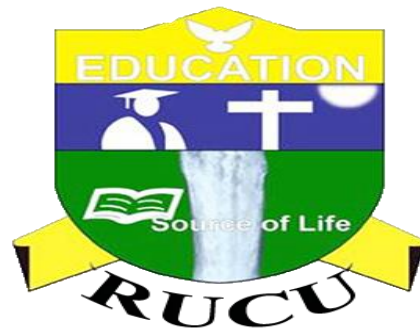


**RUAHA CATHOLIC UNIVERSITY
FACULTY OF LAW**



RESEARCH PROPOSAL

**THE CHALLENGE OF POPULATION GROWTH IN NGORONGORO CONSERVATION
AREA: AN EXAMINATION OF THE NGORONGORO CONSERVATION AREA ACT.**

**A research Paper Submitted in Partial fulfillment of the Requirements for the award of
Bachelor of laws Degree (LLB) at Ruaha Catholic University.**

**By
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771/LLB/T/2018**

Prepared under supervision of

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At Faculty of Law

June, 2022

CERTIFICATION

The below signed certify that he has read and hereby recommend for acceptance by the Ruaha Catholic University dissertation title: THE CHALLENGE OF POPULATION GROWTH IN NGORONGORO CONSERVATION AREA: AN EXAMINATION OF THE NGORONGORO CONSERVATION AREA ACT, fulfillment of the requirements for the degree of bachelor of laws of Ruaha Catholic University.

Signed on.....day of2021

.....

Supervisor

Justin M. Mlay

DECLARATION

I, Mihijai Iddi Mfunda hereby declare that this research is of my own original work and that it has not been presented to any other higher learning institution for similar or any academic award.

This work is not currently and has not been submitted at any university or institution for a similar degree award or any other.

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DEDICATION

I am glad to dedicate this work to my beloved family, especially father - Dr. Iddi Mihijai Mfunda, my mother - Zahara Saleh Mlilima, and my young brothers: Majid Iddi Mfunda and Mahir Iddi Mfunda. Also I dedicate this work to my beloved aunts Salha Saleh Mlilima and Mariam Clement Mbanga.

ABSTRACT.

The Ngorongoro Conservation Area is one of valuable natural resources in Tanzania. The aspects for its popularity include the wildlife that is found within the area, the historical value the area holds, and the act of wildlife and human activities conducted in one area is what attracts tourists and gives much recognition to the world. Despite its popularity, there are some short comings as a result of co-existence between wildlife, people and livestock. The wildlife is causing damages by attacking people and livestock, and destroying crops. The situation has resulted into human-wildlife conflicts, and calls for maintaining efficient legal and institutional arrangements. The objective of this research project is to establish legal and institutional framework on strengthen the welfare of wildlife and humans without jeopardizing each of the other and thus sustain the Ngorongoro Conservation Area.

In this study, the researcher applied approaches including that was interview that was conducted to people living in the Ngorongoro Conservation Area. Also, the researcher interviewed officials and investors in the Ngorongoro Conservation Area. The obtained information has helped the researcher to prove hypothesis as to legal challenges on multiple land use within Ngorongoro Conservation Area on the aspect of population

Legal Instruments

- The African charter of Human and peoples right of 1981
- World Heritage Convention 1972
- The Convention on migratory species.1999
- The Convention on International Trade in Endangered Species 1975
- Wildlife Conservation and Law Enforcement 1999
- The Constitution of The United Republic Of Tanzania Of 1977
- The wildlife conservation Act No 5 of 2009
- Ngorongoro Conservation Area Ordinance Cap 14 of 1959

LIST OF ABBREVIATION

CBC	-	Community Based Conservation
CITES	-	Convention on International Trade in Endangered Species of Flora and Fauna
EAC	-	East African Community
MLU	-	Multiple Land Use
MNRT	-	Ministry of Natural Resources and Tourism
NCA	-	Ngorongoro Conservation Area
NCAA	-	Ngorongoro Conservation Area Authority
NGO	-	Non-Governmental Organization
TANAPA	-	Tanzania National Parks
TARURA	-	Tanzania Rural and Urban Roads Agency
TAWA	-	Tanzania Wildlife Management Authority
TAWIRI	-	Tanzania Wildlife Research Institute
TFS	-	Tanzania Forest Services Agency
UN	-	United Nations
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environment Programme
UNESCO	-	United Nations Education, Scientific and Culture Organization
UNFCCC	-	United Nations Framework Convention on Climate Change
URT	-	United Republic of Tanzania
WFP	-	World Food Programme
WHC	-	World Heritage Committee

WHO	-	World Health Organization
WHS	-	World Heritage Site
WMAs	-	Wildlife Management Areas
WTO	-	World Tourism Organization

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CHAPTER ONE:

GENERAL INTRODUCTION

1.1 Introduction

Given the nature of the land, in this case, the (Ngorongoro Conservation Area) it is crucial that the population is balanced among all species and activities conducted within the area. When human activities supersede wildlife activities, this tend to the weak species seek refuge elsewhere as a result the wildlife being the weakest specie because they are outnumbered by human activities and population, they tend to leave the conservation area and bring harm to the neighboring villages. Where the competition for space and resources between wildlife and human's increases and affects people's livelihood, conservation is at risk¹.

1.2 Background of the problem

The history of Ngorongoro Conservation Area (NCA) dates back to 1928, when it was gazetted as a game reserve. In 1940 the Game Reserve was merged with the Serengeti Game Reserve and upgraded by the Game Ordinance to become Serengeti National Park. In 1951, the Fauna Conservation Ordinance No.17 of 1951 re-established the Serengeti National Park. Following the development, there was a concern from the natives about prohibitive policies of disregarding their interests in the Serengeti National

¹ Arhem, K. *Maasai pastoralism in Ngorongoro Conservation Area: sociological and ecological issues*. BRALUP Research Paper 69, University of Dar es Salaam, Tanzania (1981).

Park. As a result, the Colonial British Government excised the NCA from Serengeti National Park using the Ngorongoro Conservation Area Ordinance (Cap. 413) of 1959. Following reorganization of the laws by the Parliament, the NCA Act is now cited as Cap. 284 [R.E. 2002]. As such, the western part retained the Serengeti National Park as an exclusive wildlife management area; and the eastern part as NCA – the Multiple Land Use Area². The Ngorongoro Conservation Area Ordinance sought to meet three objectives namely: conservation of natural resources, promoting the interests of indigenous residents and fostering tourism development.

The NCA is part of Tanzania Maasai land which have lived in the area since the 18th century. The NCA is, therefore, unique in the conservation theory and practice for, unlike national parks and other wildlife protected areas, it is a conservation area where human activities such as pastoralism and cultivation is carried out to a greater or lesser extent³ in coexistence with wildlife.

The NCA was established on 1st July 1959 by Ngorongoro Conservation Area Ordinance, the ordinance recognized the existence of Maasai within the area hence its core purpose was to control entry and residence within the conservation area⁴.

When NCA was established in 1959, the population of native residents was about 8,000. In 2017, the population grew to 93,136, and in 2017 it grew to approximately 110,000 people. an increase of over ten times. This population growth goes hand in hand with

² D. Bygott, *Ngorongoro Conservation Area*; a Kibuyu Guidebook

³ K. Arhem, *Pastoral man in the Garden of Eden: The Maasai of the Ngorongoro Conservation Area*, 1985

⁴ Ngorongoro Conservation Area Ordinance Cap 14 of 1959

increasing pressure on natural resources through increased livestock population and improvement of economic activities and settlements inside the area. At the time of the creation of the said laws the given population was fit for the environment to accommodate both wildlife and humans.

The NCA, Cap. 284 [R.E. 2002], regulates conservation of natural resources and human development by emphasizing on human development in aspects including socio economic development, for example residing in NCA, human settlements and infrastructure development, and livestock development within the conservation. The NCA Act states that the only people permitted to reside within the conservation area are the ones whose place of ordinary are within the residence.

With the creation of the new conditions the law only managed to block a few Maasai from migrating within the area but has failed to the growing population that is was still within the area⁵.

The size of the NCA area has not increased since 1959 yet the population of the living organism it inhabits keeps multiplying by each year⁶.

1.3 Statement of the problem

⁵ K. A. Galvin Philip, K. Thornton, *Ngorongoro Conservation Area, Tanzania: Fragmentation of a Unique Region of the Greater Serengeti Ecosystem*, Springer, Dordrecht, 2008

⁶ A. S. Kennedy and V. K, *Animals of Serengeti and Ngorongoro Conservation Area*, Princeton University Press, 2014

There has been defectiveness in Ngorongoro Conservation Act in matters of protecting the Conservation's interest as well as the villages surrounding it. The law has managed not to grasp the Maasai people and other tribes their heritage right of the area, however it has failed greatly to control the population within the area.

Population growth of both pastoralists and livestock has increased to such an alarming point that unless something is done immediately, there is no hope that this once spectacular game reserve can continue to exist as a wildlife refuge without bringing harm and damage to the neighboring villages⁷.

Generally, the problem that has brought attention in the said matter and, the laws governing and controlling entry and residence within NCA are not effective enough to combat the issue of overpopulation as instead of implementing laws that will control the population within the area, they just restrict new residence hopping doing so will have impact to the issue that is already at hand.

1.4 Literature review

There are several legal scholars that have made effort by discussing and criticizing in writing the implications of laws governing Ngorongoro conservation Area in different parts of the world. Authors have underlined some of the effects in the present legal systems. However, some of the Authors have succeeded to advice what should be done so as to overcome the problem of overpopulation within the conservation Area

⁷ HOARE, R.E. 1999b. *Data collection and analysis protocol for human-elephant conflict situations in Africa. A document prepared for the IUCN African Specialist Group's Human-Elephant Conflict Working Group*. Arusha, IUCN: pp. 30.

Jan Reynolds⁸, in his book of *Only the Mountains Do Not Move*, the author covers the story of a Maasai way of life together and their relation with complete way of life while living in the conservation area. The author proves a good argument from his book in relation to the Maasai culture in relation to pastoralism, he talks about how the tribe takes pride in owning a thousand of livestock and how it is tradition to them wealth being measured by form of who owns more livestock than the other. However, the author has focused more on the cultural aspect of the Maasai community, together with their nature of pastoralism.

In this research the writer has explored and point out, how the Maasai tribe overpopulate together with highlighting the danger such overpopulation brings to the land the Maasai reside in and how such danger could be avoided in the first place⁹.

Elliot Fratkin¹⁰, In his book namely *Maasai*, the author focuses on the struggle of land between the Maasai themselves within the conservation area. The author talks about a period of widespread of warfare between pastoralist fighting for grazing lands and cattle. In this book the author has gone to a great extent to show the audience that the land provided and named as a multiple use land is not enough to provide refuge for both activities as it is the nature of Maasai tribe to own a thousand cattle's and fight wild animals as sport.

However, in this book the author says that the existence of the Maasai in the conservation area is as important as that of the wild animals, since some of the plant

⁸ J. Reynolds, *Only the Mountains do not move*, Lee & Low books, 2011

⁹ https://doi.org/10.1007/978-1-4020-4906-4_11, Accessed on December 2021

¹⁰ E. Fratkin, *Maasai Africa World press*, 2020

species only started to surface after the interaction of the wild animals and the Maasai within the region, so the author concluded by stating that, he is not sure removing either specie would hold what effect to the land.

In this research the researcher has explored and provide what is a better way the government can control the rapid growth of population within the conservation area.

Katheleen. Homewood and W. Rodgers¹¹, In the journal the authors have focused more in the study of population growth of both human beings, livestock and wild animals, for a 2year period. The authors have set out to identify the nature and growth of misunderstand between the Conservation authority and the pastoralists. Also in this article the authors have stated that the authorities rule in control of the land use such as restriction of grazing in certain part of the conservation.

That been said, the researcher in course of this research broughtabout the threat of overpopulation and how the authorities will solve such challenge.

Adam Scott Kennedy¹², in his book, *Animals of Serengeti and NCA*, the author talks about how it is in its nature for wild animals to look for another area to accommodate their staying when the current area does not accommodate their needs or the existing area brings discomfort. The author also points out that such discomfort can be caused by over population and other various factors.

¹¹ K. Homewood, et al, *the journal of agriculture science*, Cambridge University Press, 2009

¹² A. S. Kennedy, *Animals Of Serengeti and Ngorongoro conservation area*, Princeton University Press 2014.

By including the idea brought by with the author of the said book, the researcher has specified the particular measures that may help with the control of overpopulation within NCA.

Shivji and Kapinga¹³, in the book of Maasai rights in Ngorongoro, the author have focused their discussion to the distribution of resources and the benefit of the NCA. The authors have also managed to outline the legal framework of the NCA together with the power of Ngorongoro Conservation Area Authority (NCAA), together with that, they have also managed to trace and identify the history of the Maasai in relation to the land in question.

In continuing the work done by the authors, the researcher has point out the legislation framework on how it has failed to protect and control population growth within NCA. The researcher has covered the said gap by researching on the said areas and point out how such gap affects the society

1.4 Hypotheses

The Ngorongoro Conservation Act does not adequately cover human population and thus violating their welfare and rights.

1.5 Objective of the research

This research has general objective and specific objectives.

1.5.1 General objective

¹³ I. Shivji and W. Kapinga, *Maasai rights in Ngorongoro, Tanzania*, Russell press, Nottingham (1998)

The general objective is to examine how the Ngorongoro Conservation Act regulates population growth in relation to the conservation of natural resources and improved human welfare.

1.5.2 Specific objective

The specific objectives are: -

- I. To find out the lacuna in law that lead to rapid population growth in NCA
- II. To illustrate on the problems of increased human population in the NCA and its impact to the natural resources and human welfare.
- III. To propose how the Ngorongoro Conservation Act would manage to regulate effectively the problem of increased human population within the conservation area.

1.6 Significance of the research

The significance of the research is to generate the knowledge on how better the Ngorongoro Conservation Area Act could be applied to regulate the increased human population and minimize activities affecting the sustainability of the conservation area. In this regard, the study has assisted in ensuring that NCA is maintained for the future generations and contribute towards economic growth and people's well-being. The findings of this study, of which will contribute towards strengthening the management of the Ngorongoro Conservation Area.

1.7 Research methodology

Under this research the researcher has obtained data through primary data collection, and secondary data collection.

1.7.1 Source of Data

The main source of data to this research are books, journals, magazines, laws.

A. Secondary Source

The secondary data were obtained through extensive survey of published and unpublished documents. The data were obtained from Ruaha Catholic University Library (Benjamin Mkapa learning Resources Centre), Ministry of Natural Resources and Tourism (MNRT), Ngorongoro Conservation Area Authority (NCAA), Tanzania National Parks (TANAPA), Tanzania Wildlife Management Authority (TAWA) and online sources.

B. Primary Source

The need to triangulate ideas from various information sources necessitated consultations with key experts from MNRT, NCAA, TANAPA, and TAWA. This stage involved in-depth discussions on issues pertaining to organizational mandates, regulatory framework, management and national security threats. The discussion with key informants was aimed to confirm the issues obtained from the secondary data.

1.7.2 Research design

Since the researcher wants to make the analyzation of the law with proving the application of that defect law, the researcher preferred to use non doctrinal methodology. That is fact because this methodology helped the researcher to examine the weakness of the law to detriment of the administration of the conservation area. But

also this methodology has brought room to the researcher to see and analyze the actual effect in the field in relation to the population growth.

1.7.3 Field research

The researcher used the primary data in collecting information from the team of Ngorongoro Conservation Area legal personnel since they have legal understanding to the effect and nature of the research.

A. Interview

The aims of the researcher to use the interview is because it would provide room for the interviewee to explain his or her views, this allowed the researcher to acquire a lot of information.

Whereby the researcher is going to use (11) respondent on which two from the legal officers who deal with the Ngorongoro conservation areas disputes and also the two who were the people who are residing within the Ngorongoro conservation Area, three people who are residing in villages neighboring the Ngorongoro conservation area, together with two penologists so as to understand if there are any land benefits from having a multiple land use, and two from TANAPA ECOLOGY department. And in this interview the researcher has used both structured and unstructured interview because it provides the information to be applied in the research. This is easy way to get data and this interview is important due to give the information connected to this research

1.7.4 Library research

The researcher was also able to utilize the library as a source of collecting the necessary information in relation to multiple land use in Tanzania and Africa together with all matters relating to Ngorongoro Conservation area.

Since the problem is current and ongoing physical did not be of much help rather the researcher opted to relay on internet data the most.

1.7.5 Target population and sample size

The researcher has used non probability sampling based on personal with experience and enough knowledge about the multiple land use. This is because the researcher had access of receiving pure information about the particular problem. Due to that fact the researcher selected only 17 sample size so as to provide with the required information, this is because the said number of sample size helped the researcher to digest the reality of the information given so as to prove the facts provided.

Whereas, five were selected from the legal officers who are deal with the Ngorongoro conservation areas disputes

The other five were pointed from the people who are residing within the Ngorongoro conservation Area,

Also, three who were the people who are residing in villages neighboring the Ngorongoro conservation area,

Two penologist so as to understand if there are any land benefits from having a multiple land use, and

And the last two from TANAPA ECOLOGY department. The ecology department is an important sector as the department deals with relations of organism in relation to their surroundings.

1.7.6 Study area

The NCA is located in Ngorongoro district in Arusha region. The Ngorongoro Conservation Area is bordered with Lake Eyasi, the agricultural communities of Oldeani (Oltiyani in Maasai) and Mbulumbulu mountain forests on the South and Southeast in Karatu District. Also, the NCA is bordered with Oldonyo Lengai mountain, Lake Natron GCA and Sale Plains in the North-East. The NCA borders Tanzania and Kenya boundary and Serengeti National Park on the North and Northwest. To the West, Ngorongoro Conservation Area is bordered by Maswa Game Reserve, while to the East it is bordered with Engaruka plains in Monduli district.

1.8 Scope and limitation of the study

1.8.1 Scope

The research focused on NCA since it is the only area vested with the status of multiple land use in Tanzania, where human coexists with wildlife.

1.8.2 Limitation of the study

The main problem during the study was time limitation and inadequate financing to conduct questionnaire survey in the Ngorongoro Conservation Area. The problem was solved by relying published and unpublished literatures.

CHAPTER TWO

THE CONCEPTUAL FRAMEWORK ON CHALLENGES OF POPULATION GROWTH IN NGORONGORO CONSERVATION AREA: AN EXAMINATION OF THE NGORONGORO CONSERVATION AREA ACT

2.1 Introduction

The study of multiple land use is of a relatively recent origin. As a pioneer, the objective of this research is to unfold the potential and significance relating to the mix between the wildlife together with humans. It also presents the problems of wildlife conservation, principles, and legal approach to wildlife conservation in sub-Saharan Africa.

2.2 Multiple land use pre-colonial era

Mixing wildlife and human activities is as old as humanity its self because history shows us in early times there were tradition customs, rules, taboos, beliefs and practices of various ethnic groups that counteracted with wildlife activities. Example it was the Maasai culture for a young male to be considered to be grown (moral), one has to fight a lion and remove his teeth as a souvenir of his winnings¹⁴.

2.2.1 Olduvai Gorge

This is paleoanthropological site that is to be found within the boundaries of the NCA. Olduvai Gorge is a site that holds the earliest evidence of human ancestors, dating a couple millions of years back. Through this identification leads to conclusion the mixing

¹⁴ <https://www.ncaa.go.tz.com> accessed on 15th December 2021

of human activities and wildlife has not become in early times rather it existed way back, and we shall see how was developed and made formal here after¹⁵.

2.3 Multiple land use during colonial era

2.3.1 The German Colonial era

When the colonialists arrived to the shores of Tanzania for the first time, they found wild animals interacting with human beings, however such interactions benefitted the human beings the most as they hunted the wild animals for their own personal gains. After introduction of colonialism in Africa a new legal order was created so as to replace the traditional structure and ideology. The goal here for the colonialist was to have wild animals separated from the human activities. By doing so it protected the wild animals from adversities of African hunters.

The Wildlife Conservation was first introduced in 1891 where as a decree that was made by Hiram Vos Wissmann, who was the imperial Governor in the first general Wildlife Ordinance for the German East Africa in 1896, where he stated that, “I feel obliged to issue this ordinance in order to protect and conserve the wildlife and to avoid that species become extinct for our future generations”.

Despite the fact that these regulations were established to ban customary hunting practices, the local people continued to live and interact with wild animals in these areas based on their customary rights to occupy land, however the rights to use wildlife were significantly reduced.

¹⁵ C. Egeland, et al *Deconstructing Olduvai: A Tephronomic Study of the Bed I Sites* 2007

2.3.2 The British Colonial era

Following the first world war, the British took control of Tanganyika from the German. Whereas the British implemented more holistic approach by enacting a succession of major game ordinances. The land Ordinance of 1923 made all property of the British crown, and the customary land rights were held at the discretion of the Governor.

2.4 Multiple land use after colonialism

After Independence, the government of Tanzania began one of the first forms of community-based conservation, the NCA, a multiple use area involving the local Maasai people. In the late 1980's and early 1990's conservation in Tanzania continued incorporating local

people, and the government went as far as institutionalizing community-based conservation with the creation of wildlife management areas outlined in the 1998 Wildlife Policy (Ministry of Natural Resources and Tourism 1998)¹⁶. Wildlife management areas give the user rights to wildlife back to local communities and require establishing benefit streams from wildlife use to local communities. Around the Serengeti ecosystem, numerous organizations, government offices, and private tourist¹⁷.

2.4 Population

¹⁶ K. Homewood, et al., *The ecology of pastoral land use in the Ngorongoro Conservation Area, 1981*

¹⁷ ibid

Refers to a distinct number of people residing in a particular area whether it be a city or town, region, country.

Skalski defines the term population as a group of individuals of same species living and breeding in a given geographical area¹⁸.

Members of a particular population often rely on same resources, and are subjected to similar environmental constraints, while depending on the availability of other members to persist over time. Scientists study population by examining on how individuals in that population interact with each other and how the population as a whole interacts with its environment¹⁹.

2.4.1 Population size (overpopulation)

Overpopulation refers to a population which it exceeds justifiable size within a particular geographical area or habitat. A more complete explanation of a population's size includes the population density the size of a population in relation to the amount of space that it occupies. Density is usually expressed as the number of individuals per unit area or volume²⁰.

2.4.2 Protected area

¹⁸ J. Skalski, *Wildlife Demography*, 2005, page 57

¹⁹ *ibid*

²⁰ J, Alho, et al, *Statistical Demography and Forecasting*, 2005 page 89

protected area is a defined geographical space, which is recognized and managed, by legal authorities or other effective means, so as to achieve the long-term conservation of nature in association of the ecosystem services together with cultural values²¹.

M. Lockwood, defines the term protected area refers to mean a very wide range of land and water managing types that have some value for biodiversity and landscape conservation. By defining areas for protection is a cornerstone strategy for archiving biodiversity conservation²².

However, the practice and concept of protected areas has progressed over time. Countries around the world have a variety of systems that govern and regulate protected areas which differ considerably, depending on ever national needs and priorities²³.

2.5 Natural Resources Governance

This is the ways in which natural resources are managed where as in principle a governance issue. Governance refers to the effectiveness of decision making processes and institutions. According to Blaser, defined the term governance as the process by which public officials and public institutions acquire and execute their authority to provide public goods and services²⁴.

²¹ M. Lockwood, *et al*, *Managing Protected Areas*, 2006, page 89

²² *ibid*

²³ A., Amare, *Natural Resources*, Vol.6 2015, page 8

²⁴ *ibid*

As argued by Balint, the governance variable is important for natural resources management. The dimensions of governance include transparency and accountability, access to information, rule of law, bureaucratic efficiency, and control of corruption²⁵.

2.6 Conservation Area

These are designated areas by the local planning authority on the basis of whether the area has any special architectural or historic interest and whether preserving the area would bring beneficial values²⁶.

2.7 Wildlife and human conflict

Due to growing population between wildlife and human activities, the struggle of space is always expected within the area, hence this poses as a threat within areas practicing multiple land use.

Crop-raiding by wildlife leads to food insecurity to societies residing to the shores of the conservation area²⁷. Local people rarely tolerate the loss without complaints or avenges, researches report incidences where people have been hostile to wildlife and getting into conflicts with conservation²⁸.

The primary cause of the conflict was identified as the growing human population and increasing landscape transformation from natural to cultivated village land, bringing

²⁵ <https://www.iucn.org.com> accessed on 8th November 2021

²⁶ T. McCabe. *Giving conservation a human face*. 2002 Pages 61.

²⁷ T. McCabe, *Sustainability and livelihood diversification among the Maasai of Northern Tanzania*. *Human Organization* Volume 62, 2003, page 63

²⁸ R. Boone., et al. *Addressing management questions for Ngorongoro Conservation Area, Tanzania, using the Savanna Modeling System*. 2002, page138

human societies and wildlife into closer contact and increased competition for access to resources. Whereas elephants moved into settled land mostly during wet season in search of water, forage and probably minerals, lions moved most frequently into villages when their preferred prey species particularly zebra and wildebeest had migrated into other areas in the Serengeti ecosystem during dry season.

2.8 Crop Raiding by Wildlife

Crop-raiding by wildlife causes food shortage whereas it leads to increase of poverty. Rural poverty contexts imply a stronger pressure on natural resources, this is because when people lose their crops, they must reallocate labour to other pursuits, which are such as, bush meat hunting²⁹. Local people rarely tolerate the loss without complaints or conflict³⁰. Researchers report incidences where people have been hostile to wildlife and getting into conflicts with conservation institutions including opposition to conservation programs. Several studies have reported different techniques applied by small-scale farmers to protect crops from wildlife such as crop guarding, bush meat hunting, burning fires, pitfalls and snares, hedges and reinforcing farm fences, and use of dogs. The use of certain weapons and problem animal control techniques are unsustainable, considered illegal and their application is restricted. In Western Serengeti crop damage may be as high as US\$ 0.5 million a year³¹.

2.9 Community based conservation and multiple land use

²⁹ V. Broch-due., et al. *Poverty and the pastoralist: Deconstructing myths, reconstructing realities*. 1999. Pages 3

³⁰ R. Boone., et al, *Cultivation and conservation in Ngorongoro Conservation Area, Tanzania. Human Ecology* 34, 2006 page 809

³¹ idem

2.9.1 Community based conservation

Community based Conservation is a participatory process between people and organizations who have rights and responsibilities affecting conservation, as it requires both communication and co-operation between the stakeholders, which include various wildlife authorities³².

Participation being a core model of Community Based Conservation, this entails for the model to always open door for people to regain control over resource management and strengthening their decision-making capabilities. Nevertheless, Community Based Conservation faces numerous challenges emanating from cultural contexts, socio-economic factors, and the way projects are designed and implemented³³.

The approach contains different concepts, types of participation and benefit sharing, and even names such as community wildlife management, and community based natural resources management. Community Based Conservation underscores participatory wildlife management through decentralization of natural resources management, which is referred as a systematic and rational dispersal of power³⁴.

2.9.2 Multiple land use (NCA)

³²[https://www.scirp.org/\(S\(lz5mqp453edsnp55rrgjt55.\)\)/reference/referencespapers.aspx?referenceid=202800](https://www.scirp.org/(S(lz5mqp453edsnp55rrgjt55.))/reference/referencespapers.aspx?referenceid=202800) accessed on 16 November 2021

³³ A. AGRAWAL., et al. *Enchantment and disenchantment: the role of community in natural resource conservation*. 1999

³⁴ idem

According to Gabrielson, defines the term multiple land use as broadest social aspects, conservation of organic resources means restoring to the highest possible level and maintaining at a state of high productivity, of such resources, including wildlife, that can be used on a crop basis to sustain human society, broadest social aspects, conservation of organic resources means restoring to the highest possible level and maintaining at a state of high productivity, those resources, including wildlife, that can be used on a crop basis to sustain human society³⁵.

The NCA, was gazette in 1959 as a multiple-use area, where the wildlife together with traditional pastoralist could continue their co-existence. Subsequently, the human population keeps increasing as time goes by, this happens mainly through natural growth. As a result of the area not meeting the size of the activities conducted people immigrate into areas that are not permitted³⁶. Meanwhile, they do so with their livestock, which is their main livelihood, have remained almost constant – resulting in fewer livestock per capita. While a few herders own massive herds, the vast majority of the families live well below poverty levels, and under increasing need for outside food and livelihood support³⁷.

2.10 Blockage of migratory corridors

Generally, wildlife corridors play vital ecological roles in enhancing biodiversity and survival of a large number of species. In addition, the function of wildlife corridors include serving as areas of habitat, connecting wildlife populations separated by human

³⁵ ThoughtCo. <https://www.thoughtco.com/multiple-use-1341734> accessed December 17, 2021.

³⁶ S.S Ajayi, *Wildlife Conservation in Africa*. 2019

³⁷ Bernard Bett, et al, *Encyclopedia of Food Security and Sustainability*, volume 3, 2019 page 450

activities (such as roads, development, or logging), facilitating the re-establishment of populations that have been reduced or eliminated due to random events (such as fires or disease), and allowing an exchange of individuals between populations, preventing the negative effects of reduced genetic diversity potentially associated with long-term population isolation. Also, wildlife corridors increase the area and diversity of habitats over and above the area of the two habitat patches connected.

The survival of our wildlife is a matter of grave concern to all of us in Africa. These wild creatures amid the wild places they inhabit are not only important as a source of wonders and inspiration but are an integral part of our natural resources and of our future livelihood and wellbeing.”

-Mwalimu J.K. Nyerere 1961

2.11 Conclusion

Ngorongoro conservation area forms one among, wonders of the world and this is due to the historical value it holds, since the remaining of the first Human being where located in Ngorongoro. Hence it is important to ensure the area is preserved right by having legislations that govern each aspect of the area including population control.

CHAPTER 3

LEGAL FRAMEWORK ON THE CHALLENGES OF POPULATION GROWTH IN NGORONGORO CONSERVATION AREA: AN EXAMINATION OF THE NGORONGORO CONSERVATION AREA ACT

3.1 Introduction

In understanding the Legal frame work in protection of wild life and the aspect of human population one has to grasp into their fingertips international Environmental Law as it is concerned with the attempt to control pollution and the depletion of natural resources within a framework of sustainable development, not only that but also, regional laws, as such laws are created by member states for states to govern problems that arise between states

3.1 Regional Instrument on Investment

Under this chapter the regional instruments that where discussed includes the Treaty for Establishment of East African Community³⁸. The aim is to widen the community also to ensure availability of peace and harmony among member States.

3.1.1 The African charter of Human and peoples right of 1981

³⁸V.N.Fru, *The International law on Foreign Investments and Host Economies in Sub-Saharan African*, Transaction Publishers USA and London, 2011.

The charter also relates in protection of wild life and human interaction. As its core objective is to promote and protect Humans rights and basic freedom The charter further describes what is ought to be done when an interaction arises between the wild life and human beings.

Under 21 of the charter provides that all people shall freely dispose of their wealth and natural resources. As it shall be exercised with the exclusiveness interest of the people. Under no circumstance shall be deprived of their freedom whenever the need arises, as The Article makes it clear that in the case of spoliation, the disposed people shall have the right to the lawful recovery of its property as well as adequate compensation³⁹.

3.1.2 Treaty for the Establishment of the EAC

The Treaty establishing the East African Community (EAC) was signed by heads of states of the Partner countries on November 30, 1999 in Arusha, Tanzania and came into operation on July 7, 2000. The Community was formally launched on January 15, 2001. Currently with six Party States including Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda, the broad goal of EAC is to enhance cooperation in all areas of mutual benefit of the Partner States⁴⁰

One of EAC objectives is to promote a sustainable growth and equitable development of partner states including rational utilization of the region's natural resources and

³⁹ The African charter of Human and peoples right of 1981

⁴⁰ (<http://www.africa.union.org>) Accessed on January 2022.

protection of the environment⁴¹. The future management of NCA bears significant contribution to the scenic and variable habitats of SME and dispersal areas for migratory wildlife species. Thus, any management consideration of NCA should take this into account those aspects to ensure its conformity with this Treaty

3.2 International Conventions and Agreements

Tanzania as a part of international community has subscribed to a number of international agreements on natural and cultural resources, tourism, environment and human welfare rights. These agreements have been either signed and/or ratified between Tanzania and other individual countries and through United Nations Environmental Programme (UNEP), UNESCO, United Nations World Tourism Organization (UNWTO), United Nations Development Programme (UNDP), Food and Agriculture Organization (FAO), World Food Programme (WFP), World Health Organization (WHO) and United Nations Framework Convention on Climate Change (UNFCCC). As such, some decisions and actions on specific issues are based on international policies, agreements, common agreed goals, and principles or procedures. This section provides an overview of important agreements related to the management of NCA.

3.2.1 World Heritage Convention (WHC)

The Convention Concerning the Protection of the World Cultural and Natural Heritage commonly known as the 'World Heritage Convention', is an international treaty, adopted in 1972. The Convention recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two. The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them⁴².

3.2.2 The Convention on migratory species.

Migratory species threatened with extinction are listed on Appendix I of the Convention. CMS Parties strive towards strictly protecting these animals, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them. Besides establishing obligations for each State joining the Convention, CMS promotes concerted action among the Range States of many of these species.

Tanzania is a member in this convention, which it entered into action in 1999, in order to protect migration of its endangered species. The convention calls for a country to implement various measures so as to prevent migration of species. Such measures may be conducted in a way of creating obstacles or any by controlling factors that lead to such Animals migration⁴³.

⁴² World Heritage Convention 1972

⁴³ The Convention on migratory species.1999

3.2.3 The Convention on International Trade in Endangered Species (CITES)

CITES is an international agreement to which States and regional economic integration organizations adhere voluntarily

The core objective of having CITES is to regulate the manner of conducting trade among endangered species. Not only that but also CITES offers protection of such species. This is a relevant law as it deals with regulation of trade of endangered species by regulating such species care and treatment would vary when such species interact with the human being⁴⁴.

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species.

Example, an Elephant forms part of endangered species, there for having such species migrate into areas that are not meant for them to be is to be considered an act of not taking care of them.

3.2.4 The Protocol on Wildlife Conservation and Law Enforcement.

The protocol also relates to the topic as it advocates member states to harmonies legal instrument for wildlife, establish management programs for wildlife and also it creates

⁴⁴ The Convention on International Trade in Endangered Species 1975

wildlife status and management, not only that but also establishes institutional arrangements for the protocols implementation.

In order to effectively protect wildlife, SADC developed the Protocol on Wildlife Conservation and Law Enforcement (1999). The objectives of the Protocol on Wildlife Conservation and Law Enforcement emphasize the need for a regionally-agreed approaches to conservation, management, and the enforcement of illegal uses of wildlife⁴⁵. Information exchanges regarding wildlife management and utilization are also important for effective conservation. The Protocol on Wildlife Conservation and Law Enforcement also promotes national and regional capacity building and the facilitation of community-based wildlife management. Objectives, to establish common approaches to the conservation and sustainable use of wildlife resources in the Region, and to assist with the effective enforcement of laws governing those resources

integrate management and conservation programs into national development plans, and assess and control activities which may be detrimental to such resources (art. 7)

According to Article 7⁴⁶ of the protocol it entails countries to take necessary measures to factors that threat the existence of resources, in this case population growth within NC

1.7.7 Description of the Study Area

The NCA is located in Ngorongoro district in Arusha region. The NCA is bordered with Lake Eyasi, the agricultural communities of Oldeani (Oltiyani in Maasai) and Mbulumbulu mountain forests on the South and Southeast in Karatu District. Also, the

⁴⁵ Wildlife Conservation and Law Enforcement 1999

⁴⁶ ibid

NCA is bordered with Oldonyo Lengai mountain, Lake Natron GCA and Sale Plains in the North-East. The NCA borders Tanzania and Kenya boundary and Serengeti National Park on the North and Northwest. To the West, NCA is bordered by Maswa Game Reserve, while to the East it is bordered with Engaruka plains in Monduli district.

3.2.5 Convention on the Protection of International Cultural and Natural Heritages (1972)

This is a Convention of UNESCO, which recognizes that global cultural and natural heritages are increasingly threatened with destruction not only by traditional causes, but also by changing social and economic conditions. This recognition was made by UNESCO's General Conference that was held in Paris between 17th and 21st November in 1972. Having noted that deterioration or disappearance of any item of the cultural or natural heritage constitutes a harmful impoverishment of the heritage of all the nations of the world, Conference members agreed upon that, parts of the cultural or natural heritage of outstanding interest wherever they are should be preserved as part of the world's heritage of mankind as a whole. To that effect, Tanzania being a State Party to this Convention identified and delineated NCA as one of WHSs found in the country due to its outstanding universal values. According to Article 4 of this Convention it is the duty of a State Party to protect, preserve and transmit to future generations of the cultural and natural heritage belonging primarily to that State. This is one of the reasons that necessitated review of the current MLUM so as to identify actions that will either reduce or eliminate impacts that may threaten the outstanding universal values that made NCA to be inscribed on the list of WHSs.

3.3 The constitution of the United Republic of Tanzania.

When it comes to the protection of natural resources in Tanzania, the constitution of the country is no stranger in the field, as it has stipulated and discussed the protection of natural resources in various Articles. The protection of natural resources is insisted in the Constitution under Article 8 (1), 9(i) and 27 (1) and (2)

In accordance to Article 8(1) provides that, every person has the duty to protect natural resources, the property of the state authority, all property collectively owned by the people, and also to respect another person's property; and Not only that but also under Article 9(i) it states, persons shall be required by law to safeguard the property of the state authority and all property collectively owned by the people, to combat all forms of waste and squander, and to manage the national economy assiduously with the attitude of people who are masters of the destiny of their nation.

Also, in accordance with Article 26⁴⁷ provides that each citizen is obliged to observe and follow the constitution of The United Republic of Tanzania

In matter that relate Multiple land use the Constitution is silent. Due to the absence of such area within the constitution possess as a major setback of protection of people interest in relation to conservation. The Tanzania Constitution could at least establish a solid legal ground and status for acknowledging The community based conservation that

⁴⁷ ibid

is practiced within the NCA. Doing so could bring easement in managing conflicts that arise with the relation to the community based conservation, by providing the base for responsibility for the damages that are caused by wild animals, and vis-à-vis⁴⁸.

According to Article 27⁴⁹ provides that every citizen is entitled to the protection of the natural resources of the country. By granting such power and responsibility to the citizen it is unclear on how conflicts are to be resolved when they arise. The conflicts mentioned here are the human and wildlife conflict that may arise due to various factors.

3.3.1 The wildlife conservation Act No 5 of 2009

The act provides for the protected areas which include, national parks, game reserve, Ngorongoro conservation and wetlands reserves. The Act hold bases for governing conflicts and interaction between wildlife and human(activities). Wildlife damage control in one the programs controlled by the government to address conflicts of which arise between Human and wildlife. This is the bulk of legal mechanism for conservation and protection of wildlife as well as addressing the damages that caused by wildlife⁵⁰.

The act also provides for classification of wild animals under Section 94, in this section the act has categories such as, mammals, amphibian, birds, reptile, insects. The schedule of the same act provides a list of dangerous animals, which include lions, elephants, leopards, hyenas, hippopotamus together with protected species such as rhinos⁵¹.

⁴⁸ The Constitution of The United Republic Of Tanzania Of 1977

⁴⁹ *ibid*

⁵⁰ The wildlife conservation Act No 5 of 2009

⁵¹ *ibid*

Example as of the year more five reports where filed in relation to elephants destroying villager's crops.

Also the act governs by restricting any form harm to be inflicted to the wild animals, it manages to do so by control any form of disturbance of wild animals.

However, the law has allowed killing of wild animals in protection of human life, protection of property, protection livestock and protection of crops, this is accordance to Section 30⁵².

By doing it entails that the laws are aware of the Human and wildlife conflict. However, permitting to kill the wild animal is not a concrete solution to the problem.

The areas governed by the Wildlife Conservation Act include Game Reserves, where human settlement and utilization is prohibited, and Game Controlled Areas (GCAs) where human habitation coexists with wildlife conservation, as well as all the wildlife found outside of any type of protected area. The Government of Tanzania, through the Ministry of Natural Resources and Tourism (MNRT).

3.4 Conclusion.

This chapter has illustrated more on laws governing the Interaction of wildlife and human activities within the conservation area. This issue has been discussed in three different areas, of which are international, religion and domestic legal framework also the institutions framework of Tanzania.

CHAPTER FOUR

⁵² ibid

RESEARCH FINDINGS AND ANALYSIS

4.1 Introduction

According to this research the case study which the research was conducted in NCA, as It involved visiting different places such as MNRT, addition several experts of natural resources and population aspect were involved in the interview. The target was to obtain data and relevant information on relation to laws regulation NCA. Interview was main source of data collection in this study.

4.2 What is Overpopulation?

Overpopulation is an undesirable condition where the number of the existing human population exceeds the actual carrying capacity of Earth. Overpopulation is caused by a number of factors. Reduced mortality rate, better medical facilities, depletion of precious resources are few of the causes which result in overpopulation⁵³. It is possible for a sparsely populated area to become densely populated if it is not able to sustain life.

“Overpopulation occurs when species’ population exceeds the carrying capacity of its ecological niche. It can result from an increase in births (fertility rate), a decline in the mortality rate, an increase in immigration, or an unsustainable biome and depletion of resources⁵⁴.”

⁵³ G. Caughley Analysis of Vertebrate Populations. 1977.

⁵⁴ Interview conducted on 12th November 2021, respondent P a student of LLB at Ruaha Catholic University

The human overpopulation issue is the topic I see as the most vital to solve if our children and grandchildren are to have a good quality of life.

Alexandra Paul⁵⁵

4.3 Reasons for overpopulation

A. Migration

Many people prefer to move to areas with better living standard like the where the best facilities are available in terms of better life of their animals. The result is that those people settle over there, eventually making those places overcrowded. If the number of people who are leaving the area is less than the number of people who enter, it usually leads to more demand for food, clothes, energy, and homes⁵⁶.

Due to hardship of life most of the time you find these people migrating from neighboring villages into the NCA, with a dream that life will be easier within the conservation, without knowing they are overpopulating the land and it won't be able to accommodate the increasing size⁵⁷.

B. Lack of Family Planning

By taking into account the form of life style of the people residing within NCA, these people their focus in life are their livestock and education is not a priority to them.

⁵⁵ https://www.brainyquote.com/quotes/alexandra_paul_394698 accessed 18th December 2021

⁵⁶ Library research, E. Coast., Maasai socioeconomic conditions: A cross-border comparison. Human Ecology volume 30: 2002 page 79.

⁵⁷ <https://www.ncaa.go.tz/pages/community-services>

Wealth to them is measured by livestock and not money⁵⁸. Now people living such form of life and have little or no knowledge about family planning. All they ever think of is getting their children married at an early age increases the chances of producing more kids. Those people are unable to understand the harmful effects of overpopulation, and lack of quality education prompts them to avoid family planning measures⁵⁹.

4.4 Effects of overpopulation

A. Malnutrition, Starvation and Famine

When the availability of resources is scarce, starvation, malnutrition, along with ill health and diseases caused by diet-deficiency such as rickets become more likely.

Famine is typically associated with less-developed regions, and there is a high correlation with poverty levels. Since various tribes migrate to NCA to seek refuge the area fails to accommodate all. Local Human Population⁶⁰.

B. Water and food Shortage

Roughly 1% of the world's water is fresh and accessible. Overpopulation is a major issue that creates immense pressure on the world's freshwater supplies. Giving the nature of

⁵⁸ Interview conducted at Iringa with the Regional manager of Wildlife conservation society

⁵⁹ An interview conducted at Dar es salaam with the secretary general of the Ministry of Natural resources of Tanzania 2pm East African time.

⁶⁰ K. Galvin., etal. *Integrated modeling and assessment for balancing food security, conservation and ecosystem integrity in East Africa*, 2000

NCA despite that it is filled with enough water, however considering the rise of population between the human beings, livestock and wild animals these water bodies are merely enough to accommodate all the beings within the area.

As per the study, the human demand for freshwater would stand at approximately 70% of freshwater available on NCA. Therefore, people living in impoverished areas that already have limited access to such water will be at great risk⁶¹.

C. Extinction

The impact of overpopulation on the world's wildlife is severe. As demand for land grows, the destruction of natural habitats, such as forests, becomes common. Data has also been collected to show a direct link between increases in human population and decreases in the number of species on the planet. If present trends continue, as many as 50% of the world's wildlife species will be at risk of extinction, some scientists warn.

D. Pandemics and Epidemics

Poverty is linked to many environmental and social reasons, including overcrowded and unhygienic living conditions, malnutrition and inaccessible, inadequate, or non-existent health care, for which the poor are more likely to be exposed to infectious diseases. Further, high densities of population increase the chance of the emergence of new pandemics and epidemics.

E. Depletion of Natural Resources

⁶¹ <https://thewaterfiltermarket.com> accessed on 15th December 2021

The effects of overpopulation are quite severe. The first of these is the depletion of resources. NCA is limited in sustaining water and food to accommodate both the wildlife, livestock and human being, which is falling short of the current needs.

Most of the environmental damage can be traced in the last fifty years is because of the growing number of people migrating within the area. They include cutting down forests, hunting wildlife in a reckless manner, causing pollution, and creating a host of other problems⁶².

Those engaged in talks about overpopulation have noticed that acts of violence and aggression outside of a war zone have increased tremendously while competing for resources.

F. Diseases

It is observed over time some of the cattle of the Maasai suffer diseases that arise after an interaction with the wild animals. Furthermore, the sample size in nearby villages were not large and extensive enough for representing the conclusive picture on the livestock depredation. However, the depredations recorded may involve one animal or a single group of animals. When the level of loss due to diseases was compared to loss due to predation, diseases caused higher livestock loss in households than depredation, theft or loss while grazing⁶³.

4.5 Multiple land use

⁶² Library research, J. Ellis., etal. *Climate patterns and land use practices in the dry zones of east and west Africa. Bioscience volume 44*: 1994 page 340-349

⁶³ Interview conducted at Dar es Salaam on 8th November 2021, respondent G a state attorney from the Ministry of Natural Resources at 12pm-1pm East African time.

The basic resolution of multiple land use is to take advantage of the existing interrelationships between the natural together with agricultural resources on land unit so that they manage to manipulate of one or a few of the resources, additional benefits may be derived from many of the related resources⁶⁴.

4.6 Benefits of multiple land use

A. Maintenance of cultural heritage

The Bantu tribes which include the Maasai, have the cultural heritage of the NCA. Therefor having the multiple land use model allows the Bantu people to reside in their land at the same time having the wildlife in the same place. Since the bantu are permitted by the NCAA to reside within the conservation area they are protected and governed by the law by monitoring and limiting what they can do and not do within the conservation area.

B. Tourism attraction

The NCA is not only famous for its variety of wilderness found within the area but also the model practiced within the area is also a form of attraction, as not so many countries have managed to practice the multiple land use model and have succeeded with flying colors like Tanzania has⁶⁵.

⁶⁴ Interview conducted at Iringa on 8th December 2021, respondent F an officer from Iringa Boma museum at 13pm East African time.

⁶⁵ S. Charnley.. *From nature tourism to ecotourism? The case of the Ngorongoro Conservation Area, Tanzania. Human Organization. volume 64: 2005 page 75.*

Example, the Hadzabe and the Maasai, these two tribes can be found residing to the shores of lake Eyasi and within the NCA. Tourists are always intrigued finding the Maasai walking by the Conservation area without fearing wild beasts who may bring harm to them⁶⁶.

4.7 Factors threatening multiple land use model

A. Overpopulation

Studies show, threats to the NCA include the escalation in the numbers of Maasai, their cattle and more recent cultivation, immigration, agricultural infringement, poaching, invasive species, soil erosion by cattle some 500 of which may enter daily, forest destruction, a growing lack of water and an increase in peripheral developments. All these aspects are a result of overpopulation as when the area is so small people are forced to exploit other means to survive. Clear policies from the state are needed so as to monitor the numbers and condition of NCA⁶⁷.

B. Overgrazing

Despite Maasai been allowed to reside within NCA regulations still are to be followed, there are areas that are set out only for grazing wild animals, however when one seeks for a permit can be allowed to conduct grazing within the said area⁶⁸. However, such practices are ignored. The invasions also may be partly due to the prevention of fire

⁶⁶ Interview conducted by phone on 8th September 2021, respondent J a secretary of director of planning from the Ministry of Natural resources.

⁶⁷ Interview conducted in Ngorongoro Conservation Area 20th December 2021 respondent P a Local residing within the area.

⁶⁸ Interview conducted at Arusha on 8th September 2021, respondent O a state attorney from Tanzania Wildlife Management Authority 12pm East African time.

because of drought which may contribute as much as emigration, disease or disturbance by tourists to the change in the animal populations. The forests to the north-east are increasingly threatened by illegal logging, fuelwood gathering, grazing and cultivation by people living in the Conservation Area and in villages in the Karatu and Kitete areas along the eastern boundary⁶⁹.

5.1 Resettlement

Due to the problem of overpopulation of which the people residing within the Ngorongoro conservation area are facing, a resettlement scheme was initiated of which one hundred and eight families were moved from the conservation area to a new place in Tanga Muheza, where the moved families are equipped with land for farming, modern houses together with enough area for grazing⁷⁰.

6.1 Conclusion.

Generally, according to the collected data it proves the problem of over population is bringing hardship to the wildlife, not only that but also to the people residing within the area.

⁶⁹ Interview conducted at Kilimanjaro on 8th December 2021, respondent Z a local villager at 7am East African time.

⁷⁰ Radio interview, Minister of Natural resources of Tanzania March 2022

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Based on the key findings together with analysis of the current situation the researcher believes that there are two options that could be adopted to guarantee sustainable conservation of NCA. However, the first option is to maintain multiple land use model with some adjustments this option proves to have more advantages economically, socially, culturally, politically and internally than the one that advocates for changing NCA to other protected area category. In view of the above, key considerations; hereafter follows strengths and weaknesses of both options are presented as follows:

5.2 CONCLUSION

During discussions, various respondents acknowledged that NCA is experiencing ecological problems to balance conservation of natural and cultural resources, community development and tourism development, Conservation awareness creation is created when rural communities and other stakeholders are involved in taking joint responsibility for the sustainable management of wildlife and other natural resources. This includes a wide range of activities which build trust between protected area managers and rural communities as well as creating awareness of the indirect and direct values of wildlife and natural resources. a rapid increase in human and livestock populations have contributed to the loss of wildlife and the fragmentation of habitats. To

reduce and reverse this trend, urgent action is required to assess the corridors, dispersal areas, migratory routes and breeding sites for wildlife.

Community-based conservation seeks to integrate the sustainable utilization of natural resources with rural development by channeling some profits from resource utilization into the socioeconomic development of local communities. This requires local communities to participate as partners in the management of natural resources both inside and outside of the NCA.

This research was necessary as Integration of community conservation particularly in terms of the benefits to communities and conservation as promoting the concept of community-based conservation requires sound policies for accomplishing the benefits from the NCA to the local communities. The research has also focused on the interaction between local communities residing in and around the NCA and the NCAA, the validity of coexistence with the existing laws of the NCA, community attitudes toward wildlife and conservation, and the perceptions of community members regarding the conservation of natural resources within the NCA.

5.3 Recommendations.

5.3.1 Broadening the existing boundary of NCA:

According to Wildlife Conservation Act No. 5 of 2009, settlements and human activities are not allowed in GCAs; therefore, the proposed alteration will legalize existing settlements and human activities in Lake Natron GCA as well as part of Mto wa Mbu and avoid resettlement inconveniences to residents in those areas. Also, the proposition aims

to enable settlement and development to communities as opposed to current situation in GCAs. In terms of conservation, altering of boundaries will enhance gene flow from different wildlife populations between ecosystems. Further, the boundary alteration will increase tourism products under the management of NCAA

5.3.2 Introduction of resettlement scheme

resettlement is the movement of a large group of people from one region to another, often imposed by state policy or international authority and most frequently on the basis of ethnicity or religion but also due to economic development.

Resettlement is the process of moving people to a different place to live, because they are no longer allowed to stay in the area where they used to live.

When one talks about resettlement scheme, here the government is required to find unhabited area, and build houses, hospitals, together with schools for the people of Ngorongoro to reside. By doing so it gives them a better option than what they are going through within the Conservation Area.

Point to not is that under resettlement scheme people are not forced to evict the area rather given option to choose between the two whereas the new option having better living condition than the previous one.

5.3.3 Review Ngorongoro Conservation Area Act

From the findings of the study, it is recommended to review the NCA Act to take into account the following key aspects: -

- i. Strengthen legal compliance and enforcement to ensure sustainability of the conservation area.
- ii. To regulate human population in terms of allowable number and activities.
- iii. To consider human rights in terms of access to their basic needs, infrastructure, and their livelihoods.
- iv. To ensure that they participate in resource protection.
- v. To ensure that they equally benefit from participating in the protection of natural resources.

5.3.4 Control of human and livestock population

The NCA Act has to state the amount of people required to reside within the area, by using scientific analysis the Act has to specify how many people together with their livestock will the area be able to accommodate.

5.3.5 Categorize Ngorongoro Conservation Area.

Also NCA has to put zones within the Conservation area whereas each area will have a designated purpose.

NCA Act to recognize natural and cultural resources conservation zone (no settlement and grazing), transitional zone (regulated use zone – i.e. grazing only and no settlement), and community development zone (settlement, crop production, grazing, and other regulated uses);

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