Conflicting Land Use and Management Strategies in the Ngorongoro Conservation Area (NCA) of Northern Tanzania

By

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Abstract

Land use conflicts in the NCA between the indigenous Maasai and the Ngorongoro Conservation Area Authority (NCAA) have persisted since the NCA's inception in 1959. This thesis employed qualitative research methods to evaluate the extent of these conflicts from the perspectives of the Maasai and the NCAA. In particular, interviews, focus groups and archival research were the research tools that were employed to gain insight into these land use conflicts as well as explore prospects for reconciling the differences. Findings have revealed that the conflicts are complex and dynamic and reflect differing views in the purpose and importance of the NCA. For the Maasai residing in the NCA, securing their livelihoods in a highly constrained environment is of greatest importance. Restrictions imposed on their traditional livelihoods as pastoralists have prompted the Maasai to undertake subsistence cultivation as well as seek employment in the NCA.

In contrast, decisions by the NCAA are most often framed in the context of conserving the NCA's natural environment and augmenting tourism revenue, and the long-term viability of local communities is of lesser importance. Current land use conflicts can be traced to these differences in priorities between the Maasai and the NCAA and the current exclusion of Maasai from NCAA decision-making bodies has entrenched these conflicts as well as created an atmosphere of mistrust. It is equally important to recognize that there are opportunities for reconciling these conflicts, including application of the ecosystem and co-management approaches which have increasingly being used by conservation and development practitioners at global levels to resolve the conflicts over use, access and ownership of natural resources in protected areas. These two approaches offers much promise for improving the management policies and in meeting the needs of local communities while ensuring continuing conservation of natural resources in these areas.

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Annexes

List of Acronyms

AWF	–	African Wildlife Foundation
CAP	–	Chapter
CBD	–	Convention on Biological Diversity
CBNRM	–	Community Based Natural Resources Management
DANIDA	–	Danish International Development Agency
FAO	–	Food and Agricultural Organization
FR	–	Forest Reserves
GMP	–	General Management Plan
ICDP's	–	Integrated Conservation and Development Projects
IUCN	–	International Union for Conservation of Nature
NCA	–	Ngorongoro Conservation Area
NCAA	–	Ngorongoro Conservation Area Authority
NGOs	–	Non Governmental Organizations
NGOPADEO	–	Ngorongoro Pastoralist Development Organization
NP	–	National Park
NRM	–	Natural Resource Management
NSGPR	–	National Strategy for Growth and Poverty Reduction
MNRT	–	Ministry of Natural Resources and Tourism
PAs	–	Protected Areas
SUA	–	Sokoine University of Agriculture
TLUs	–	Tropical Livestock Units
UNDP	–	United Nations Development Program
UNECA	–	United Nations Economic Commission for Africa
UNEP	–	United Nations Environment Program
UNESCO	–	United Nations Education, Scientific and Cultural Organization
URT	–	United Republic of Tanzania
WB	–	World Bank
WCMC	–	World Conservation Monitoring Centre
WCPA	–	World Commission on Protected Areas
WCS	–	World Conservation Strategy
WHC	–	World Heritage Committee
WRI	–	World Resources Institute
WWF	–	Worldwide Foundation for Nature

Chapter One: Introduction

1.1 Contemporary Views of Conservation and Development in Protected Areas

Protected Areas (PAs) are usually set for specific purposes (Holdgate and Phillips, 1999). Conservation, tourism and sustainable development are foremost among these purposes (Nelson and Serafin, 1997). In most cases, PAs are most nations' main response to loss of biodiversity (UNEP-WCMC, 2001). In the past however, many conservationists and PA managers believed that biodiversity in PAs could not be well maintained without rules and regulations accompanied by strict restrictions on their uses (Redford and Sanderson, 2000). Their beliefs were entirely rooted in the Yellowstone model[1] of conservation which restricted land use and benefits by local communities in and around the PAs (Stevens, 1997). Under the Yellowstone model, use of resources by local communities for their subsistence needs was excluded, raising fundamental concerns to local communities who relied on these resources to sustain their livelihoods. This model of conservation has long been a cause of conflicts between conservation authorities and local people over land use priorities, and complicated the management of PAs (Stevens, 1997). Apart from causing conflicts, this model has undermined the conservation objectives in some of these areas (Stocking *et al.* 1996; Stevens, 1997).

In the African context, the practice of conserving natural resources ranges from narrow views of protecting individual species and habitats through to broader goals of preventing environmental degradation. In Africa, where there are high levels of poverty and a continued substantial dependence on natural resources for subsistence and

[1] The Yellowstone model is what "have become the world standard-parks in which settlement is prohibited and both subsistence and commercial uses of natural resources are banned" (Stevens, 1997:28).

livelihoods, PAs have frequently been set up in areas that were once occupied and used by local communities to meet their daily needs (Bernstein *et al.* 1992). As a result, communities within and around these areas have found difficulty in surviving as they have been facing a number of socio-economic problems such as poverty, land tenure as well as equity issues (Nepal, 1999). Other scholars have regarded the establishment of PAs as the cause of local people's evictions from their homelands (Lindsay, 1987; Chatty and Colchester, 2002). This reflects the fact that, establishment and extension of PAs has often ignored the possible development opportunities to local people inhabiting or surrounding them (Stevens, 1997; Neumann, 1998). Conservationists have tended to disregard community interests[2] despite wide recognition that PAs are intended to bring benefits to them (Stevens, 1997).

It is increasingly being recognized that use of top-down approaches of the Yellowstone model to natural resources management (NRM) has tended to favor conservation initiatives and thereby denied the local peoples' (who are routinely considered the owners and custodians of lands currently designated as PAs) prior rights to land and devalued their indigenous knowledge and system of land use (Beltran and Phillips, 2000; Chatty and Colchester, 2002). As a result, these approaches are widely blamed for impoverishment and hardships to local people due to progressively tightening restrictions imposed on their land use strategies (Galvin *et al,* 2002: McCabe, 2003). Notably, these restrictions were associated with incorrect assumptions that local communities overstocked, overgrazed or otherwise overused the natural resources in their areas which are currently protected and thus were obstacles to sustainability of resources

[2] The term "interests" is used in this thesis to refer to the fundamental needs and concerns of certain groups.

(McCabe, 2002). An awareness of these wrong assumptions and the damaging impacts of conservation approaches adopted from the Yellowstone model have prompted the conservationists and development practitioners to look at ways through which conservation could be linked with development.

In recent years, the international conservation community, conservation agencies and conservation professionals have begun to realize that management of PAs must take into consideration both conservation and development needs by bringing local communities into management practices of these areas (Schwartzman, *et al.*, 2000). This realization has brought to the fore a new emphasis in conservation movements, encouraging the PA authorities to support local people by improving their lives (Garnett *et al.* 2007). In that regard, PAs authorities have now been called to elect and create new development opportunities through 'Integrated Conservation and Development Projects' (ICDPs) that offset restrictions on some aspects of local resource use (ibid). These projects have increasingly received recognition in the 1980s, with strong emphasis being placed on sustainable management of wildlife and other resources for the benefits of local people living within or around the PAs.

In view of these initiatives, some PAs are currently conveying increased national and international development programs aimed at fostering and leading to greater development reward of local people living in their areas (Fabricius and Collins, 2007; Garnett *et al.* 2007). The integration of conservation and utilization of natural resources in PAs has brought to the fore a new set of issues, including the equitable distribution of benefits and products extracted from these resources and the indigenous knowledge that goes with it (Stevens, 1997). The creation of the World Conservation Strategy (WCS) by

the International Union for Conservation of Nature (IUCN) in 1980, in collaboration with UNEP, FAO, WWF and UNESCO, devoted more attention to the new alliance between conservation and community development in PAs.

The overall aim of the Strategy was "...to launch a new message that conservation is not the opposite of development; that humanity is part of, and relies upon nature, natural resources and ecological processes; that conservation cannot be achieved without development to alleviate the poverty and misery of people" (Stocking *et al.* 1996:164). These themes were developed further at the Earth Summit in Rio de Janeiro in 1992 where the importance of biological resources and the need for their sustainable use, rather than just conservation received more attention (IUCN 1993, 2000; Stocking *et al.* 1996). Ownership of biological resources and the role of indigenous knowledge in environmental conservation became more central to conservation discussions. The main achievement of the Summit became a strengthening of the concept of sustainable development with strong emphasis put on contribution of conservation programs to the welfare of the local people inhabiting or those living near the PAs (Stocking *et al.* 1996).

The Summit, coupled with signing of the Convention on Biological Diversity (CBD) at the Summit, emphasized a win-win situation where conservation efforts were required to promote and support community development programmes with the realization that biodiversity has greater economic benefits to people living in and around the PAs (Luckert and Campbell, 2002). These fundamental relationships among conservation, development and rights of local communities are captured in the CBD Article 1 which states:

> "...the objectives of this convention to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of utilization

> of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding" (CBD, 1993:146).

Regardless of the promising objectives of the WCS, CBD and other initiatives of reconciling conservation with development such as ICDPs, there are concerns about the effectiveness of these intentions to integrating conservation and development objectives in many parts of the world, and particularly in Africa. Most of ICDPs have been dominated by signs of failures in achieving either conservation and/or development goals. In fact, most PA authorities in which the ICDPs initiatives are implemented still ignore or pay very little attention to promoting socio-economic developments to the local communities (Garnett *et al.* 2007). Recent publications (McCabe, 2002; Wells *et al.* 2004; McShane and Wells, 2004; Sobrevilla, 2008) suggest that failure of these initiatives inevitably leads to loss of biodiversity, and their expected successes are rarely associated with lasting improvements in the well-being of the communities in which the ICDPs have been undertaken. This advances the need for very justifiable pressures to take proper account of human needs when setting up projects with the aim of combining conservation with development as they offer the most promising course of action for long-term sustainability of natural resources and human well-being.

The view that conservation objectives tend to be undermined when local people and their rights are ignored has also led to an increasing recognition that local people should be treated as partners in the overall management practices of PAs. This has prompted conservationists to pay more attention to the interests (such as access to land and participation in decision making processes) of local people. Increasingly, they have been modifying their policies to fit within the emerging discourses of giving conservation a human face in the name of 'Community-based Natural Resource Management', the

CBNRM (Ghimire, 1994; Goriup and Wase, 2002; McShane and Wells, 2004). This approach to natural resource management seeks to sustain natural resources while enabling the local communities to use and access these resources more equitably (Turner, 2004; Fabricius and Collins, 2007). There are few promising examples of CBNRM where local communities are beginning to be effectively integrated into conservation efforts and development projects in developing countries.

One example in Southern Africa is the 'Communal Areas Management Programme for Indigenous Resources' (CAMPFIRE) in Zimbabwe which has been widely promoted as an attempt to create a community-based conservation scheme for wildlife combined with rural development (Murombedzi, 2003). The program began with the premise that giving local people a stake in wildlife conservation would increase their incentive to conserve these resources, and that wildlife would become an important engine of their local economic development. These two objectives of the program are to save endangered species and, to improve the economic situation of the rural people in Zimbabwe. It also allows the sharing of benefits from the wildlife resources "...however small by the community and at the same time giving indigenous peoples a voice in rural politics" (Fabricius, 2002 cited in Chatty and Colchester, 2002:9).

Another example is the Kayan Mentarang Conservation Area in Indonesia, where WWF started a project in collaboration with the Directorate of Nature Protection and Conservation of the Indonesian Ministry of Forestry and the National Institute of Research in 1991. The project has been working to secure the communities' support and participation in the sustainable management of forest resources inside the conservation area. In achieving this goal, "...the project employed various strategies like participatory

action research, community mapping, biological surveys, and participatory planning in order to set the conditions for collaboration and openness in the establishment of a joint management of the area" (Eghenter, 2002:331).

From the above two examples, the need for an effective participation of local people in CBNRM is centered within the recognition that "...local communities have greater interests and greater accountability in the sustainable management of natural resources over time than does the state or other distant stakeholders" (ibid:331). This is based on the belief that local people, because of their long-term residence in their areas, are more aware of the natural environment and ecological processes which continually shape their places. As such, if allowed to use their local knowledge, they are more able to effectively manage resources using their local management strategies combined with their traditional land use systems. This new community-centered approach of conservation, combined with the provision of land security to local people, is a promising way to allow both conservation and development goals to be met simultaneously in PAs.

1.2 Grounding the Thesis

1.2.1 Stating the Research Problem

The Ngorongoro Conservation Area (NCA) of northern Tanzania is one of the PAs in the world, and particularly in Africa, which has attempted to provide for *multiple land-uses*[3] with the aim of bringing conservation objectives closer to development goals of the indigenous people, the Maasai (Homewood and Rodgers, 1991). Formerly part of

[3] "Multiple-use management areas fall within category VI of the IUCN's list of protected areas which received a high profile as an alternative to traditional national parks. Unlike national parks, rather than excluding human consumptive utilization, multiple-use areas seek to control the scale and location of human activities, such that development requirements and conservation objectives can be met within the same protected area" (Stocking *et al.* 1996:169).

the Serengeti Game Reserve, it was separated in 1959, creating two areas with different conservation statuses (NCAA, 1996, 2006). The NCA was primarily charged with ensuring multiple land uses as a pioneer experiment by the British colonial government, intended to reconcile the interests of wildlife conservation, tourism and the Maasai pastoralists who formerly inhabited the Serengeti ecological zone (Galvin *et al.* 2002). However, as will become evident in this thesis, the multiple land use strategy of the NCA has gone through periods of severe problems due to conflicting interests over land use and management strategies.

The empirical component of this thesis is based on a field study concerning the conflicts[4] between the Maasai pastoralists and the Ngorongoro Conservation Area Authority (NCAA) over land use priorities. Over time, the multiple land use system of the NCA has been facing a number of challenges throughout its existence. Despite the legal recognition of multiple land uses in the NCA mandate, the historical and contemporary situation in Ngorongoro shows that the interests of conservation and tourism have been given greater attention than development and livelihood needs of the Maasai pastoralists (McCabe *et al.* 1992; Parkipuny, 1997; Shivji and Kapinga, 1998).

It appears that the NCAA has not been able to maintain its multiple land use strategy as its different land uses appear to be conflicting with each other. On that ground, the NCA is thus a good case study for analyzing the conflicting objectives over different land use strategies between indigenous peoples and conservation authorities. It clearly reveals how potentially conflicting objectives (especially over land use priorities) do occur between people who wish to expand their operational areas for various

[4] The term *'conflicts'* is used in this thesis to refer to the perceived differences in goals and interests between key actors in the NCA and that armed or violent conflicts is beyond the study.

production activities (such as cultivation, grazing, honey harvesting as well as collection of firewood for fuels) and the conservationists who wish to protect natural resources and other environmental features.

The case of NCA further shows how difficult it has been to integrate natural resource management with complex issues of economics, politics, and human rights (McCabe, 2002). The overriding issue in the area is how to balance conservation objectives against the needs of the indigenous Maasai who wish to use the land and utilize other resources to sustain their livelihoods and foster their socio-economic development (McCabe, 2003). Throughout its fifty year existence, the NCA has experienced several conflicts of interests over access, use and ownership of land between the Maasai and the NCAA.

The conflicts are chiefly associated with disagreements between the Maasai and the NCAA over the best uses of land. The NCA has long experienced conflicts between wildlife values and pastoral activities of the Maasai residing in the area. The situation in the NCA represents a growing pattern of land use conflict between local communities, especially pastoralist and conservationists all over the world (Homewood and Rodgers, 1991). The conflicts in the NCA seem to become more perilous and difficult to handle, hence calling more attention from those interested in the integration of conservation and sustainable development of the local and indigenous peoples living in and around the PAs.

1.2.2 The Focus of the Study and the Thesis Objectives

This thesis focuses on the imbalance between the interest of conservation and tourism against those of community development in the Ngorongoro Conservation Area.

This imbalance is centered on a view that the principal conservation values have been well preserved while little progress has been made to achieve socio-economic developments of the Maasai residing in the NCA (Parkipuny, 1997; McCabe, 1997, DeLuca, 2002). The main research question to be addressed in this thesis is: *"to what extent has the multiple land use strategy of the NCA and the management practices of the conservation authority resulted in the conflicting relations between the NCAA and the Maasai residents*[5] *over land use priorities?"* This research examines if the NCAA's restrictions on land use have limited the amount of land that could be used by the Maasai and whether this has affected their traditional land use and livelihood strategies. This research also explores the extent to which the Maasai concerns are considered by the conservation authority during its decision-making processes and the extent to which they benefit from tourism and conservation outcomes.

Overall, this research looked at the issues surrounding the complexities of conflicts from the perspectives of both the NCAA and the Maasai with the principal focus of what is needed to reconcile the conflicting situation in the NCA. Its central objective was to: *evaluate the extent to which different land uses and management strategies in the Ngorongoro Conservation Area are in conflict from the perspectives of the conservation authority and the Maasai.* In particular, the thesis has the following specific objectives:

1. To assess the perception of main issues surrounding the conflicting land use and management strategies in the NCA;

[5] Two terms are in need of clarification at this point as these are used in specific ways throughout the thesis. "The Ngorongoro Conservation Area Authority" (NCAA) refers to the Board of Directors and all NCAA departments responsible for wildlife and environmental management in the Ngorongoro Conservation Area (see section 4.3.1 for details). "The Maasai" refers to those Maasai that are resident in the NCA and thereby excludes all other Maasai who reside elsewhere. In addition, the findings presented in Chapter five reflect the perceptions and views of "key informants" that were, for the most part, identified by NCAA managers and Maasai elders, and therefore these do not necessarily represent the views of the NCAA and all Maasai residing in the NCA (more information on the identification of key informants is presented in section 4.4).

2. To examine the livelihoods concerns of the Maasai and the main challenges facing the NCAA in view of the existing conflicts in the area;
3. To explore the main claims from the Ngorongoro Conservation Area Authority and from the Maasai over the conflicts in the NCA; and
4. To examine possible solutions to resolve the conflicts in the NCA.

To carry out these objectives, views were sought from the NCA's managers, the indigenous Maasai and from other key stakeholders using qualitative research methods (see chapter 4). The importance of this research is centered within the broader recognition that creating a sustainable future of the NCA and the Maasai's well-being urgently requires the ongoing conflicts be resolved immediately in order to avoid additional detrimental outcomes to the environment and hostile relations between the Maasai and the NCAA.

1.3 Significance of the Thesis

This thesis intends to broaden our understanding of the issues surrounding conflicts between local people, especially pastoralists and conservation authorities in protected areas, and in this particular case, in the Ngorongoro Conservation Area. The thesis maps out the complex interactions of conservation, tourism and human development in the NCA. It also provides deeper levels of understanding of the Maasai's concerns which may guide policy modification and adjustments for better management of the NCA's resources. The thesis also raises important points for analyzing and discussing the role, interests, and the power relations involved in the governance of wildlife and other resources in the NCA in particular, and elsewhere in the world where the multiple land use concept is being applied.

Equally important, this thesis forms a basis for conflict management and benefit sharing between the conservation agencies and the local communities. The discussion of having an active and effective participation of the Maasai in the overall management of the NCA further increases the desire for sustainable conservation goals to be met in the same way as sustainable development of local communities. Overall, this thesis is expected to contribute to the body of knowledge on the integration of conservation, tourism and community development objectives, and where possible it hopes to give direction for further studies in the field of conservation and human development in the NCA, and also to those interested on the interface of conservation and development elsewhere in the world.

1.4 Overview of the Thesis

After this introduction, the second chapter further develops contemporary views on the linkage of conservation with human developments in protected areas. In particular, this chapter provides a review and an appraisal of the origins and multiple dimensions of protected areas. It further defines and outlines the intended roles and the management issues surrounding the PAs. In part, this chapter expands the discussion on conflicts between local people and the conservation authorities over land use priorities, and theorizes the ways of dealing with conflicts through the ecosystem approach which offers promising outcomes in reconciling competing interests between PA authorities and local people. An outline of the new approach to natural resource management, the co-management approach will also be presented in this chapter.

The third chapter describes the case study of the Ngorongoro Conservation Area where different land use and management strategies are in conflict. In particular, the

chapter begins with a review of the historical context of conservation in view of colonial rule in Africa. This will be followed with an outline of the legislative history of the NCA, its natural resources and other main features it contains. The chapter also describes the different land use strategies of the NCA and outlines how they appear to be in conflict with each other. The chapter will end by analyzing different laws which influence the management of the area.

The fourth chapter will discuss the research framework and the research methods used for this study. The fifth chapter presents and discusses the research findings, evaluating the extent to which different land uses and management strategies in the NCA are in conflict from the perspectives of the conservation authority and the Maasai residing in this area. The chapter will be divided into two main sections. The first section will outline the complexity of conflicts over land use and management practices in the NCA while the second section will discuss the opportunities and challenges to resolving the conflicts in the NCA.

Chapter six concludes the thesis by highlighting the future of conservation and of the Maasai in the NCA. It will also highlight the need for a multi-disciplinary platform upon which the Maasai can channel their concerns alongside those of natural scientists in an effort to protect the natural resources in the area. The chapter will also suggest ideal recommendations that will help to guide ways to resolve the conflicting situation by bringing the interest of the NCAA (conservation and tourism) closer to those of the Maasai in a way that will allow them to enjoy better standard of living while also protecting the NCA's resources upon which they depend for their survival.

Chapter Two
The Origins and Multiple Dimensions of Protected Areas: A Review and Appraisal

2.1 An Overview

This chapter develops further the contemporary views on the link between conservation and community developments in PAs. The chapter begins with an outline of the origins and the multiple dimensions of PAs and outlines their intended roles and the management issues that go with. It then presents the views on issues related to perceptions and the factors behind the rise of conflicts between local people and the conservation authorities in PAs especially over land use priorities, and theorizes the ways of dealing with these conflicts through the ecosystem approach. Further to this, the chapter discusses the growing discourse in natural resource management, the co-management as an effective approach of natural resource management.

2.2 The Origins and Multiple Dimensions of Protected Areas: A Review and Appraisal

PAs are generally regarded as effective measures for conserving nature and natural resources (Dudley, 2008; Sobrevilla, 2008). The term 'protected area' is widely accepted as the successor of 'national parks and game reserves' in referring to places in which plants and animal species were preserved (Stevens, 1997). The first area to be designated a 'National Park' was the Yellowstone in the United States in 1872. This park was perceived and managed as an area of wilderness where there was little or no significant human impact as people were restricted to the role of visitor (Holdgate and Phillips, 1999; Phillips, 2007). It inspired other nations to establish parks to protect their

natural resources for the sake of preserving life forms on earth (UNEP-WCMC, 2001). Since then, "...national parks become the means to preserve scenery, places of spiritual renewal, venues of outdoor recreation and tourism development, or scientific research sites" (Stevens, 1997:13). From time to time, people began to use the term protected areas to include other different forms of nature parks. Use of this term 'protected areas' gained more popularity in the 1980s, replacing the previous terminology of national parks and equivalent reserves (Stevens, 1997; Holdgate and Phillips, 1999).

Since then, the concept of PAs has been re-defined over time to effectively capture their full significance. Prior to 1992, most definitions of the term were based on the Yellowstone model of natural resource management which advocates exclusion and eviction or relocation of local peoples from their areas in order to pave the way for 'effective' conservation of biological diversity. Following this, the IUCN World Commission on Protected Areas (WCPA) attempted to re-define the concept in 1994 to reflect their intended roles. The Commission defines protected area as:

> "...an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means" (IUCN, 1994:3).

This definition reflects a view of conservation that can accommodate the social, economic and cultural interests, values, rights and responsibilities of local communities living in and around these areas (Beltran and Philips, 2000). From this definition, it becomes clear that PAs have wide-ranging roles. As noted from different literature, PAs are set to conserve species and other biodiversity, maintain essential ecological processes

and life-support systems[6], preserve the wilderness, protect specific natural and cultural features, maintain cultural and traditional attributes, and ensure sustainable use of resources from natural ecosystems (Holdgate and Phillips, 1999; UNEP-WCMC, 2001; Phillips, 2007).

Drawing on global experiences, the IUCN has developed a typology of PAs management categories. Currently, and as Stevens (1997:14) suggests, "...PAs include national parks (the most internationally known and prestigious of all), but they also encompass a much broader range of different types of nature parks with a wide range of goals and different types of management regimes". Some of the best known are nature reserves, wilderness areas, natural monument areas, habitat/species management areas, landscape as well as the managed resource PAs (see IUCN, 1994:17-23 for details). PAs have become vehicles in global efforts to preserve endangered species, habitats, and ecosystems as well as valued natural and cultural landscapes (Dudley and Parrish, 2006; Dudley, 2008).

PAs are considered to have been set up (and continue to be set up) mainly for conservation of nature for both people and the nature itself (Holdgate and Phillips, 1999; Goriup and Wase, 2002). Globally, the growing need to conserve the environment and its natural resources and to protect the biodiversity is reflected in the increasing number of PAs and the land surface areas set aside for this purpose (UNEP-WCMC, 2001; McCabe 2002). By 1997, there were nearly 10,000 PAs encompassing approximately 5 percent of the earth's surface (Stevens, 1997). Since then, the number of PAs has been increasing significantly. Currently, there are more than 100,000 PAs worldwide, covering about 12

[6] "Life-support systems are the ecological processes that keep the planet fit for life. They shape climate, cleanse air and water, regulate water flow, recycle essential elements, create and regenerate soil, and enable ecosystems to renew themselves" (IUCN, 1991:9).

percent of the world's land surface area and making them one of the Earth's most significant land uses (Phillips, 2007; Sobrevilla, 2008; Dudley, 2008).

There is a growing recognition that PAs provide the core of efforts to protect the world's threatened species and they are considered to be essential providers of ecosystem services and biological resources (Dudley, 2008). The Convention of Biological Diversity (CBD) adopted in 1992 is the most important international legal instrument supporting and fostering these efforts at local, national and global scales in a comprehensive manner. It plays an increasing role in shaping and framing the international efforts in nature protection, including the establishment, maintenance, and functioning of PAs all over the world (CBD, 2000). PAs received a boost in 2004 when the CBD agreed on a Programme of Work on Protected Areas based on the outcomes from the fifth IUCN's World Parks Congress (held in September 2003 in Durban, South Africa) which aimed to complete ecologically representative systems of PAs around the world.

However, PAs are not by themselves the solution to protecting the world's biodiversity. Some literature has recently suggested that they must be complemented by sound stewardship across the entire landscapes for them to provide a range of goods and ecological services while preserving the natural and cultural heritage of the earth's surface (IUCN, 2005; Phillips, 2007). PAs serve multiple purposes and several approaches to protection have been implemented. In some, land use rights and access to resources are restricted while in others, multiple land use objectives are pursued and local communities are considered to be part of the management teams (Holdgate and Phillips, 1999; Fisher, 2000).

Despite their promising intended objectives, most PAs do face many challenges in achieving their desired objectives. The chief ones are the external threats associated with pollution and climate change, irresponsible tourism, development of infrastructure and ever increasing demands for land and other resources due to an increase of human population in these areas and these problems are compounded by limited political and financial support (Holdgate and Phillips, 1999; Dudley and Parrish, 2006). In most cases, PAs are not sufficiently well-managed to maximize their contribution to biodiversity conservation and in meeting the needs of local communities (Phillips, 2007; Dudley, 2008). Due to this, many of PAs have been dominated by significant losses of biodiversity in spite of their protected status. As a result, some of them have been inscribed in the current IUCN list of World Heritage Sites in Danger (IUCN, 2009).

To deal with these challenges, the IUCN, through its Programme of Work on Protected Areas, intends to support and improve the establishment and maintenance of comprehensive systems of PAs which are effectively managed. The rationale behind this is to improve the coverage, representativeness and management of PAs at national, regional and global levels (Dudley and Parrish, 2006). Also, through a global network of PAs, the IUCN intends to contribute to the achievement of the three objectives of the CBD (conservation of biological diversity, sustainable use of biodiversity and the fair and equitable sharing of benefits arising out of utilization of biological resources) and the 2010 biodiversity target of achieving a significant reduction of the current rate of biodiversity loss at the global, regional and national levels (IUCN, 2005; Phillips, 2007; Dudley, 2008; Sobrevilla, 2008).

2.3 The Intended Roles of Protected Areas

PAs are by definition dedicated to the conservation and maintenance of biodiversity (IUCN, 1994). In arguing for *'Caring for the Earth: A Strategy for Sustainable Living'*, the IUCN suggests that PAs are "...established to safeguard outstanding examples of the natural or cultural heritage, for their own sake, for the conservation of life-support systems and biological diversity, and for human enjoyment" (IUCN, 1991:36). PAs differ substantially in their extent, objectives and principal characteristics and Table 1 below outlines the intended functions and the expected benefits of PAs.

Functions of protected areas	**Benefits of protected areas**
Provides safeguards for:	Developmental importance through:
1. Conservation of wild species and areas of particularly high species diversity	1.Conservation of soil and water in vulnerable and sensitive areas
2.Protection of intrinsic, inspirational and recreational values of the world's great areas	2.Regulation and purification of water flow, mainly by protecting wetland and forests
3.Life-support systems in natural and modified ecosystems	3.Shielding people from natural disasters such as floods and storm surges, notably by protecting watershed forests, coral reefs, riverine, mangroves and coastal wetlands
4.Culturally important landscapes, historic monuments and other heritage sites in built-up areas	4.Maintenance of important natural vegetation on sites of low intrinsic productivity
5.Sustainable use of wild resources in modified ecosystems	5.Maintenance of wild genetic resources and species important for medicine
6.Traditional and sustainable use of ecosystems in sacred places or traditional sites of harvesting by indigenous peoples	6.Protection of species and populations susceptible and sensitive to human disturbance
7.Supporting scientific research	7.Habitat provision for harvested, migratory or threatened species for breeding, feeding or resting
8.Recreational and educational use of natural, modified and cultivated ecosystems	8.Income and employment for local people, notably from tourism

Table 1: Functions and Benefits of Protected Area Systems (adapted from IUCN, 1991:37).

Increasingly, PAs are regarded as the basis of nearly all national and international conservation strategies set aside to maintain functioning natural ecosystems, to act as refuges for biodiversities and maintain ecological processes (Dudley, 2008). Their values range from the protection of natural habitats and the associated flora and fauna, to the maintenance of environmental stability of surrounding areas (Holdgate and Phillips, 1999). Some have also regarded them as the only hope at hand of stopping many endemic species from becoming extinct (Dudley, 2008; Sobrevilla, 2008). Also, there is a growing recognition that PAs are the cornerstones for *in situ conservation*[7] of biological diversity (CBD, 1993, 2003). These have been recognized at multiple levels, and their importance ranges from conservation of biodiversity, to provisions of essential ecosystem services for human welfare and contributions to sustainable development (IUCN, 1991). At the same time, PAs embody important cultural values as they conserve places of values such as sacred natural sites (Dudley, 2008). Some of them reflect sustainable land use practices. In most cases, PAs are used as important sites for undertaking scientific research and monitoring programmes, as well as for conservation education among various groups of people (Holdgate and Phillips, 1999; Phillips, 2007).

Equally important, PAs also help us understand human interactions with nature. As noted by Dudley (2008:2), "...PAs have direct human benefits. People, both those living in or near them and others from far away, gain from the opportunities for recreation and renewal available in these areas, from the genetic potential of wild species, and the environmental services provided by the natural ecosystems, such as provision of

[7] *In situ conservation* is defined by the Convention of Biological Diversity as the "...conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties" (CBD, 1993:147).

water". This means that PAs are important for delivering vital ecosystem services to the local people. This is closely linked to the growing recognition that PAs need to be complementary to measures to achieve conservation and sustainable use of biodiversity by local people residing in and around them in accordance to the CBD guidelines. They can also enhance rational use of their marginal lands to the local people by supporting different human land use activities such as pastoralism, cultivation, hunting and bee harvesting. Many PAs are thus considered to be of great importance to local communities, especially those that heavily depend on a sustainable supply of resources available from these areas for their survival (Stevens, 1997).

There are tangible economic benefits associated with PAs even though these are not usually central to their establishment (IUCN, 2000). PAs protect and preserve various tourism attractions (such as natural resources, cultural features, historical sites, and geological features), and assist with ensuring the long-term viability of this growing industry (DeLuca, 2002; Charnley, 2005). PAs thus help the government authorities in their efforts to market their natural attractions by providing local people (those from within and around the PAs) and visitors (especially foreigners) with tangible products and access to these natural attractions. They also have the potential of providing opportunities for local and regional economic development (Nelson and Serafin, 1997; DeLuca, 2002). In most cases, many of the economic benefits available from these areas have the potential to remain in local communities inhabiting or those surrounding them, thereby contributing to their development initiatives (IUCN, 1993; McShane *et al.* 2004). PAs also have the potential to generate employment in local communities across the broad

range of skill levels, most obviously from outdoor recreation and tourism (Nelson and Serafin, 1997).

Despite the significant role they play, most PAs are not managed effectively and the provision of their intended benefits has increasingly become a contentious issue between local communities and conservation managers (Dudley, 2008). Though the world's governments have accepted PAs as important conservation measures, "...yet they are also places where conflicts occur" (Lewis, 1996:2). To address these conflicts and challenges, the CBD (as a particularly important endorsement of PAs) has presented a powerful array of actions and tools for effective management of these areas. In particular, Article 8 (c) of the CBD calls for the establishment and maintenance of a system of PAs and obliges local agencies, national governments, regional and international bodies to regulate or manage biological resources important for the conservation of biodiversity whether within or outside PAs, with a view to ensuring their conservation and sustainable use to local people (CBD, 1993).

2.4 Perceptions and Rise of Conflicts in Protected Areas in Africa

The question of conflicts in most PAs in Africa has deep historical roots in European colonialism and the European ideas of scenic African landscapes (Neumann, 1998). Since the remote areas (which have been the homes of indigenous communities) were rich in biodiversity, much of the land in these areas has been designated as PAs to conserve the abundant resources available in them (Nepal, 1999; Beltran and Phillip, 2000). This has been done through alienating or terminating the ownership of much of the territorial lands once occupied by indigenous peoples (Anderson and Grove, 1987; Neumann, 1998; Adams and Mulligan, 2003). The European colonial powers alienated

these lands when establishing settler estates and throughout the process of reserving land for forest and wildlife conservation (Neumann, 1998). During this time as history shows, strict laws that prohibited access and limited use of resources by local people (especially the indigenous one) were put in place by the colonial governments as part of their conservation measures. This has continued to occur even during the post-independence period (roughly 1960s to early 1980s) as rapid growth of the amount of land under strict protection for conservation has been given greater attention (Adams and Mulligan, 2003).

The growth of PAs in Africa whose main population is primarily rural and agrarian[8] has produced conflictual relations between people and the park authorities (ibid). It has once been suggested that policies guiding conservation in most PAs "...must be in conflict with the rights and traditions of indigenous and other traditional peoples on their terrestrial, coastal/marine or freshwater domains" (Beltran and Phillip, 2000:3). In most cases, conflicts occur because conservation laws and policies guiding the management of PAs ban human activities (such as cultivation, grazing, hunting, firewood and building materials collection and many other forms of natural resources extraction) as part of their management strategies and thereby impinge upon human activities that are very crucial to sustaining their livelihoods (Bernstein *et al.* 1992; Neumann, 1998; Ellis, 2000). Overall, loss of local land and inadequate access to resources in favor of conservation has fueled conflicts over access, use, and rights to land and other natural resources in most PAs in Africa as in many other parts of the world.

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[8]About 70% of Africans and roughly 80% of the continent's poor live in rural areas and depends mainly on agriculture for their livelihood, establishing poverty as a rural phenomenon in the region. Agriculture is the main source of income for 90% of rural population in Africa. This majority is generally unable to meet basic food and other needs due to the continuous poor performance of the agriculture sector (UNECA, 2005).

The FAO (2000) has described conflicts over natural resources as disagreements and disputes over access to, and control and use of natural resources. These conflicts often emerge because various groups of people have different interests for resources such as forests, water, pastures and land, or want to manage them in different ways. Disagreements also arise when these interests and needs are incompatible, or when the priorities of some user groups are not considered in policies, programmes and projects. For Mitchell (2002), such conflicts of interest are an inevitable feature of all societies:

> "...conflicts occur because it is normal in a society to have individuals or groups with different needs, values, interests, hopes, expectations and priorities. Often, there are tensions among these different characteristics, if not mutual incompatibility" (Mitchell, 2002:17).

Conflicts, therefore, are not necessarily destructive: some regard them as common features of resource use systems (Lewis, 1996; FAO 2000; Mitchell, 2002). If well managed, "...conflicts can be opportunities for problems to be identified and solved, and progress achieved" (Lewis, 1996:2). Some have suggested that conflicts are the prerequisites for proper management that is participatory and equitable (Nepal and Weber, 1995; Lewis, 1996; Mitchell, 2002).

Sometimes, as Lewis (1996) suggests "...many conflicts can become counterproductive and destructive, leading to more detrimental results and hostile relationships" (p. 2). In PAs for example, conflicts have been occurring between the rights and interests of local people and the desires of PA managers who wish to protect the biological diversity from adverse impacts. Over time, conservation policies have concentrated on protecting species and their habitats by limiting and/or prohibiting access and use of land and other biological resources by the local communities (Nepal and Weber, 1995). Further to this prohibition is that local people have been identified as

primary causal agents in loss of biodiversity and that they are too often perceived as an enemy of nature by those interested in conservation (Stocking *et al.* 1996; Goriup and Wase, 2002). In general, conflicts in PAs are often associated with local peoples' reduced access to land and limited use of natural resources, existence of local peoples' needs that conflict with conservation objectives of the PAs, lack of local peoples' involvement in the planning, management, and decision-making for the area and the disagreements of ideas from different stakeholders on how the PAs should be managed (Nepal and Weber, 1995; Lewis, 1996; Mitchell, 2002).

Conflicts tend to be worse where local peoples (especially the indigenous ones) are interested in conservation, ownership and traditional use of their lands and other resources, and when their fundamental rights are not adequately guaranteed by the PAs authorities (Neumann, 1998). Following this, it has been established that most of conflicts in PAs are basically due to struggles over land use priorities between the conservation authorities and the local communities (Lewis, 1996). Due to inadequate and sometimes lack of support to local communities, local people in these struggles usually fail as conservation is given greater attention since it has the support of big international conservation organizations such as the African Wildlife Foundation, World Wide Fund for Nature, Frankfurt Zoological Society, and the International Union for Conservation of Nature.

The process of partitioning and setting land aside for conservation of wildlife and other natural resources has significantly affected and suppressed the interests, land rights, as well as the livelihood strategies of local people who initially inhabited those areas. This has subsequently resulted in persistent conflicts in Africa's PAs as it has been the

case in many other parts of the world where people have been evicted from their areas for conservation to take place (Nepal and Weber, 1995; Neumann, 1998; Chatty and Colchester, 2002). In view of this, Neumann (1998) has once suggested that "...establishment of national parks and the associated PAs has criminalized many customary land rights and natural resource uses for communities across Africa" (p.5). This is further evidenced by the recurring confrontations between park authorities and local people over access to land and other resources, and the enforcement of conservation policies and laws in most PAs in Africa (Anderson and Grove, 1987; Stocking *et al.* 1996; Neumann, 1998). In reality, these confrontations over land have further complicated the land rights of the local communities living within or those surrounding the PAs, hence intensified further conflicts between the conservation authorities and local communities.

Historically, hostilities between conservation authorities and local people have peaked but their patterns have remained consistent (Nepal and Weber, 1995; FAO, 2000). Seen from the perspective of the conservationists, "...conflicts over land uses in PAs are defined by grazing trespass, illegal hunting, and boundary encroachment" (Neumann, 1998:3). From the perspectives of local people, conflicts in PAs revolve around reduced access to ancestral lands and restrictions on customary resource uses (Nepal and Weber, 1995; Neumann, 1998). On that basis, most PAs in Africa have continuously experienced conflicts over access to land and other natural resources between state conservation agencies and the local people (especially peasants and pastoralists) as will become evident in the case of the Ngorongoro Conservation Area.

Increasingly, the use of centralized top-down or state-based approaches to conservation that emerged in Africa during the colonial period is recognised to have been the causal factor of a wide range of conflicts emanating from natural resources in PAs which have continued to occur (Andrew-Essien and Bisong, 2008). These conflicts are likely to endanger the future of natural resources throughout the post-independence period across the region as the management practices and the conservation policies continue to restrict local people's access and use of those resources. With the use of top-down approaches, forced removal and sometimes compulsory re-location of the indigenous people to other environments (which may not be adequate for production activities) have become popular practices in Africa in paving the ways for expansion and even creation of new PAs (Lindsay, 1987; Stevens, 1997; Chatty and Colchester, 2002; Adams and Mulligan, 2003).

Notably, the whole process of establishing and/or expanding PAs has negatively affected the local communities by denying them access to many of their livelihood needs in the ways they did before their homelands were designated as PAs. This has brought to the fore the desire for reconciling different land use objectives of local people with natural resource management. In recent years, this desire has captured the attention of those interested on the interface of both conservation and development as the promising strategy to bringing together the competing interests of different stakeholders in PAs. To achieve this end, the ecosystem approach is being promoted by the CBD as a mechanism to addressing the conflicts in PAs. It seeks a balance between conservation goals and use of the biological diversity to enhancing both sustainability of resources and well being of the people in PAs (CBD, 2003).

2.5 The Role of the Ecosystem Approach in Addressing Conflicts in Protected Areas

Resolving conflicts (especially those emanating from different interests and perceptions) between different resource users in PAs is a complex process which has to involve multiple stakeholders from both governments and non-governmental organizations; multiple and sometimes competing objectives; and multiple agencies and sometimes with overlapping jurisdictions (Bell, 1987; Nepal and Weber, 1995). Since there are competitions for resources, different perceptions of values, and disagreements as to which land use is the best among different groups in PAs, then a more balanced approach to conservation and sustainable use of biodiversity is necessary to reconcile the competing interests which have for so long been the cause of conflicts in PAs. It has been proven that, such a balanced approach can be achieved through the ecosystem approach[9] which was adopted by the Convention on Biological Diversity (CBD). Shepherd (2004) has described the ecosystem approach as:

> "...a strategy for integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (p. 1).

The CBD promotes the ecosystem approach as the new philosophy of managing natural resources that takes into account the entire ecosystem in a manner that safeguards the long-term ecological sustainability, biological diversity, and productivity of the landscapes (CBD, 2003). Its main focus at this level is to provide for sustainable use of natural resources which ensures their long-term sustainability. This new approach to management of ecosystems is being guided by an understanding of the natural forces of

[9] The ecosystem approach has been adopted by the Conference of Parties of the Convention on Biological Diversity (CBD) as the primary framework for action under the Convention. The CBD promotes the use of the ecosystem approach as a framework for meeting its three objectives: conservation, sustainable use, and the fair and equitable sharing of the benefits arising out of utilization of genetic resources (UNESCO, 2000; Shepherd, 2004).

change in ecosystems and how human activities affect those forces (CBD, 1993). Such an understanding of the natural forces of change has led to an increasing recognition that humans, as part of the ecosystems, need to be included in the decision-making process (CBD 2000, 2003; Shepherd, 2004).

This approach is based on the application of scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environments (CBD, 2003). To deal with such complex and dynamic nature of ecosystems, the CBD has provided twelve principles (see Annex 1) of the ecosystem approach as contained in Decision V/6 of the fifth meeting of the Conference of Parties (COP 5) to the CBD. These principles are complementary and interlinked and are intended to guide the effective management of PAs for delivering the CBD objectives in practice (UNESCO 2000; Shepherd, 2004). Since it is not necessary to adopt all principles at once or to give the same weight to every one of them, the IUCN Commission on Ecosystem Management has outlined five points (see Annex 2) to guide the practical implementation of the ecosystem approach.

Broadly, the ecosystem approach provides a framework for integrating conservation of biodiversity, sustainable use of its components and the equitable sharing of benefits from natural resources especially in areas where there are both multiple resource users and important natural values as in NCA (IUCN, 1997; UNESCO, 2000; CBD, 2003). It further seeks to put people and their traditional natural resource use practices at the centre of decision-making processes to enhance the management of PAs (Shepherd, 2004). If well implemented, the ecosystem approach has the capability to link ecology with complex issues of economics and politics, and further ensure that good

policy intentions do not yield to inappropriate outcomes in PAs. At the most fundamental level, proper implementation of the ecosystem approach can allow the available resources in PAs to enhance a constant flow of economic benefits to the indigenous and local communities while at the same time maintaining or restoring the naturalness of the areas (ibid).

In addition, the ecosystem approach maintains that livelihoods of people all over the world depend on goods and services provided by the ecosystems and that the ecosystems are under increasing pressure from unsustainable use and poor management practices. This has threatened the sustainability of natural resources and the livelihoods of people relying on these resources. In PAs, the increasing pressure on ecosystems is what has culminated conflicts (especially over land uses) between PA's authorities and the local communities. As a solution to both conflicts in PAs and the increasing threats to the ecosystems, the ecosystem approach has increasingly been used as a mechanism to resolve the problems as it advocates that people be involved in the management of biological resources available in their areas. Indeed, it stimulates the search for alternative approaches to natural resource management that can enhance both conservation and community development goals to be achieved simultaneously in a sustainable way.

One approach which is being promoted through the ecosystem approach is *collaborative management* (also called co-management) which has considerable potential for resolving conflicts in PAs by achieving peoples' participation in the conservation and sustainable and equitable use of natural resources (Sneed, 1997; Clark and Reddy, 1999). Co-management is now used as an alternative to older, top-down approaches to natural

resource management. If well set, the co-management approach can provide effective arrangements to deal with complex interests and relationships and can promote the participation of local communities who are frequently marginalized in conventional resource management and development processes (Lewis, 1996). This is why co-management is considered in this thsis to be an effective approach to deal with such complex situations in the overall management of PAs, including the NCA.

2.6 Co-management: An Effective Approach to Natural Resource Management

2.6.1 The Emergence of Co-management Approaches

The historical context and the rise of ideas behind the conservation of natural resources in Africa (and perhaps in many other parts of the world) has clearly shown how the PAs management strategies have tended to exclude local people from conservation efforts and from the benefits of these efforts. This process has been seen as a major threat to the well-being and cultural survival of indigenous peoples residing in those areas (Stevens, 1997). There is enough evidence indicating how local people (especially indigenous ones) have been detrimentally affected by top-down approaches to management of natural resources of the states, governments and their responsible authorities (Neumann, 1995; Stevens, 1997; Chatty and Colchester, 2002).

Use of these bureaucratic approaches to conservation has consistently been fueled by conservation thinking which considers people as obstacles and threats to sustainable management of natural resources (McCabe, 2002). According to Stevens (1997), such thinking have also tended to overlook the basic "...principles of grassroots conservation, indigenous management systems, and co-management arrangements in which indigenous peoples share policy making and implementation responsibilities with government

agencies and nongovernmental organizations" (p.4). Increasingly, use of top-down approaches is also recognized to have been the causal factor for ongoing conflicts and worsening tensions over use, access, ownership and management of natural resources in most PAs (Lewis, 1996; Nepal, 1999; Andrew-Essien and Bisong, 2008).

Recognition of the damaging effects of state-based (top-down) approaches is currently considered to have been a major force for the emergence of new people-state centered approach to natural resource management in the name of co-management (Fisher, 2000; Murombedzi, 2003). It differs from CBNRM approach which is people-centered with local communities having a more complete control of natural resources that have been used in several parts of the world, including Africa (Fabricius, 2004; Turner, 2004). The CBNRM approaches have come under strong criticism due to their failure to deliver real benefits to local communities and in sustaining natural resources (Barrow and Murphree, 1998; McCabe, 2002; Fabricius, 2004). The shortcomings of CBNRM approaches and the problems of the centralized (top-down) approaches have brought to the fore the realization that both of these approaches have not been able to bring together the diverse interests of different stakeholders. Co-management has emerged to overcome their shortcomings and problems (Pinkerton, 1993; Clark and Reddy, 1999; Fisher, 2000).

Co-management arrangements are by definition intended to promote user participation in planning, decision-making and in implementation of the resulted management plans for better management of PAs or specific set of resources (Pimbert and Pretty, 1995; Stevenson, 2006; Armittage *et al.* 2007). Broadly, co-management is described as "...the sharing of power and responsibilities between government agencies

and local resource users with regard to the allocation and use of resources" (Stevenson, 2006:169). It generally involves *bottom-up* or grassroots initiatives aimed at bringing individuals and conservation authorities to work together towards achieving the desired environmental sustainability and sustainable development goals (Clark and Reddy, 1999; Borrini-Feyerabend, 1996). The scope of co-management is much broader than that of the state-based/top-down and CBNRM approaches. It focuses on the growing need of decentralization and community participation in management of PAs, themes which have become the priority agenda in development and conservation processes (Murombedzi, 2003; Borrini-Feyerabend *et al.* 2004).

Co-management approach is currently seen as a solution to long-term conflicts over resource issues in PAs (Borrini-Feyerabend *et al.* 2004; Stevenson, 2006). It maintains that, by working together, people with their mutual, overlapping and diverging interests, and perspectives, are able to achieve more than individuals or conservation authorities working on their own (Sneed, 1997; Clark and Reddy, 1999; Stevenson, 2006). This approach has thus captured the growing interest of researchers, development practitioners, governments, and non-governmental organizations, and community-based actors involved in natural resource management issues (ibid). In particular, co-management approach has led to increased acknowledgement of participatory initiatives, bringing hope to people who want to play significant roles in governing and managing the natural resources in their areas. It is now promoted by different international organizations as a promising agenda towards a better future of natural resources and the well-being of local people.

For example, the report by Claudia Sobrevilla (2008) for the World Bank: *"The Role of Indigenous Peoples in Biodiversity: the Natural but Often Forgotten Partners"* has made clear that engaging indigenous people more effectively in biodiversity conservation represents a win-win situation for both conservation and community development. The report has called for greater recognition of these new alliances and partnerships with local communities (especially the indigenous one) in the overall management of PAs. In recognition of co-management approach, the IUCN through the CBD has made provisions to guide its initiatives. In particular, article (10e) of the CBD has made reference to the importance of encouraging cooperation between governmental authorities and local communities to develop methods for proper integration of conservation and sustainable use of biological resources. Following this, it have become necessary for the conservation agencies to develop partnerships with local communities based upon the principle of full and informed consent to working with them in managing the PAs.

2.6.2 Intended Objectives of Co-management Approaches

Co-management approach has increasingly been promoted by various international and national actors, including development practitioners and conservationists to achieve three main objectives: poverty reduction, conservation of natural resources and promoting good governance of natural resource management in PAs (Sneed, 1997; Clark and Reddy, 1999; Fisher, 2000). These objectives are closely linked. For example, the desire for poverty reduction is closely linked with conservation of resources as poor people in the developing world depend on natural resources for their livelihoods (Borrini-Feyerabend *et al,* 2004). Through co-management arrangements,

flow of benefits to local people is made possible. In so doing, co-management confers specific rights such as benefit sharing as incentives for poverty alleviation in order to stimulate active participation of local communities in natural resource management (ibid).

The desire for ensuring effective conservation of natural resources requires genuine involvement of the key stakeholders who largely depend on resources available in places within which the co-management is undertaken (Pinkerton, 1993; Fisher, 2000). Involvement of local people is particularly relevant in situations where active commitment and collaboration of stakeholders is necessary, and where access to natural resources in PAs is essential for security of livelihood strategies and cultural survival of people inhabiting them (Berkes *et al.* 1991; Sneed, 1997). With this target, co-management holds a promise to yield positive results in better and more acceptable long-term solutions towards a more sustainable future of people and the natural resource base upon which they depend (Clark and Reddy, 1999).

Promoting good governance of natural resource management is often best achieved through decentralization of power to increase public participation in decision-making for the overall management of natural resources in their areas (Murombedzi, 2003). Seen from the perspectives of improving local people's capabilities in resource management, decentralization and power-sharing are increasingly seen as important engines to foster effective performance of co-management in many parts of the world that have accepted these new alliances for natural resources management (Pimbert and Pretty, 1995; Borrini-Feyerabend *et al.* 2004). This has led policy-makers and researchers to increasingly advise countries and their responsible conservation authorities to incorporate

local people into their natural resource management agendas. With this reality, co-management is currently reflected in many countries development strategies[10] (Stevenson, 2006). It is in this context that co-management approach has gained more popularity in recent years with its interests being centered in local-level solutions to resource problems.

2.6.3 The Main Characteristics of Co-management

As explained above, co-management, a new approach to natural resource management has emerged and increasingly become popular among conservationists and development practitioners (Clark and Reddy, 1999; Fisher, 2000; Stevenson, 2006). It is being put in place as a development option to help to resolve the conflicts emanating from natural resource issues, especially in PAs. Following this, it has been suggested that for a better and successful performance of co-management, effective collaboration should have the following four main characteristics:

i. Shared goals are necessary

Successful co-management requires an existence of a mutually acceptable planning process with shared management goals between the conservation managers and local communities. It becomes important for all stakeholders to agree on what should be the common goals of their management partnership. Sneed (1997) suggests that co-management arrangements "...should have as a central goal the conservation of

[10] Some of reasons for this are centered within the recognition that "...(i) local people are likely to identify and prioritize their environmental needs more accurately than centralized systems, (ii) resource allocation is more efficient and transaction costs becomes lower when decisions are taken locally, (iii) local groups are more likely to respect decisions that they have participated in their formulation, (iv) monitoring of resource use is improved, and (v) marginalized groups gain greater influence on local policy" (DANIDA 2007:3).

biodiversity and the natural resources in and around the PAs" (p.152). Through negotiations and agreements, participants have to develop a set of specific objectives of their partnership that will help to achieve the central goal. During this process, among the goals to be set, stakeholders will have to prioritize them while keeping in their mind that their collaboration is a means of achieving management objectives and not an end in itself. At the end of the process of setting the goals, stakeholders have to also come up with a management plan with practical guidelines towards its implementation.

ii. There have to be institutional structures

Co-management agreements require that institutional structures be created or evolve to facilitate management arrangements between government agencies and local resource users in determining the success of co-management (Berks *et al.* 1991; Sneed, 1997). Ideally, an effective co-management requires that a management body be in place to deal with important issues such as policy-making, administration formalities, and enforcement of responsibilities among the participants (Sneed, 1997; Borrini-Feyerabend *et al.* 2004; Stevenson, 2006). Importantly, the management body has to represent all the stakeholders equitably. In addition to this, co-management arrangements also require resource management committees be set on which indigenous or local people have equal or majority representation (Berkes *et al.* 1991; Sneed, 1997; Clark and Reddy, 1999).

iii. There have to be mechanisms for co-management

The co-management agreements are required to provide for mechanisms through which continuing local community participation in policy formulation, planning, ongoing management, and evaluation will be guaranteed (Borrini-Feyerabend, 1996; Sneed,

1997). These mechanisms should focus on having systematic evaluations and monitoring programs to help with the review of policy, planning and management activities as means of ensuring better performance of the management partnership (Fisher, 2000). Equally important, co-management mechanisms have to deal with important issues such as the extent of participation, the degree of power sharing, accountability and responsibility of participants, and the incorporation of cultural beliefs and traditional knowledge in co-management arrangements (Berks *et al,* 1991; Sneed, 1997; Fisher, 2000). All of these are intended to guide effective performance of the co-management.

iv. There has to be benefit sharing

In addition to allowing local communities to participate in management activities, co-management agreements are required to ensure the flow of potential economic benefits to the participating communities. Importantly, co-management arrangements are required to consider reducing pressures on natural resources by providing alternatives that will raise income levels of the local communities and allow sustainable use practices of land and natural resources through regulated access (Fisher, 2000). Under this approach, agreements and arrangements are also required to consider the local indigenous residents in employment opportunities that will be made available in guiding the day-to-day management activities of the area or set of resources (Sneed, 1997). At the same time, co-management agreements are required to also have a clear understanding that effective participation of indigenous people in the management will depend on whether crucial issues such as security of land tenure, land use rights, equity, and compensation package for any negative impact are addressed by the co-management agreements (Sneed, 1997; Fisher, 2000; Stevenson, 2006).

Drawing from the above characteristics, co-management offers promising alternatives for implementation of the ecosystem approach, especially in addressing conflicts in PAs. Like many other management approaches, co-management has weaknesses too, but its strengths lie in the recognition of problems of the previous approaches to management of natural resources that have resulted in the persistence of conflicts over resource use and management strategies (Stevenson, 2006). Another strength of co-management is that its arrangements are adaptable to any given place, time, and circumstances (Armittage *et al.* 2007). Further to this, co-management arrangements and agreements have advantages for promoting more appropriate, efficient, and equitable governance of natural resources through which well-being of local people and sustainability of resources could be met simultaneously (Sneed, 1997; Borrini-Feyerabend *et al.* 2004).

Clearly, if well established, co-management arrangements have the capacity to democratize decision-making processes, foster conflict resolution, and encourage stakeholders' participation in the overall management of PAs (Fisher, 2000; Stevenson, 2006). In that regard, co-management is thus a promising approach as it supports community involvement in all management activities previously regarded as the realm and responsibility of government (Clark and Reddy, 1999; Fisher, 2000). As such, co-management holds much promise for meeting the needs of local communities especially the indigenous people and in ensuring continuing conservation of biodiversity and natural resources as they are at the level where community groups and government agencies can work together.

Chapter Three
Conflicting Land Use and Management Strategies in the NCA

3.1 An overview

This chapter describes the case study of Ngorongoro Conservation Area where different land use and management strategies are often in conflict. In particular, the chapter begins with a review of the historical context of conservation in Africa in view of colonization of the continent in the 19th Century. This will be followed by the historical context of the NCA with a description and an outline of its legislative history. Following this will be an outline of the available natural resources and other main features in the NCA. The chapter will then describe the different land use strategies in the NCA and theorize how they appear to be in conflict with each other. Of great importance, this chapter will also describe different laws which influence the management of the area. Central to this research, the chapter will end by providing a detailed discussion of the conflicting land use and management strategies in the NCA.

3.2 The Historical Context of Conservation in Africa

3.2.1 The Ideas behind Conservation of Nature in Africa

The conservation of nature and the establishment of PAs in Africa have their roots in the colonial rule of the region from the 19th century (Neumann, 1998; Adams, 2001; Adams and Mulligan, 2003). During this era, the colonists claimed that natural resources were overexploited by the Africans, especially by those who relied heavily on abundant wild natural resources that were available in and around the areas they inhabited for their survival (Fabricius, 2004). In reality however, colonists did not recognize the fact that

many societies in Africa valued nature and '...incorporated it into their world views, metaphors, folklore and belief systems" (Fabricius, 2004:1). Most of the African societies regarded nature as the source of their daily life as it provided them with the necessities for their livelihoods such as fuel wood, food, water, bees, medicinal plants, rangelands, rivers and other wild resources (Stevens, 1997; Redford and Sanderson, 2000; Fabricius, 2004). As such, their everyday resource use practices routinely recognized the importance of nature to supporting their day-to-day lives.

Recognition of the importance of nature to their livelihood strategies led Africans (especially the indigenous people) to develop rules and procedures to regulate and control their resource consumption practices and to manage natural resources in their areas (Fabricius, 2004). It is often suggested that to achieve this end, traditional institutions such as kings, chiefs, headmen and healers played an important ecological role by regulating and monitoring resource use practices in Africa (Anderson and Grove, 1987; Schroeder, 1999; Fabricius, 2004). The rationale for this was to ensure a reliable supply of natural resources to sustain the daily requirements of peoples' livelihoods. Further to this, some have regarded these local institutions to have evolved to govern the use of natural resources in ways that were geared at enhancing constant flow of ecosystem services to the people by maintaining their resilience (Anderson and Grove, 1987; Schroeder, 1999; Olenasha *et al.* 2001). In that regard, it becomes clear that use of these institutions was intended to ensure that people continued to obtain the needs for their livelihoods from nature.

Equally important, culture also played a significant role in ensuring a continued existence of natural resources in Africa before the arrival of the colonial powers.

Together with their local and traditional knowledges, people often incorporated the use and management of natural resources with their cultures (Anderson and Grove, 1987; Olenasha *et al.* 2001; Fabricius, 2004). Through culture, they created rules to control the amount and rate of natural resource to be used. Many of these rules were intertwined with their traditional religions, local belief systems and norms and customs (Neumann, 1998; Olenasha *et al.* 2001). For example, they used taboos as methods of forcing compliance of societal values and as mechanisms to govern their resource use practices (Olenasha *et al.* 2001). Through their taboos, they developed sanctions that governed and restrained the consumptive use of natural resources (ibid). Although not well documented, the available evidence (though minimal) is enough to convince us that the existed local practices of natural resource management helped to preserve nature before the arrival of colonial powers in Africa.

However, with the coming of colonial powers in Africa, the colonists viewed African resource use and management practices as not being sustainable. They maintained their general views that Africans overexploited the natural environments through their overdependence on nature (Fabricius, 2004). They thus perceived that natural resources would not last forever and that something needed to be done to conserve them and to ensure their long-term sustainability (Anderson and Grove, 1987; Neumann, 1995, 1998; Schroeder, 1999). With these perceptions, the colonists warned of the long-term impacts of the decline of natural resources and the destruction of particular natural environments and advocated these be protected[11] (Neumann, 1998; Adams and Mulligan, 2003). An outcome of this was the demarcation of areas inhabited by wild

[11] This reflects many of the views prevailed among the colonist when advocating for conservation of natural resources in Africa.

animals and forests into what came to be known as game and forest reserves under the control of states (Neumann, 1995; 1998; Adams, 2003).

In this trend, a number of game and forest reserves were created in Africa by the first half of the 20th century as a means of fostering preservation of wildlife and forests and other resources that were seen to be declining (Adams, 2001). Some of these reserves in the region were transformed into what came to be known as 'National Parks' in the second half of the 20th century. In most cases, the whole process of creating the reserves and the parks went hand in hand with eviction of local communities who inhabited those areas (Chatty and Colchester, 2002). Overall, the ideas behind the creation of PAs were to allow 'effective conservation' of natural resources under the strict control of the colonial governments. This trend "...continued throughout the 1950s and 60s, and even accelerated in the post independence years" (McCabe, 2002:66). By the beginning of the 21st century, it was reported that Africa contained 1,254 PAs occupying approximately 7 percent of the continent's land surface (UNDP *et al.* 2000, UNEP-WCMC, 2001).

3.2.2 Impacts of Colonist Conservation Policies in Africa

With the creation of PAs, Africans, especially the indigenous people were adversely affected by the state-based conservation policies of the colonial governments. During the colonial era, governments imposed strict laws to govern natural resource management in the region. The laws were often based on protectionism that ignored the needs of people by imposing restrictions on their land use systems and excluded them from the PAs (Stevens, 1997; Adams, 2003). With these restrictions, people lost control of the livelihood strategies which prevailed in the pre-colonial period. As such, local people who initially inhabited those areas found themselves deprived of their former

diets, grazing and arable lands. With the newly introduced policies and laws therefore, it became impossible for anyone wishing to make a living from nature to do so without breaking one law or another (Neumann, 1995, 1998).

Use of the centralized or state-based approach of the colonial powers to conservation of natural resources in Africa is also blamed for outlawing people's rights of use and access to land and other natural resources (Lindsay, 1987; Neumann, 1998; Adams and Mulligan, 2003). This approach has often been characterized by "...coercive policies that displaced African settlement and land use" (Neumann, 1995:365). With this approach, colonial governments made rules and decisions about how land and other resources could be used and preserved, and informed local people afterwards without their prior consent. They did this as they maintained their views that Africans were the primary degraders of natural resources and the environment, and that they would not be motivated to conserve them without strict rules (Adams, 2003). The view that traditional land use systems of local and indigenous people were unsustainable has continued to flourish throughout the post-independence period, and it is recognized to have been a source of major land use conflicts in PAs throughout the continent (Bell, 1987; Lindsay, 1987; Neumann, 1995, 1998; Adams, 2003).

Another impact of colonial conservation policies is that they limited local communities' participation in management activities (Neumann, 1995). This form of conservation disregarded the traditional conservation strategies that preserved nature for centuries long before the arrival of colonists. Viewed from this perspective, it is undoubtedly that the western models of conservation were transferred to Africa with no regard of specific contexts of and the history of people and nature. This advances the

recognition that uses of the colonist approaches to conservation of natural resources have not been that effective to sustaining nature in Africa. Some regard these approaches to have contributed to more environmental degradation and higher rates of loss of biological diversity in many parts of the continent (Bell, 1987; Neumann, 1995, 1998; Fabricius, 2004; Olenasha, 2006).

The colonists' conservation policies are also blamed for socio-economic hardships to local people as most of them have found it difficult to survive. This is due to land use restrictions placed on them which have reduced their access to various sources of livelihoods they had in the past. This tendency has in most cases being regarded to have been the cause of more conflicts in PAs (Nepal and Weber, 1995). This is emphasized by local resistance to the colonial nature conservation as it affected their traditional ways of life. Their resistance included illegal hunting, grazing trespasses, bush burning, and fuel wood theft (Neumann, 1995). In citing Scott (1987), Neumann (1995) points out that, "...these actions were aimed not at reforming the legal order, but at undoing its application in practice" (p.365). This reflects the fact that Africans wanted to retain their traditional management systems that had protected nature for a considerable amount of time.

Many of today's conservation policies are still based on colonial ideologies. Ironically, such philosophy of excluding local and indigenous communities from accessing land and other resources in their former homelands infringes on their well-being (McCabe, 2002; Sobrevilla, 2008). Many conservationists and ecosystem managers still do not recognize the importance of local management and land use practices in sustaining and protecting biodiversity. Combined with the history of local resistance to

conservation laws of the colonial regime, this has limited the ability and desires of the post-independence governments to take over the governance of natural resources management programmes (Neumann, 1995; Adams and Mulligan, 2003). As such, conflicts over land use priorities in PAs have been the continuing features in Africa.

3.3 Historical Context of the Ngorongoro Conservation Area

3.3.1 Description of the NCA

The Ngorongoro Conservation Area (Figure 1) is situated in Ngorongoro District, within Arusha region in northern Tanzania. The area occupies some 59 percent of the district, covering 8,292 square kilometers (NCAA 1996, 2006). The area has great topographic and climatic variation. Its altitude ranges from 1,020m to 3,587m (NCAA 1996). The Ngorongoro District is administratively divided into three Divisions, namely Loliondo, Ngorongoro and Sale. The NCA is within the Ngorongoro Division. The whole district is dominated by tourism and conservation interests, containing the NCA itself, Loliondo and Sale Game Controlled Areas (GCAs), and the Lake Natron Ramsar site (Kipuri and Sørensen, 2008). The NCA is internationally renowned as a conservation area for its beauty, its spectacular wildlife populations and its important archaeological and paleontological remains (NCAA, 1996, 2006). The NCA is also outstanding for its pioneering joint land use policy which is dominated by conservation objectives but at the same time maintaining a large population of the Maasai pastoralists (ibid).

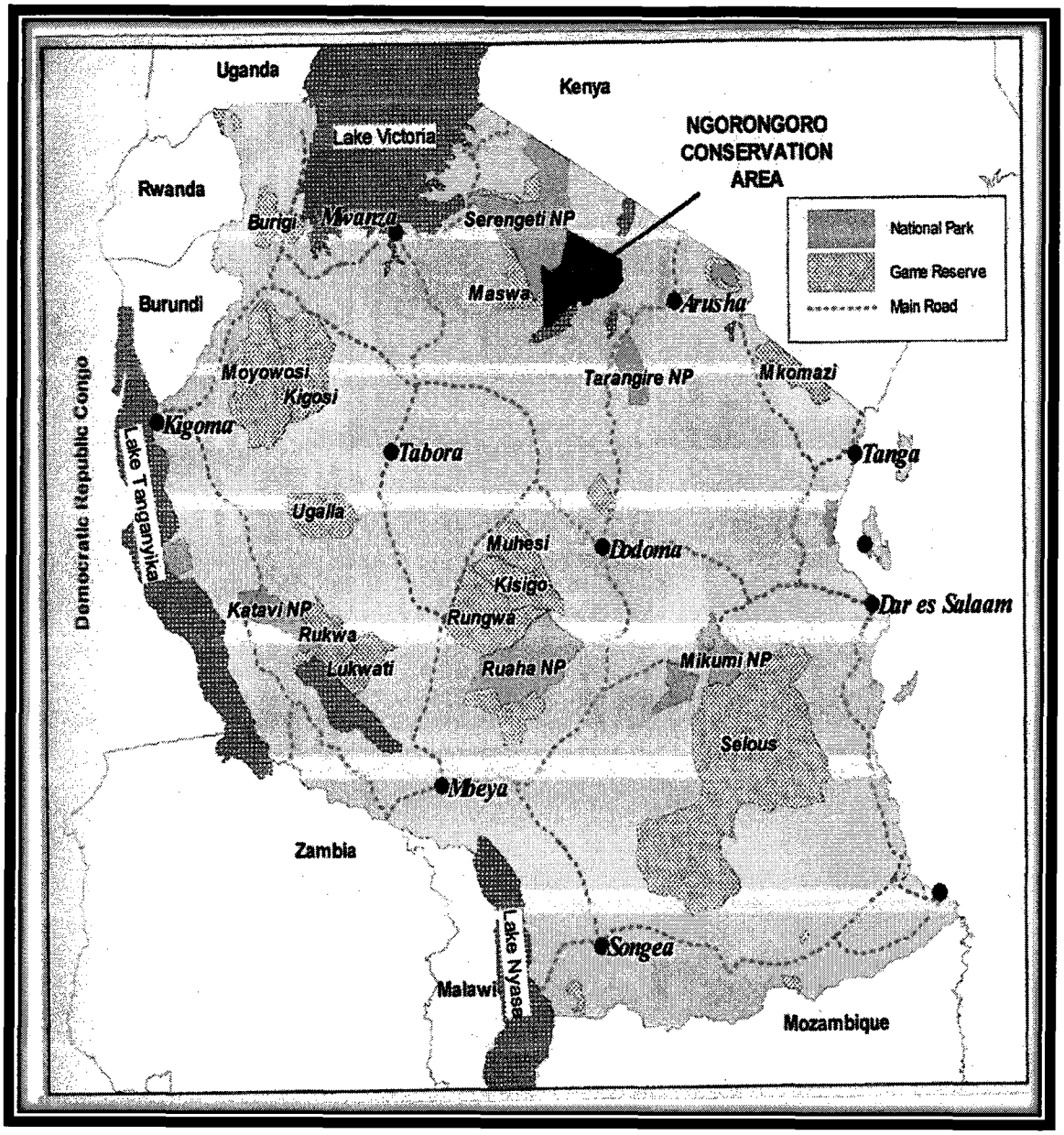

Figure 1. Location of the Ngorongoro Conservation Area in Tanzania (Source: NCAA, 2006:25).

As shown in figure 2, the NCA is bordered by Serengeti National Park on the northwest and Maswa Game Controlled Area to the southwest. Lake Eyas Escarpment and Lake Manyara National Park border NCA on the south. On the north, the NCA is

bordered with the Loliondo Game Controlled Area, while the Sale Plains and Lake Natron basin border the area on the northeast (NCAA, 1996, 2006).

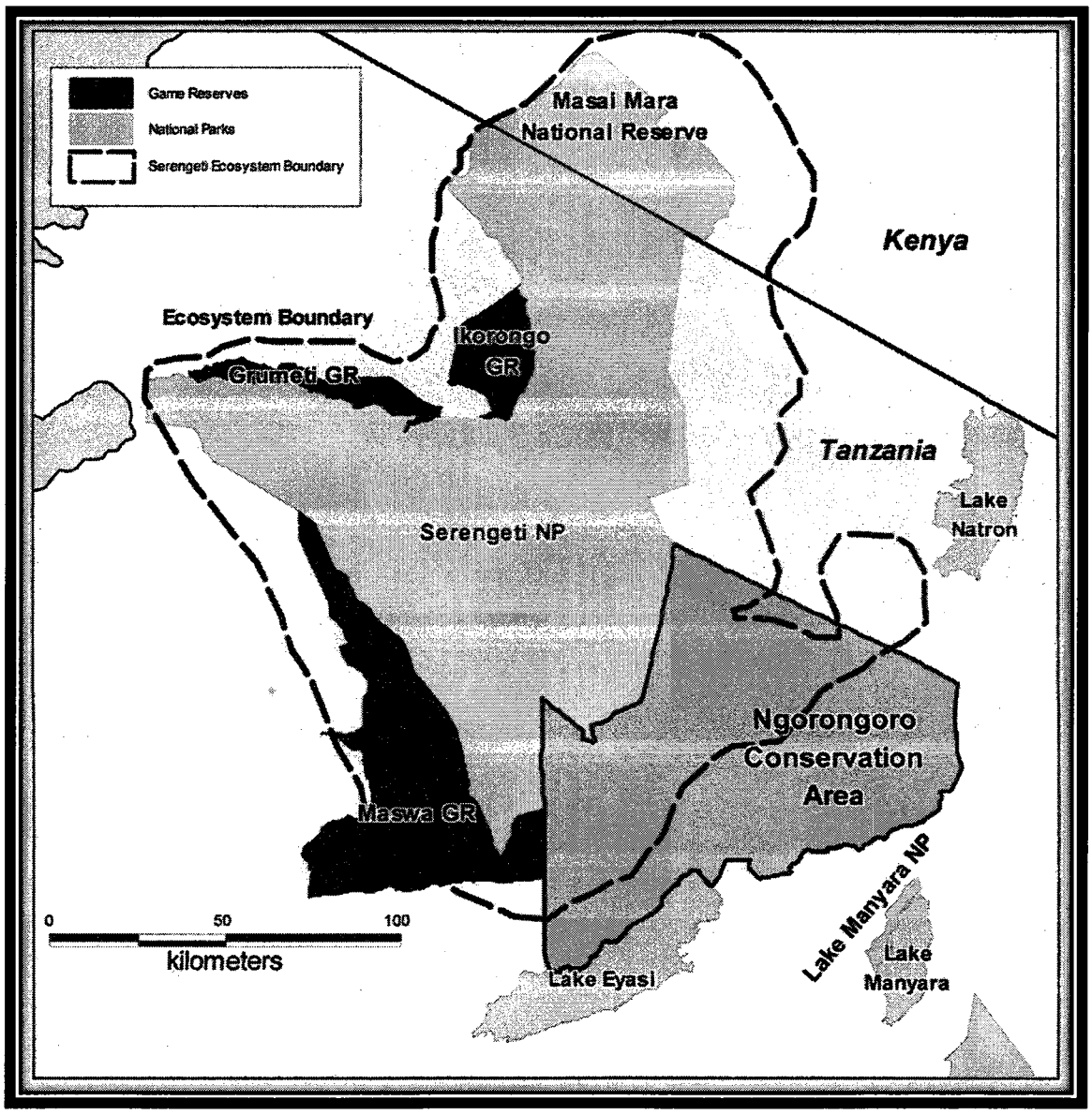

Figure 2. Ngorongoro Conservation Area and its surroundings (Source: NCAA, 2006:27).

Ngorongoro Division in which the NCA is located comprises of six wards, namely Kakesio, Endulen, Ngorongoro, Olbalbal, Nainokanoka and Nayobi (Figure 3). In

total, the area has sixteen villages registered under the Local Government (District Authority) Act.

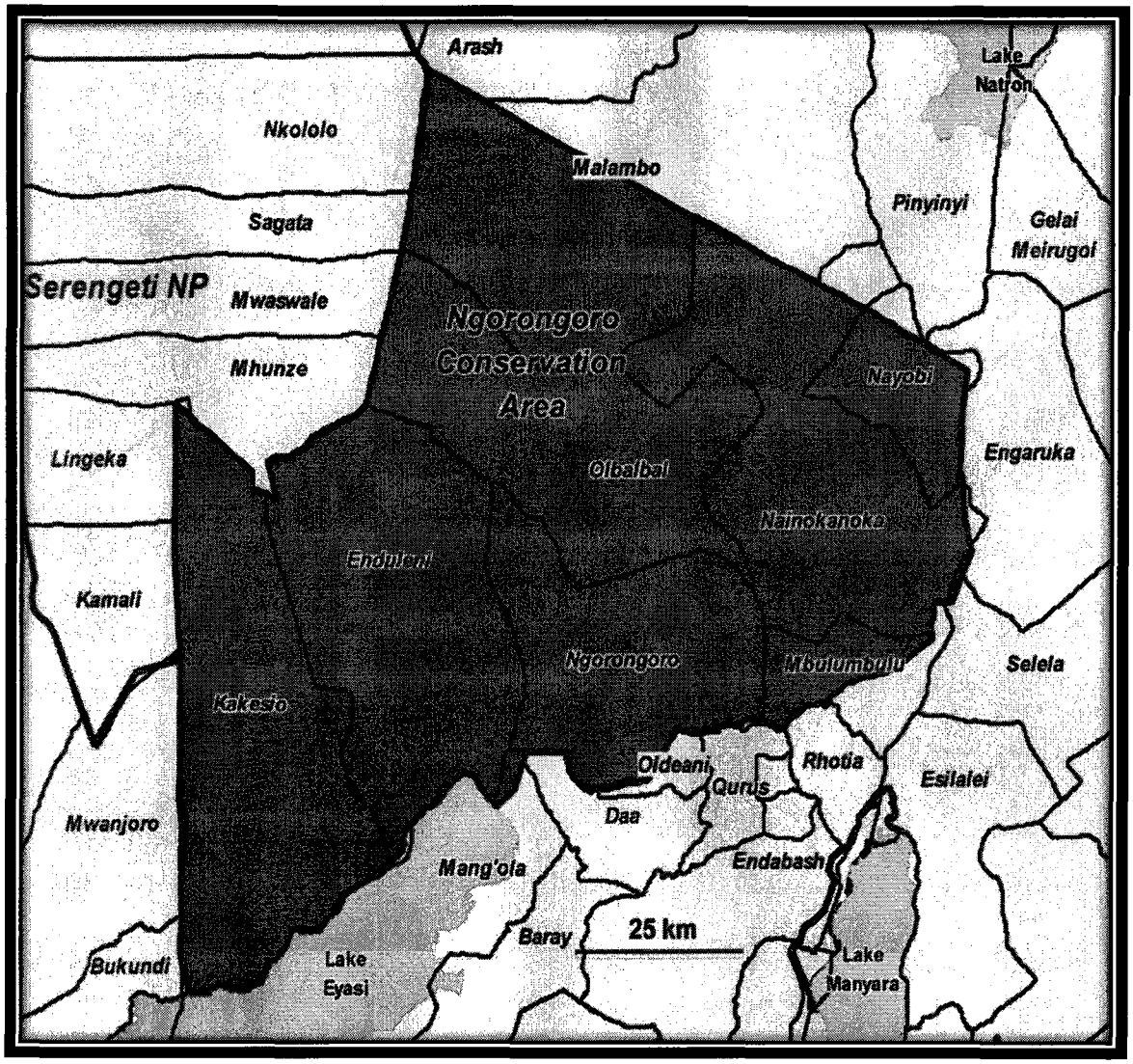

Figure 3. Internal Ward Boundaries for the NCA (Source: NCAA 2006:28).

The NCA was established in 1959 as a pioneering experiment of multiple land use, designed to promote the conservation of wildlife and other natural resources, tourism and to safeguard pastoralism interests of the Maasai (NCAA, 2006). It is regarded as a unique area in the whole of Africa, and for this "...it is therefore a management challenge for PAs managers" (NCAA, 1996:3). Due to its multiple land use status, the NCA was

proclaimed a World Cultural and Biological Heritage site in 1979 and was classified as a Biosphere Reserve under the UNESCO's Man and the Biosphere Programme in 1981 (NCAA, 2006).

3.3.2 The Legislative History of the NCA

The history of Ngorongoro as a PA dates back to 1922 and 1948 when Game Ordinances were promulgated to establish it as a Game Reserve and a National Park respectively (NCAA, 1996). Most of NCA was formerly part of the Serengeti National Park (formerly the game reserve) which was formed in 1951 under the provisions of the Game Ordinance which governed wildlife conservation during the colonial Tanganyika (now called Tanzania after the union with Zanzibar in 1964). Prior to the establishment of the NCA, several years were spent negotiating the terms and conditions for the Maasai to move out of Serengeti into the NCA. The negotiations to separate the NCA from the Serengeti Game Reserve begun in early 1950s. In 1951, boundaries of Serengeti National Park were revised and the park was reconstituted under the National Parks Ordinance (NCAA, 1996). Following these negotiations and consultations with both the Maasai and the colonial government machinery, the Tanganyika Government in Sessional Paper No. 1 of 1956 modified the borders of the Serengeti National Park to what they are today.

Although in the previous game ordinances the interests of the Maasai were preserved while in Serengeti, it later became apparent that their continued presence with their livestock within the Serengeti National Park was irreconcilable with the prevailing single use concept of the purpose of the park (NCAA, 1996). As a result, the final decision to remove the Maasai from Serengeti and excise the Ngorongoro Highlands was reached in 1956. Following this, the colonial government decided to establish an

independent, *multiple land use unit* in the same year under the Ministry of Lands, Forests and Wildlife (now the Ministry of Natural Resources and Tourism) in which the Maasai would be accommodated. The establishment of the multiple land use unit led to the promulgation of a new ordinance, *the Ngorongoro Conservation Area Ordinance No. 14 of 1959,* which came into effect on July 1, 1959. Through this Ordinance, the Ngorongoro area became a Conservation Area with a multiple land use status and was legalized by the Ngorongoro Conservation Ordinance CAP 413 of 1959 (NCAA, 1996, 2006).

With the creation of the NCA, the Maasai pastoralists were assured that their interests (including land rights) would be protected in the new multiple land use area (Galvin *et al.,* 2002; McCabe, 2002). At the same time, different compensation schemes in the new area were promised to the Maasai, particularly water development for range improvements, security, and health services (NCAA, 2006). Their agreements with the colonial government stated that compensation would be in two phases. Phase I would establish water sources (either by dam, bore hole or pipeline) in agreed locations. Phase II would establish veterinary centers in strategically agreed areas and veterinary drugs would also be supplied (Kipuri and Sørensen, 2008). This compensation was considered adequate by the Maasai leadership at the time as it assured that they would be able to maintain the health of their cattle, their primary economic asset and a focal point of their culture (ibid).

On the basis of these agreements and proposals, the Maasai living in Serengeti agreed to move to the newly established area, the NCA. As a result, a total of 8,292 square kilometers of Ngorongoro district was designated by the Ngorongoro Conservation Ordinance No. 14 (CAP 413 of 1959) as the Ngorongoro Conservation

Area (NCA). Upon its establishment, a multiple use philosophy was adopted, with principal objectives of conserving the environment and wildlife, developing and promoting tourism and safeguarding the interests of the Maasai pastoralists who formerly inhabited the whole of the Serengeti ecological zone.

Due to administrative challenges that led to poor performance of the Ngorongoro Conservation Unit, a more active body was later proposed to administer the NCA. The Parliament responded to this proposal in 1975 when it passed the Game Parks Laws (No. 14) of 1975 that elevated the status of NCA administrative body to an autonomous Parastatal Organization (NCAA, 1996, 2006). The primary responsibility for the administration and management of the area therefore was vested in the Ngorongoro Conservation Area Authority (the NCAA), giving it a legal mandate to maintain the multiple land use objectives for which the NCA was created. The NCAA retains its own Board of Directors which has the responsibility of controlling the management and the day-to-day functions of the conservation authority.

3.4 Natural Resources and Main Features of the NCA

The NCA is well endowed in terms of natural resources, and for this it has been categorized internationally as a unique protected area in the whole of Africa because of its varied resources and physical features (UNESCO/IUCN, 2007). Among the unique features of the NCA is the Ngorongoro Crater, the largest unflooded and unbroken caldera in the world (NCAA, 1996). The crater is 610 meters deep, and its floor covers an area of 304 square kilometers (NCAA 1996, 2006). It is internationally renowned for its rich wildlife and spectacular scenery (ibid). It supports high population densities of wildlife throughout the year (approximately 25,000) of large animals, largely ungulates;

which includes one of the remaining populations of black rhinoceros in the country alongside the highest density of mammalian predators in Africa (NCAA 2006; UNESCO/IUCN 2007).

The NCA also includes the Northern Highland Forest Reserve (NHFR), a vital water catchment area that provides water for the NCA and for the adjacent subsistence and commercial agricultural communities of Oldean and Karatu (NCAA, 2006). The forest reserve is also believed to be an important recharge area for springs supporting the groundwater forests in Lake Manyara National Park. The forest is rich in vegetation providing important habitat for wild animals including birds, rhinoceros, elephants and buffaloes. Though grazing is not allowed within the forest reserve, it does provide a refuge for pastoralists during critical droughts.

The NCA also contains two of the most important paleontological sites in the world; the Oldupai Gorge and the Laetoli Footprint Sites. A study by Homewood and Rodgers (1991) revealed that the unique archaeological and paleontological resources in the NCA are fundamental to our understanding of human evolution, and are recognized as such by the international community. It is believed that the earliest signs of mankind in the world are at Laetoli (within the NCA) where hominid footprints about 3.6 million years old are preserved on a volcanic rock (Homewood and Rodgers, 1991; NCAA, 1996). Further north, more advanced descendants of Laetoli's hominids were found buried in the layers of Oldupai gorge. Excavations, mainly by the archaeologists Louis and Mary Leakey yielded four different kinds of hominids, showing a gradual increase in the brain size and in the complexity of their stone tools (NCAA, 1996). Also, the first skull of *Zinjanthropus,* commonly known as 'Nutcracker Man' who lived about 1.75

million years ago, was found in this site (Homewood and Rodgers, 1991). The conservation area contains many other paleontological and archaeological sites and the potential for further discoveries is high (NCAA, 2006).

The NCA, however, is more than an area of biological and archaeological interests. It is also a home of the Maasai who are legally considered to be indigenous residents in the area. By 2007, it was reported that the area was inhabited by 64,842 Maasai pastoralists settled in 16 villages[12] with approximately 300,000 numbers of livestock (NCAA, 2007). The area has been a traditional homeland of the Maasai practicing their nomadic ways of life for nearly three centuries (NCAA, 2006). Also, there is enough evidence to suggest that pastoralism in one form or the other has existed in the area for more than two thousand years (Arhem, 1985; 1986; Homewood and Rodgers, 1991). The area also serves as a refuge for pastoralists from other places during times of droughts (NCAA, 2006). The NCA therefore plays a crucial role in supporting the pastoral land use system of Ngorongoro District (NCAA 1996, 2006).

3.5 Land Use Strategies in the NCA

Under the NCA Ordinance of 1959, the NCA is managed as a form of PA with a multiple land uses strategy. In its General Management Plan (GMP) of 1996, the NCAA stipulates that the purpose for which the NCA was created is "...to maintain a multiple land use system which perpetuates the historical balance of people and nature, conserves biodiversity and ecological integrity, protects water catchments, safeguards and promotes the rights of the NCA's indigenous residents (the Maasai), encourages responsible tourism, provides opportunities for interpretation, education, and research, and supports

[12] These villages are registered under the Local Government (District Authorities) Act No. 7 of 1982.

the values that led NCA to be accorded the status of being a World Heritage Site and an International Biosphere Reserve" (p.10). This advances the recognition that the multiple land use system of the NCA is regarded as one of the earliest to be established world-wide and is recognized around the world as a means of reconciling human development and natural resource conservation (NCAA, 1996, 2006).

This strategy of multiple land uses in conservation perspectives is a deviation from a traditional approach of regarding conservation as complete abstention of human interference (McCabe, 2002). For the NCA, this strategy stands for *'best use'* of the resources to achieve the principal objectives of the establishment of the NCA. Central to its multiple land use strategy, the NCA was established to allow and maintain the coexistence of pastoralists and wildlife in a natural traditional setting (NCAA, 2006). The multiple land use strategy of the NCA is admirably suited to this area because of its rich and varied natural resources that allow utilization with little competition if well planned (Kayera, 1988; Parkipuny, 1997). Based on these facts therefore, wildlife conservation, tourism, and pastoralism are the three land use strategies that were considered to be compatible in the area (NCAA 1996, 2006).

Wildlife conservation

This is one of the main land uses within the NCA. It is considered to be a dominant land use in the area which aims at ensuring that viable populations of both common and endangered wildlife resources are maintained in a sustainable manner within the NCA (ibid). The history of wildlife conservation in the area includes several attempts at what has often been called rational wildlife development of encouraging sustainable utilization of wildlife resources, as well as wildlife observation (Homewood

and Rodgers, 1991). According to the NCA Act (CAP 284 R.E. 2002), all forms of wildlife exploitation are prohibited in the conservation area in order to meet the NCAA's goal of maintaining and increasing the population of wild animals. Indeed, wildlife conservation goals of the NCA intend at making an important contribution to the diversity and conservation values of the NCA as a whole (ibid).

In this regard, the welfare of wildlife resources of the NCA continues to be the main focus of the management authority (the NCAA). As pointed out earlier, the NCA is home to a large wildlife population. Human activities such as cultivation, forests and honey harvesting are controlled to prevent their negative effects on wildlife population. Also, though subsistence hunting is very much a part of most African traditional cultures, this is not the case for the pastoral Maasai. They are an exception to this as they have a cultural distaste for game meat that amounts to a general prohibition except in times of natural calamities such as famine and droughts (Homewood and Rodgers, 1991; Parkipuny, 1997). In view of this therefore, much of the original purpose of wildlife conservation in the NCA has been to control poaching, increasing trophy and meat hunting by settlers and tourists (Homewood and Rodgers, 1991; McCabe, 2002).

Tourism

Tourism is another form of land use within the NCA. As pointed out earlier, the area has high diversity of wildlife species, scenery and archaeological values which form a set of tourism assets (Charnley, 2005). These features have made the area a major tourist attraction for both foreigners and local people. In that manner, development of tourism in the NCA is being planned on the basis of a reappraisal of the economics of tourism, of the respective roles of foreign and local tourism, and of their implications for

the long-term future of conservation (McCabe, 2002, 2003; Charnley, 2005). The NCA attracts by far the highest number of visitors in Tanzania, "...making the NCA an economic asset of considerable national significance" (Stocking *et al.,* 1996:171). The major form of tourism within the conservation area is game viewing as it is generally accepted to be compatible with conservation in the area (NCAA, 1996, 2006).

Pastoralism

Pastoralism is also recognized by the Ngorongoro Conservation Area Ordinance of 1959 as another form of land use in the NCA. It is undertaken by the Maasai communities. According to its General Management Plans, the NCAA promotes pastoralism as one of its ways to safeguard the interests of the Maasai and to enhance their socio-economic development (NCAA, 1996, 2006). Traditionally, the Maasai are nomadic cattle herders, believed to have lived in some parts of Ngorongoro from 1840s (McCabe, 2003). In its simplistic terms, pastoralism is regarded as a subsistence production system in which people make their living by tending herds of large domesticated animals. As such, pastoralism is considered to be the main source of livelihood needs among the pastoral Maasai (Parkipuny, 1997; DeLuca, 2002). They rely on their herds (e.g. cattle, goats, and sheep) for their subsistence needs. Historically, cattle have been the base of the Maasai livestock-based economy and food security (McCabe, 2002, 2003; Galvin *et al.* 2002). Their animals provide them with milk, blood and sometime meat, though they rarely slaughter or sell their herds (Leader-Williams *et al.* 1996). They occasionally bleed their animals to obtain animal protein and fat. The blood is normally mixed with fresh milk to make a protein rich drink (Parkipuny, 1997; Kipuri and Sørensen, 2008).

The Maasai also have strong symbolic values related to their herds. For them, herds are not just a source of protein for their dietary requirements; rather herds are regarded as symbols of wealth, power and status (Parkipuny, 1997). As such, those with more livestock are considered to be wealthier and powerful, and are given more respect within the Maasai community. Interestingly too, cultural beliefs among the Maasai prohibit them from obtaining diet requirements from wild animals. Based on their cultural beliefs and life ways, they are therefore not expected to cause any significant impact on wildlife resources within the NCA (Leader-Williams *et al.* 1996). There is enough evidence to suggest that, the cultural beliefs and socio-economic system of the Maasai have allowed them to coexist harmoniously with wildlife for many years (Homewood and Rodgers, 1991; Parkipuny, 1997; Kipuri and Sørensen, 2008).

Despite the fact that wildlife conservation, tourism and pastoralism were generally regarded to be compatible, today they are seen as incompatible. Although the stated objectives were to maintain the historic balance of people and nature, in practice this has not been possible. The three land use strategies of the NCA have been facing a threat of being in conflict with each other (Parkipuny, 1997; DeLuca, 2002). For example, wildlife conservation has for so long been in conflict with the traditional pastoral land use system of the Maasai due to wildlife and livestock competitions for resources such as water and pastures. This has made the workability of the multiple land use strategy to be questionable. The major concerns of many are about the danger of failure of the NCA's multiple land use strategy for which the area was created. This is what has necessitated this research to undertake a thorough examination of the laws (see section 3.6) that influences the management of the NCA so as to gain a deeper

understanding of the legal environment of the ongoing conflicts over land use priorities between the NCAA and the Maasai.

3.6 Laws Influencing the Management of the NCA

The conflicting land use strategies between the Maasai and the NCAA have called for greater attention of this research to look at the laws which are applicable in the NCA. The laws informed this research on how the NCA land is supposed to be used and owned by the key stakeholders of the area. There are several laws which play crucial roles in influencing the management of the NCA. They are discussed chronologically below:

i. The Ngorongoro Conservation Area Act

The Ngorongoro Conservation Area Act No. 14 of 1959 (CAP 284 R.E 2002) is the main legal instrument which guides the day-to-day operations of the NCA. According to its preamble, the NCA Act was legislated to control entry into and residence within the Ngorongoro Crater Highlands Area, to make provisions for conservation and development of natural resources therein and for related matters. Under this Act, apart from the three main land uses that were proposed as outlined in section 6 (a), (b) and (c), the NCA authority was established to perform many other functions as outlined in section 6 (d) through (h). One of the controversial provisions of the Act is the ban of cultivation in the area following the amendment made to it in 1975.

ii. The Wildlife Conservation Act

The Wildlife Conservation Act No. 12 of 1974 (CAP 283 R.E 2002) according to its preamble was legislated "...to make provisions for the protection,

conservation, development, regulation and control of flora and fauna products and for matters incidental thereto and connected therewith" (page 5 of the Act). The Act has the power of law in all protected areas in Tanzania, including the NCA. In the NCA, the Act is applicable in conjunction with the Ngorongoro Conservation Area Act. In particular, Part III of the Act outlines a number of provisions which restricts any activity that can have negative impacts on the well-being of natural resources in PAs. In general, the Act obliges people to abide with its provisions. Under normal circumstances therefore, all land uses in Tanzania's protected areas are regulated by this Act and permits are required for any intended use.

iii. The Local Government (District Authorities) Act

As pointed out earlier, NCA forms part of Ngorongoro District. It follows that, administratively the NCA falls under jurisdiction of Ngorongoro District in accordance with Local Government (District Authorities) Act No. 7 of 1982 (CAP 287 R.E 2002). Under this Act, section 30 (1) outlines a provision to the effect that area of a district council shall be divided into wards consisting of such number of villages as may be specified in an appropriate manner. Added to this, section 22 of the Act provides that the villages shall be registered accordingly. In accordance to this provision, Section 7 of the Village Land Act also necessitates that, "village land shall consist of land within the boundaries of registered villages". The important aspect to be examined here is the status of the 16 villages in the NCA as far as the land rights of its inhabitants are concerned and the extent to which their traditional land uses can be compromised with goals and the task of conserving natural resources in the NCA.

iv. The Land Act and the Village Land Act

The principal pieces of legislation governing land tenure in the country are the Land Act No. 4 of 1999 (CAP 113) and the Village Land Act No. 5 of 1999 (CAP 114). These two Acts have a direct role to play in rural land use planning (NCAA, 2006). Under the two Acts, there are two types of land tenure; the granted and deemed rights of occupancy. The deemed rights under section 2 of the Village Land Act includes the customary right of occupancy. This is to the effect that in the NCA, land can be held not only under granted right of occupancy but also under customary right of occupancy. On the basis of the customary right of occupancy as provided under section 14 (7) of the Village Land Act, a person (a native of NCA) can hold land under customary right of occupancy, but subject to permission or license from the NCAA. Section 14 (7) of the Village Land Act reads as here under:

> "Persons who traditionally and in accordance with customary law occupied and used land in any National Park or in the land under the jurisdiction of the Ngorongoro Conservation Area Authority but who, since the enactment of National Parks Ordinance and the Ngorongoro Conservation Area Ordinance may occupy that land only with the permission of or under a license from the Director of the National Parks or the Ngorongoro Conservation Area Authority, shall be deemed to occupy that land under a customary right of occupancy"

This provision reflects that the NCA Maasai are supposed to have all rights to land. However, the most important questions to be examined here is how the conservation authority (NCAA) has exercised its power to control land use in the area, and how the native Maasai of Ngorongoro are enjoying their land rights under that control of the NCAA.

v. The Forest Act

The Forest Act No. 14 of 2002 not only replaces the 1957 Forest Ordinance, but also the Export of Timber Ordinance (CAP 288) and Grass Fires Ordinance (CAP 135). According to its preamble, the Act was legislated to provide for the management of forests, to repeal certain laws relating to forests and for related matters. In particular, the Act is applicable in the NCA in conjunction with the NCA Act. Its provisions are intended at maintaining the ecosystems' stability through conservation of forest biodiversity, water catchments and soil fertility as outlined on section 3 (c). Also, sovereignty over biological resources, their derivative products and intangible components are also affirmed within the Act. For example, section 26 of the Act outlines activities which are prohibited within the forest reserves without permission in accordance with the provisions of the Act. It is under this Act that the NCAA prohibits human activities to be undertaken in its Northern Highland Forest Reserve.

vi. The Tourism Act

The Tourism Act No. 29 of 2008 has been legislated to outline provisions to deal with institutional framework, administration, regulations, registration and licensing of tourism facilities and activities, and for related matters. The Act is new in the country. It strives to promote the National Tourism Policy of 1999 which recognizes tourism as one among the sectors with great economic growth potential. This recognition of the importance of tourism as an economic activity and as a development option in Tanzania is the driving force for both the Act and the Tourism policy to enforcing wildlife conservation due to the fact that Tanzania's tourism is largely wildlife-based. This

statement is in favor of conservation of wildlife in the country, and in the Ngorongoro Conservation Area in particular.

3.7 Conflicting Land Use and Management Strategies in the NCA

The combination of land use strategies under the name of multiple land uses makes the NCA unique in the whole of Africa, but also has made the area contentious (Stocking *et al.* 1996). This becomes clear when one considers the contradictions involved in attaining its multiple land use strategy. In particular, the contradictions are on the imbalance between the different land uses of the conservation area. These contradictions have been the topic of fair amount of research as detailed elsewhere (Arhem, 1985, 1986; Homewood and Rodgers, 1991; McCabe *et al.* 1992, 1997, 2002, 2003; Parkipuny, 1997; Shivji and Kapinga, 1998; Galvin *et al.* 2002; DeLuca, 2002). Under the NCA Act of 1959, the conservation area was established to function as a multiple land use area, with conservation, tourism and pastoralism of the Maasai being its major land uses. Over time, more attention has been given on conservation and tourism as very little has been done to safeguard pastoralism and other interests of the Maasai. Over concentration on the two land uses is what has culminated in the conflicting relations between the NCAA and the native Maasai over land use priorities.

Despite the recognition of pastoralism as a sustainable land use system which can cause no threat to conservation efforts (NCAA, 1996), the NCAA has frequently being discouraging this form of land use with the stated intention of developing tourism and safeguarding the goals of conservation in the NCA (Kipuri and Sørensen, 2008). Repeatedly, this has been done by setting restrictions on grazing lands and by excluding the Maasai from prime grazing areas in various parts of NCA. At the same time the

Maasai are required to get permits to take their livestock down the crater to access mineral salts (ibid). They are also not allowed to manage their pastures as they did in the past (Olenasha *et al.* 2001). It is debatable whether village by-laws or other village-based regulations on land use are binding within the legal set-up of NCA, and whether customary arrangements as outlined in the Village Land Act are recognized.

It has being argued that the NCAA tendency of favoring conservation and tourism at the expense of Maasai interests has undermined their livelihood strategies, causing a downfall of their pastoral economy (Galvin, *et al.* 2002; McCabe, 2003; Charnley, 2005). This has severely diminished their well-being since they have been unable to meet the necessities of their lives as they did in the past (Parkipuny, 1997; Kipuri and Sørensen, 2008). The economic hardships facing the Maasai are largely attributable to constraints imposed on their land use practices by the NCAA's conservation policies. Surprisingly too, these hardships "...are not adequately counter-balanced by assistance from the NCAA to meet pastoral development objectives; nor are they mitigated by tourism benefits" (Charnley, 2005:80). This situation has to a larger extent intensified the conflicts over land use in the NCA.

The ongoing conflicts in the NCA are therefore attributable to the NCAA's lack of interest and commitment to the developmental needs of the Maasai. This situation contravenes the objectives for which the conservation area was created. According to its Ordinance of 1959, the NCAA was expected to be safeguarding and promoting the interests of the Maasai. This was made clear under section 6 (c) of the NCA Act (CAP 284 R.E 2002) which states that:

> "...the function of the authority (the NCAA) shall be to safeguard and promote the interests of Maasai citizens of the United Republic engaged in cattle ranching and dairy industry within the conservation area".

Under the above provision, the NCAA was supposed to be supporting the pastoral economy of the Maasai (which is central to their livelihoods); instead, it has increasingly been trying to discourage this form of land use in the area with strong emphasis being placed on the other two land uses. The NCAA's lack of interests to developmental needs of the Maasai becomes so clear when one considers the fact that even the compensation schemes that were promised to them during the negotiation processes for the creation of the area were never fully realized (Olenasha *et al.* 2001). Since then, the standard of living of the pastoral Maasai has continued to decline compared with when they lived in Serengeti (Parkipuny, 1997; Olenasha *et al.* 2001).

Conflicts over land use have tended to be more severe in recent years as the Maasai have became more numerous and sedentary, turning to cultivation to supplement their previously cattle-based livelihoods (Parkipuny, 1997; Potkanski, 1999; Galvin *et al.* 2002; McCabe, 2002, 2003). With the reduced access to grazing lands in the NCA, the Maasai have increasingly found it difficult to possess and graze as large a number of herds as they did in the past (McCabe 2003). Under such circumstances, they have been regarding themselves as victims of conservation and tourism activities because the government and the NCAA in particular have paid less attention to their needs (Arhem, 1986; Kayera, 1988; DeLuca, 2002). Because of this, the Maasai are growing poorer as their population has exploded beyond the ability of their cattle to support them without subsistence cultivation (Galvin *et al.* 2002; McCabe, 2002, 2003).

However, cultivation is not legally allowed in the NCA. It was banned in 1975 by the Act No. 14 of 1975 which amended the Ngorongoro Conservation Area Act (CAP

284) under section 25 to the effect that "...no person shall use any parcel of land in the Conservation Area for cultivation". Though in 1992 the ban on cultivation was temporarily lifted by the political statement of the Prime Minister as an emergency measure to improve food security among the Maasai, its illegality remains (Shivji and Kapinga, 1998; DeLuca, 2002). This is because the ban was lifted without amendment of the law that banned it; as such, the continuing use of land for cultivation in the NCA has been a contentious issue for a considerable amount of time. It appears therefore, that conservation in the NCA has not been easy to integrate with human development activities throughout its existence (Parkipuny, 1997; DeLuca, 2002; Olenasha, 2006). This advances the recognition that the conflicting land use strategies in the NCA are centered within the conflict between conservation and the developmental needs of the Maasai.

Equally important, the question of how the NCA is managed is considered one of the main issues that have intensified the conflicting relations between the Maasai and the NCAA. Under the NCA management charter, the NCAA holds jurisdiction over the territory of the NCA, and over indigenous residents, functioning in some ways as a local government (Shivji and Kapinga, 1998; NCAA, 2006). Under this charter, all regulatory powers in management and administration of land within NCA are vested in the NCA authority (ibid). It appears that the NCAA has retained the 'Yellowstone' model to conservation in managing the conservation area. This becomes clear when considering the fact that the NCAA has set aside the Maasai in all management aspects of the area. It is apparent that the Maasai are not consulted when it comes to decision-making about what and how to conserve the natural resources in the NCA. Though they see themselves

as having an important role to play in planning, policy making and in the management of the area, they currently have no active participation (McCabe, 2002; Galvin *et al.* 2002; Charnley, 2005).

The NCAA tendency to hold all statutory powers in managing and administering lands has disregarded the history which shows how the Maasai conserved the area using their traditional methods long before it was given the status of being a protected area (Arhem, 1985, 1986; Homewood and Rodgers, 1991). Before conventional approaches of the Yellowstone model were introduced in the NCA, the Maasai had their own conservation systems in place based on their indigenous knowledge (Olenasha *et al.* 2001). Their management strategies "...were implemented in different ways, ranging from taboos to actual practices in their own pastoral ways of life" (Olenasha *et al.* 2001:142). As they regarded nature as part of their lives, the Maasai used their indigenous conservation strategies as mechanisms to ensure the long-term sustainability of nature (Arhem, 1985; Homewood and Rodgers, 1991; Olenasha *et al.* 2001; Olenasha, 2006).

For example, in their study, Olenasha *et al.* (2001) when interviewing a Maasai elder in one of the villages within the NCA on this matter had the following to say:

> "...we conserve nature because we live in it, because it is our life, it is the life of our cattle. The conservation people [referring to NCAA] do it because it gives them employment, and because they get money from the white men [tourists]. For them, if the white man does not bring money, it is the end of the story. For us, even if the white man does not bring money we will still preserve the environment. We did it before the white men came. We do because it is our lives; it is the life of our ancestors and our unborn children" (Olenasha *et al*, 2001:142).

This quotation reflects how intrinsic motive were the Maasai strategies to management of natural resources in the area. In fact, their strategies were intended to ensure sustainability of both nature and their livelihood strategies for them and for their future

generations. As they helped to preserve the abundance of resources in the area, the indigenous conservation strategies of the Maasai were expected to be integrated with the conventional approaches of the NCAA to further ensure sustainable management of the conservation area. Contrary to this expectation, the NCAA still ignored the importance of conservation values and beliefs of the Maasai which played significant roles in regulating the use of natural resources in the area.

Clearly, lack of Maasai participation in decision-making within the NCA has for so long been a contentious issue and it has exacerbated more conflicts in the area since its inception (Shivji and Kapinga, 1998). According to Charnley (2005), "...the situation persisted throughout 1970s and 1980s, with the NCA acting in a way that was characterized by top-down decision-making" (p.84). By the 1990s, the question of Maasai participation in managing the area received increasing recognition. This was to a larger extent due to pressures from the Maasai themselves and their supporters who have claimed for so long that the conservation policies of the conservation authority have detrimentally affected their land rights and their participation in the management of the area (Shivji and Kapinga, 1998; Galvin *et al.* 2002). Another pressure came "...from non-governmental organizations and donor agencies whose assistance in part hinged on a more participatory approach to providing development assistance" (Charnley, 2005:84) in the conservation area.

The outcome of these pressures was the creation of the Ngorongoro Pastoralist Council in 1994 under the Ngorongoro Conservation Area Ordinance No. 14 of 1959 (CAP 413). According to its constitution and the provisions of the Ordinance that created it, the Pastoralist Council consists of 45 members, including six Ward Council Chairmen,

sixteen Village Council Chairmen, two non-Maasai representatives (Tatoga and Hadzabe), six traditional leaders, six youths, and six women alongside the NCAA Chief Conservator, the Ngorongoro Member of Parliament and the Ngorongoro District Council Chairman.

The Pastoralist Council was created to provide for Maasai participation in the management of the conservation area. In particular, it was created to serve as a channel through which the Maasai concerns could be brought to the attention of the NCAA Board of Directors (Shivji and Kapinga, 1998; McCabe, 2002). However, this Council has been playing an advisory role to the NCAA Board of Directors as it has no power to influence in NCAA's decision making bodies. Following this, and as Charnley (2005:84) has pointed out, "...many Maasai feel that the Council does not adequately represent their interests, does not promote Maasai participation in decision-making, and does not advocate for Maasai interests and rights". This quotation highlights the reality that the presence of the Pastoralist Council does not qualify the NCAA to have provided for effective participation of the Maasai in the management process of the area as the main powers of decision-making and exercising policy continue to be vested in the Board of Directors.

With this view, it appears that the NCAA has not been that effective to bring the Maasai into its decision-making process. This is reflected on the fact that the NCAA has been unable to provide the Maasai with real and tangible vested interests in conservation and management of the area they consider to be theirs (McCabe, 2002). Though the creation of the Council seems to be a move in the right direction of the NCAA, however, a lot has to be done to improve its effectiveness. The council is actually given decisive

influence over marginal issues only such as the management of cultural bomas[13] which are supposed to display the Maasai culture to the tourists (Lane, 1996). The Maasai have tried to respond to this challenge by forming various community-based organizations (CBOs) to help them in the struggles for their interests such as having an active role to play in all aspects of managing the NCA and in seeking for their lost land rights.

By 1998, it was reported that two legal CBOs were existing in the NCA, the Ngorongoro Pastoralist Development Organization (NGOPADEO) and the Ngorongoro Crater Pastoralist Survival Trust (Shivji and Kapinga, 1998). These grassroots organizations are made up of community leaders in the Ngorongoro Conservation Area, formed to establish strong linkages between the pastoralists and the Conservation Authority (ibid). In particular, these local organizations are intended to assist the Maasai in raising their voices to the NCAA and to the government in general. For example, they have made many claims to the Tanzanian government requesting the General Management Plans of the NCAA to also address their concerns (McCabe, 2002). Though these organizations are aimed at reversing the decades of hostile relations between the Maasai and the NCAA, the Conservation Authority has not yet given the Maasai with what they really need and want. They want to be actively involved in planning and decision-making processes and in managing the NCA. They also want to regain their access to land and other resources that were lost when their former lands were given the protectionist status.

Today, the Maasai priorities for their livelihoods remain to be food security, grazing lands, health services and infrastructure such as a better water supply, housing, and schools. The NCAA has been providing some of these needs as mechanisms to lessen

[13] These are places within the NCA where the Maasai interact with tourists.

the extent of conflicts between them and the Maasai (Odhiambo, 2003; Kipuri and Sørensen, 2008). For example, the NCAA has in recent years formed *'ERETO-Ngorongoro Pastoralist Project'* in partnership with DANIDA as a response to growing concern about the unprecedented and rising levels of poverty among the Maasai in the NCA (Kipuri and Sørensen, 2008). In particular, ERETO has been involved in supporting the Maasai by providing them with free cattle to restock their livestock and to improve their livelihood strategies (Odhiambo, 2003). This however has been seen as the NCAA strategy to lessen the Maasai's claims for their land rights (DeLuca, 2002). Still, there is a lack of a clear management policy and commitment to human development on the same levels as it is on the conservation of wildlife and other resources in the area (DeLuca, 2002; Charnley, 2005); as a result, conflicting interests over land use and management strategies have been common features within the NCA.

Chapter Four
The Research Methodological Framework

4.1 The Methodological Approach

This research lends itself to a qualitative approach, a collection of methodologies that cuts across disciplines and subject matters (Smith, 2001; Denzin and Lincoln, 2003). A qualitative approach to research, sometimes called "an interpretive approach", (Robinson, 1998:408) is based on a holistic world view (Myers, 2000). That is to say that, "...the natural order of reality is seen, conceived of and understood in different ways by different groups and individuals" (Robinson, 1998:408). Qualitative research involves perceptually putting pieces together to make wholes, with an overall goal of understanding a social or human problem from multiple perspectives (Myers, 2000). Qualitative approaches focus upon people's opinions, representations, perceptions and constructions of what is occurring in their places and the researcher seeks to establish the meaning of a phenomenon from the views of the participants (Dwyer and Limb, 2001; Smith, 2001; Winchester, 2005).

Qualitative approaches have increasingly been used by geographers to explore some of the complexities of our everyday life, gaining deeper insights into the processes which continue to shape our social worlds (Dwyer and Limb, 2001; Hoggart *et al,* 2002; Winchester, 2005). Through qualitative research processes, meaning is produced from individuals or groups having different perceptions about the way they view things (Dwyer and Limb, 2001). Therefore, in this research, views were sought from the Maasai themselves (i.e. community members, traditional and village leaders, and the officials of a Maasai community-based organization (CBO) and the Pastoralist Council), officials

from the NCAA, the Wildlife Division, Ngorongoro Primary Court, as well as the Ngorongoro Division. For the purpose of this research, three villages (see figure 4) were selected to be studied, especially to obtaining information from the members of the Maasai communities.

Dwyer and Limb (2001) suggest that the emphasis when using qualitative methodologies is "...to understand lived experiences and to reflect on and interpret the understandings and shared meanings of people's everyday social worlds and realities" (p. 6). Central to qualitative approaches is the belief that people often turn meanings of their social worlds into knowledge, and that their valued experiences are situated within their historical and social contexts (Tesch, 1990). As Winchester (2000) puts it, "...qualitative approaches are used to elucidate human environments and human experiences within a variety of conceptual frameworks" (p. 4). Using this approach, this research embraced the conviction that realities cannot be studied independently from their contexts, and affirmed the position that qualitative methodology is legitimate and valuable, possessing distinctive characteristics.

Reliable research builds from a coherent question, through a congruent methodology to develop an understanding of a situation. In this research I set out to collect in-depth information about perceptions on the conflicting land use and management strategies which are rather difficult to quantify and "...qualitative methods are best used for problems requiring depth of insights and understanding, especially when dealing with explanatory concepts' (Robinson, 1998:409). Qualitative methodology thus offers a gateway to exploring the processes shaping our social world while also allowing the researcher to engage with the lives and experiences of others through interviews,

group discussions or participant observation (Dwyer and Limb, 2001; Smith, 2001). Overall, multiple qualitative methods, including interviews, focus groups and document analysis were used in this project and description of the research process follows.

4.2 Description of the Research Process

The use of a qualitative methodological approach formed an important strategy of this research. This research commenced on July 1, 2008 and was carried out in three phases.

First phase (3 weeks)

This phase was dedicated to a preliminary visit to the Ngorongoro Conservation Area in July 2008. The aim of this visit was to undertake preparatory work and familiarize myself with a number of issues that would require critical attention during the data collection process. While in Ngorongoro, I first visited the NCAA's offices to introduce myself and obtain permission to undertake the study. Having obtained the permission, I established contacts with the Acting Chief Conservator of the NCA through a formal discussion on my research topic and the study objectives. He then offered the names and departments of NCAA managers who could provide necessary information that will address my research objectives. He then assigned[14] them to participate in the study. Once this was done, I had to establish contacts and set up meetings with these managers in preparations for the actual data collection process.

[14] The NCAA as many other government agencies in Tanzania is very careful in giving out information. In maintaining the rules of professional ethics, the NCAA necessitates its managers to keep confidential all information regarding its operational activities, unless asked to do so by the Chief Conservator, who is considered to be the spokesperson of the Conservation Authority.

I also visited the Ngorongoro Division office and the Ngorongoro Primary Court to establish contacts with their officials. In my visits to these offices, I was able to arrange meetings with the Secretary of the Ngorongoro Division and the Magistrate of the primary court. In this phase, I also had a chance to establish contacts with officials of the Ngorongoro Pastoralist Council and a Maasai community-based organization (NGOPADEO). Through informal discussions with these officials related to my research topic and objectives, I was able to set up interviews with them.

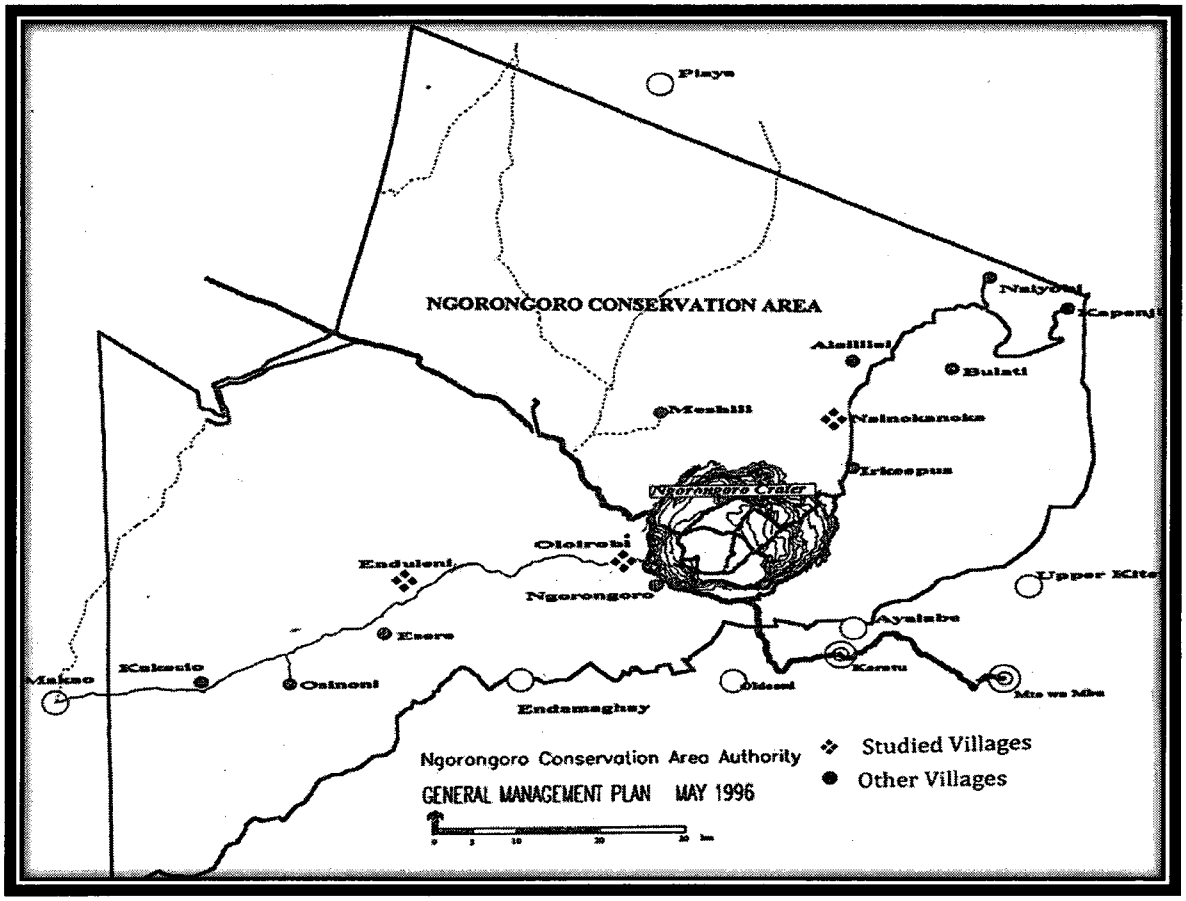

Figure 4. The studied villages in the Ngorongoro Conservation Area (Source: NCAA, 1996:6).

During my stay in the NCA at this time, I also worked very closely with the Secretary of the Ngorongoro Pastoralist Council to select and hire a research assistant

who was well-respected and well-positioned within the Maasai community. The contractual negotiations with the research assistant included the discussion of the research objectives, methods to be used and the ethical issues that were to be considered throughout the study. Through my research assistant, I selected Nainokanoka, Endulen and Oloirobi villages (Figure 4) to be studied and undertook preliminary visits to them.

The table below summarizes important information about the three villages. These villages differ slightly in terms of population, with Nainokanoka being the most populated one. Overall, the three villages share the same history as they were all created under the government villagilization policy of 1970s. As in other villages within NCA, people in these villages also share similar living conditions. They are all looking for alternative livelihoods rather than relying solely on their cattle (Parkipuny, 1997; DeLuca, 2002; Runyoro, 2006).

Village	**Nainokanoka**	**Endulen**	**Oloirobi**
Location in NCA	Nainokanoka Ward	Endulen Ward	Ngorongoro Ward
Population	4,396	3,872	3,019
Main functions of the villagers	Pastoralism, small-scale cultivation, and honey harvesting	Pastoralism and small-scale cultivation	Pastoralism, small-scale cultivation, and operating cultural bomas

Table 2. Summary of the Studied Villages in the NCA (adapted from the NCAA General Management Plan of 2006-2016 and the NCAA report on human and livestock census of September, 2007).

The criteria for this selection included my ability to access them (both in terms of location and acceptance of me and my research), time and money available to conduct site visits, and my personal security and that of my research assistant[15]. Accessibility was

[15] Safety and security were considered the most important factors when selecting the villages. As a result of the NCA being a home to a number of wild animals, including many that are dangerous (such as lions, leopards, elephants, and buffaloes), I had to consider choosing the villages where there could be less risks of being attacked by wild animals.

important due to limited time I had to complete the study. Due to the remoteness of some of the villages within the NCA, I had to consider selecting villages that could easily be reached in a reasonable amount of time. The question of limited funds was another consideration when selecting the villages to be studied. With this limitation I was unable to rent a car as I had planned; instead I had to rely on rides from business men who make infrequent trips with their private cars to some of the villages (mostly to the ones I picked) within the area.

Overall, these selection criteria might have influenced the findings for this research by producing partial results due to unintentional selection bias. While undertaking initial visits to the villages, I talked to the village council, traditional leaders and Maasai elders about my research objectives and thereby created an enabling environment for the Maasai community members that clarified expectations and benefits of participation. At this stage, research participants from the Maasai community were also identified.

Second phase (six weeks)

This phase was dedicated to data collection, and took place from August to mid September of 2008. The first week was dedicated to open-ended interviews with the NCA managers, while in the second week I interviewed the Secretary of the Ngorongoro Division, the Magistrate of the primary court, two officials of the Pastoralist Council (Manager and the Secretary) and the coordinator of NGOPADEO. Weeks three through six of this phase were dedicated to interviews and focus group discussions in the three Maasai villages. Overall, at the beginning of each interview and focus group discussions,

all research participants were invited to participate, and if they were willing to do so, were assured that their responses would be treated in the strictest confidence.

Third phase (2 weeks)

In the last two weeks of September, 2008 I travelled to Dar es Salaam to collect information from the Wildlife Division[16] of the Ministry of Natural Resources and Tourism of Tanzania. I conducted a formal open-ended interview with the Research and Training Officer of the Wildlife Division on the role of the Ministry as the department responsible for overseeing the management of wildlife areas in Tanzania. The focus in this discussion was very much on the impact of conservation policies on the livelihood strategies of local people, who largely depend on natural resources to sustain their lives. Prior to returning to Ottawa, I spent a week in Dar es Salaam undertaking some preliminary transcription and organization of the data I collected.

4.3 Methods Used

To carry out the research, semi-structured interviews, focus group discussions, and document analysis were the methods used. The rationale for selecting the interview and focus groups was based on the need to gain a deeper understanding of the extent to which different land use priorities are in conflict from the perspectives of the Maasai and of the Conservation Authority. These methods were also considered to be the most reliable and accessible to collect the information sought given the nature of the study, which did not require a large number of samples and quantification. In addition to these

[16] The Wildlife Division is one of the major Departments of the Ministry of Natural Resources and Tourism (MNRT) of Tanzania. It is responsible for overseeing the conservation of representative habitats and wild animals, which constitute the naturally occurring biodiversity of Tanzania (Wildlife Conservation Act, 1974).

tools, the document analysis method was also used in this research to complement the interviews and the focus groups. The table below summarizes the application of these methods by linking the methods to the research objectives.

RESEARCH OBJECTIVES	RESEARCH METHODS		
	Semi-structured interviews	Focus group discussions[17]	Document analysis
1.Assess the main issues surrounding the conflicting land use and management strategies in the NCA	Addressed the questions on the main issues surrounding the conflicts in the NCA from varying stakeholders including the NCAA and the Maasai (see Annex 3).	Addressed the questions on issues surrounding the conflicts in the NCA from the perspectives of the Maasai (see Annex 4).	Documents reviewed were the NCAA GMPs of 1996 and 2006-2016, the Wildlife and Tourism Policies, a publication on Maasai Rights in Ngorongoro, the Constitution of the Pastoralist Council, and the laws that influences the management of the NCA.[18]
2.Examine the socio-economic problems facing the Maasai and the main challenges facing the NCAA in view of the existing conflicts in the NCA	Addressed the questions on the livelihoods concerns of the Maasai and the challenges facing the NCAA (see Annex 3)	Addressed the questions on the livelihoods concerns of the Maasai (see Annex 4)	Documents reviewed were: The two General Management Plans of the NCAA and a publication on Maasai Rights in Ngorongoro.
3. Explore the main claims of the NCAA and the Maasai over the conflicts in the NCA	Addressed the questions on the main claims from both groups with respect to the conflicts in the NCA (see Annex 3)	Addressed the main claims voiced by the Maasai in view of the ongoing conflicts in the area (see Annex 4)	Documents reviewed were the GMP of the NCAA (2006-2016) and a publication on Maasai Rights in Ngorongoro
4.Examine the possible solutions to resolve the conflicts in the NCA	Addressed questions about the opportunities for resolving the conflicts in the NCA (see Annex 3)	Addressed the same questions from the Maasai point of view (see Annex 4)	The Wildlife and Tourism Policies[19] of Tanzania were relevant documents for this objective.

Table 3. Application of the Research Methods

[17] Questions addressed with this method were those required views to be given by the Maasai themselves.
[18] See the list of statutes on page 'x' in the table of contents.
[19] These policies advocate sustainable use, management, and development of wildlife resources in Tanzania (MNRT, 1998, 1999).

Field notes were taken during the interviews and focus groups to record the information provided. While taking the notes, a careful consideration was made to ensure that the only information written would be details which addressed my research objectives. I also took some photographs and obtained oral consent from the participants to use them in any way that would be related to this research. Details on how the selected research methods were used are outlined below.

4.3.1 Semi-structured Interviews

Semi-structured interviews were the main tools used to obtain specific and in-depth individual reactions of the research participants about the research themes covered in this study. A checklist of prepared open-ended questions (see Annex 3) was used to guide the interview, and thereby allowing the interviews to explore land use conflicts in considerable depth. The first group of people interviewed was made up of NCAA managers, including representatives to the departments of conservation services, community development and extension services, ecological monitoring as well as tourism services. During their interview sessions, a series of open-ended questions (see Annex 3) was used to obtain information on how they viewed the conflicting nature of land use and management strategies in the area. In particular, information was collected on issues surrounding the conflicts in the NCA, the challenges facing the NCAA in achieving its management goals, the extent to which the NCAA tourism strategic plan provides for Maasai participation in tourism activities, and on the extent to which the NCAA safeguards their interests.

At the same time data were collected on whether and how the NCAA was willing to share power with the Maasai in the management of the conservation area. Prior to the

interviews, I had informal conversations with these managers about the future of conservation and of the area. The languages used to conduct the interviews with these managers were both Swahili and English. Some of the managers, although fluent in English, felt more comfortable using Swahili. Where English was used, I took notes by recording what was being said by interviewees and where Swahili was used I had to translate what was said into English when taking the notes. This was meant to facilitate the transcription process which was held right after the data collection process.

The second group of individuals involved in interviews were the officials from the Ngorongoro Division and the Ngorongoro Primary Court. These officials were interviewed on whether land use conflicts in the NCA are known to local government and legal institutions. In particular, the Secretary of the Ngorongoro Division was interviewed about how the local government viewed the tensions between the Maasai and the NCAA over land use priorities, and whether the Division had been playing any role in resolving the conflicts. The Magistrate of the Ngorongoro primary court was interviewed on whether the land use conflicts in the area were attributable to any legal matters. Another group of individuals involved in the interviews were two officials of the Pastoralist Council (Manager and the Secretary). They were interviewed about whether the Council had the power to influence during the decision-making processes and how they felt about its representation of other Maasai in the management of the conservation area. All of these different groups of people were interviewed in Swahili. It was easier for me to ask questions in Swahili and note responses in English. Although challenging, this process simplified transcription of the data for textual analysis.

I also managed to interview the coordinator of NGOPADEO (a Maasai CBO) about what conservation means among the Maasai, the causes of land use conflicts in the NCA, and whether the Maasai have rights to land access. I also interviewed him on the main livelihood concerns of the Maasai in view of the current situation in the conservation area. Prior to the interview, I had informal conversations with him about the future of the Maasai with respect to ongoing tensions over land use priorities on their part and on that of conservation authority. Since the coordinator has some college education (trained in the field of community development), he felt more comfortable using English rather than Swahili or the *Maa* (the Maasai language) languages. His decision to use English enabled me to take notes of our conversations in English as well.

Another interview session was with an official from the Wildlife Division of the Ministry of Natural Resources and Tourism. In particular, the officer was interviewed about how the Ministry views the conflicting nature of the multiple land use objectives of the NCA and he was asked to comment on whether the Ministry was willing to encourage and promote the traditional land use strategies of the Maasai within NCA. Importantly, the language used to conduct the interview with him was English. The notes for the interview with this officer were also taken in English.

Several interviews were conducted with a few members from the Maasai communities, including Maasai elders, traditional and village council leaders in the three chosen villages. The open-ended questions (see Annex 3) to these individuals were centered on their perceptions of issues surrounding the conflicts in the area. In particular, they were interviewed about how their land rights have been contested within NCA and how they felt about the conservation policies of the NCAA. They were also asked to

comment on the socio-economic problems they face in view of the current conservation practice of the NCAA and the extent to which the existing problems could lead to more serious problems in the near future. Another set of questions focused upon issues surrounding their participation in the overall management of the conservation area. The same questions were asked to all participants in all the three villages that were studied.

Overall, the interviews with the Maasai members were held in their Maa language. Though some of the Maasai within the NCA do speak some Swahili, most of them are not fluent in the language. As I do not speak their language, this issue was handled through translation of the questions to and the responses from the participants. I asked the questions in Swahili, while the research assistant translated them into the Maa language to allow the participants to give their opinions. At the end of each comment from a respondent, the research assistant had to translate into Swahili what was being said for me to listen and take the notes.

In the overall process, I had to build a strong trust relationship with the research assistant to ensure that I obtained accurate information from him when translating the conversations. These relationships were built from the beginning when training him on his roles and the ethical issues where he agreed to play the role of translator. With this role, the research assistant agreed to take an ethical stance in translating the conversations by further ensuring that he provided accurate translations which captured the significant meanings of the original language. Overall, although the interviews were planned to last between one to two hours, due to the issue of language, the interviews with the Maasai lasted for up to three hours.

4.3.2 Focus Group Discussions

The focus groups included discussions with key informants to obtain collective opinions and probed issues concerning the conflicting land use and management strategies in the NCA from the perspectives of the Maasai members. Two focus groups were conducted (one in Endulen and one in Oloirobi). I was unable to undertake a focus group in Naionokanoka village as my research period coincided with preparations for a village market (*mnada* in Swahili)[20]. A guide prepared in advance with sub-topics underlying the intended research objectives (see Annex 4) was used to direct the conversations and the discussions were centered on issues surrounding the main attributes of the conflicts, the main socio-economic problems facing the Maasai and their main claims with respect to the impacts of conservation policies on their land rights. Another list of topics under discussions was organized to cover issues of who decides on what and how to conserve the area's natural resources, and whether the Maasai have ever been involved in any way in decision-making processes regarding the management of the NCA.

Conversations on possible solutions that would help to bring the interests of the conservation authority closer to those of the Maasai formed another theme for the discussions. During the discussion on this topic, the Maasai became particularly excited when they were given the opportunity to express their opinions about the current management practice of the NCAA which does not provide a fair framework for them to be beneficiaries of conservation and tourism outcomes. This opportunity stimulated their

[20] The village (open) market takes place once in every month in each village within the NCA.

interests to freely express their views, especially about the main issues of their concerns with respect to the ongoing conflicts over land use priorities in the NCA.

One problem which emerged with this method was that of language. As it was for the interviews with the Maasai, the focus groups were also conducted in the *Maa* language. This made a difference in generating the information as it was difficult to facilitate the discussions. At the beginning of each focus group session, I provided a brief introduction of the research and its intended objectives in Swahili. The research assistant then translated this into Maa for participants. In the same fashion I introduced the discussion topics in Swahili and the research assistant translated them in Maa for the participants to discuss among themselves.

During the discussions, the research assistant had to listen carefully to the conversations and give a synopsis of what was being discussed so that I could record it[21]. This however, was not an easy process. Due to this limitation, I asked the research assistant to also write down the main ideas that emerged from the discussions in a summary form. We then sat together after the discussion sessions to compare the information we gathered, to correct the missed comments and to undertake some interpretations of what was discussed. Since the notes were taken in Swahili, I had to then translate them into English during the transcription process. Overall, focus groups lasted for about three hours.

4.3.3 Document Analysis

This tool also formed an important strategy of the study by complementing the interviews and focus groups. A number of documents (see Table 3) were reviewed as

[21] The notes for the focus groups were taken in Swahili as it was not easy to translate them into English due to the complex nature of how the focus groups were set.

secondary sources of data collection for this research. Most of the documents reviewed were those addressing the research objectives. In particular, the documents reviewed for this study were the NCAA General Management Plans (the previous one of 1996 and the current one of 2006-2016) which provided more insights from which actions and operational plans of the NCAA are drawn. These management plans also provided more information on the history of the area and the management objectives for which the NCA was created. I also reviewed the Wildlife and Tourism Policies of Tanzania. These two policy documents provided me with information on how wildlife PAs have to be administered in relation to types of resource and land utilization permitted in them.

I also had a chance to review the Constitution of the Ngorongoro Pastoralist Council which provided more details on the main functions for which the Council was established, and a book co-authored by Issa Shivji and Wilbert Kapinga (1998) on *'Maasai Rights in Ngorongoro'*. This publication provided more information on Maasai life (especially on issues related to human rights, rights to land and livelihood needs) in view of the management practice of the NCAA. Finally, a number of statutes (see section 3.6 of chapter three) which have direct influence on how the NCA is managed were also reviewed as part of data collection for this research. In particular, all reviewed documents helped to shed more light on the data that were gathered through interviews and focus groups.

4.4 Recruitment of Research Participants

The selection of individuals to participate in this research was aimed at getting people who could provide insights addressing the intended objectives of the study. In particular, the focus was upon those who have been affected by the conflicting land use

and management strategies in the NCA. The targeted participants were from the Maasai communities, the NCAA, the Ngorongoro Pastoralist Council, the Ngorongoro Primary Court, Ngorongoro Division, and the Wildlife Division of the Ministry of Natural Resources and Tourism of Tanzania. Obtaining access both to villagers and to civil servants involved negotiating power relationships and formal authority. Those from the Maasai communities were recommended and directed to participate by their traditional and village council leaders while those from the NCAA and the Wildlife Division[22] were assigned to participate as part of their official duties by their heads based on the relevance of departments in which they work. Equally important, participants from the Pastoralist Council, Ngorongoro Division, Ngorongoro Primary Court and a Maasai community-based organization (NGOPADEO) were also recruited on the basis of the official positions they held.

Accordingly, particular attention was given when selecting participants from the Maasai communities. Initially, the plan was to have the participants recruited randomly from their villages to provide an equal chance of every member of the Maasai population to be selected. However, according to the Maasai culture and traditions there are some limits from whom one can obtain information, especially information on sensitive matters which are considered crucial to the entire community such as land issues. During the preliminary visits to their villages, I was informed that it was only through recommendations from the traditional and village council leaders of the Maasai, who are

[22] The NCAA and the Wildlife Division officials were assigned to participate by taking into consideration the extent to which they could provide relevant and appropriate information that would address the research objectives.

the *'gatekeepers'*[23] (Hoggart *et al*, 2002), that one can get a chance to talk to the local people in their villages.

Abiding by this condition, through my research assistant, I had to work closely with the traditional and village council leaders to select the individuals to participate in the research. More consideration was taken to involve only those who were recommended[24] to participate in the interviews and the focus groups. This selection process was biased in a sense that it reduced the probability of other members of the Maasai communities from being selected. On the other hand however, this selection process helped to minimize the barriers to accessing the key participants.

In general, the Maasai are patriarchal societies and men typically speak for women and usually make decisions in their families. In addition, male elders and traditional leaders make decisions on community matters. Under their traditions and their political structures which are based on the age-sex system, males under the age of 18 years old and women are restricted from giving out information, unless permitted to do so by their traditional leaders (Nkoitoi, 2005). Following this tradition, 12 men (including the traditional leaders themselves and the Maasai elders) were involved in the study and, surprisingly, one woman (a community development activist and a primary school teacher) was also recommended in one of the three villages. Overall, recruitment of participants from the Maasai communities was very challenging. However, working with the research assistant helped to overcome most of the difficulties.

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[23] Gatekeepers within the research contexts have some power, control and responsibility to allow or deny another person access to someone or to something. They need to be convinced that the research is credible and worthwhile, enough to stimulate their interests in the study (Hoggart *et al,* 2002).

[24] This selection process raised some difficulty in obtaining a truly representative sample.

4.5 Consideration of Ethical Issues

The research proposal for this research project was reviewed by Carleton University's Research Ethics Committee based on its Tri-Council Guidelines prior to the start of the project. The committee approved this research project as it met the appropriate ethical standards. Overall, the research plan for this work addressed a number of ethical issues, including security risks and validity concerns inherent in conducting intensive research on the broad theme of conservation and community development. As such, considerations of ethics included addressing issues of consent, confidentiality and privacy for participants who willingly agreed to participate in the study (Hoggart *et al,* 2002).

In that regard, all quotes[25] and, where possible, the participant's names or their job titles are used in this research after having received permission from them. Prior to engaging with participants, attention was given to clearly explaining the research objectives and limitations and to obtaining informed consent (oral consent from those who do not know how to read) from all participants. Participants were further advised that anonymity, privacy and confidentiality were to be kept throughout to the completion of the thesis. Prior to interviews and the focus group discussions, participants were reassured of the confidential nature of the research and every attempt was made to maximize their privacy. In addition, the training I provided to my research assistant also included the discussions around these ethical issues.

More attention was also given to consideration of the likely risks that my research participants would have encountered as a result of being part of the research. Throughout

[25] Direct quotes from participants are used in this research as " the most important way in which qualitative research is often seen as offering space for the voices of respondents to be heard" (Butler, 2001:267).

the research process, every attempt was made to minimize the likelihood of risks and avoid deception among the research participants. While there was no direct risk involved to participants in this study, reflecting on sensitive issues relating to land use conflicts, access to land and other resources, and local peoples struggle for livelihoods could have caused emotional distress. Informal discussions around the research themes prior to the interviews and the focus groups with the Maasai provided an enabling environment for them to feel that the study was sufficiently valuable to them, a situation which enabled the participants to explicitly express their feelings.

4.6 Positionality and Subjectivity in the Research

It was necessary for me to also reflect on how this research is shaped by my own values and roles as a researcher in relation to the research process itself, participants and the phenomena under the study. As Mansvelt and Berg (2005) suggested, "...if we are to locate our knowledge, then we must locate ourselves as researchers and writers within our own writing" (p.253). This is a valuable aspect in an interpretative work (Robinson, 1998; Dowling, 2005). My positioning as a young man, with some knowledge of rural life in the developing world paved the way to gaining deeper understanding and experiences of land use issues in the NCA. As a Tanzanian, raised in a peasant family in northern Tanzania, my background does not differ significantly from that of the Maasai who shared their life experiences and thoughts with me during the course of my research.

Most of the struggles of the Maasai for livelihoods are not too far different from what my community has been going through. My family and the entire community in my area also live largely on what nature provides us with. In particular, I had known some of the members of the Maasai community (some of them closely) since 2003 when I worked

as a teacher at Embarway Secondary School (located in Endulen Ward within the NCA)[26] and in 2006 when I undertook my practical training at the NCAA as a partial fulfillment of my undergraduate degree requirements in Geography and Environmental Studies program of the University of Dar es Salaam. My previous acquaintance with some of them provided me with an easier entry in the very foundation stages of my research, especially in selecting the studied villages, undertaking initial visits to these villages, establishing contractual relations with one member from the Maasai community to work with me as a research assistant and in recruiting the research participants.

At the same time, I also found it necessary to bring in the question of subjectivity[27] at work during the research process in defining the relationships I had with my research participants. While conducting the study in the three villages, despite the cultural, social and economic differences between myself and the Maasai, I was able to become closer to their lives and gained an adequate understanding of their culture and lifestyle by working with my research assistant (a member from their community) and by living in one of the households for the duration of my stay in each village. In positioning myself into the field context, I also had to take part in some of their social activities such as informal gatherings and in their traditional dances, practices which not only helped me to form strong relationships with them, but also played a vital role in gathering detailed information that was sensitive to their perceptions of conflicts emanating from land uses in the NCA. Also, since the Maasai communities have been the subjects of many studies in their areas, while conducting this study I learned that they fully understood how their

[26] I taught at this school for one year on a temporary basis soon after I completed my high school before joining the University of Dar es Salaam for my Undergraduate degree in September 2004.

[27] "Subjectivity is an important tension that is central to the research process and the production of the written text" (Dwyer and Limb, 2001:9).

lives and experiences can be part of the academic realm of knowledge construction. As such, this understanding together with the description of my research that I provided to them at the beginning of every interview and focus group stimulated them to participate in the study.

Although in most cases I did not 'fit in' their traditional settings, at least I was able to confront my own attitudes towards land use issues in PAs as well as my role as a researcher throughout the research project with the Maasai subject. At the same time, because social scientists have increasingly been recognizing the benefits gained when researchers immerse themselves in the points of view of what they are studying (Dwyer and Limb, 2001; Hoggart *et al,* 2002; Mansvelt and Berg, 2005), I also had to reflect on the question of being an 'insider or outsider' within the research context. I considered myself to be an insider and an outsider[28] at the same time during the research process. As I grew up in a place with similar socio-economic conditions as those of the Maasai, I considered myself to be an insider on one hand. This positionality enabled me to understand the issues they were explaining to me as I share with them some of their outlook, perspectives and experiences of the social world.

On the other hand, as I am not from the same area and as a first time researcher in the NCA, I also considered myself to be an outsider. With this positionality, I recognized that I had limitations in my understanding of the geography and history of the area, the traditional land uses of the Maasai, their language and culture, their particular struggles for livelihoods, the status of conservation and how the NCA was being run. Importantly however, these two positionalities (insider and outsider) prepared me to adapt this

[28] An 'insider' in research is "...someone who is similar to his/her informants in many aspects while an 'outsider' differs substantially from his/her informants" (Winchester, 2005:26).

research as necessary to suit the specific field context in the NCA. This adaptation subsequently enriched the interviews and focus groups I had with the participants. As such, my own positionality and the interactions I had with the Maasai informed this research and my understanding of the degree to which the data I collected was socially conditioned.

4.7 Power Relations in the Research Process

In qualitative research, commitments to reduce power differences between researchers and participants are necessary (Kobayashi, 2001; Skelton, 2001; Dowling, 2005). They are intended to move the research paradigm away from the traditional conception of quantitative research where the researcher is the ultimate source of authority (Skelton, 2001; Hoggart *et al,* 2002). In particular, these commitments are aimed at promoting equal participation in the research process. Their importance within the research contexts lies on the notion that power cannot be eliminated from the research process since it exists in all social relations (Dwyer and Limb, 2001; Hoggart *et al,* 2002; Dowling, 2005).

In undertaking this research, I was aware that both my research participants and I had different powers and speaking positions in relation to social structures, although some of them felt more powerful than me because of my age[29]. One aspect in which power proved to be superior was in relation to the selection of participants. Most of my research participants were 'assigned' to participate by those who possessed power over them and this was consistent with norms of the institutions I studied and the culture and traditions of the Maasai. This selection procedure might have influenced the findings of

[29] All of my research participants were older than me, a situation which made some of them feel powerful in the context of the research.

this research as the views of those who were not assigned or recommended to participate are beyond the study.

I also attempted to reduce the impacts of my power as a University-based researcher. This included some measures to empower the participants. Although no one refused, use of consent forms provided participants with the freedom to choose whether or not to participate in the research. This freedom to decide enabled me not to take advantage of someone's less powerful position to gather the information I needed. Indeed, the dignity of all participants was respected throughout the research process. An adherence to this principle was intended to ensure that those who willingly agreed to participate in the study would not be used simply as a means to achieve my research objectives.

Another aspect of balancing power relations with my research participants was that of establishing a rapport with them throughout the research process. Since most of my research participants were selected based on who holds power over them, I had to ask them whether they had been briefed on the research project and on their chances to refuse to participate. Most of them had limited information, especially on the research objectives. At the outset of the interviews and the focus groups, I had to provide them with a brief description of the project in ways that they were able to understand and observe how they related to it[30]. Having described the research project, participants became interested to continue with the research. At the beginning of interviews or the focus groups, I informed them of their rights to refuse to answer any question they felt

[30] When talking to the Maasai, a simple Swahili was used, and the research assistant was there to assist with the translation of the conversations.

uncomfortable with and to withdraw from the study at any stage of the research even though they had been assigned to participate.

Overall, equal power relations between researchers and the people they work with have continued being an important strategy for knowledge construction in qualitative research (Rose, 1997; Skelton, 2001; Dowling, 2005). Well established researcher and participants' power relations also helps to balance power between participants who have unequal knowledge (Rose, 1997). As a result, this general understanding of how power relations are important enabled me to keep focused on how these relations can affect the research process and its findings. With such an outlook, I became aware that respectful listening and thinking during the interviews and focus groups had significant impacts on the whole process and on the data I collected. This enriched my expectations that the outcomes of this research might contribute to the achievement of the multiple land use strategy of the NCA for both conservation and human development of the Maasai to be attained on the same levels.

4.8 The Analytical Procedures

It is generally accepted that a lot of qualitative research produces textual data which provides rich descriptions and explanations of phenomena (Tesch, 1990; Mason, 1996; Kitchin and Tate, 2000; Dwyer and Limb, 2001; Hoggart *et al,* 2002). As a result of this, there is a need for systematic analysis of the collected data. This is regarded as the process of coming up with findings from the data that can convince the readers of the existence of a certain kind of knowledge (Robinson, 1998; Kitchin and Tate, 2000; Ryan, 2006). Centred within the assumptions of qualitative research, data collected through interviews and focus groups "...represents the 'truth' about the respondents positions or

actions and that this truth can be discerned and analysed" (Robinson, 1998:426). In order to produce the findings for this work, the complete process of data analysis for this study required the collected data to be analysed.

Overall, data analysis was aimed at generating meanings and relationships of words and concepts which are embedded within the collected data. The analysis was done by assembling the raw data in order to draw links between them and the research objectives that were intended to be addressed in this research. This was intended at grouping together the answers from different participants around the common issues (research objectives) that were central to this research. The data analysis process involved two stages: the first stage involved organization of the raw data while the second one involved the actual analysis as detailed below.

4.8.1 Organization of Data

The first stage taken in the analysis involved the organization of data. It began with the transcription and annotation of the field notes into coherent transcripts or texts (Kitchin and Tate, 2000; Babbie, 2006) that were used in the second stage of the analysis. The transcription was done using word-processing programs. At this stage, transcripts were produced in exactly the same words that were used in the field to avoid distortion of their original meanings. While transcribing, I was able to think carefully about what was being transcribed and to develop ideas about insights and interpretations that emerged during the fieldwork and the questions that emerged from the literature I reviewed. In general, a total of 24 open-ended interviews were conducted and two focus group sessions were completed to collect the required information. During this stage, a grid for

data was prepared for indexing the interviews and the focus groups as shown in the Table below.

Location[31]	Participants[32]	Research Method[33]	Number of interviews and focus groups[34]	Addressed research objectives[35]
NCAA headquarters	5 NCAA managers	Interviews	5	1, 2b, 3a and 4
Ngorongoro Division[36]	One official	Interviews	1	1 and 4
NGOPADEO[37]	One official	Interviews	1	1, 2a, 3b and 4
Endulen village	Traditional & village council leaders, and few Maasai members	Interviews	5	1, 2a, 3b and 4
		Focus group	1	
Nainokanoka village	Same as in Endulen	Interviews	4	1, 2a, 3b and 4
Oloirobi village	Same as in Endulen and Nainokanoka	Interviews	4	1, 2a, 3b and 4
		Focus group	1	
Ngorongoro Primary Court	One Official	Interview	1	1 and 4
Pastoralist Council	Two officials	Interviews	2	1, 2a, 3b and 4
Wildlife Division	One official	Interviews	1	1 and 4

Table 4. Interview and Focus Groups Indexing Grid.

Of those 24 interviews, 11 were with subjects who were governmental or NGO officials in some capacity. In particular, five interviews were with the NCAA managers, two with the Pastoralist Council officials, one with an official from the Maasai CBO (NGOPADEO), one with the Wildlife Division official, one with the Ngorongoro Division official and one with the Magistrate of Ngorongoro Primary Court. The

[31] Indicates where the interviews and focus groups were carried out.
[32] Stands for a group or individuals who participated in the study from each place or institution.
[33] Outlines the research method employed to obtain the information from each place/institution.
[34] Outlines the number of interviews and focus groups completed at each place/institution.
[35] Details the specific objectives that were addressed in each particular place.
[36] A local government, one of the three Divisions (the other two are Sale and Loliondo) in the Ngorongoro District.
[37] A Maasai Community-based Organization comprised of Maasai elders.

remaining 13 interviews were with the Maasai communities (which included the traditional leaders and village council leaders, as well as a few selected Maasai members) in the three villages that were covered during the study. Also, the two focus groups were conducted with the Maasai in two of the selected villages.

4.8.2 Grouping the Data

The second stage of the analysis involved the process of grouping the data by moving beyond organization (stage one) to a higher level of synthesis which involved meanings and outcomes from the collected data (Crang, 2001). In particular, this stage involved description, classification and making connections of the raw data that were grouped under different themes drawn from specific objectives for their analysis.

Research participants / **Addressed objectives**	**I** NCAA Managers	**II** Maasai members	**III** Pasto-ralist Counc il	**IV** NGO PA DEO	**V** Ngoro-ngoro Division	**VI** Ngoro-ngoro Primary Court	**VII** Wildlife Division
The main issues surrounding the conflicting land use and management strategies in the NCA							
The socio-economic problems facing the Maasai and the challenges facing the NCAA							
The main claims of the Maasai and of the NCAA in view of the current situation							
The possible solutions for the conflicting land use and management strategies in the NCA							

Table 5. A Matrix of Participants by Objectives

The overall purpose of grouping the data was to bring together the views from different participants around the central research objective to be incorporated in the whole analysis of the identified issues. In particular, this stage involved assembling the raw data into a matrix by objectives (Table 5) in which each one of the objectives were compared to each of the research participants involved in the study. Overall, all information which addressed the research objectives was taken into consideration and analyzed to identify the relevant patterns and issues concerning the research problem for this study.

A matrix above was then developed into three tables/matrices (see Table 6-8) that were employed in the discussion chapter to present key findings of this research. These findings remained consistent with the ways through which raw data was organized in stage one of the analysis. In particular, these tables/matrices will indicate how different stakeholders hold differing perceptions over the conflicting land use and management strategies in the NCA, hence conveying the essence of the findings of this research. Accordingly, the research findings are built upon the analyzed fieldwork information in conjunction with the information gathered through documents that were analyzed as secondary sources of data. The findings will thus be discussed in the context of the conflicting land use and management strategies in the Ngorongoro Conservation Area. Based on the findings, possibilities to resolve the conflicts will also be presented.

Chapter Five
Results and Discussions

5.1 An Overview

This chapter presents the key findings of this research, conveying the extent to which different land use and management strategies in the Ngorongoro Conservation Area are in conflict. The chapter is divided into two main sections. The first section outlines the complexity of conflicts in the NCA and provides insight into the nature, intensity and multi-dimensional attributes of conflicts in NCA. It is built on several themes around the first three research objectives with particular emphasis on land use conflicts, livelihood concerns of the Maasai, resource and biodiversity conservation, multiple jurisdictions in land administration, and the important issue of planning and decision-making process for the overall management of the NCA. These themes are explained in the context of Maasai and the NCAA perspectives and of conflict and cooperation to draw attention of the fundamental differences between the two groups on these themes.

The second section will discuss the opportunities and challenges to resolving the conflicts in the NCA. In particular, this section highlights first the major claims voiced by both groups (the Maasai and the NCAA) over the ongoing conflicts in the Area, and second it presents possible solutions to resolving the conflicts that were identified during the study. Having highlighted the major claims and the possible solutions, the chapter will end by suggesting the guiding principles that would help to put into practice those possible solutions in order to resolve the existing conflicts between the NCAA and the Maasai over land use priorities and management strategies in the NCA.

5.2 Understanding the Complexity of Conflicts in the NCA

The ongoing conflicts over land use and management strategies in the NCA are profoundly altering the implementation of the NCA's multiple land uses strategy as provided by the laws which created the Area. Multiple land uses in the NCA were a pioneering experiment by the colonial government in an attempt to reconcile the interests of wildlife conservation and the Maasai pastoral ways of life. Over time, conflicting interests in attaining the multiple land uses strategy have dominated the discourse in the NCA. Conservation and tourism land use strategies have long continued to be regarded as the overall objectives of the conservation area by the NCAA to the detriment of the Maasai land use rights. This situation has to a larger extent culminated in the ongoing conflicts in the Area.

The complexity of conflicts in the NCA becomes clear when one considers the many and complex issues surrounding the conflicting land use and management strategies which are perceived and viewed differently by both groups. Findings from this research reveal that the ongoing conflicts are multi-faceted rather than singular in nature. They are largely due to lack of NCAA commitments and interests on developmental and livelihood needs of the native Maasai. Following this, attainment of the multiple land uses strategy of the NCA has long been a contentious issue between the NCA's stakeholders, centered on disagreements over land use, management and control of the NCA. For the purpose of this thesis, the identified issues surrounding the complexity of conflicts in the NCA are disaggregated into larger themes (see the table below) which are built around the first three objectives of this research and are discussed in the subsections that follows the table.

Participants / Themes	I NCAA managers	II Maasai members	III Pastoralist Council	IV NGOPADEO	V Ngorongoro Division	VI Ngorongoro Primary Court	VII Wildlife Division
Land use conflicts (see section 5.2.1)	Incompatibility of the multiple land uses of the NCA	The question of land rights (ownership and access) of the Maasai	Existence of different priorities over land uses between the Maasai and the NCAA				Failure of wildlife conservation to compete adequately with other forms of land use
Multiple jurisdictions in the administration of land in the NCA (see sec. 5.2.2)					Overlapping powers in the administration of land in the NCA	Contradictory legal framework in the administration of land	
Livelihood concerns of the Maasai (see sec. 5.2.3)		Declined economy, The issue of cultivation, and Inadequate social services and infrastructures	The question of timber and fuel wood extraction	Mistreatment in employment opportunities			
Resource and biodiversity conservation (see sec. 5.2.4)	1.High population growth of the Maasai 2.Encroachment and blockage of wildlife corridors 3.Livestock-Wildlife disease transmissions 4.Destruction of forests 5.Threat of invasive alien species						
Land use Planning and Decision-making process (see sec. 5.2.5)	1.Insufficient incorporation of scientific research into land use planning of the NCA, and 2. Lack of proper land use planning	Lack of participation in planning and decision making		Improper sharing of the research results			

Table 6. Issues Surrounding the Conflicts in the NCA[38]

[38] Empty spaces in the table suggest that there was no contribution from the participants on that particular theme. And, claims in the text for section 5.2 are referenced to this Table.

5.2.1 Land Use Conflicts in the NCA

As explained earlier, the NCA was established with intention of supporting different land use objectives. When it was created in 1959, multiple land strategy was put in place to accommodate the Maasai (who were forced to leave Serengeti) and their pastoral land use system. As such, conservation of wildlife and other resources, development of tourism and traditional land use system (pastoralism) of the Maasai were considered to be compatible land uses and were included in the overall objectives of the NCA. The establishment of the NCA with its multiple land uses status assumed the three land uses could continue to co-exist without causing significant problems but land use conflicts have emerged. Findings from this research have indicated that the different land uses for which the NCA was created are currently in conflict. Reasons for this are discussed below from the perspectives of the NCAA and the Maasai.

Incompatibility of the NCA's multiple land uses

Views from my informants indicate that the conflicting land uses within the NCA revolve around the collisions of the multiple land uses. Many of these conflicts are associated with the failure of wildlife conservation to compete adequately with other forms of land uses in the NCA. For so long, pastoralism activities of the Maasai have been regarded as hindrances by the NCAA to the achievement of its wildlife conservation goals. The Authority has maintained the view that the Maasai pastoral ways of life have caused adverse impacts on wildlife and on the environment in general, a reason why the NCAA has been discouraging the pastoral land use system of the Maasai (Shivji and Kapinga, 1998).

The three main land use strategies of the NCA are, in fact, conflicting. Views from the NCAA have indicated these land uses (pastoralism, conservation and tourism) are no longer compatible. According to the NCAA, such compatibility in the past was due to ignorance of the Maasai that was in place at that time. One NCAA manager when asked to comment on this subject had the following to say:

> "...co-existence of the Maasai with wildlife was accidentally as it was not planned to occur. The Maasai who initially resisted the western culture have now realized the need to live 'modern life' they rejected in the past for the sake of preserving their culture. For example, now they have increasingly been demanding socio-economic developments to improve their life, including livestock keeping to be supplemented with subsistence cultivation as livestock are no longer the only source of their livelihoods. These demands of the Maasai are contrary to the conservation policies that we seek to enforce here".

Understandably, the NCAA wants to conserve the wildlife and other resources as much as possible. Thus, it views the increasing demands of the Maasai for their livelihoods as problematic to its conservation efforts. It considers these demands to have not been supporting its conservation objectives. Following this, the Authority has increasingly been putting less emphasis on interests of the Maasai as it only accepts certain interests as legitimate, a situation which has intensified the conflicts. With the ongoing conflicts in the NCA, the compatibility of the multiple land uses strategy is currently questionable. From the perspectives of the Maasai and their supporters, they all see the government of Tanzania and the NCAA in particular to have paid more attention to conservation and tourism objectives rather than on their interests as they were promised when they were moved from Serengeti National Park. They also see themselves to have been humiliated and mistreated due to the national and international conservation strategies which favor wildlife to their detriment as indigenous people.

Findings from this research also reveal that problems have worsened as the Maasai began to be involved in tourism activities through ecotourism[40]. Apparently, the NCA is a place in which ecotourism can flourish very well if well planned. In recent years, the Maasai have been allowed to build and operate *'cultural bomas'* (designated places where the Maasai can interact with tourists). The "...cultural bomas are constructed to look like the typical Maasai homesteads where the tourists can meet the Maasai warriors and women, watch them performing their traditional dances, tour a typical hut made from sticks and cow dung, learn about the Maasai ways of life and culture, take pictures and purchase Maasai handcrafts" (Charnley, 2005:78). Currently, there are about six cultural bomas in the NCA. The revenues earned from these projects are spent by community members on activities aimed at alleviating poverty (McCabe, 2003).

The cultural bomas have increasingly been the principal focus of Maasai as they generate income that allows them to supplement their deteriorating pastoral economy. The Maasai want each ward to have at least four bomas. However, their desires seem to be conflicting with those of the NCAA which wants to ensure that cultural bomas remain at a capacity that the NCA can handle. Since construction of these bomas requires land and other resources such as forest products, their existence is considered by the NCAA to have caused difficulties to its wildlife conservation efforts by further reducing habitats and pastures to the wildlife. Such that, if more cultural bomas are going to be constructed, the NCAA maintains the view that conservation goals of the area will be more suppressed, a reason why it obliges the Maasai to seek permission for such constructions

[40] Ecotourism "...is a tourism strategy intending at ensuring genuine social benefits and serving as a tool for sustainable community development" (Charnley, 2005:75).

which usually it does not provide. In reality, this view contradicts with the Maasai desires to alleviate poverty through these cultural bomas. In particular, the Maasai see this situation as the NCAA strategy to continue discouraging their development initiatives, further intensifying the NCAA-Maasai conflicts.

The question of Maasai land rights in the NCA

The question of Maasai land rights is another source of conflicts which is complicated by the historical factors and the legal regimes within the NCA. The Land Act and the Village Land Act (both of 1999) are two principal legislations governing land tenure in Tanzania. Under these legislations (see section 3.6 of chapter 3), there are two major forms of land holdings in Tanzania: deemed rights of occupancy (which includes customary rights of occupancy) and granted rights of occupancy.[41] Under the provisions of the Village Land Act, since the 16 villages within NCA are registered under the Local Government (District Authorities) Act, it was expected that the Maasai communities could be enjoying title to their lands. However, despite the provisions of law, the Maasai of NCA still have no title to their lands. Views of the Maasai indicate that this situation prepares them to be evicted from the NCA in the near future. To date, the tenure of the NCA land is still the express domain of the NCAA as outlined in its Act. To that effect, it follows that any changes to land status have to fall within the provisions of the Act and conform to the General Management Plan of the NCAA.

The problems arising from ambiguous Maasai land rights are largely due to extensive statutory powers that the NCAA has over the lands in the Area as outlined in its

[41] According to the Village Land Act, deemed rights of occupancy are the one in which title to the use and occupation of land includes the title of a native or a native community lawfully using or occupying land in accordance with native law and custom. Granted rights of occupancy are those granted by the President over public land.

laws. The laws of the NCAA have considerably restricted the Maasai from enjoying their land rights in the same way as they did before the area was designated as a PA. The NCAA has routinely used its vast laws to control the Maasai from using, owning, and accessing land in the NCA. As such, the question of the Maasai land rights has long been a contentious issue. The Maasai consider the restrictions on their land rights as having caused serious problems in their total way of life. They also see the restrictions to have been impinging their rights as human beings.

While the Maasai efforts to secure land rights are generally limited, the study shows that there are big private investors such as tourism operators (lodges and campsite owners) who are continuing to enjoy and appropriate large areas of land in the NCA. This situation has intensified the ongoing conflicts in the Area. Consequently, conflicts have tended to arise with the NCAA tourism investment strategy of offering investment opportunities to the outsiders (especially the foreigners) to the disadvantage of the few Maasai with interests and capability to invest in the same industry. They find it difficult to acquire land for such investment to take place. The response of Mzee[42] Daniel Olorigisoi[43] underscores the point when interviewed on the subject:

> "...the Conservation Authority is here for the outsiders and not for us. It is not serving our interests when it comes to issues for us to use the land. We all see it to be more interested on serving the interests of the outsiders. Don't you see this as a problem? Don't give me the answer. For example, I and my relatives we raised some money long ago after selling our cattle with a plan of constructing a tourist hotel or a camping site in the Area. As we cannot use the land without permission from the Authority, we have asked for such permission since 1994. To date as I speak with you, we have never heard anything from them regarding our request. Worse enough, in recent years we have seen a new Rhino Lodge been constructed and a number of camping sites are being mushroomed in our lands. We have been

[42] Mzee is a Swahili word which stands for 'elder or old person'. It is normally put before the name of a very respected or dignified person in a community.

[43] I received an oral permission from this respondent to use his name in this research. He found this as an opportunity to voice out his complains to the NCAA.

> questioning ourselves, is this because they are owned by foreigners? The conservation people should hear us sometimes as we see them to have taken our traditional homelands that we could be using for our own developments".

The quotation above represents many testimonials of the Maasai on issues related to their land rights. It reflects how they have been rejected from being able to undertake their own development activities. The NCAA practice of favoring and protecting the interests of the outsiders, together with the increased foreign and private investments in the NCA, is viewed by the Maasai to have widely intensified land use conflicts especially on issues of who gains and who loses from the existence of the NCA. To a larger extent, these investments have often been conflicting with the interests and the concerns of the Maasai residents for securing their land tenure. At the same time, those investments are said to be conflicting with the wildlife conservation goals of the NCAA. For example, most of the tourist facilities are located in sites which have continuously being opposed by other conservationists.

While in the NCA, I had a chance to visit the four big lodges in the area[44]. These lodges are located around the rim of the Ngorongoro Crater (to allow tourists to have a clear view of the crater and its wildlife while at the lodges) which is supposed to serve as the wildlife corridor. This siting of the lodges has in one way or another blocked the wildlife corridors, further preventing the wildlife from moving freely in and out the crater. During the study, the Maasai suggested that the NCAA is much more interested in supporting development projects which has direct economic benefits to the Authority itself regardless of the impacts they cause on the environment and to other resources. For a long time, this has been regarded as a bad attitude of the NCAA as the projects it

[44] Ngorongoro SOPA Lodge, Ngorongoro Wildlife Lodge, Ngorongoro-Serena Lodge, and the Crater Lodge.

supports often conflict with other land uses in the Area, and further infringing the Maasai's rights who have increasingly demanded their land rights particularly to live in their homelands and be able to access land for their own development activities.

Conflicting priorities over land uses between the NCA's stakeholders

This research reveal that land use conflicts in the NCA are also due to conflicting priorities over land uses between the Maasai and the NCAA, especially on disagreement as to which use is best. In view of the Maasai, conservation is good in itself but they do not like how it is exercised by the NCAA. They feel that they are not as important as wild animals and tourists are to the NCAA. They see the NCAA priority as using the area's resources for economic advantage. This is contrary to the Maasai priorities that have been and will continue to be free access to land in order to secure their livelihood requirements which include food security, housing materials, fuel sources, medicinal plants, and water for their domestic uses and for their cattle. Conflicts have tended to be worse when the NCAA restricts the Maasai from accessing land and other resources which are important for them to fulfill the necessities of their lives.

For example, section 24(1a) of the NCA Act empowers the NCAA to prohibit, restrict or control the use of land for any purpose. It is in light of this provision that the NCAA has set four management zones[45] to assist it in controlling all issues related to land uses. Of the four, the development zone which encompasses the central and northern part of the NCA, the highland grasslands and the Rift Valley escarpment and its floor is the only one set aside for the pastoralists' development in which the Maasai at least could

[45] These zones "...have been designated to resolve the existing challenges facing the conservation area, to protect outstanding resource values and accomplish defined management objectives by stating what can and what cannot be done in different areas of the NCA" (NCAA 2006:69-70).

enjoy some freedom of using the land but subject to guidelines of the NCAA. The other zones are set aside mainly for conservation purposes in which the Maasai have no free access. For example, they are prevented from accessing the highland forest reserve where there are enough pastures, water and honey even during hardship conditions such as droughts. More conflicts have tended to emerge when the Maasai trespass across the prohibited zones which are specified for conservation objectives. Given these circumstances, the Maasai do not really see their future in the NCA.

Overall, views of the Maasai have indicated that they are becoming more impatient with the land use restrictions placed on them by the NCAA. This is reflected on the following quote from one Maasai elder at Oloirobi village when interviewed on this subject:

> "...there are many restrictions on land use which are put on us, we are now changing, and the time comes where we will no longer tolerate this".

This quote suggests that the Maasai see problems and they have several times challenged the NCAA to solve them so as to prevent a worse situation which is likely to occur in the NCA. If the NCAA will continue to place little interests on land use priorities of the Maasai, the study affirms that the Maasai may revolt and the area might not be habitable in the future, suggesting that violent conflicts may arise. This controversial issue therefore needs immediate and special attention to prevent a likely worsening situation in the NCA.

5.2.2 Multiple Jurisdictions in the Administration of Land in the NCA

Another set of issues surrounding the complexity of conflicts in the NCA are the multiple jurisdictions involved in the administration of land in the Area. Given that the

conflicting land use and management strategies are the central focus of this work, it became necessary for this research to focus on the implications of the existing legal framework in the NCA and the power relations of its key stakeholders on the ongoing conflicts over land uses. Drawing from Table 6 (see the second row of the themes), the overlapping powers between NCA's stakeholders and the contradictory legal framework in the administration of land were identified to be the main issues surrounding the conflicts in the NCA under this theme. These issues have to a larger extent intensified the ongoing conflicts in the Area as detailed below:

Overlapping powers among the key stakeholders of the NCA

Findings from this research have revealed that, from its inception in 1959, the administration of land in the NCA has in various ways been subject to multiple intersecting jurisdictions which have created a complex situation. These jurisdictions are due to the existence of different stakeholders with different interests on how the NCA land has to be administered. They include the NCAA itself which operates as an autonomous parastatal organization with its own Board of Directors, the Ngorongoro District Council, the Ministry of Natural Resources and Tourism, and the funding agencies particularly the international conservation lobby such as the Frankfurt Zoological Society and the International Union for Conservation of Nature (the IUCN).

Consequently, with the existence of these stakeholders, overlapping of powers and interests among themselves have become inevitable features, a situation which in turn has exacerbated the ongoing conflicts in the NCA. In particular, the NCAA is subject to the extensive powers of the Minister responsible for the conservation of natural resources in the country. It has the typical powers of a government authority, i.e.

executive powers (which include enforcement and police powers) and the legislative powers. Under the legislative powers, the NCA Act empowers the Authority to make rules and orders of a general and special nature in relation to the management and affairs of the Area, as well as over the conduct of the residents within the NCA. Section 21 of the Act empowers the NCAA to use its legislative powers to make subsidiary legislation in relation to the control of, or entry into, residence and settlement within the Conservation Area, control of cultivation, grazing and protection of natural resources.

In relation to land use by residents in the NCA, the Authority has vast powers under the provisions of its Act. For example, section 24(1) empowers the NCAA to make orders, either in relation to any particular parcel of land or generally in relation to the Conservation Area, to prohibit, restrict or control the use of any land for any purpose. This provision also empowers the NCAA to prohibit, restrict or control the construction or extension of buildings or works, or restrict or control its siting. With its executive and police powers, the NCAA has power to enforce and impose penalties for breach of orders made under the Ordinance. It also has the power to authorize arrest without warrant of any person who is reasonably suspected of having committed an offence against the Ordinance or against rules made under it. In light of these provisions, it becomes clear that the NCAA has extensive powers in administering land in the Area. Following this, it has become impossible for the Maasai to make use of land for their own purposes without violating the laws of the NCAA, a situation which has intensified further the land use conflicts in the Area.

In addition to the regulatory powers of the Authority over the NCA, the Ngorongoro District Council (a local government authority) also has jurisdiction over the

NCA in matters of planning and implementation of development programmes. As outlined in the Provisions of the Local Government (District Authorities) Act, all District Councils in Tanzania are authorized to enact by-laws which are to be applicable in their areas of jurisdiction. On that basis, the Ngorongoro District Council has the power to enact by-laws on development issues of the entire district, including the NCA. In particular, the Local Government (District Authority) Act empowers the Ngorongoro District Council to administer lands and other resources in the whole district, thereby taking the necessary measures to control and regulate land uses, maintain forests, manage wildlife, and for the overall protection and management of the environment.

Therefore, the land of NCA is subject to the administration of both the Conservation Authority and the District Council. Findings from this research have revealed that these two authorities have overlapping powers in performing their responsibilities especially on issues related to land administration. This state of affairs has caused confusion in the administration of the NCA's land as lines of responsibilities of these two authorities are unclear. Notably, an official of the Ngorongoro Division (a sub-division of the District Council) when interviewed on this issue had the following to say:

> "...when it comes to the question of administration of land in the area, the NCAA is more powerful than the District Council".

To that effect, in case of any conflict of interests between the two, normally the NCAA interests prevail over those of the District Council. This has in one way or another prevented the District Council from enacting by-laws which were to be applicable to guide land utilization in the NCA.

Equally important, the presence of funding agencies and the international conservation lobby is another significant factor in conflicts arising from the overlapping powers in the administration of land in the NCA. The Frankfurt Zoological Society is one of the internationally operating conservation organizations which have influenced the conservation policy at the National level in Tanzania and in particular over the management and functioning of the NCA. It has been financing and providing logistical support such as vehicles and radios to the NCAA. Currently, it supports the NCAA in its Rhino Monitoring and Protection Project, controlling the alien invasive species, as well as in all efforts to control poaching in the Area. To that effect, this organization has in one way or another been influencing the management of the NCA, further complicating the question of land administration in the Area.

Contradictory legal framework in the NCA

This research has revealed that land use conflicts in the area are attributable to the legal aspects especially the existence of different laws that conflict in their applications in administering land in the NCA. The contradictions arise from the application of the Village Land Act, the Land Act, the Local Government (District Authorities) Act and the NCA Act. It seems that these legislations are formulated without consultation of the counterparts. More evidence of the contradiction involved came after having reviewed the legislation. For example, the Local Government (District Authorities) Act empowers the Ngorongoro District Council to enact by-laws which are applicable to the management of village lands in the whole district. This provision contradicts with the NCA Act which empowers the NCAA to administer all lands within its boundaries. This further contradicts with the fundamental principles of National Land Policy of Tanzania.

In particular, Section 3 (1) (subsection b and c) of the Village Land Act outlines a provision stating that:

> The fundamental Principles of National Land Policy shall have regard to ensure that existing rights in and recognized long standing occupation or use of land are clarified and secured by the laws to facilitate an equitable distribution of and access to land by all citizens.

In view of this provision, since the Maasai have long lived and used the land in the area before it was designated as a PA, it would have been of great interest for the laws of NCAA to explicitly protect their customary land rights. This work has established that the contradictory legal regimes in the NCA have to a larger extent resulted in conflicts of interests between the different stakeholders especially on questions of how best the NCA land has to be administered, a situation which have also intensified the land use conflicts in the Area.

5.2.3 Livelihood Concerns of the Maasai

The current practices of the NCAA restricting the Maasai from having a free access to land and other strategic resources has undermined their livelihood strategies. This subsection draws on a number of livelihood concerns (see table 6) of the Maasai. They are discussed below:

Declining livestock economy of the Maasai

One of the livelihood concerns of the Maasai is the decline in livestock economy, specifically a reduced number of their livestock per capita. Traditionally, the measure of wealth among the pastoral communities such as the Maasai is the tropical livestock units (TLUs) per capita (McCabe, *et al.,* 1997a). Eight TLUs per capita are considered the minimum viable herd for subsistence for a household that depends wholly on pastoralism

(Boone, *et al.,* 2002). Average TLUs of the Maasai have declined from 12.8 when the NCA was established to 6 in 1987 (ibid), with further declines to 3.4 in 1994 (McCabe *et al.,* 1997b) and to 2.7 by 1999 (NCAA, 1999). The implications of this decline becomes clear when one considers the fact that, since 1980s, the livestock population within NCA has essentially continued to decline while population of the Maasai have increased dramatically due to both natural fertility and immigration (McCabe, 2003). Previous studies have indicated that the NCA had 8,700 people in 1966 (Dirschl, 1966). The number grew to 52,000 by 1999 (MNRT and NCAA, 2001). As of 2007, the NCAA report on human and livestock census has estimated the number of the Maasai to be 64,842 with some 300,000 number of cattle (NCAA, 2007). Overall, a growing population of the Maasai has become increasingly dependent on a shrinking livestock population.

My interviews with the Maasai on this question have indicated the decline in TLUs has resulted in extreme poverty among the NCA's Maasai. From their point of view, this impoverishment is due to constraints on their land use practices imposed by the NCAA's conservation policies. With the NCAA land use laws and regulations, the Maasai have very limited access to grazing land, and the number of cattle that one should have remains under the control of the NCAA. Given these circumstances, the Maasai have continued to blame the government and the Conservation Authority for causing many of their economic difficulties. One female interviewee when asked to comment on this subject had these to say:

> "...everything we want to do for the sake of our own development has to comply with the rules and laws of the NCAA no matter how important it is for our own life. In most cases, we end up being discouraged; hence we fail to make life of our own. This has tremendous effects on us as we now rely much on grants and

> assistance from different social groups outside the NCA. We will continue being underdeveloped if the NCAA won't allow us to make use of the land for our own life."

Clearly, this quotation reflects that the Maasai residents have been victimized by the NCAA's extensive powers of controlling all land uses within the NCA. The experience learned in NCA has conclusively shown that pastoralism has lacked support at the highest levels of government and has rarely, if ever, benefited from the institutional frameworks designed explicitly for its promotion as viable land use and as a livelihood strategy of the Maasai. This has thus hindered the Maasai communities from attaining a certain level of economic development which is not lower than that of other Maasai outside the NCA and of the other Tanzanians in general.

Transmission of wildlife diseases to livestock

Apart from the NCAA restrictions on land use, the abject poverty in relation to the downfall of the livestock is also attributable to livestock diseases, often transmitted from wild animals. During the study it was revealed that the Maasai livestock production is highly constrained with tick-borne diseases such as east coast fever (ECF), ormilo (bovine cerebral theileriosis), malignant catarrhal fever, anaplasmosis, contagious bovine pleuropneumonia, nairobi sheep disease, lumpyskin disease, babesiosis and anthrax. Of these diseases, malignant catarrhal fever and east coast fever were identified to be the most serious diseases affecting livestock. Malignant catarrh fever is fatal to cattle and other livestock herds. The disease is believed to be transmitted from wild animals, especially wildebeests which act as host to pathogenic parasites. This is critical as wildebeests and livestock interact or overlap over resource use within the NCA, more

particularly during the wildebeests' annual migration from the NCA to Maasai Mara National Park (of Kenya) via Serengeti National Park.

East coast fever has also posed serious constraints to livestock production of the Maasai because of the high mortality rate for livestock. According to Kipuri and Sørensen (2008), east coast fever "...has the biggest economic impact, killing an estimated 70 to 90 per cent of non-immunized calves in the NCA each year depending on the level of tick infestation" (p.20). This high mortality rate is responsible in itself for the serious decline of livestock populations that has been observed in the NCA for a considerable number of years. The Maasai have responded to this problem by controlling ticks. Their affordable control measure has in many cases been to burn the bushes, usually through uncontrolled fires. However, their controlling measure of burning the bushes has usually been in conflict with the conservation goals of the NCAA as it implies destruction of habitats and the overall vegetation cover in the area. The Maasai expressed that under such circumstances, livestock diseases have been inevitable features in their pastoral production systems and due to this, they currently have little hope of recovery without assistance.

Overall, diseases have killed a large number of the Maasai cattle, further affecting their economic conditions as well as their survival as individuals. Although at the creation of the Area the Maasai were promised veterinary services including expertise by the NCAA, these have poorly been provided as they are still inadequate to meet their demands. The Maasai are particularly concerned about the scarcity and expense of veterinary drugs. More recently, this task has been subcontracted out to private operators from whom the Maasai can acquire veterinary services at their own expenses. The study

has revealed that most of them are unable to afford the veterinary costs. Due to these circumstances, the Maasai households are in dire economic conditions because of livestock losses.

The issue of cultivation

Cattle have been the basis of the Maasai economy and food security. The continued decline in cattle since the 1980s has resulted in food shortages (McCabe *et al.,* 1997a; Galvin *et al.,* 2002; Runyoro, 2006). In response to this, the Maasai have increased their reliance on small herds of other livestock, primarily goats which are less prone to diseases as well as opting for subsistence cultivation to supplement the necessities of their livelihoods. This represents a significant livelihood adjustment as the Maasai had primarily been pure pastoralists. During the study, the Maasai explicitly expressed that there has been no intention for them to be predominant cultivators of land since their economic base is still on livestock. This transition has been further complicated by the NCAA's refusal to legalize cultivation. It appears that the NCAA's refusal to legalize cultivation is tied to the belief that subsistence cultivation will eventually lead to extensive commercial farming. This is in contrast to the Maasai themselves as they expressed that they are not, and have never been interested in extensive farming. Added to this is the fact that their interests and demands throughout have continued to be on small plots for growing food.

The Maasai have made some progress on securing the rights to augment their livelihoods when the ban on cultivation was temporarily lifted in 1992 by the then Prime Minister Samwel Malecela on humanitarian grounds that conservation cannot outweigh the importance of the Maasai. As the government didn't specify the time-frame for which

the lift of the ban would last, the Maasai have continued to cultivate in places near their households. While conducting the study in their villages, I observed that the Maasai have now been engaged in cultivating small plots for food near their homesteads or at some distance in places suitable to grow potatoes, maize, beans and other vegetable products.

While cultivation is taking place, views of the NCAA on this have indicated that the ban was lifted apparently against its wishes, such that it was done to suit political ends of the ruling party. One NCAA managers clarifies this point when interviewed regarding the lift of the ban on cultivation:

> "...the Maasai have been given stronger voices with our governments' top leaders. For example, the lift of the ban on cultivation by the Prime Minister was more political in nature as we conservationists we were not consulted and it was lifted without amending the laws that banned it. If we could have been asked regarding this, we would have rejected to lift the ban as we are aware of impacts that cultivation can have on the area's landscapes and to our conservation goals we seek to achieve here".

From the above quotation, it becomes clear that under the laws of the NCAA no one is allowed to farm in the conservation area. Although cultivation is necessitated by the Maasai inability to rely exclusively on their livestock for food, the continued practice of cultivation under such circumstances has caused conflicts between the Maasai who want to sustain their livelihood and the NCAA that wishes to conserve the natural resources of the Area. This research has revealed that the NCAA position has been and continues to be a phase out of cultivation in the NCA. Other pressures to phase out cultivation are coming from the international bodies. For example, UNESCO has warned that the NCA could be removed from the list of world heritage sites due to the increased cultivation and other human activities in the area (UNESCO/IUCN, 2007).

This research has revealed that the shift of the Maasai from being pure pastoralists to agro-pastoralist has produced a complex situation in the NCA. The Maasai see the government directive to the NCAA lifting a ban on cultivation was controversial and remains so since there has been arrests and prosecution of the Maasai on charges of unlawful cultivation in the area despite the lifting of the ban. From the NCAA perspectives, they see the issue as a political directive that is inconsistent with the laws they seek to enforce. In spite of periodic crackdowns by the NCAA, the Maasai dependence on cultivation has increased in recent years as an important supplement to their food requirements. Given the current situation in the NCA, the Maasai now cannot survive as pure pastoralists and it is expected that illegal cultivation will continue to persist in the NCA.

In its broadest sense however, the Maasai still prefer to undertake their pastoral economy as the principal source of their livelihood needs. Despite the current integration of crop production (though restricted) into their pastoral economy, food availability has continued to be inadequate among the Maasai partly due to changes in weather conditions and destruction by wild animals. The Maasai have in recent years been engaging in trade by selling their livestock to earn money to purchase food[46] and while this provides temporary economic relief, this practice leads to further reduction of their household's cattle, leading to more poverty, as well as breakdowns of their social systems. Due to these, the Maasai have increasingly found it difficult to survive. Their life in the NCA has become more complex and most of them have lost control over their own future with young Maasai moving to big towns to look for more sources of livelihoods.

[46] They also use the money to pay school fees, hospital bills, marriage costs, and for buying veterinary drugs for their livestock (fieldwork).

The question of timber and fuel wood extraction in the NCA

Another issue of concern of the Maasai regarding their livelihood strategies was the extraction of timber and fuel wood. The majority of them depend on these forest products to obtain building materials and power sources for their domestic uses, and their dependence on forest resources has imposed pressures on NCA vegetation, further intensifying the conflicts between the NCAA and the Maasai. On the legal aspects, Section 27 (d) of the NCAA Act empowers the Authority to take measures for the protection of flora and fauna and any form of extracting forest materials (with the exception of firewood collection for domestic uses) is illegal within the conservation area. The NCAA concerns are tied to the practices of some Maasai women who have been selling firewood to earn money[47].

More serious problems have been with the extraction of timber, especially *Juniperus procera* or *mitarakwa* in Swahili as these trees are preferred by the Maasai for construction of their huts commonly known as *bomas* (Maasai homesteads) due to their durability. The use of trees for construction is central to the Maasai livelihoods but this is contrary to section 9 (1) of the Wildlife Act which prohibits anyone to fell, cut, burn, injure or remove any standing tree, shrub, bush, sapling, seedling or any part thereof in any game reserve without permission from the responsible authority. During my visit to the Ngorongoro Primary Court, I learned that a number of Maasai have been prosecuted and charged with the offence of unlawful possession of forest materials as provided in the Forest Act. In particular, the Act prohibits people from felling down the trees for any

[47] The study has revealed that the Maasai women have been involved in selling firewood to earn money that they use to cover other necessities of their lives, especially for buying food.

purpose within the PAs as outlined in its section 88[48]. Interviews with the Maasai confirmed that the laws of the NCAA do not allow them to build permanent and modern houses, as such many Maasai have and will continue to rely on those forest resources for constructing their traditional houses despite the prosecutions.

Inadequate social services and infrastructures in the NCA

Another livelihood concern of the Maasai is the inadequate social services and infrastructure. The Maasai have considerable need for better social services and improved infrastructure but often have the least access due to economic constraints and the limitations from the NCAA. During the study, I noticed that the existing facilities for social services in the NCA are not sufficiently serving the interests of the Maasai residents. Many Maasai have to walk many hours to reach medical services or schools. Though they have been improved, these services remain poor. There are few and scattered dispensaries, and drugs or specialized doctors and nurses to serve the Maasai within the NCA are scarce. Each village has at least one primary school, but they are also lacking teachers. Reasons for understaffing are complex and not fully understood but poor working and housing conditions have discouraged well-trained people from working in the NCA.

Views of the Maasai have indicated that since the conservation area was established to safeguard their interests, it would have been beneficial to them if the NCAA could have improved their social services. The NCAA has shown little

[48] This section states that "...any person, who without lawful authority or excuse, the burden of proof which shall be upon him, takes, receives or is found in possession of forest produce with respect to which an offence against this Act has been committed, unless he can account for such possession or can show that he came by such produce innocently shall be guilty of an offence and upon conviction shall be liable to a fine of not exceeding one million shillings or to imprisonment for a period not exceeding two years or to both such fine and imprisonment" (Forest Act No. 14 of 2002).

commitment to making the necessary improvements and has used its vast legislative powers to prohibit, restrict and control the Maasai from using the land even when they want to construct their own social services facilities. The NCAA routinely uses its power to control construction of secondary schools, dispensaries or a dwelling houses and all construction is regulated by the Conservator. At this time, the Maasai have long proposed to construct two secondary schools, one in Olbalbal (for girls) and one in Nainokanoka (a mixed school) and the Conservator has not yet granted permission. The environmental impact assessment process has been applied unevenly. The Maasai have trouble securing environmental approvals to advance their projects, but new development such as the Rhino lodge and several camp sites have recently been established in the Area. This has understandably raised many questions on the part of the Maasai. Overall, the uneven application of environmental legislation has adversely impacted Maasai access to social services.

Equally important, infrastructures such as roads, power and water supply have also remained poor in the NCA. Roads, though they are important and necessary infrastructure, in the NCA, they are classified according to users' requirements. They serve different functions including administration, anti-poaching, tourism activities and delivering community services. Generally speaking, roads in the area are in poor condition and restricted to a few tourist destinations within the NCA. Although there are concerted efforts to improve the existing road system in the area, still most parts of the NCA are inaccessible during the rainy seasons. Findings from this research have indicated that the NCAA has accorded priority to improving the road networks in places

where it obtains benefits. Most of the village roads are poorly maintained; as a result they are hardly passable throughout the year.

Power supply is also a substantial problem in the NCA, especially for the Maasai communities. Power has never been supplied to the Maasai communities, a situation that has forced them to rely on fuelwood from the NCA forests as their main sources of power. An environmental assessment into the feasibility of linking Maasai villages to the national grid has been conducted and the extent to which the NCAA will assist with this project remains uncertain. In contrast, the NCAA and the private lodges rely on generators to supply power for their operations.

Water supply has been a long-term problem in the NCA that adversely impacts all residents in the PA. The NCA indigenous residents compared to other NCA employees have a less reliable water supply. The focus group sessions with the Maasai revealed considerable hardships, especially in Endulen, which has one public water station that all villagers depend to obtain water for their domestic uses and sometimes for their livestock. As a result, the majority of the villagers have faced hardships, especially during dry seasons, when water is scarce and the majority of the Maasai routinely relies on unsafe water flowing down the streams and into unmaintained ponds. These ponds are occasionally shared with cattle and wild animals, which in turn increases Maasai exposure to water borne diseases such as typhoid and diarrhea.

Mistreatment in employment opportunities in the NCA

Focus group meetings with the Maasai also revealed a sense of mistreatment by the NCAA in its employment recruitment procedures, which in turn entrenched high rates of unemployment among the Maasai. The Maasai are committed to conservation but their

interests have been constrained by the NCAA as it has recruited few Maasai to work in its different departments. While at the NCA offices, I was able to confirm that very few members from the Maasai community have been able to secure work with the NCAA. One of the outcomes of the NCAA recruitment programs is the under-representation of the Maasai in all areas of employment in the conservation area. Many Maasai have sufficient education and traditional knowledge to contribute to NCA conservation programs but the NCAA routinely recruits from outside the region. The Maasai claim *"upendeleo"* or favoritism is practiced and this contributes to NCA staff hiring of acquaintances. The Maasai also claim to have limited access to non-skilled jobs. It follows that, these employment practices have contributed to an alienation of many of the Maasai residency in the conservation area and increased tensions between the Maasai and the NCAA.

Overall, the livelihood concerns discussed above makes it clear that there are competing interests between the Maasai and the NCAA. The livelihood concerns raised by the Maasai are not seen as priorities by the NCAA, and these differences have undoubtedly contributed to ongoing tensions between the two groups.

5.2.4 Resource and Biodiversity Conservation in the NCA

The NCAA is mandated to conserve and develop the natural resources of the conservation area, recognizing the NCA as an asset of national value and an area of international interest. It aims at ensuring that the area's natural resources and the biodiversity are conserved in such a way that they provide a maximum sustained yield of products, as well as maintaining the area's unique features. However, natural and anthropocenic factors have contributed to declines in resource stocks and biodiversity

(NCAA, 2006). This section, drawing on interviews with NCA managers and on NCAA documents, reports on the key challenges (see Table 6) which the NCAA is struggling with to attaining its conservation objectives. They include the following:

High population growth of the Maasai

Findings from this research revealed that there has been a significant population growth of the Maasai in the NCA. The study by Dirschl (1966) indicated that a few years after the establishment of the area, the NCA was inhabited by 8,700 people. A recent human and livestock census has reported that the conservation area is currently inhabited by more than 64,000 people with an average number of 12,000 households (NCAA, 2007). These population increases have intensified demands on the area's resources as well as conflicts amongst resource users and the NCAA. One NCAA manager, when interviewed on this subject had this to say:

> "...the challenge we are facing now is how to balance conservation goals with development activities of the indigenous Maasai. It is very challenging because of the high increase of human population beyond the carrying capacity of the area. The NCA can only support 25,000 people. Now that there are more than 64,000, it has been so difficult to manage the area as the NCA and its resources. So, the big challenge is that we need to have sustainable development which will ensure a sustainable future of the conservation area. Our main concern is to make sure that the needs of the Maasai are not affecting the viability of resources that we are having now".

This quote reflects the NCAA's views regarding the challenges that the Maasai population growth has brought to the Conservation Authority, and this is in stark contrast to the views of the Maasai who have continued to place greater emphasis on their livelihood concerns (see previous section). This is not to suggest that the NCAA's views are not legitimate but it does highlight differences in priorities between the NCAA and the Maasai.

Destruction of forest resources

Apart from being a home to wildlife resources, the NCA is also well-endowed in forest resources. Lerai forest in the south-west of the Ngorongoro Crater, and the highland forests of the south-eastern NCA, including the Northern Highland Forest Reserve, are recognized as exceptional resources by the NCAA for several reasons including importance as water catchment sites, botanical treasure, essential wildlife habitats, source of fuelwood, medicinal plants, livestock grazing during drought periods and tourism and recreation sites (NCAA, 1996). The NCA forests have in recent years been under considerable pressures from illegal harvesting of forest materials such as timber, poles, and fuelwood and it appears these threats to forests are primarily attributable to non-residents along the NCA boundaries with Maasai use of the forests being of lesser concern. The threats to forests include uncontrolled burning, clearing of land for cultivation, inadequate control of cattle grazing in forested areas, bush encroachment and the increased population and human settlements and collectively there has been a substantial loss of woodland and forests in the NCA[49].

Views from the NCAA have indicated that destruction of forest resources is one of the main challenges it faces. The Authority considers the destructions to have altered the vegetation cover of the conservation area, which in turn has resulted to substantial destruction of wildlife habitats, water catchment sites and the overall scenic quality of the NCA. The NCAA has responded with several proposals to enhance the management of forests, including enhancement of law enforcement along the NCA boundary and forest revegetation in highly impacted areas. Other measures of the NCAA have been to halt

[49] In an interview session with the NCA's Natural Resource Management Officer who provided permission for his job title to be used in this research by signing the consent forms.

further development of permanent structures within the PA. Although these actions to curb forest losses are promising, the NCAA maintains the view that the increasing human population in the area and the exponentially rising demands for land and forest products remains to be its major challenges that will continue to hinder its prospects for conserving the NCA's forests.

The threat of invasive alien species

Another challenge to the NCAA's conservation efforts is the threat of unpalatable (alien/exotic) species which has caused serious impacts on native biodiversity in the NCA. According to the NCA Range Management Officer[50], the NCA has been invaded in recent years by a number of well-known invasive species which have affected the general structure and species composition of the area's ecosystems thereby replacing them or excluding them by outcompeting indigenous species for resources such as water. The rapid spreads of invasive species have noted to be resulting from the increased movements of people in and out the Area and transportation of products (such as road building materials and agricultural products) into the NCA. People and products entering the NCA from other places increase the chances of introducing and spreading seeds of the exotic species in the NCA.

Of particular concern in the NCA are the Thorn apple *Datura stramoniun* and Mexicana poppy *Argemone mexicana* (field work) as these two invasive species are toxic to other plants and animals. Their continued dispersal is threatening the integrity of the NCA's natural resources by reducing the viability of important grasses such as *Themeda triandra* as well as reducing pasture lands for both livestock and wildlife inside the NCA.

[50] The officer agreed for his job title to be used in this research by signing the consent forms.

To halt the extent of the problem, the NCAA is currently working to control the already existing populations of invasive plants to prevent them from spreading to unaffected areas within NCA. It has been employing manual methods such as cutting, pulling, digging, and burning. This however has been done by timing them, especially when they are at a flowering stage so as to deplete them easily and prevent them from germinating seeds.

Though the NCAA has shown commitment to curb the problem, its effectiveness has been limited by inadequate resources and it fears that it would become far more expensive and difficult to control the species should they not be brought under control in the near future. The study has also revealed that a number of well-known invasive species have been identified outside the NCA, especially in the vicinity of Karatu District and in other places surrounding the area, such that there is a danger that these species may spread into the NCA. As the NCAA has not been able to control the already existing species, the other challenge likely to emerge will be how to respond to the introductions of new alien species.

Livestock-wildlife disease transmissions

As the NCA is a multiple land use area where pastoralists and their livestock live alongside wildlife, contacts between wild animals and livestock cannot be avoided. Views from the NCAA have indicated that these contacts have resulted in disease transmissions in both directions and the impacts range from negligible to severe. Research conducted by the NCAA in collaboration with Sokoine University of Agriculture (SUA, Morogoro-Tanzania) between 1998 and 2002 indicated that both wild animals and livestock have suffered from severe disease outbreaks (SUA-NCAA, 2004).

In an interview with the NCAA Ecological Monitoring Officer[51], he identified rinderpest, foot-and-mouth disease, and some carnivores' diseases such as canine distemper and parvovirus infection to be the notable diseases affecting wildlife[52]. These diseases have in most cases resulted in widespread culling of wildlife populations and there is a considerable decline in number of certain wildlife species in the NCA.

Clearly, the diseases affecting wildlife have undermined the NCAA's conservation efforts and the viability of the most threatened large mammals such as black rhinoceros and elephants in the NCA. Views from the NCAA have made it clear that increase in tick-borne diseases, often transmitted from livestock has continued to threaten rhino populations in the Ngorongoro Crater. Other wildlife species that have been experiencing serious decline over the past few years include the wild dog, oryx, greater kudu and lions. Livestock-wildlife disease transmission is a substantial challenge to the management of the NCA and NCAA managers pointed out during the interviews that specific vaccines and treatments are often unavailable or untested for use on wildlife.

The NCAA response to this challenge includes plans to expand and continue strengthening the Livestock Development Section of the Community Development Department to provide wildlife veterinary services and to control livestock disease outbreaks. This research also revealed that efforts to control disease transmissions have contributed to declines in the quality of grazing lands. The NCAA has attempted to reduce disease exposure by relocating livestock into uninfected areas but this contributed to overconcentration of livestock and wild animals in areas with less risks of disease

[51] His job title is used here following his permission.
[52] See section 5.2.3 for those diseases affecting livestock.

transmission and increased the potential for conflict between pastoralism and wildlife management.

Encroachment and blockage of wildlife corridors

Wildlife corridors are of great importance to support wildlife movements within the NCA and in the whole of Serengeti ecosystem[53] (see figure 2). For example, the great annual migration of wildebeest and other plains animals such as zebras and gazelle depend on the free movement to the north into Serengeti National Park and the Loliondo Game Controlled Area. The continued viability of these corridors has in recent years become unclear due to encroachment by human activities in and around the NCA. For example, outside the NCA adjacent to Karatu District, the continued agriculture, illegal harvesting of forest products and settlements have severely affected the wildlife corridor passing through Qurus, Endanyawish, Matala, Endamaghay and Lake Eyas Escarpment (fieldwork).

From the NCAA point of view, the expansion of settlements accompanied with the increased human land uses such as livestock grazing and cultivation are the main factors responsible for the blockage of wildlife corridors and thereby impair the NCAA's capacity to meet its conservation objectives. Wildlife corridors are essential for the survival of migratory animals, and provide animals with access to good pastures and water especially during the dry seasons. The blockage of wildlife corridors brings additional complexity to wildlife management activities of the NCAA. The NCAA

[53] The Serengeti ecosystem covers some 27,000 square kilometers, encompassing the Ngorongoro Conservation Area in the south east, Ikorongo and Grumeti Game Reserves in the north west, Maswa Game Reserve in the south west, the Loliondo Game Control Area (also known as government approved hunting blocks) in the north east, the Serengeti National Park at the center, and in the north by the famous Maasai Mara National Reserve in Kenya (NCAA, 1996, 2006).

maintains a view that it is necessary that all corridors and important wildlife habitats remain open and made available for wildlife and currently the NCAA is directing its efforts to addressing the factors that have contributed to the problem. Some of its controlling measures include the continued discouragement of cultivation and development of permanent structures in the NCA's wildlife corridors.

The collective challenges presented by population growth, destruction of forests, invasive alien species, wildlife and livestock disease transmissions and blockage of wildlife corridors have made it difficult for the NCAA to effectively conserve the natural resources and biodiversity of the NCA. Some of these challenges are rooted in factors that reside within the NCA, including population increases and expansion of tourism facilities. Other concerns, including illegal hunting and timber harvesting on the perimeter of the NCA are beyond the immediate control of the NCAA. Overall, resource and biodiversity management in the NCA has several layers of complexity ranging from multiple stressors to multi-tiered jurisdictional responsibilities.

5.2.5 Land Use Planning and Decision-making Process in the NCA

Land use planning and decision making process is another source of complexity and conflict in the NCA. The study has revealed that one of the main obstacles for a successful multiple land uses strategy is the question of selecting and putting into practice the appropriate land use plans and decisions that are to best meet the needs of the Maasai while safeguarding the natural resources of the NCA at the same time. Drawing from the table (see Table 6), issues surrounding this challenge were identified and are discussed below from the perspectives of both the NCAA and the Maasai.

Insufficient incorporation of scientific research into land use planning of the NCA

The NCA is very rich in natural resources (see chapter 3) and a thorough understanding of the functions and relationships between resources and resource users is necessary for effective land use planning in the NCA. Its scenic landscapes, status as the World Heritage Site, and the existence of the Maasai living alongside the wildlife are some of the aspects which have attracted many researchers from different parts of the world to undertake scientific studies in the PA. Research into the NCA's natural science has been carried out since the PA was established but there has been limited incorporation of this scientific research into land use planning of the NCA.

Views from the NCAA have indicated that both long and short-term research in the NCA have not been well integrated with management needs of the Area. The NCAA pointed out that most of the research findings have not been shared with or properly presented to the NCA managers in the way that encourages application and, not surprisingly the NCAA General Management Plans tend to lack scientific information. Views of the Maasai (particularly those of the NGOPADEO) on this issue have also indicated that if the fundamental results and recommendations of previous studies (see Homewood and Rodgers, 1991; McCabe *et al.,* 1992; Shivji and Kapinga, 1998) could have been well communicated to the NCAA, this perhaps would have enabled the Conservation Authority to undertake more management actions that would meet the needs of both users of the NCA.

Inadequate utilization of indigenous knowledge of the Maasai in planning

Findings from this research have also indicated that there has been inadequate utilization of the indigenous knowledge of the Maasai in land use planning of the

Conservation Area. Views of the Maasai have suggested that their indigenous knowledge of the natural environment of the area has received little recognition from the NCAA despite the fact that they have generally been useful assets and intellectual resources that have preserved the NCA for many years. This becomes clear when one considers the fact that there have been no mechanisms for recognizing, documenting, and integrating their indigenous knowledge into land use planning in ways that encouraged and promoted co-existence of the different land uses in the NCA. An interview with an NCAA manager supported the Maasai's views and the incorporation of indigenous knowledge of the Maasai in its land use planning and the overall management options for the NCA would have increased the likelihood of attaining a balance between conservation and human development of the Maasai.

Lack of proper land use planning

This work has also revealed that the ongoing conflicts over land use priorities in the NCA are simply the consequences of improper land use planning of the Conservation Area that has failed to accommodate the land use interests of its different users. Some of the Maasai I interviewed suggested that perhaps the NCAA has adopted and maintained the conservation policies of the colonial administration which deprived their rights of access to land. It remains clear that the colonial policies were very oppressive and did not provide the Maasai with any tangible benefits from the area's resources and thereby contributing to long-standing conflicts between the conventional conservation strategies (of the NCAA) and the indigenous conservation systems of the Maasai in the NCA.

Expressing their views on this, the Maasai suggested that their indigenous systems have allowed them to sustainably conserve the natural resources of Ngorongoro. They

regarded conservation as their daily-life task and it was customary for Maasai leaders to regulate access to a given resource and enforce arrangements through a system of fines and other social sanctions. During the time of stress, as water and pasture resources became increasingly scarce, access was more restricted and herds were eventually moved elsewhere as a temporary measure to avoid damaging the environment and its resources. In an interview session with one member from the Maasai community wearing a professional hat on this subject, he emphasized that:

> "...conservation in the NCA as in many other parts of Africa has been invaded by foreign ideas as conservation today is no longer African any more. Look, there are new ideas and concepts that have been introduced in the management of our lands, often conflicting with our indigenous strategies that have preserved the NCA for many years even before our land was given the protectionist status. Though we still wish to use our taboos and other traditional methods, our wishes are constrained with the existence of 'modern approaches' to conservation which are currently being used by the Conservation Authority".

This quotation reflects the fact that the NCAA has failed to accommodate the indigenous conservation systems of the Maasai into its land use planning. This neglect of respecting and utilizing their traditional methods of conservation has had adverse consequences in the area, including the dwindling number and quality of flora and fauna.

Inadequate participation of the Maasai in planning and decision-making process

Another issue surrounding the conflicts in the NCA as revealed from this research is inadequate participation of the Maasai in planning and decision-making process. Findings from this research have indicated that, with its top-down approaches to conservation adopted from the colonial power, the NCAA has long excluded the Maasai from all aspects of planning and decision-making processes for the NCA. Integration of the Maasai into NCAA land use planning received attention in the mid-1990s and facilitated the creation of the Ngorongoro Pastoralist Council in 1994. The Council was

expected to serve as a platform for NCAA and the Maasai's discussions on matters of mutual interest and as a medium through which the Maasai concerns and proposals can be channeled to the NCAA's Board of Directors. Instead, the Council has being regarded as the conduit pipe to communicate the decisions of the board from the top to the Maasai residents at the bottom.

The Council has generally no power and it does not result in effective participation of the Maasai in the planning and decision-making processes of the NCAA. The NCAA Board of Directors and the Management team of the Authority have continued to exercise their statutory powers of decision making and exercised policy and other discretions vested on them virtually to the total exclusion of the Pastoralist Council. With this manifesto, participation of the Maasai in decision-making processes of the Authority becomes unrealistic. For so long, active participation in decision-making has continued to be their outcry. Their desire to form partnership with the NCAA is expressed in the words of Makutian Esoto[54] when interviewed on the subject:

> "...the current decision-making practices of the *"mamlaka"* [referring to the Conservation Authority] which have excluded us from being part of the decision making bodies real hurts us. We need to be one thing with the conservation authority on this issue. In reality, we need good co-operations between us if we real need to ensure a sustainable future of our area's resources and avoid conflictual relations between us with the NCAA. The NCAA will totally immerse us into a deep burning fire if it's not going to give us voices in its decision making bodies".

This quote clarifies the dire need of the Maasai to working together with the NCAA to addressing the issues confronting the future of the Conservation Area. Most of the Maasai I interviewed on this subject expressed the need for their active participation in decision making processes. As permanent inhabitants of the Area, they said that they have special interests not only on their own development but also in the protection of the

[54] The participant provided permission for his name to be used in the thesis.

quality of the environment and its surrounding resources. They stressed that they have strong traditions of stewardship and responsibility for wildlife and environmental protection. In spite of these traditions, the NCAA has continued to exclude them from contributing their knowledge and skills and often they have been accused of contributing to poaching and other environmental problems in the area.

This suggests that there are fundamental differences between the two groups on this question of participation. This is reflected in the fact that the Maasai interests are and will continue to be their desire for them to be part of the planning and decision making teams. On the other hand, despite the continued outcry of the Maasai to have active participation in planning and decision-making processes, the NCAA has continued to place little interest in having the Maasai actively involved. It remains clear that, for a sustainable future of the NCA, there has to be clear arrangements to encourage active and effective participation of the Maasai in planning.

5.3 Resolving the Conflicts in the NCA: Opportunities and Challenges

The previous section identified the multiple and intersecting conflicts that are present in the NCA, and it also reported on the differing priorities of the NCAA and the Maasai. This section outlines the major claims from both the Maasai and the NCAA over the conflicting land uses in the NCA, followed by a discussion of possible solutions to resolving the conflicts in the NCA.

5.3.1 Major Claims of the NCAA and the Maasai over the Land Use Conflicts in the NCA

The major claims of the Maasai and the NCAA were explored in view of opportunities to reconcile the conflicts in the NCA. As shown on Table 7, claims from the Maasai were those voiced by the Maasai members, officials from the Pastoralist Council and NGOPADEO during the study (column II-IV). Those of the NCAA were raised by the NCAA managers (column I) during the interview sessions with them. These claims are discussed below the table in view of what is needed to ensure a sustainable future of the conservation area and of the Maasai residents.

Participants / **Themes/ Addressed objective(s)**	**I**	**II**	**III**	**IV**
	NCAA managers	Maasai members	Pastoralist Council	NGOPADEO
Major claims of the Maasai and the NCAA over the conflicts in the NCA	1.Commitments to achieve its conservation goals 2.Reducing pressures on land and natural resources 3.Enhanced enforcement to regulate natural resources utilization in the NCA 4.Commitments to improve its decision-making processes	1.Adjustment to conservation policies 2.Fair treatment in employment opportunities	1.More power to the Pastoralist Council	1.Enhanced Maasai input to NCAA planning and decision-making process 2.Enhanced sharing of benefits 3.The NCAA to revisit its laws

Table 7. The Major Claims of the Maasai and the NCAA[55]

[55] Columns V-VII are deleted as there was no contribution from these participants (Ngorongoro Division, Ngorongoro Primary Court and the Wildlife Division) regarding the major claims of the Maasai and the NCAA.

5.3.1.1 Claims of the NCAA

The major claims of the NCAA were captured with regard of the management challenges it faces with a focus of what is needed to be in place to maintain the ecological integrity of the NCA in order to achieve its conservation and tourism objectives. The NCAA's claims are detailed below:

Commitments to achieve its conservation goals

The NCAA claims to have a dire need to achieve its conservation objectives which include protection of critical wildlife habitats, maintenance of the diversity of both flora and fauna populations, and the maintenance of wildlife populations in sufficient numbers to ensure long-term genetic viability and tourism. To meet these ends, the NCAA claims to have been making considerable efforts to halt the threats (see section 5.2.4) to its conservation values, including commitments to prioritize research needs annually, continue and enhance its natural resource monitoring program, prohibit new constructions in wildlife corridors, and strengthen patrols and enforcement of forest protection regulations.

Reducing pressures on land and natural resources

The NCAA claimed that the increased pressure on land and other natural resources have suppressed its conservation objectives for which the area was created. Views of the NCAA indicate that the increased pressures in and adjacent to the conservation area have continued to cause serious problems to its management goals. Given the prevailing socio-economic and political conditions within the NCA, the NCAA claims to have found it difficult to integrate conservation with development needs of the

Maasai. It appears that the NCAA's concerns about development are tied to two factors: Maasai population growth and changes in Maasai culture. The high increase in Maasai population within the NCA over the recent years is by itself a concern as this creates greater demand for resources and some NCAA staff suggest the PA's carrying capacity will be breached in the future (see section 5.2.4).

Changes in Maasai culture, especially attempts to move from a pastoral to more diversified economy including subsistence cropping, are also from NCAA perspectives, impinging on the attainment of conservation objectives. These concerns within the NCA are also coupled with external pressures. For example, UNESCO's recent warning that it may remove the NCA from the list of world heritage sites due to increased human activities in the conservation area has prompted the NCAA to propose plans to relocate its staff from within the conservation area to a 435-acre Kamyn Estate, some 30km away from the NCAA headquarters. Similarly, plans are also underway to relocate the Maasai families settled in the NCA after 1975 when the government prohibited additional people from settling permanently in the area.

Enhanced enforcement to regulate natural resources utilization in the NCA

The NCAA claims to have also been facing difficulties enforcing its regulations to guide effective use of natural resources in the NCA. All resource utilizations in the NCA are supposed to be regulated by the laws governing the NCAA but the Maasai and other communities bordering the NCA continue to use land and other resources for different purposes without approval from the NCAA. The NCAA is currently attempting to assert its authority and ensure laws are followed in order to halt the current threats to conservation especially those emanating from uncontrolled utilization of land and other

resources. This shift relies heavily on strengthening patrols and enforcing resource use regulations in the conservation area.

Commitments to improve its decision-making processes

Section 5.2.5 outlines Maasai views regarding their lack of involvement in NCAA decision making processes and how this isolation has adversely impacted NCAA-Maasai relationships and contributed to a sense of persecution for the Maasai. Interviews with NCAA managers indicated an awareness of the importance to promote effective participation of the Maasai in planning and in its decision-making processes. The creation of the Pastoralist Council represents one step to improve relations between the NCAA and the Maasai residents. Further measures to improve its decision-making processes include a proposal for Maasai and neighbouring communities to actively be involved in decision making and the incorporation of indigenous knowledge of the Maasai into the NCAA's conservation initiatives, and in developing the NCAA's General Management Plans.

5.3.1.2 Claims of the Maasai

Claims from the perspectives of the Maasai were raised with regard of their livelihoods concerns, especially on what ought to be the way forward for their better future while in NCA. Their claims are discussed below:

Adjustments to the conservation policies of the NCAA

The Maasai claimed to have been affected by the old colonial policies that the NCAA through the government of Tanzania adopted from the British colonial government. For them, they see those conservation policies which are in place today to

have been outdated and exclusionary (see section 5.2.5). The Maasai are now seeking adjustments to conservation policies that will allow them to regain their past freedom of access to land and other resources in order to improve their livelihood strategies.

Enhanced Maasai input to NCAA planning and decision-making process

The Maasai have also raised a claim that the role of planning and making decisions for the NCA has essentially relied heavily on the executive powers of the Board of Directors (the highest decision making body of the NCAA) with little input from the Maasai (see section 5.2.5). Majority of the NCAA Board of Directors (appointed by the Minister of Natural Resources and Tourism) are from outside the NCA and the Maasai are concerned by their very limited knowledge of the NCA. In addition, the Maasai are concerned that Board members are mostly chosen for their expertise in tourism or wildlife conservation, and that broader concerns of multiple land uses strategy that is of interest to the Maasai are of lesser importance. The Maasai have thus continued to regard themselves as being the forgotten partners in planning and decision making bodies of the NCAA. During the study, they collectively claimed to have a dire need for the NCAA to actively and effectively involve them in its planning and decision-making processes.

More power to the Pastoralist Council

Another claim raised by the Maasai is that more powers should be given to the Pastoralist Council which is currently the only body representing their interests to the NCAA. The Council is currently playing an advisory role to the NCAA Board of Directors, and the Maasai are concerned over the inability of the Council to influence decisions on conservation and tourism activities. This desire to revise the role of the Council is part of a larger effort by the Maasai to play an active and effective role in

managing the area in ways that will benefit their communities as well as the NCAA, and the Maasai are advocating the Pastoralist Council be an independent department free from the dominance of the NCAA and headed by Maasai residents.

Enhanced sharing of benefits

The NCA Act does mention the Maasai as shareholders of benefits delivered from tourism and conservation activities but this has tended not to occur. The NCAA realizes considerable revenues from its conservation and tourism activities and the Maasai claim a fairer sharing of these revenues would improve their livelihoods and facilitate a phasing out of cultivation as it is not a traditional practice of the Maasai. An enhanced flow of economic benefits to the Maasai would improve their food security and access to better social services (education, medical care, and improved infrastructures). The Maasai have expressed their interests and commitment to become more actively involved in tourism activities in order to generate additional incomes that will enable them to meet the necessities of their daily life.

The need for fair treatment in employment opportunities

Section 5.2.3 reported on Maasai frustrations with NCAA hiring and employment practices and this underpins Maasai desires for reforms to NCAA practices that would provide Maasai with equitable access. Three substantial benefits of these revisions include bolstering the NCAA's knowledge of the local history, improve the livelihoods of the Maasai residing in the NCA, and bridging the current gap between conservation and development goals in the NCA.

The need for the NCAA to revisit its laws

Sections 5.2.1 and 5.2.3 presented the adverse impacts of NCA laws on the Maasai and the conflicts. The primary Maasai concern is the violation of their land use rights which have disenabled them from undertaking their pastoral economy. The adverse impacts of NCA laws also, from the Maasai perspectives, prevent the undertaking of Tanzanian development plans such as the National Strategy for Growth and Poverty Reduction (also MKUKUTA)[56]. The Maasai are calling for a full review of NCA legislation, with an eye to protect their interests.

5.3.2 Possible Solutions to Resolve the Conflicts in the NCA

Having identified the major claims from both groups, this research then undertook a thorough examination of possible solutions to resolve the conflicts from all stakeholders involved in this research as shown in the table below (column I – VII). These possible solutions are discussed below the table.

[56] The National Strategy for Growth and Poverty Reduction (MKUKUTA) for Tanzania from 2005 to 2010 has been set out as the principal development policy with very detailed goals and strategies aimed at making progress towards a better quality of life and improved social well-being in Tanzania. It is set up into three clusters (growth and reduction of income poverty, improvement of quality of life and social well being, and governance and accountability) each with its own goals, targets and strategies to reach them (NSGPR, 2005).

Participants / Themes/ Addressed objective	I	II	III	IV	V	VI	VII
	NCAA Staff	Maasai members	Pastoralist Council	NGOPA DEO	Ngoro-ngoro Division	Ngoro-ngoro Primary Court	Wildlife Division
The possible solutions to resolve the conflicts in the NCA	1.Co-managing the Area with the Maasai 2.Addressing the needs of the Maasai	Active participation in tourism activities	Effective mechanisms for benefit sharing	Active participation of the Maasai in planning and decision-making	Recognition of land rights of the Maasai	Improving the conflict resolution mechanisms	Empowering the Maasai in decision making process

Table 8. Possible Solutions to Resolve the Conflicts in the NCA.

Co-management of the NCA between the Maasai and the NCAA

One possible solution to resolving the conflicts in the NCA require key stakeholders to work together to co-manage the Conservation Area. Co-management however hinges on the readiness of the Maasai and the NCAA to collaboratively manage the area for the benefits of both parties and while both groups have signaled interest in co-management, it is not entirely clear there is a full commitment at this time. The potential benefits of co-management include to garner a buy in on conservation and community development, empowering the Maasai and stimulating their interests to resolving the issues confronting the future of the NCA, and reducing NCAA-Maasai conflicts.

Active participation of the Maasai in tourism activities

Active involvement of the Maasai in NCA tourism would facilitate poverty reduction, improve Maasai livelihoods and reduce NCAA-Maasai conflicts. The NCAA

has shown its willingness to involve the Maasai in tourism activities, including to support the existing cultural bomas of the Maasai, recruit Maasai as tour guides, especially for the walking safaris, and encourage the lodges operating in the NCA to consider the Maasai in future employment opportunities.

Improved benefit sharing

Many of the Maasai livelihood concerns, including food insecurity and access to adequate infrastructure, can be addressed (in part) by a more equitable sharing of benefits derived from NCAA's tourism business and other conservation activities that generates income to the NCAA. Improved livelihoods will allow the Maasai to reduce their growing dependency on subsistence cropping, which will in turn, assist the NCAA in achieving its conservation goals. This will also reduce the NCAA-Maasai conflicts over land use priorities.

Recognition of the Maasai land rights

Maasai land rights is one of the main source of conflicts and it will not be possible to reconcile conservation with development goals without addressing this concern. This research has revealed the NCAA has failed to provide the Maasai with free access to land, suggesting solutions will be difficult to find. The Ngorongoro Division (Table 8, column V) has indicated that recognition of the Maasai land rights is required in order to address the ongoing conflicts in the NCA. Mechanisms to achieve this remain unclear but it may require the intervention by a third party that is respected by the NCAA and the Maasai.

Improvement of the conflict resolution mechanisms

Conflicts emanating from a breach of NCAA laws have relied mainly on court proceedings and this has been continuous and promoted new conflict. The Ngorongoro Primary Court (Table 8, column VI) has indicated that there is an urgent need to improve the conflict resolution mechanisms of the NCAA, especially by creating an enabling environment on which both parties will have an opportunity to discuss the issues of mutual interests to them and come up with agreements of what is required to resolve the NCAA-Maasai conflicts.

5.3.3 Guiding Principles to Resolve the Conflicts in the NCA

This research maintains the view that the status quo of conflicts in the NCA cannot be allowed to remain if sustainable conservation, tourism and community development are to be achieved. Continued inaction will deepen the problems and make it even more difficult to find and implement solutions. To put the identified possible solutions into practice, this research suggests four guiding principles that are to be followed. These principles are drawn from the ecosystem and co-management approaches in order to resolve competing interests, especially between the conservation agencies and local communities.

Both the ecosystem and co-management approaches share the common goal of reversing the *top-down* approaches to management of natural resources. They are being promoted by the IUCN and other international organizations such as African Wildlife Foundation, Worldwide Foundation for Nature and United Nations Environment Program to encourage national governments and their responsible authorities to put people with their traditional resource use practices at the centre of their decision making processes. In

particular, the two approaches seek to democratize decision making, foster conflict resolution, and encourage stakeholders' participation in the overall management of their common resources. They also provide a framework for both conservation and sustainable use of resources to be met in an equitable way. Above all, the two approaches promote power-sharing whereby community groups and government agencies can work together toward a better future of their areas and/or their resources. Drawing from these two approaches, the suggested guiding principles to resolving the conflicts in NCA are outlined below:

i. Recognition of the Maasai as one of the main stakeholders in the NCA

The first principle is for the NCAA to recognize the Maasai as among the main stakeholders of the NCA. It is apparent that the Maasai with their indigenous knowledge view the ecosystems in terms of their own economic, cultural and traditional usage. In view of this therefore, the conservation authority has to consider them as important stakeholders in all management aspects of the area. In addition, their land rights and other interests will also have to be recognized. Equally important, the NCAA will also have to build a trusting relationship with the Maasai and provide a forum through which it will involve them in planning, making decisions and in implementing the resulting management plans. The elements under this principle will resolve the conflicts as they are intended at ensuring a sustainable future of the NCA where conservation, tourism and sustainable use of resources for the development of the Maasai will be assured in the NCA.

ii. Enhancement of benefit-sharing between the NCAA and the Maasai

The second principle is for the NCAA to improve the flow of benefits accrued from tourism and conservation activities to the Maasai. To resolve the conflicts in NCA, there has to be a mechanism to provide for an equitable sharing of benefits between the NCAA and the Maasai. If the first principle will be in place, it will then follow that the NCAA will have to ensure active participation of the Maasai in tourism activities, a situation which will enable them to generate income that they could use to diversify their livelihood strategies. Also, the NCAA will have to use part of its revenue to improve the social services facilities to serve the interests of the Maasai. This flow of benefits to the Maasai will strengthen their incentives for protection and wise use of the NCA's resources, a situation that will bring the interests of the NCAA closer to those of the Maasai.

iii. Use of adaptive management strategies

The third principle is to use the adaptive management strategies which involve the learning processes to integrate project design, management, and monitoring in order to adapt methodologies and practices to the ways in which the natural resources are being utilized, managed and monitored. Use of these strategies in conservation projects offers promising outcomes to resolving the conflicts between conservation agencies and local people. With these strategies, the NCAA will have to understand the conditions under which the indigenous strategies to conservation of the Maasai were the most effective and understand the lessons learned across conservation projects from other countries. This learning process will enable the NCAA to work closely with the Maasai to design proper ways to manage the area. This will also serve as an important source of information to

gain knowledge of how best to manage, monitor and evaluate whether the multiple land uses and management strategies are being attained in the NCA.

iv. Having a shared institutional structure

The fourth principle is to have a shared institutional structure to facilitate the collaborative management of the area between the NCAA and the Maasai. Since the Maasai considers the NCAA Board of Directors to have been ineffective in managing the NCA, it will then be necessary for the NCAA and the Maasai to negotiate and come up with an agreement on whether to merge the NCAA Board of Directors with the Pastoralist Council or to create a new management body that will represent both stakeholders equitably. Following the creation of a management body, the NCAA would have, in consultation with the Maasai, to prepare a new Management Plan for the Conservation Area that will accommodate the interests of both parties. A shared management body will thus play significant roles to ensure that both stakeholders will co-manage the NCA in accordance with the General Management Plan that will be formulated. In part, a management body will also have to take into account the mechanisms of local conflict resolution which consider the existing cultural, political and social contexts in the area.

Chapter Six
Conclusions and Recommendations

The central objective of this research was to evaluate the extent to which different land use and management strategies in the Ngorongoro Conservation Area are in conflict from the perspectives of both the NCAA and the Maasai residents. To accomplish this, views were sought from the NCA's managers and from the Maasai and other key stakeholders using qualitative research methods. The fieldwork was informed by extensive literature about the origins of conservation ideas in Africa and how this has resulted in conflicts over resource use in many protected areas, including in the NCA of northern Tanzania. This literature highlighted the role of the ecosystem approach and the new discourse of co-management as promising approaches to dealing with conflicts over use, access and ownership of natural resources in protected areas.

This research has shown that the different land uses of the NCA are in fact in conflict with each other. This is attributable to the management practices of the NCAA which have continued to place little interests on either pastoralism or the overall developmental needs of the Maasai and given more attention to conservation and tourism. This situation has contributed to widespread poverty and socio-economic marginalization of the Maasai. The socio-economic hardships currently facing the Maasai are attributable to the restrictions placed on their land uses and loss of control of their own future.

Failure of the NCAA to pursue the twin objectives of conservation and development is routinely cited by the Maasai and their supporters for the decline in Maasai livelihoods and the Maasai becoming increasingly reliant on subsistence cropping as a livelihood strategy. This thesis makes a case that failure of the NCAA to implement

sustainable and long-term conservation and development strategies involving the Maasai from the initial stages of planning has worsened the relations between the Maasai and the NCAA and also led to severe environmental and ecological damage in the NCA.

It is generally agreed that the Maasai have co-existed in harmony with wildlife and other resources for generations without depleting the resource base; this research suggests it would not be wise to assume that sustainable land use practices in the NCA can be achieved without having an authorized institution with legislative powers to regulate resource use. The NCAA clearly has an integral role in regulating the land uses in the Conservation Area but it will not be possible to resolve the existing conflicts without strong commitments to integrate the Maasai into the management of the NCA. Key recommendations from this research follows.

Adoption of the ecosystem approach in the NCA: The ecosystem approach is being promoted by the Convention on Biological Diversity as a strategy to manage natural resources that takes into account sustainable utilization of resources. This approach has emerged to reconcile competing interests which have long been the major cause of conflicts between different resource users especially in protected areas. The ecosystem approach provides a framework for integrating conservation, sustainable use of resources and equitable sharing of benefits arising from those resources between the conservation agencies and local communities. Importantly, this approach promotes effective collaboration of key stakeholders in the management of natural resources while at the same time recognizing local communities as integral part of the ecosystems in their areas. To adopt and implement this approach, the NCAA should therefore consider the Maasai as important stakeholders in all matters regarding the NCA and enhance benefit-

sharing with them and further make use of adaptive management practices such as co-management.

Power-sharing between the NCAA and the Maasai: Along with the adoption of the ecosystem approach, it is equally important that the NCAA form a management partnership with the Maasai. This could be made possible through collaborative management (co-management) arrangements in which the NCAA would have to collaborate not only with the Maasai but also with other important stakeholders such as tourism operators, NGOs, researchers, local governments and many other government agencies in maintaining a sustainable future of the NCA. If well arranged, co-management will provide a forum through which these stakeholders could work together to address the existing conflicts in the NCA.

Re-examination of the NCAA legal framework: The Conservation Authority should recommend to the legislative body of the government to re-examine the legal context in the NCA and undertake the necessary amendments to the NCAA Act to include provisions for the participation of the Maasai residents in decision-making process of the Authority in compliance with democratic principles of participation. For the amendments to bear positive results, they should be geared towards ensuring that the welfare and interests of the Maasai are fully promoted and safeguarded, allowing them to increase control of their livelihoods. Including the Maasai in decision-making processes that regulate the management of land use is a critical change required to NCA laws.

Adjust NCA conservation policies: A paradigm shift away from the conventional wildlife conservation policies which excludes Maasai use of the conservation area's resources to multiple land use policies that would guarantee the Maasai rights to land and

other resources is required. This will be difficult to implement but it will require input and contributions from researchers, government agencies, NGOs, the Maasai and the NCAA.

Revise NCAA decision-making processes: Two key decision-making processes requiring revisions relate to hiring and employment and the Pastoralist Council. The NCAA needs to adopt hiring processes that will give the Maasai equitable opportunities for employment in the NCA day-to-day operations. Second, the Pastoralist Council responsibilities need to be broadened to include the capacity to influence decisions on how the NCA is to be managed. Equally important, the Council should be independent from the NCAA and the Chief Conservator should not be a member of the Council since his or her presence deters free expression of views by other members during the meetings.

Improve conflict resolution mechanisms: The current reliance on formal and legal institutions (usually through the court proceedings or legislative actions) to resolve disputes is cumbersome and entrenches mistrust. A good conflict resolution process is required to provide all key stakeholders with the opportunity for discussion and understanding needs and interests of all involved parties. It is critical as this will enable both groups to develop a wide range of alternatives of how to address the livelihood needs of the Maasai and those of conservation objectives of the NCAA.

Overall, conservation of the NCA's wildlife, which has for many years been the primary concern of the NCAA, will only enjoy further success and improvements if the native Maasai residents are actively involved in tourism and conservation activities. The Maasai in the NCA are most affected by the management choices and need to be more

active participants in the NCAA's decision-making process. This will help resolve the ongoing conflicts over land use and management strategies in the NCA. At the same time, active participation will also play an important role in ensuring that the needs of the Maasai and the conservation objectives of the NCAA are met simultaneously.

Annex 1. The 12 Principles of the Ecosystem Approach

Principle 1	The objectives of management of land, water and living resources are a matter of societal choice.
Principle 2	Management should be decentralized to the lowest appropriate level.
Principle 3	Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.
Principle 4	Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem-management programme should: i. reduce those market distortions that adversely affect biological diversity; ii. align incentives to promote biodiversity conservation and sustainable use; and iii. internalize costs and benefits in the given ecosystem to the extent feasible.
Principle 5	Conservation of ecosystem structure and functioning, to maintain ecosystem services, should be a priority target of the ecosystem approach.
Principle 6	Ecosystems must be managed within the limits of their functioning.
Principle 7	The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
Principle 8	Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.
Principle 9	Management must recognize that change is inevitable.
Principle 10	The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.
Principle 11	The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.
Principle 12	The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

The 12 Principles of the ecosystem approach for delivering the objectives of the CBD (adapted from UNESCO, 2000, pp. 4 and from Shepherd, 2004, pp. 2).

Annex 2. The Five Points for the Implementation of the Ecosystem Approach

1. Determining the main stakeholders, defining the ecosystem area, and developing the relationship between them
2. Characterizing the structure and function of the ecosystem, and setting in place mechanisms to manage and monitor it
3. Identify important economic issues that will affect the ecosystem and its inhabitants
4. Determining the likely impact of the ecosystem on adjacent ecosystems
5. Deciding on long-term goals, and flexible ways of reaching them

Adapted from Shepherd, 2004:3.

Annex 3. Interview Guide

A. Open-ended questions for the interviews with NCAA officials.

1. How do you view the conflicting land use and management strategies in the conservation area?
2. What are the issues surrounding the conflicting situation?
3. Are there any challenges you are facing in achieving the management goals?
4. What claims do you have with regard to the conflicting land uses between the authority and the Maasai residents?
5. To what extent has the conservation policies of the NCAA affected the traditional land use of the Maasai?
6. In what ways are the Maasai benefiting from the existence of the NCA?
7. Are you involving them in tourism activities? If yes, how and to what extent?
8. To what extent are you involving the Maasai in planning and in decision-making process of the NCAA?
9. As the history shows, do you think the Maasai can play any significant role in the management of the area today?
10. Are there any limitations for having them (the Maasai) effectively involved in the decision making process for the management of the area?
11. How can traditional land uses of the Maasai, conservation and tourism goals be compatible in the area?
12. In your views, what are the possible solutions for the conflicting situation in the area?
13. Is the NCAA willing to have power-sharing with the Maasai towards the management of the NCA?

B. Open-ended questions for an interview with the Ngorongoro Division official

1. How the Division views the tensions associated with the conflicting land use and management strategies in the NCA?
2. Are there any socio-economic problems facing the Maasai with regard to the conflicting situation?
3. Are there any challenges facing the NCAA to achieving its management goals?
4. Is there any role the Division and the Ngorongoro District Council in general has played to lessen the conflicts in NCA?

C. Open-ended questions for an interview with the Ngorongoro Primary Court official

1. In legal terms, what are the main issues surrounding the conflicting land use and management strategies in NCA?
2. Are there any promising solutions for the conflicting situation?

D. Open-ended questions for the interviews with the Pastoralist Council Officials

1. What are the main attributes for the conflicting land use and management strategies in NCA?
2. Are there any socio-economic hardships facing the Maasai pastoralists in view of the current situation in the area?
3. Does the Pastoralist council have power to influence during the decision-making process of the NCAA?
4. How do you feel about the council's representation of other Maasai in the NCAA management matters?
5. Are there any limitations for the council to perform its functions as stipulated in the council's constitution?

E. Open-ended questions for an interview with the NGOPADEO official

1. What conservation means among the Maasai communities?
2. What are the main factors for the conflicts between the NCAA and the Maasai residents over land use priorities?
3. What are the main concerns of the Maasai as far as the question of land use is concerned?
4. How do you view the future of the Maasai and of conservation with respect to the current situation in the area?
5. Are there any roles the Maasai want to play in managing the area?
6. In your views, what are the likely solutions for the conflicting situation?

F. Open-ended questions for an interview with the Wildlife Division Official

1. How the Ministry views the conflicting nature of the multiple land use objectives of the NCA?
2. Can you comment on whether the Ministry is willing to encourage and promote the traditional land use strategies of the Maasai within NCA as the way of overcoming the conflicting situation?

G. Open-ended questions for interview with the Maasai communities

1. The individual perception of the issues surrounding land use conflicts in the Ngorongoro Conservation Area.

   i. Were you born here? If not, where did you come from, when and why?
   ii. Is your community most dependent on resources present in the area?
   iii. If yes, what kind of resources? And is this because of livelihood or economic advantage that can be obtained from them?
   iv. Who has access to land and other cultural resources in the area?
   v. What do you know about the Ngorongoro Conservation Area?
   vi. What is your general understanding of land use strategies in the conservation area?

vii. How do you feel about the conservation policy of the NCAA?
viii. Are you legally allowed to own and make use of the land in the NCA?
ix. How do you feel about your access to land and other resources in the NCA?
x. Are there any conflicts of interest between conservation objectives of the NCAA and your traditional use of the land and other cultural resources in the area?
xi. If yes, why land use conflicts occurs between these two land use objectives in the area?

2. The problems which the Maasai people face in view of the current conservation practice of the NCA.

   i. Are there any socio-economic problems you are likely to be facing due to conservation practices of the NCAA?
   ii. How land is currently owned, allocated, used, shared and managed by different socio-economic groups in the area?
   iii. To what extent has the conservation goals and policies affected the socio-economic structures of the Maasai in the area?
   iv. Can the existing problems lead to more serious problems in the near future?

3. The main claims of the Maasai with respect to the impacts of conservation policies on their land rights.

   i. What are your main claims with respect to the impacts of conservation policies on your access to land?
   ii. Are these claims associated with your history in the area?
   iii. Are there any other claims, including customary rights and legal jurisdiction you have made with regard to land in the area?
   iv. Who is responsible for such claims?
   v. What has to be done with regard to these claims?

4. The Maasai involvement in decision making process in the management of the Ngorongoro Conservation Area.

   i. Do you know anything about community empowerment in decision making over natural resource management? If yes, to what extent?
   ii. Do you have any experience with community involvement in natural resource management?
   iii. Are you involved in the decision-making process for the management of the conservation area?
      - If yes, how and to what extent?
      - How do you feel about your involvement in the management of the area?
      - Has the pastoralist council managed to represent you in the management of the area?
      - If not, why?

iv. What has to be done for the pastoralist council to ensure effective representation of the Maasai in the decision making process of the area?

5. The possible ways through which the conflicting land use and management strategies could be resolves in the NCA.

   i. What are the possible solutions for the conflicting situation in the area?
   ii. What are the possible management solutions that have to be adjusted to improve the Maasai involvement in the overall management of the NCA?
   iii. Can co-management be an effective way to provide for power-sharing in management of the NCA between you and the Conservation authority?

Annex 4. Guide for the Focus Group Discussions with the Maasai Communities

1. What is your general understanding of land use strategies in the conservation area?
2. Are there any conflicts between the different land uses in the NCA?
3. If yes, to what extent? And what factors trigger such land use conflicts in the area?
4. Are your interests (especially on your traditional land use such as pastoralism) safeguarded by the NCAA?
5. Are there any socio-economic problems associated with the conflicting situation?
6. How is the NCA managed?
7. Who decides about what and how to conserve the NCA and its resources?
8. What role do you play in the overall management of the Ngorongoro Conservation Area?
9. Have you ever been involved in any way in decision-making process of the NCA?
10. Do you have access to land? if yes, to what extent? And if no, why?
11. Are you in any way affected by the conservation policies of the NCAA? If yes, what claims have you ever raised with respect to the impacts of NCAA policies on your land rights?
12. What has to be the better role of the NCAA in your views?
13. What are the possible solutions that will help to resolve the conflicting situation?

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