parks, there is a possibility that the resentment would not be as strong.

To maintain a sustainable elephant population, I believe that this needs to be done, now.



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⁸⁹ <http://www.elephantvoices.org>

12. Conclusions

The African elephant population dramatically reduction in the 1981's, made CITES place the population under Appendix I. This lead to a change in the ivory market and the hunting dramatically reduced. This was essential if the population were to survive.

When the ban was proceed by a big campaign in western countries, and an attitude change towards ivory. This attitude has not been accepted in Asia in the extent that it has been done in the western countries.

CITES one-time sale to Asia was a step back, for the elephant population. It is necessary that the demand for ivory will be over, to proceed with a growing elephant population. As long the market demand is there, issue with ivory will not be over. CITES have allowed few countries to step down a level in the Appendix, as they has had a successfully population growth.

They believe that they have done what was asked of them, and therefore are allowed to have one-time sales. During this time they have storage tusks in large amounts, from elephants that have died before and during the ban.

The problem is not entirely the one-time sale, a large part has to do with the attitudes from humans. This sale will raise the demand for ivory, which can increase poaching in Africa. In countries that not has as good population growth, as the Appendix II countries. The increasing demand for ivory, after one-time sales, can in the future endanger the elephant population. It is therefore of vital importance, that all trade with ivory will become illegal.

With a growing elephant population, the human-wildlife conflicts will properly increase. Humans need to realise, that elephants needs their natural habitat space for survival. Humans have to stop move so closely to the reservations areas. The elephants would probably not eat as much of farmer's crops, if they had their natural habitat space. It is also of interest if the sate could economically compensate farmers, or build fences around the agriculture area. But as it is today, this is not economically possible, but in the future this could be a solution.

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Lina Jansson, Södertörn University College, June 2006

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