

UNIVERSITY OF NAIROBI
INSTITUTE OF DIPLOMACY AND INTERNATIONAL STUDIES

CRITICAL ANALYSIS OF STATEGIES OF WILDLIFE RELATED CONFLICT
MANAGEMENT IN KENYA

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DECLARATION

This research project is my original work and has not been submitted to any university for examination purposes.

Signature

Date

This research project has been submitted for examination purpose with my approval as University Supervisor.

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Date

DEDICATION

The research project is dedicated to my wife Jane Kageni and my children Briton and Britney who have sacrificed so much during my studies.

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First I thank the almighty God who has given me the strength, life and money to undertake my studies.

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ABSTRACT

According to the 2003 International Union for the Conservation of Nature (IUCN) World Parks Congress, human-wildlife conflict occurs when wildlife requirements encroach on those of human populations, with costs both to residents and wild animals. In Africa, human-wildlife conflict is particularly prevalent, even in countries with a higher average annual income. Crocodiles still kill people in the Lake Nasser area in Egypt and within towns in Mozambique; leopards still kill sheep within 100 km of Cape Town, South Africa, and lions kill cattle around the outskirts of Nairobi, Kenya like was recently witnessed in Kitengera. Conflict is a dynamic phenomenon that goes through phases, infraction, escalation, controlled menace, and termination. Conflict will always occur when actors in conflict try to pursue their perceptions of mutually incompatible goals by undermining directly or indirectly the goal seeking capability of one another. Another school of thought argues that conflicts are caused by lack of fulfillment of needs. People are displeased because their expectations are not met. This displeasure builds up when they perceive that they are being neglected. Rampant land transformation combined with the increase in various recreational activities and growing public interest in charismatic species, such as large carnivores and endangered species, have increased the human presence in protected areas, wildlife habitats and raised concern about capacities to manage and regulate public access and large-scale use of protected areas. In recent years, the successful recovery of declining or near extinct species populations through wildlife management and protection from overexploitation has also led to new conflicts. The wildlife managers and communities continue to use various strategies to mitigate these conflicts. The causes of these conflicts range from poor governance, inequality access to resources, and resource competition among others. Various strategies have been used to manage wildlife related conflicts. Coexistence is only achieved when the strategies used are able to deescalate the conflicts. This research looks analysis the strategies used in management of wildlife related conflicts and the researcher makes recommendation based on this analysis.

LIST OF ABBREVIATIONS

AIDs	Acquired Immune deficiency syndrome
GDP	Gross Domestic Product
GOK	Government of Kenya
HIV	Human-immunodeficiency Virus
HWC	Human Wildlife Conflict
IDP	Internally Displaced Persons
IUCN	International Union for the Conservation of Nature
KWS	Kenya Wildlife Service
NGOs	Non Government Organizations
PA	Protected Areas

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

There is a need to seek more knowledge on the common belief that there is anything like human wildlife conflict which has informed lots of policies and strategies in wildlife conservation worldwide. A conflict arises when two or more parties have incompatible goals about something.¹ Conflicts would be nearly solved if policy makers' work on marking goals and aspirations of parties come closer and nearly harmonized.

Conflict will never go away; they are endemic in all societies at different levels. Therefore need to know how to handle conflicts when they arise. Conflicts bring an opportunity to re-examine relationships. Proper management of conflicts should remove its negative and harmful effects. Conflicts are therefore beneficial and should not always be viewed negatively.² They come with benefits to the society. Another school of thought argues that conflicts are caused by lack of fulfillment of needs.³ People are displeased because their expectations are not met. This displeasure builds up when they perceive that they are being neglected. This leads to frustration as explained by the frustration-aggression theory. Such frustrations can easily degenerate into violent conflicts. Some conflicts are not manifested until a trigger occurs like was seen in Kenya's post election conflict. Such structural conflicts will always require structural changes to be resolved. What is perceived as minor conflict can lead into a major conflict. It is therefore important to have conflict early warning and response mechanisms.

¹ Mwagiru M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

² Ibid.

³ J. Burton (1990). *Conflict: Human needs theory*, London: Macmillan.

The concept of human-wildlife conflict has been used globally for long time. According to the 2003 International Union for the Conservation of Nature (IUCN) and World Parks Congress, human-wildlife conflict occurs when wildlife requirements encroach on those of human populations, with costs both to residents and wild animals (IUCN). Human-wildlife conflict has been in existence for as long as humans and wild animals have shared the same landscapes and resources. Human-wildlife conflict does not occur only in Africa. Nowadays human wildlife conflict exists in one form or another all over the world. Conflict between humans and crocodiles, for example, has been reported in 33 countries spanning the tropics and subtropics, and the problem probably exists in many more. All continents and countries, whether developed or not, are affected by human wildlife conflict. However there is an important distinction to be made between the level of vulnerability of agropastoralists in developing countries and that of well-off inhabitants of developed Countries.

In Africa, human-wildlife conflict is particularly prevalent, even in countries with a higher average annual income. Crocodiles still kill people in the Lake Nasser area in Egypt and within towns in Mozambique; leopards still kill sheep within 100 km of Cape Town, South Africa, and lions kill cattle around the outskirts of Nairobi, Kenya like was recently witnessed in Kitengera.⁴

Despite the human-wildlife concept being around for several years, conflicts in the wildlife sector has continued. Communities that once coexisted with wildlife are now up in arms against the same animals they once cherished. From definitions of conflicts by the scholars, for conflict to occur two or more actors involved. These actors must be human beings. Consequently there is a need to evaluate the notion that human-wildlife conflict exists. This means that the strategies that are currently being used in conflict management in the wildlife sector are based on

⁴ Ibid.

this concept and it is important to find out if this has any bearing on the current challenges in the wildlife sector. The reason why conflicts persist is competition for power politics that blind people from seeing the opportunities for cooperation and reaching an understanding in the ensuing conflict. Conflicts operate within a system and not a single entity.⁵ It is critical to ask ourselves if there really is a wildlife related conflict system within Kenya and equally with its neighbors. All actors in the conflict are either affected or involved in the conflict. This involvement may be direct or through proxies. Therefore every conflict has several actors. Each of these actors usually has an interest in the conflict or its outcomes. For any conflict to be settled or resolved, then all the actor's primary, audience, constituent or allies must be involved. This study investigated the actors of conflicts in the wildlife sector and their roles. Equally it aimed to examine why despite of enormous resources being used annually, wildlife related conflicts continue to escalate.

1.1 Statement of the Research Problem

The last ten years have seen an increase in resources in an effort to manage conflicts in the wildlife sector. Kenya Wildlife Service uses over Kshs 100 million every year in community social responsibility. There has been a concerted effort both with non-governmental organizations and the government. Despite this effort, conflicts are rising in the sector and communities that once cherished wildlife are now killing animals daily. The Maasai community in Kitengela area killed six lions in one day this year. The frame of addressing this has been through the human wildlife concept. In the definition of conflict two or more people or parties are involved. The conflict in the wildlife sector is between actors.

Despite the enormous resources raised by the actors, during conflict in most cases they leave it to the government. Various actors have been undertaking co-operate social responsibility

⁵ Mwangiri M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication

programs in communities living with animals. All these efforts are not solving the problem. This has an impact on the tourism sector which is the driving sector in achieving Kenya's vision 2030. Tourism sector contributes 15 percent of the national gross domestic product (GDP). Wildlife contributes 70 percent of the tourism sectors contribution to GDP. Therefore any problem in the wildlife sector has huge implications for Kenya's economy. This will have an impact in implementation of other sector as spelt out in vision 2030. The country will not achieve its national mandate. If these conflicts continue in the current trend, Kenya will lose the conservation good will of the communities. Such a move will have an ecological disaster due to overgrazing. The country can easily lose its natural habitats including the catchment areas like Aberdare and Mt Kenya. This would affect so many sectors that support the national survival agenda. The threat of this to tourism and the countries national GDP is real. This is the foundation and basis for this study. There is clearly an urgent problem that requires a solution before the wildlife sector reached a crashing point.

1.2 General Objective

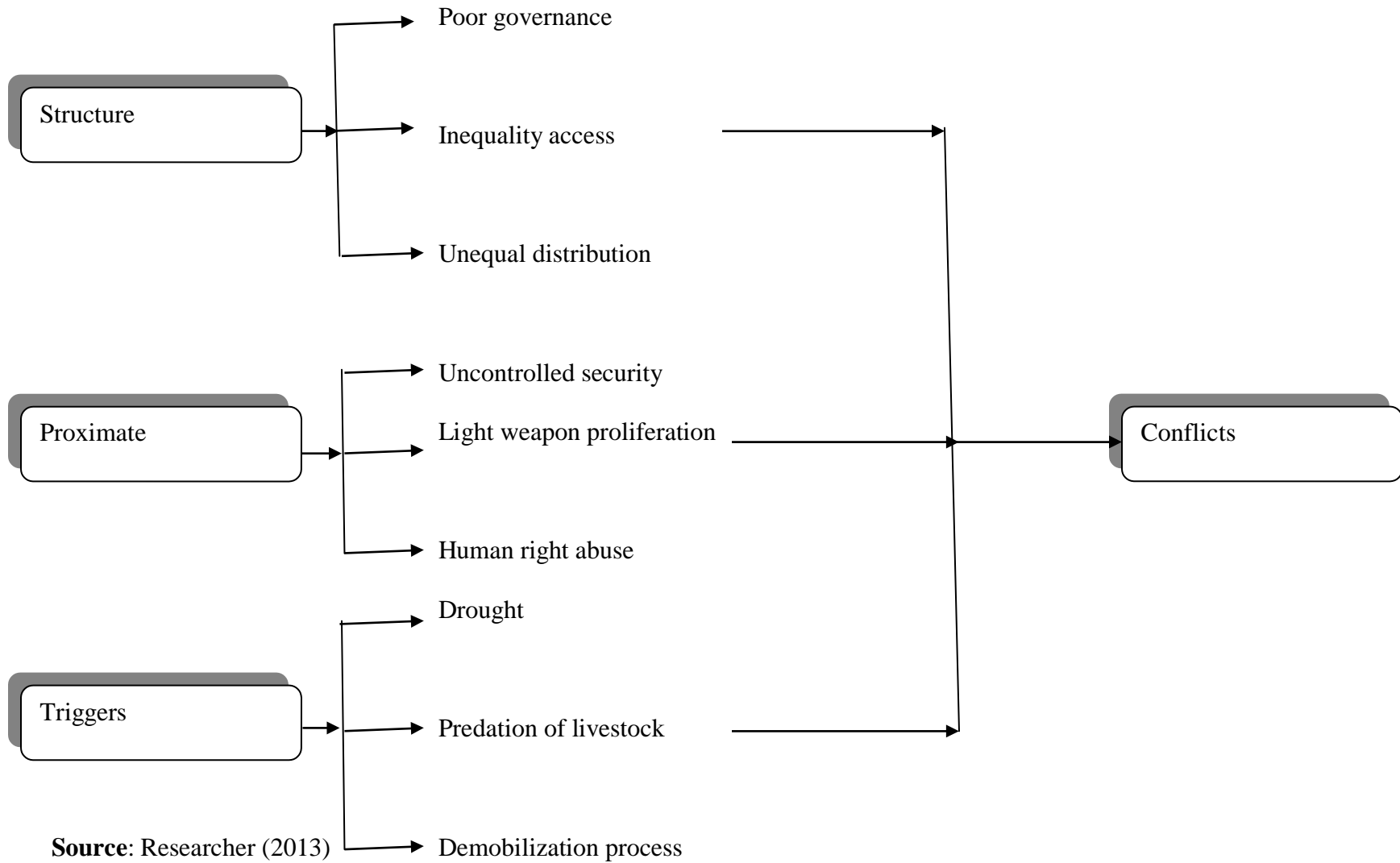
The broader objective is to finally come up with a new framework on which conflicts in wildlife sector will be solved with emerging concept of conflict about wildlife.

1.2.1 Specific Objectives

- a.** To examine the causes and issues of human wildlife conflicts
- b.** To examine the current strategies in solving human wildlife conflicts in Kenya

1.3 Causes of Conflict

Figure 1: Conflict Causes



In order to understand a given context, it is fundamental to identify potential and existing conflict causes, and possible factors contributing to peace. Conflict causes can be defined as those factors which contribute to people's grievances. They can further be described as structural causes, that is, pervasive factors that have become built into the policies, structures and fabric of a society and may create the pre-conditions for violent conflict; proximate causes – factors contributing to a climate conducive to violent conflict or its further escalation, sometimes apparently symptomatic of a deeper problem; triggers of conflict which are key acts, events, or their anticipation that will set off or escalate violent conflict.

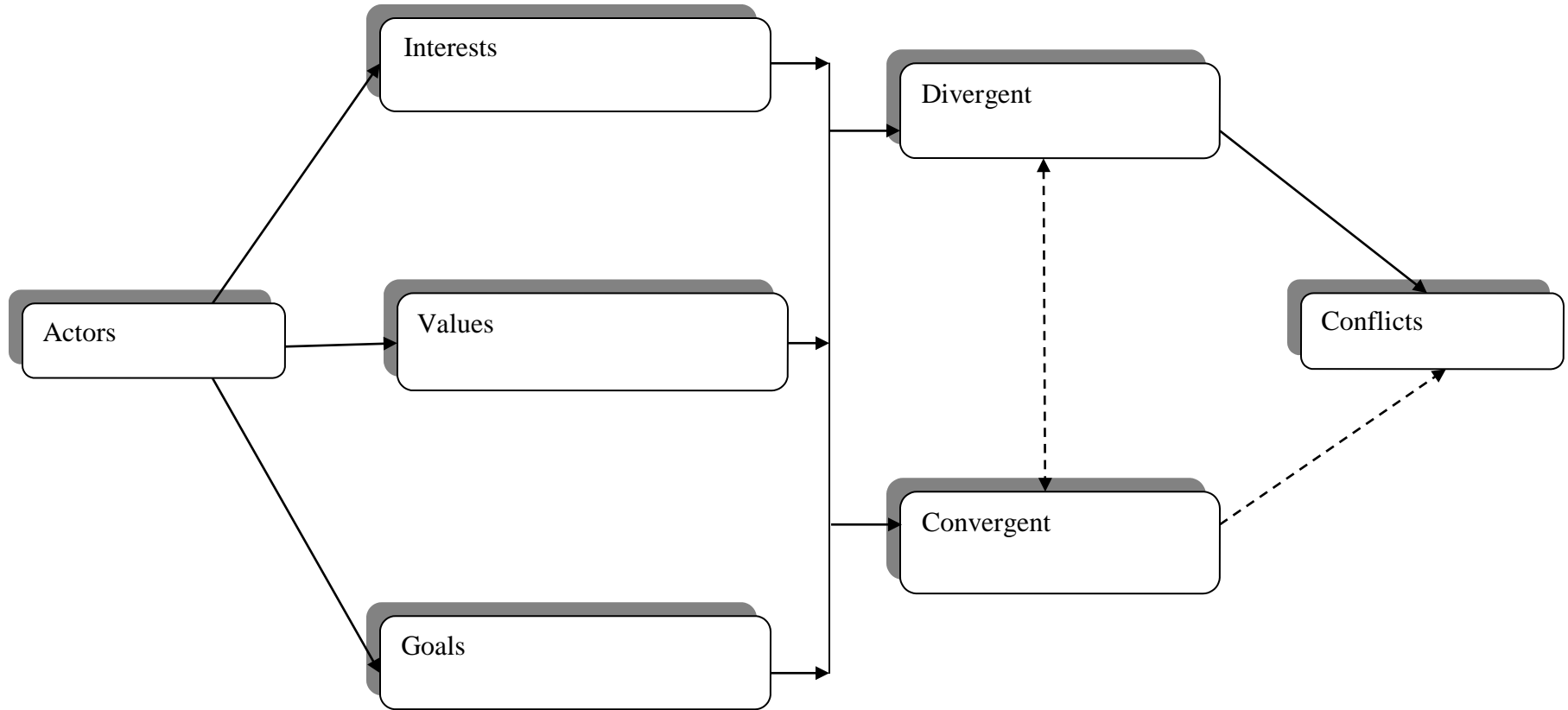
Protracted conflicts also tend to generate new causes (such as weapons circulation, war economy, culture of violence), which help to prolong them further. As the main causes and factors contributing to conflict and peace are identified, it is important to acknowledge that conflicts are multi-dimensional and multi-causal phenomena and that there is no single cause of conflict. There will always be a multiplicity of variables that cause conflict. It is also essential to establish linkages and synergies between causes and factors, in order to identify potential areas for intervention and further prioritise them. Particular attention should be paid to spoilers, such as specific groups with an interest in the maintenance of the negative status. If not adequately addressed within the framework of preventive strategies, they may become an obstacle to peace initiatives.

Similarly, it is important to identify existing institutional capacities for peace, in order to further define entry points to address causes of conflict. Capacities for peace typically refer to institutions, organisations, mechanisms and procedures in a society for dealing with conflict and differences of interest. In particular, such actors need to be assessed in relation to their capacity for conflict management, their legitimacy, the likelihood of their engagement, and the possible

roles they can adopt. Key questions include; are the structural causes of conflict like illegitimate government, lack of political participation, lack of equal economic and social opportunities, inequitable access to natural resources, poor governance. Issues that can be considered as proximate causes of conflict, like uncontrolled security sector, light weapons proliferation, human rights abuses, destabilising role of neighbouring communities; triggers that can contribute to the outbreak / further escalation of conflict like elections, drought, sudden change in inflation, escalating unemployment, flood, predation of livestock, human killing by animals; what new factors contribute to prolonging conflict dynamics like increased human rights violations, weapons availability, development of a culture of fear; factors that can contribute to peace? For example communication channels between opposing parties, demobilisation process, reform programmes, civil society commitment to peace, anti-discrimination policies.

1.4 Actors

Figure 2: Various actors in conflicts



Source: Researcher (2013)

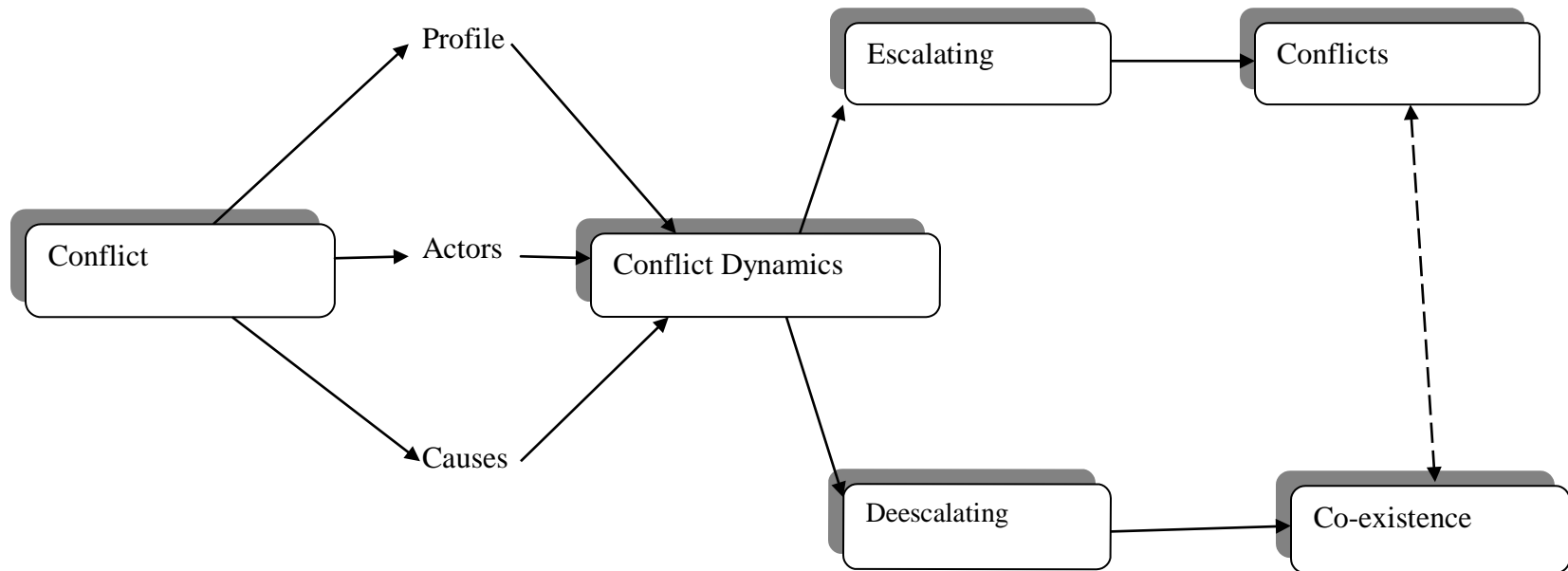
People are central when thinking about conflict analysis. The Resource Pack uses the term “actors” to refer to all those engaged in or being affected by conflict. This includes individuals, groups and institutions contributing to conflict or being affected by it in a positive or negative manner, as well as those engaged in dealing with conflict.

Actors differ as to their goals and interests, their positions, capacities to realise their interests, and relationships with other actors. Key questions for an actor analysis are; who are the main actors? Such as; national government, armed groups, private sector/business (local, national, trans-national), donor agencies and foreign embassies, multilateral organizations, regional organizations, religious or political networks (local, national, global), independent mediators, civil society (local, national, international), peace groups, trade unions, political parties, neighbouring states, traditional authorities, refugees / IDPs, all children, women and men living in a given context; what are their main interests, goals, positions, capacities, and relationships? Such as; religious values, political ideologies, need for land, interest in political participation, economic resources, constituencies, access to information, political ties, global networks; what institutional capacities for peace can be identified? Such as civil society, informal approaches to conflict resolution, traditional authorities, political institutions, and judiciary; what actors can be identified as spoilers?

Conflicts arise when there is divergence in goals, interest and values. Where there is convergence of goals, interest and values, actors have a peaceful co-existence. However, groups can be converging now and later have divergence emerging. Thus why the need for continuously manage conflicts.

1.5 Conflicts Dynamics

Figure 3: Schematic conflict dynamics



Source: Researcher (2013)

Conflict dynamics can be described as the resulting interaction between the conflict profile, the actors, and causes. Understanding conflict dynamics will help identify windows of opportunity, in particular through the use of scenario building, which aims to assess different possible developments and think through appropriate responses. Key questions to be asked are; what are current conflict trends? Such as escalation or de-escalation, changes in important framework conditions; what are windows of opportunity? Such as, positive developments? What factors support them? How can they be strengthened? What scenarios can be developed from the analysis of the conflict profile, causes and actors? Such as the best case, middle case and worst case scenarios.

1.6 Literature Review

This section reviewed various literatures of accredited scholars who have conducted research in related fields, give account of what has been published on this topic by scholars and researchers.

1.6.1 Conflicts in General

Different scholars have written extensively on theories and strategies of conflict management. The development of knowledge about conflict and the proper methodologies of its management have essentially underlined the fact that conflicts are extremely complex. Conflicts are part of human society. Conflicts are linkages between different types of conflicts but a close analysis reveals that conflict develops persona as they evolve, develop and become mature.⁶

According to Bercovitch conflict among individuals, groups and states are pervasive and are party in every process of interdependence that brings various actors together. The extent to which conflict spills over and number of actors it impacts on, is determined by the conflict system. A conflict system consists of a complete tessellation of relationships and interactions between actors and issues within the system.⁷

Conflict occurs when two or more parties have incompatible goals. Therefore, conflicts would be nearly solved actors work on marking goals and aspirations of parties come closer and nearly harmonized. Any conflict has an impact and affects values of relationships. According to realism theory man is anarchical in nature and loves himself. This individualism brings about perpetual competition. This is in contrast with the Kant's idea of perpetual peace. This means conflict is endemic and will always be there in our societies at different levels. Therefore need to

⁶ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

⁷ Ibid.

know how to handle conflicts when they arise. Conflicts bring an opportunity to re-examine relationships. The proper management of conflicts should remove its negative and harmful effects. Conflicts are beneficial and should not always be viewed negatively as many would want to believe.⁸ They come with benefits to the society. Another school of thought argues that conflict is caused by lack of fulfillment of needs.⁹ People are displeased because their expectations are not met. This displeasure builds up when they perceive that they are being neglected. Frustration leads to aggression. In the wildlife sector this aggression is expressed by killing wildlife and demonstrations. The aggression towards wildlife is equally a result of other un-fulfilled needs by the society. The wildlife then becomes a reference point to put forward a statement to the government. What is perceived as minor conflict can lead into a major conflict. It is important that any slight signal of a conflict be taken seriously before it escalates. More important is to put up a mechanism to address social needs through a holistic approach during times of peace. The early signs of the conflict should therefore be taken seriously. This requires accurate intelligence networking and high level of emotional intelligence in part of managers.

Conflicts have also arisen due to policy issues. There are reasons why people in conflict have not been attentive to administration, organizational and policy matters.¹⁰ An organization in this case refers to an enduring collection of people conducting specialized and interdependent activities related to a common purpose. There is a relationship between conflict consensus and level of policy formulation inclusiveness. When the level of involvement is low, each group takes positional views. When the level of involvement is high there is more effective consensual

⁸ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

⁹ Burton J. (1990). *Conflict: Human needs theory* London: Macmillan.

¹⁰ Sandle D J. *et al.* (2000): *Conflicts resolution theory and practice*.

approach leading to negotiations.¹¹ This is a liberal approach that there is need for involving all actors.

Research as shown that, as the level of inclusiveness increases there is an increase in effective consensus building and negotiations are easily reached. People in the negotiations become more positive. Equally conflicts arise when people purpose different goals and have different ways of perceiving reality. If inconsistency in goals is not checked, it degenerates unto a conflict. Strategic and continuously scanning the environment helps to mitigate conflicts before divergent of goals continue to widen. This is affected by the idiosyncratic factors of those in policy level within the wildlife sector and in some cases the social construction of the society. It is critical that any conflict solving mechanism address inconsistency in goals between the conflicting parties. Naturally conflicts will always be present and the key issue how every conflict is managed.¹² The point at which we intervene within the conflict cycle has an impact to the possibility of resolving or escalating the conflict.

The challenge of conflict management therefore is not how to do away with conflicts but how to deal with them so that their harmful effects do not affect our society and ruin our relationships.¹³ In life conflicts are bound to occur but how we manage them can either destroy or strengthen our understanding of the parties involved. Each conflict helps us understand the parties involved and this help in handling such parties in future conflicts.

¹¹ Ibid.

¹² Ibid.

¹³ Makumi M. *et al* (1998). *Understanding conflicts and its management*. Some Kenyan perspective. Nairobi CCR-WLEA publication.

There are two schools of thought in approach to conflict management. Subjectivists believe conflict can be managed through negotiation while objectivists believe that conflict can be removed by changing the structure that is responsible for the conflict.¹⁴ Such structural changes may require review or total shift of the legislation. Naturally, there are two methods of resolving conflict, coercive and non coercive methods. Coercive methods leads to short lived solutions while non coercive methods are long lived. There is global trend in improvement of democratic principles and rights of individuals. Equally the current society is well informed. Globalization has enhanced communication and awareness among the populace in each state. Coercion is definitely not an option in this century and more so in the intra-state conflicts. It's critical to note that handling of stakeholders at times when there is no conflict makes conflict management less complicated. Conflicts should be handled during peace by providing to all the actors with the basic needs. The frustrations when the community's needs are not met may only require a wildlife related conflict to trigger aggression. Consequently, conflict management should aim at identifying ways in which the needs of both parties can be fulfilled. This means therefore that there will be give and take in the conflict management process. This opens window for negotiation in any conflicts.

Rupesinglies view of conflict management lays emphasis on the development of effective early warning system that is able to give early signals to a conflict and trigger early mitigating response. Conflict is difficult to define and what is a potential conflict to analyst may not be viewed so by the potential culprits. Early warning signs alone can therefore be misleading in terms of mitigation. There is need to consider an early warning of any conflict holistically before resources are used. It's critical that those involved have knowledge on cultures of all parties

¹⁴ Ibid.

involved. Culture affects the manner in which conflict is handled and the context in which it is interpreted.

There are some ideas and practices that may provide the grounds of converting even the most negative and serious forms of conflict into collaborative, joint problem solving which expand social justice, human needs satisfaction and peaceful social relations at every level. The reason why conflicts persists is competition for power politics that blind people from seeing the opportunities for cooperation and reaching an understanding in the ensuring conflict. All players in a conflict are either affected or involved in the conflict. This involvement may be direct or through proxies. Conflicts in the horn of Africa for example have for a long time been handled individually without any framework. For example, Sudan conflict was handled as Sudanese politics and the internal arrangements. Equally, Eriteria and Ethiopia conflict was handled in the context of the two countries. The management of these conflicts failed to take into account the wider linkages within the system.¹⁵ States operate within systems and their conflicts need to be managed in this context. Actually they operate in open systems which receive and give back to the system. Every conflict of whatever nature therefore should be managed in this context. The intra state conflicts should also be handled in this context. The conflicts about wildlife within Kenya have systems. The handling of conflicts only at hot spots has not achieved much result. This explains why conflicts continue in the wildlife sector. It's important to put structures of conflict resolution.

To manage every conflict effectively it's good to understand that every conflict has an epicenter. That is the nucleus of the conflict. It's important we get the core area of the conflict.

¹⁵ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

Conflicts are dynamic in nature and therefore the epicenter keeps shifting. Those solving the conflict must have the capacity to scan this change to avoid continuous misdirected effort. In this regard it's good to continuously evaluate the conflict and the management strategies.

The conflict system approach displays some rough edges which research might help to iron out.¹⁶ The major problem is identifying the epicenter. This is one area that this research aims to find out in regard to conflicts about wildlife in Kenya. Where are the epicenters of wildlife related conflicts in Kenya, within an area and how do they shift throughout the year and why.

Conflict resolution researchers often combine practice of some sort with scholarship, whether in the form of intervention work outside their academic institution or training new practitioners within their program. Social movement scholars, however strong their sympathies for particular movements, and whatever activism individual scholars may take on, more often approach their subject as analysts, the relations between theory/research and practice/experience being more tenuous. Where it exists, training for activism is usually done outside academic institutions, conducted by non-governmental organizations associated with specific camps of partisans.¹⁷ Conflict resolution practitioners often conceptualize their role as neutral, impartially attentive to the concerns and interests of all participants. Although conflict resolution scholars and practitioners may harbor hope that their work will contribute to building a more just society, they see that end achieved by introducing just processes rather than fighting for specific constituencies.¹⁸

¹⁶ Ibid.

¹⁷ Burton J. (1990). *Conflict: Human needs theory* London: Macmillan.

¹⁸ Ibid.

1.6.2 Wildlife Sector and Conflicts in Kenya

Wildlife management has been defined as the art and science of applying scientific knowledge and ecological principles to manage wildlife populations for human objectives.¹⁹ Conservation is rapidly becoming one of humanities major land use objectives. In many countries it is the heart of the tourism sector contributing to the gross domestic product (GDP). A common approach has been the creation of parks and protected areas that exclude livelihood activities.²⁰ During the last one and one-half century, states similarly established parks and other protected areas to meet their own needs of ensuring public heritage, claiming sovereignty or acquiring economic benefits. The key feature of the protected area strategy is that local livelihood is assumed to conflict with conservation.²¹ In the past three decades, protected areas have increased globally from 1.8m Km² to 18.5m Km² in 2003.²²

Kenya has one of the highest remaining concentrations of tropical savanna wildlife in the world. This has been recognized by the state and the international community as a unique world heritage. Wildlife conservation efforts in Kenya confront complex and often persistent social and ecological problems. Conflicts between wildlife and other competing land use forms and hostilities towards state policies in wildlife conservation has become a persistent problem.²³ Under development in areas of high wildlife concentration has affected food security in these

¹⁹ Messer T. A, (2009). *Human wildlife conflicts: emerging challenges and opportunities*, paper university of Nebraska –journal.

²⁰ Omondi P. (1994). *Wildlife-human conflicts in Kenya; integrating wildlife conservation with human needs in the Maasai Mara Region*.

²¹ Ibid.

²² Ogri M. and Badola R. (2008) :*Competing Human wildlife conflict in protected area communities and ground level perspectives* from Nom Uttarakhand, india, spring science and business media LLC.

²³ Akam J.S et al 1996: *A political approach to wildlife conservation in Kenya*, environmental values Vol. 5 No.4.

areas. The basic human needs are not yet met. This compounds the delicate interaction between wildlife and humans and complicates resolution of conflicts in the wildlife sector. According to the frustration-aggression theory, when the basic needs are not met, the communities get frustrated. These frustrations then results to violent conflicts where the communities that have coexisted with wildlife now turn to their heritage killing the animals. The scenario complicates the tourism sector which is one of major incomes in these areas and contributor to the national gross domestic product (GDP). Where the National interest are not in line with community ideology, environmental issues have been used by the communities has one aspect and tool for attention by the state.

This has lead to continued increase in human wildlife conflict (HWC) in the country despite enormous resources used in the sector. Human wildlife conflicts are defined as interactions between human and wildlife where negative consequences, whether perceived or real exists for one or both parties.²⁴ The impacts of these conflicts to humans can be categorized into economic, health, safety and psychological. The phrase human-wildlife conflicts are now commonly used to describe situations that involve any negative interactions between humans and wildlife. These conflicts can be real or perceived, economic or aesthetic, social or political. They include impacts that may result from state, local wildlife legislation or policies that are designed to protect or conserve wildlife, public benefits or individual property rights.²⁵ However when all of the positive and negative effects are tailored for any wildlife species, the benefits provided to the society greatly outweigh the costs.

²⁴ Elsner R.M. (2008): *Knowledge, attitudes and opinions about human wildlife conflicts held by community leaders in Virginia*.

²⁵ Messer T A. (2009). *Human wildlife conflicts: emerging challenges and opportunities*, paper university of Nebraska –journal.

Human wildlife conflicts takes many forms including crop damage, damage to property, livestock predation and even attack to man. Studies have shown that local population and especially those living near Protected Areas (PAs) takes the greater burden to shoulder the costs incurred by HWC. This is more so because they are in dispersal areas of the protected areas. The increase in human population has continued to increase demand for natural resources including land. The wildlife corridors have been converted into either settlement or in areas of swamps like Kimana and Namelok in Amboseli converted into agriculture. This has witnessed increase in wildlife related conflicts. It's clear that lack of land policies for a long time in Kenya has contributed to the current dilemma. This seriously undermines support for conservation. The cost of this is both direct and indirect through opportunity costs incurred through the conflict mitigation process.

Human wildlife conflicts occur when the needs and behavior of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact on needs of wildlife.²⁶ The Kenya wildlife contributes enormously to the national GDP through tourism. The connection of this contribution to the life of the local residents has not been well articulated at the rural areas and more-so pastoral parts of the country. This is one reason why the perception on animals is changing in these communities. The communities don't have direct benefits in most parts of the country. Well informed, involved stakeholders help produce better decisions and plans, which ultimately lead to reduced conflicts.²⁷ Policy formulation in Kenya has had no much involvement of the local populations and stakeholders. The land policy has for a long time been limited in solving the crash between humans and wildlife. The pastoral areas like Amboseli

²⁶ Ibid.

²⁷ Ibid.

have had farmer's migration changing the land use in pastoral areas. The in-compactable land use in these areas has witnessed increase in wildlife related conflicts. Lack of national land policy that should have made sure the wildlife corridors are left intact for the national good and world heritage has greatly contributed to this scenario. Wildlife conservation efforts in Kenya confront complex and often persistent social and ecological problems including land use conflicts between local people and wildlife, local people suspicious and hostilities towards state policies of wildlife conservation, and accelerated destruction of wildlife habitats.²⁸. Factors contributing to conflict involving pastoralists' comprise socio-economic and political marginalization, inadequate land tenure policies, insecurity, cattle rustling, proliferation of small arms and light weapons, weakened traditional governance in pastoral areas and competition with wildlife.²⁹ The local communities are frustrated. This frustration is seen in the struggle for survival with Maasai now embracing agriculture in marginal areas and converting wetlands into farmlands. The illiteracy levels in the pastoralists' areas are high and changing the context of this shift becomes harder and requires a lot of innovation. The overriding social-economic issue impacting on wildlife in Kenya is underdevelopment. Levels of under development are manifested in forms of increasing poverty, famine and malnutrition in these areas. This scenario is made more complicated with global warming. The competition for resources is high and conflicts arise. The long term survival of Kenya's wildlife depends on the social ecological solutions to the problems of underdevelopment and equity.³⁰ There are several socio-economic problems facing Kenyans living near protected areas, in the savanna areas and wildlife corridors. These compounding problems make them not afford to grant the goals of long term wildlife

²⁸ Akalama J S. etl al (1996). *A political-Ecology approach to wildlife conservation in Kenya*, , white horse press.

²⁹ Okech R N. (2000). *Wildlife-Community conflicts in conservation areas in Kenya*.

³⁰ Akalama J S. etl al (1996). *A political-Ecology approach to wildlife conservation in Kenya*, , white horse press.

conservation a high priority. Even in areas where they gave goals of conservation, the socio-economic problems have changed the scenario. Recent studies have shown that majority of local people around protected areas have negative feelings about state policies and conservation programs.³¹ Kenya's great reservoir of wildlife is increasingly under threat and opportunities are lost for its contribution to the creation of growth, wealth and employment. Therefore governance in this country has a bearing in the wildlife related conflicts. This makes management of wildlife sector more complex since most of the sectors problems are as a result of various in so many sectors. The dictum that nothing operates in a vacuum is especially applicable to the management of human-wildlife conflicts. We live and work in environments that are shaped by social, cultural and political forces. Subsequently the programs designed to resolve human-wildlife conflicts in this dynamic environment will largely depend on the ability of decision markers and wildlife managers to recognize, embrace and incorporate differing stakeholder's values, attitudes and beliefs in making policies. Stakeholder's values, perceptions, attitudes and beliefs have continued to change overtime. Consequently there is need for progressive changes in policy and management of conflicts. The stakeholders change in context which continues to complicate the wildlife sector conflict management.

As earlier discussed the underlying causes of these conflicts is behold an animal attacking a human being or invading a farm. The central government should solve the underlying issue that makes wildlife and humans victims. In some areas there has been attempt to compensate for the damages caused by wildlife. This was started in Kenya but was faced by numerous challenges. Worldwide, the challenge of economic loss compensation ranges from valuation of losses, corruption, sustainability, transparency and source of funds. This the reason why the ICUN has

³¹ Ibid.

always recommended against economic compensation because this does not address the root course of the problem.³² There is need to solve the underlying issues that area triggered by interaction of wildlife and humans.

For wildlife managers to better manage contemporary wildlife related conflicts, an awareness and appreciation of history and potential breath of wildlife damage management is crucial. This history provides insights to organizational structures that emerged to address these conflicts and how the government shaped public perceptions about wildlife and its management.³³ This is in line with the peace paradigm. We need to change the context (perceptions and attitudes) of stakeholders so that actions taken will finally bring sustainable peace in the wildlife sector. However there will be need for delicate balance between the liberal ideas and realist approaches in a sector that attracts a lot of interests.

1.7 Conceptual Framework

Conflict analysis is the systematic study of the profile, causes, actors, and dynamics of conflict. It helps conflict managers to gain a better understanding of the context in which they work and their role in that context. Conflict analysis is thus a central component of conflict-sensitive practice, as it provides the foundation to inform conflict sensitive programming, in particular in terms of an understanding of the interaction between the intervention and the context. Conflict analysis can be carried out at various levels (such as, local, regional, national). The linkages between these levels. Identifying the appropriate focus for the conflict analysis is crucial since the issues and dynamics at the national level may be different from those at the grassroots. But while linking the level of conflict analysis with the level of intervention, it is also important to

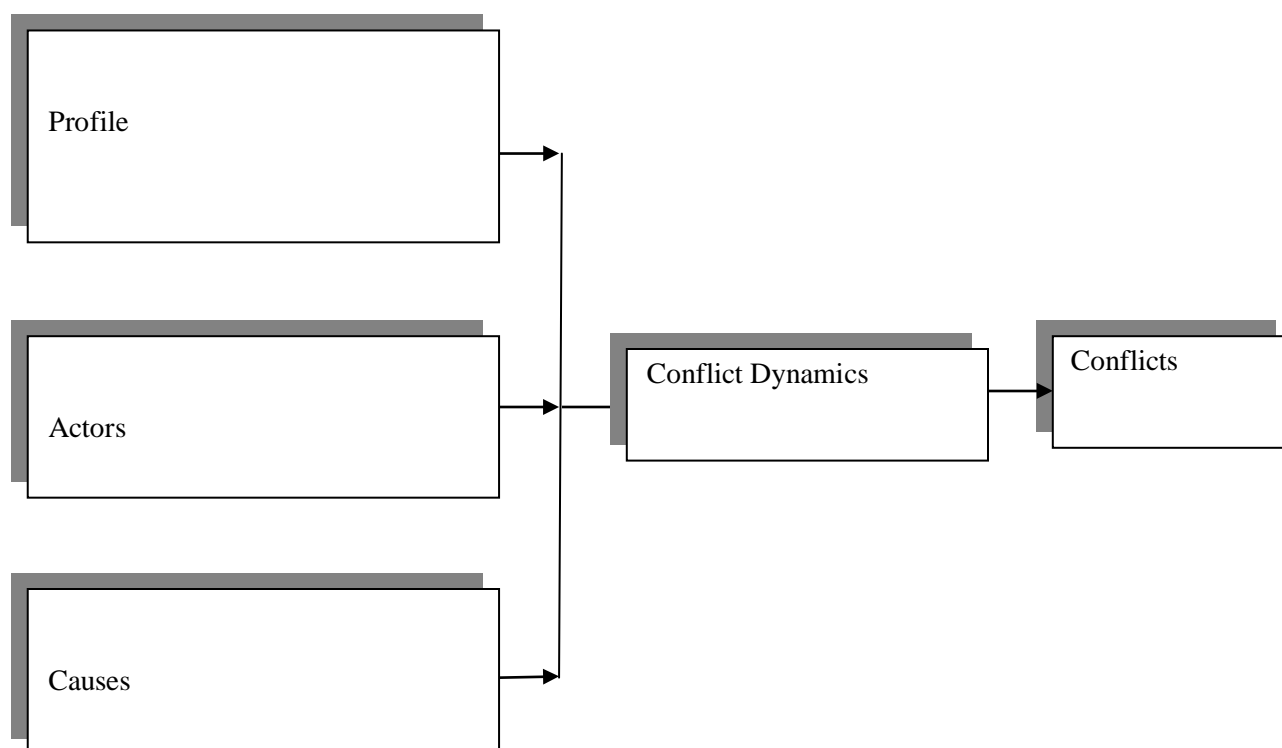
³²Ogri M.and Badola R.(2008). *Competing Human wildlife conflict in protected area communities and ground level perspectives: from Uttarakhand, india, spring science and business media LLC 2008.*

³³ Messer T A. (2009). *Human wildlife conflicts, emerging challenges and opportunities*, paper-published.

establish systems linkages with other interrelated levels of conflict dynamics. These linkages are important, as all of them impact on each other.³⁴

Figure 1 highlights the common key features of conflict analysis, which will contribute to understanding the interaction between the context and future/current interventions. The common features are the conflict profile, actors, causes and dynamics. Each is further described below.

Figure 1: Conceptual Framework



Source: Researcher (2013)

³⁴ Conflict-sensitive approaches to development, humanitarian assistance and peace building: tools for peace and conflict impact assessment, <http://toolkit.ineesite.org/toolkit/INEEcms/uploads/1053/>.

1.7.1 Profile

A conflict profile provides a brief characterisation of the context in which the intervention will be situated. Key questions that need to be asked for a conflict profile are the political, economic, and socio-cultural context. The physical geography, population make-up, recent history, political and economic structure, social composition, environment, geo-strategic position; emergent political, economic, ecological, and social issues. The elections, reform processes, decentralization, new infrastructure, disruption of social networks, mistrust, return of refugees and internally displaced persons (IDPs), rangers and civilian deaths, presence of armed forces, mined areas, HIV/AIDS; the specific conflict prone/affected areas can be situated within this context, like areas of influence of specific actors, frontlines around the location of natural resources, important infrastructure and lines of communication, pockets of socially marginalised or excluded populations; is there a history of conflict, whether critical events, mediation efforts, third party intervention.

1.8 Justification of Study

Wildlife related conflicts continue to increase each day despite the enormous effort and resources used to mitigate and resolve these conflicts. The nature of conflicts and how they are resolved becomes complex each day. In some instances conflicts about wildlife have degenerated into security issues. The human population increase that is estimated to reach 60 million people by 2030 will complicate the dynamics of wildlife related conflicts the survival of the tourism sector will be highly threatened. The country continues and may continue to lose citizens and animals through these conflicts. The good will of the communities that cherished coexisted with animals will be lost. The survival of the wildlife heritage will then be highly threatened. Each year

elaborate planning efforts in the sector continue. These efforts are supplemented by private individuals and by the nongovernmental organizations. Despite of the multi-sectoral approach we continue to lose human beings and animals.

The psychological impacts and the image of the nation is great. The retaliations towards wildlife killings affect our tourism which is a main contributor to GDP and consequently the national human development index. This impacts then to our national security and jeopardizes our national interests. It will consequently affect the national 2030 delivery unless the situation is addressed now. There is therefore need the have a permanent solution to conflicts about wildlife. The government services will be jeopardized. There is need to look at conflict management strategies visa-avis the concept of human wildlife conflict. If the wrong concept is in use the most likely is that the wrong strategies are employed. Then a paradigm shift needs to be executed soonest to avoid a national tragedy in a few years to come. These are the reasons for seeking more knowledge through this research.

1.9 Research Methodology

Research methods refer to behavior and instruments we use in performing research operation. Research methodology is a way to systematically solve a research problem. It involves the steps taken by the researcher to solve a research problem. Research methodology has many dimensions and research methods are part of the research methodology. Research methodology explains the logic behind choosing a particular research method or technique.³⁵ Secondary data

³⁵ Kothari C R. (1990). *Research methodology*.

was collected through literature review; these helped capture what has already been done in area of conflict and conflict about wildlife. This ontological information helped the study in undertaking epistemological approach in to the wild-life related conflict problem.

Primary data collection was collected using both qualitative and quantitative research approach. Quantitative research includes research designs, techniques and measures that produce discrete numerical data.³⁶ The descriptive cross sectional study was used during this research. The primary data was collected mainly to test the hypothesis – these data was collected using self-administered questionnaires and Focus Group Discussions, by the main persons affected by Wildlife-related conflicts. All the questionnaires were sent to respondents through email. Focus group discussions were done to shed more facts to the research. This helped gather more information related to involvement in the conflicts about wildlife and the interests of the actors and how they have been addressed in previous conflicts management strategies.

The study used probability method to come up with the sample population. The sampled areas were purposefully selected – as these were the main areas where wildlife related conflicts were most pronounced, in addition the selected areas were hot spots that are known in the Country to be worst hit by wildlife related conflicts. From the list of the five hot spots, random sampling was used to come up with three areas represented 60% of the total target population. From the sampled conflict areas, stratified sampling was further applied. From the each stratum the target population was conveniently picked.

³⁶ Mugenda O & Abel Mugenda A. (2003). *Research methods: Qualitative and Quantitative research methods*, Acts press).

1.9.1 Target Population and Sample Size

A population is defined as a complete set of individuals with some common observable characteristics. Sample is a subject of the population. If a sample is too small, it does not represent the characteristics of the entire population.³⁷ The target population was employees of the Kenya Wildlife Service (KWS), the communities in the conflict hot spot areas in Kenya namely Laikipia county, Narok County and South Kajiando, conservation NGOs in the same areas and other stakeholders. A sample representation of the five hot spots was picked as a true representative of the total population.

1.9.2 Data Collection Instruments

In this study questionnaire and focused group discussion tool were used to collect primary data. The questionnaires were administered to the sampled target population. For group discussions schedules were used to guide on the discussion themes; and notes were taking based on the main themes that were highlighted by the respondents.

1.9.3 Data Analysis

After collection of the questionnaires and group discussion results, the mass of raw data collected was systematically organized to facilitate analysis.³⁸ This was made easier by giving answer to each question a code before administering. The quantitative data was analyzed using descriptive analysis such as central tendencies and standard deviations using SPPSS computer programme version 19. The qualitative data was analyzed using thematic analysis based on the

³⁷ Mugenda O& Mugenda A. (1999). *Research methods-quantitative and qualitative approaches*. Acts press, Nairobi, Kenya

³⁸ Ibid.

themes with the data. The themes of wild-life related conflicts become the categories for analysis. Thematic analysis was performed through the process of coding in main phases (topics) under discussion, to create established, meaningful patterns. These phases were; familiarization with the data, generating initial codes, searching for themes among codes, reviewing themes, defining and naming themes, and then producing the final draft, which will become the final report of the study. The final results will be presented in form of narrative, pie chart, bar graph and frequency tables.

1.10 Chapter Outline

Chapter One: Introduction to the Study

The thesis divided into five main chapters. Chapter one makes up the introduction. Here, the researcher lays makes a conceptual framework of the issues to be addressed and particularly, what is to be investigated, why and how. Key components of this section are the problem statement, objectives, literature review and justification for the study.

Chapter Two: Conflict and Conflict Management

This chapter helped to define conflict from the perspective of define scholars. Conflict was seen as a dynamic phenomenon that goes through phases, infraction, escalation, controlled menace, and termination.

Chapter Three: Wildlife Related Conflicts in Kenya

This chapter had a sharp focus on wildlife related conflicts, with a sharp focus on Kenya, although the study noted that wild-life related conflict occur on all continents, in developed as well as developing countries, yet the problems vary according to the particular environment and animal's way of life.

Chapter Four: Managing Wildlife Related Conflict in Kenya

This chapter is the core of the study. It present the findings of the research while making key linkages between reviewed literature, the objectives of the study and the hypothetical positions taken by the researcher on the topic under study.

Chapter Five: Summary and Conclusion

This chapter sums up the major findings in line with the objectives and hypotheses of the study. It acts as the final and ultimate verdict on the issues addressed in the research. It makes several key conclusions and important recommendations on the way forward.

CHAPTER TWO

CONFLICT AND CONFLIC MANAGEMENT

2.0 Introduction

Conflict may be defined as a struggle or contest between people with opposing needs, ideas, beliefs, values or goals.¹ The word conflict is derived from the Latin word *confligere* meaning to strike together.² Conflict is also defined as opposition among social entities directed against another. Conflict may also be defined as an escalated natural competition between two or more parties about scarce resources, power and prestige. Conflict is sometimes used to refer to inconsistencies in the motions, sentiments, purposes or claims of entities and sometimes to the process of resolving these inconsistencies.³ Groom argues that a conflict arises from an actor imposing the burden to change on the environment either through a faulty interpretation of feedback or through an unwillingness to respond to negative feedback. At this stage incompatible behavior is evident and power politics have begun. Conflict is a natural and inevitable part of all human social relationships occurs in all levels of society.

According to Mwangiri, conflict arises when two or more parties have incompatible goals about something.⁴ Parties in conflict believe they have incompatible goals and their aim is to neutralize, gain advantage over, injure or destroy one another.⁵ Conflict is not necessarily violent but usually it is likely to occur. It is an essential and desirable element of human society⁶. Any

¹ Nyambogo C (2008). Conflict resolution: The role of information and knowledge management.

² Burton J & Dukes F (1990). Conflict : readings in management and resolution.

³ Ibid Pp 15.

⁴ Makumi M, (2000). Conflicts in Africa: Theory, processes and institutions of management, CCR publication.

⁵ Laue H J (1990). The emergence and institutionalization of third party in conflicts.

⁶ Burton J & Dukes F (1990). Conflict : readings in management and resolution.

conflict an impact and affect values of relationships. Conflicts bring an opportunity to re-examine relationships. The proper management of conflicts should remove its negative and harmful effects. Conflicts are therefore beneficial and should not always be viewed negatively.⁷ Conflict often inevitable. At times it is even positive in society transformation from social, political, economic, environmental and other points of view.⁸ Conflict is sometimes used to refer to inconsistencies in the motions, sentiments, purposes or claims of entities and sometimes to the process of resolving these inconsistencies.⁹ Conflict is always concerned with distribution of power. An exertion of power is prerequisite to the retention of a share in the determination of future relations. A conflict exists when two people wish to carry out acts which are mutually inconsistent.¹⁰

Conflict is a dynamic phenomenon that goes through phases, infraction, escalation, controlled menace, and termination. Conflict will always occur when actors in conflict try to pursue their perceptions of mutually incompatible goals by undermining directly or indirectly the goal seeking capability of one another.¹¹ Another school of thought argues that conflicts are caused by lack of fulfillment of needs.¹² People are displeased because their expectations are not met. This displeasure builds up when they perceive that they are being neglected. Conflict is essential element of human relationships. It is a means of change by which social values of welfare, security, justice and opportunities for development can be achieved. Conflicts bring an

⁷ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

⁸ Okoth G & Ogot A (2000). *Conflicts in contemporary Africa* pg 15.

⁹ Burton J & Dukes F (1990). *Conflict readings: Readings in management and resolution*.

¹⁰ Ibid.

¹¹ Sandole D J (1993). *Conflict resolution theory and practice: Integrated approach*.

¹² J. Burton (1990). *Conflict: Human needs theory*, London: Macmillan.

opportunity to re-examine relationships. The proper management of conflicts should remove its negative and harmful effects. Conflicts are therefore beneficial and should not always be viewed negatively.¹³ The reason why conflicts persists is competition for power politics that blind people from seeing the opportunities for cooperation and reaching an understanding in the ensuing conflict. Conflicts operate within a system and not a single entity.¹⁴

Some conflict may turn violent. Violence could be defined as a form of severely escalated conflict.¹⁵ All forms of violence generally hurts the weaker parties more than it does stronger parties. Conflict can take place among different sorts of entities; physical conflict in which two or more entities try to occupy the same space at the same time; political conflict in which groups try to impose their policies on others; ideological conflicts in which systems of thought or of values struggle with each other and legal conflicts. There are various theories advanced in trying to understand and explain conflict. The complexity of conflict requires more than one theory and approach to explain. This is equally so because there is multiplicity causes of conflict and some involve several actors with diverse interests. This is what has made wildlife related conflicts more complex.

¹³ Ibid.

¹⁴ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

¹⁵ Laue H J (1990). *The emergence and institutionalization of third party in conflicts*.

2.1 Actors in Conflicts

Conflicts are complex not just as conflicts but also in terms of the actors and processes involved in their management.¹⁶ The picture of conflict and the actors involved is much more complex. The interaction between actors and conflict is more complex. Traditionally conflicts were assumed that only immediate parties to the conflict were involved and interested in the conflict outcome.¹⁷ The involvement of different actors transforms the conflict significantly.¹⁸

Consequently conflicts keep transforming. This transformation is influenced by various actors. Involvement of these actors shapes the structure of the conflict. In any conflict there are visible and invisible actors. These actors have different relationships. The relationships of these actors become dysfunctional.

The more parties that enter the conflict the more complex the issues in conflict become. Each of these parties entering the conflict brings its own concerns and interests and these interact in a complex way within the conflict management. The interaction of actors and issues in conflict creates the mediation system. In every conflict there are official and unofficial actors. Official actors consist of states and organizations of states. Its importance emphasizes that in every conflict there are people involved. Conflicts involve people who have developed incompatible points of view. One cannot therefore have a conflict with a chair or animal.¹⁹ Based on this, then there is

¹⁶ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication Pp 96.

¹⁷ Ibid Pp 97.

¹⁸R. Vangnen (1991). *To Settle or to Transform? Perspectives on the resolution of national and international conflicts* Pp 1 – 25.

¹⁹ Makumi M. (2003). *Peace and Conflict Management in Kenya* Pp. 11.

nothing like human wildlife conflict. This concept has been used worldwide including Kenya. The managers strategies employed are therefore based on wrong concept.

The actors are generally the disputants but may also include other parties, such as the state which may have an interest in the peaceful resolution of social conflicts. There are different types of actors in any conflict. There are first the visible actors. These are the known actors whom we can see. Apart from these visible actors there are also in-visible actors. The invisible actors may be those who support the visible actors or those who have an interest in the outcome of the conflict.

The actors in conflicts can be obtained through conflict mapping. Conflict mapping is a tool used to map out the parties involved in the conflict either directly or indirectly.²⁰ It is important to know the strength of each party. Conflict mapping helps to know the relationship that exists between the parties.²¹ The importance of conflict map is to help identify the entry point in an effort of managing the conflicting.

All actors in a conflict have different interest. The more the actors the more are the interests in the conflict and the more difficult it becomes in resolving the conflict. The interest in conflict helps us identify the issues in conflict.²² Conflicts usually have a multiple of issues that cause them. Thus there is a complex relationship between actors, interests and issues in every conflict.²³

²⁰ Machira Apollos (2008) : *Working for Peace ; New thinking for peace building* Pp. 33.

²¹ Ibid Pp34.

²² Mwangiru M. (2000). *Peace and conflict management in Kenya* Pp. 12.

²³ Mwangiru M (2003). *Peace & Conflict Management* Pp 13.

2.2 Sources of Conflicts

Identifying underlying issues that find bad feelings and damage relationships is one of the central tasks of resolving conflict.²⁴ Conflict resist resolution when one party fails to address the issues of most significance for other parties. Unless the underlying needs and wants are identified and dealt with, conflict will continue along with growing frustration. Sources of conflicts includes; Interest: specific tangible wants or perceived needs are the most common source of disagreements. Polices should always stipulate how disputes will be settled; Values: different in opinion or priority of interests, options or choices of direction are a source of conflicts. These are probably the greatest obstacles for amicable solution of any conflict. We should therefore try to resolve the divergence towards a convergence of interest, opinions and choices; Relationships: Lack of trust makes people feel that others are not honest; Lack of effective communication. It is important to distinguish between actual and perceived conflict. Both actual and perceived conflict creates conditions for disagreement. When parties are functioning with incomplete information, imagined problems can have a great influence over beliefs about real problems.²⁵ Thus, resolving conflict must deal with what parties think the conflict is, as well as specific issues in dispute People will reciprocate in an intensified and negative manner to behavior they perceive as threatening, devaluing or insulting.²⁶ Each threatening communication incites even more threatening responses in a more countermove sequence.

As disputants struggle to establish control over others through attack and intimidation, there is the likelihood for greater rigidity, polarization and defensiveness. Studies have shown

²⁴ Isenhardt W & W Myrn (2000). *Collaborative Approaches to resolving conflict* Pp 14.

²⁵ Ibid Pp 16.

²⁶ Aberts, J.K & Driscoll, G (1992) : *Containment versus escalation; the trajectory of couples, communication complaints*. Western journal of communication, 56, 394 – 412.

that there are more conflicts between groups than between individuals.²⁷ This is because of the group identity that strengthens the resolve to pursue the group aspirations. The group takes position on a conflict based on interest and common goals. Group identity fosters a perception of materialistic deprivation, the sense that members have been treated unfairly by other groups. Groups in competition regularly develop a kind of anxious concern for their status and prestige manifested by the double symptoms of assertion of strength and fear of humiliation if there should be any retreat.

Historically, radical difference of religion, ideology or institutions has tended to induce conflict.²⁸ Centre for conflict resolution Kenya. The way the society is organized can create both the root causes of conflict and the conditions in which it is likely to occur. The society that is organized in a way that some people are treated unfairly, unequally and unjustly is likely to erupt into conflict especially so if its leaders do not represent all the members of that society. Most conflicts arise from a complex set of factors that include the particular people involved, the history these people share, the dynamics of the social, political and economic environment and the specific issues about which people disagree.

In Africa, ethnicity has been blamed for the conflicts that have been experienced in the region.²⁹ Ethnic identity that is so closely guarded by communities has been constructed by African elite so that they can continue ruling. The leaders have shaped it by using ethnicity in resource distribution inherently leading to discontentment. Other conflicts arise out of

²⁷ Komonta, S. S & Lapworth, C. W (1982). *Cooperative among individuals Vs Groups in a N-person dilemma situations*. Journal of personality and social psychology 42, 487 – 496.

²⁸ Macharia Apolos (2008). *Working for peace: New thinking for peace building* Pp18.

²⁹ Macharia Apolos (2008). *Working for peace: New thinking for peace building* Pp19.

competition for natural resources. Resource based conflicts arise out of competition for possession of the same resource. This brings the aspect of inter-group competition. Such competition has been witnessed in Kenya as was witnessed between pastoralists and famers in Tana River County.

The other cause of conflict is when need of people are not met. According to Maslow there are five categories of needs; psychological needs (survival needs); security needs, social needs; esteem needs and self actualization basic needs can be a source of conflict. Basic needs are considered to be basic human rights. These are critical on the very survival of a human being or a group in the society. Conflicts will arise as a result of violation or denial of the basic human needs.

The causes of violent conflicts in Africa are many and varied both in their nature and destruction.³⁰ Some conflict may be traced to history while some are consequences of legacy of colonialism. The colonial government divided Africans into Ethnic lines pitting them against each other to ensure the whites rule.

Ethnic conflicts in contemporary Africa are escalating. The ethnic intolerance as a result of human relationships existing in different groups continue to escalate. Studies have shown that the relatively high prevalence of war in Africa is due to high levels of poverty and not ethno-linguistic fragmentation. The reason behind Civil war in Africa is often connected with livelihoods and power.³¹ Access to land and rights of control over land use are contested between different ethnic groups. The other cause of conflict is religious identity. In middle east the

³⁰ Machira Apollos (2010): *Armed conflict and the law* . Centre for conflict resolution in Kenya Pp 12.

³¹ Adan Van Delinate and Rachel Naylor (1999); *Building sustainable peace; conflict, conciliation and civil society in Northern Ghana* Pp 7.

conflict between Israel and Arab communities in a clash of Christianity and the Muslim faith or ideology. Even between the Sunni and Shia groups of Islamic faith, conflicts exist.

At the centre of all conflicts are human needs. People engage in conflict because of their needs and conflict because of their needs and conflict cannot be transformed or settled unless these needs are addressed in the same way. Conflict can also be treated broadly as a philosophical category denoting the clash of power in the striving of all things to become manifest.³² It is a distinct category of social behavior as the parties they to get something they both cannot have.

Conflict arises when the interests of two or more parties clash and at least one of the parties seeks to assert its interests at the expense of another party's interests.³³ Conflict has also been described as a social phenomenon that can result from instantaneous or gradual changes that create diverging interests and needs.

2.3 Management and Approaches to Conflicts

Conflicts are complex and can either be violent or non violent. Violent conflict is a more manifested conflict. It inflicts physical harm to those affected by it. Non violent conflict is usually structural. Structural conflict is a conflict embedded in the structure of relationships and interactions. The difference with these structures is the cause of conflict.³⁴ Thus even to family units the structure becomes a source of conflict. The state level of elites versus masses becomes a source of conflict. The difference in economic distribution, gap between the rich and the poor (

³² R. J. Rummel; Understanding conflict and war : Vol. 2: *The conflict Helix* Chapter 26.

³³ FAO. Conflict resolution in integrated coastal area management. [http://www.fao.org/docrep/w8440e / w8440e23.html](http://www.fao.org/docrep/w8440e/w8440e23.html).topofpage.

³⁴ Ibid.

those who have and those who don't have) results to structural conflicts. At international level, it's the structural difference between states that become the source of conflicts. In terms of wildlife and natural resources management, the structure of resource returns that exist becomes a great source of conflict. Equally the structure brought about by the policy that puts community at lower level than the state is a cause conflicts. The expectation of community is total protection since they have surrendered their sovereignty to the state. Conflicts can therefore be violence or structural. Violent conflicts are a realist approach where man is inherently uncouth and selfish.

There are three approaches to conflict, the strategist, the conflict researcher and the peace researcher. Strategists are usually seen exclusively within the framework of power politics and manipulation of threat system.³⁵

2.3.1 Strategists

Strategy is concerned with the manipulation and application of threats either to preserve or change the status quo.³⁶ States are the major actors since they have a plenitude of means of coercion available and the right to go to war defend their interests. The military balance therefore becomes critical for countering the threats to state. After 1945 strategists have modified this approach to include non state actors and more specifically focusing on the individual. In this approach strategists have come up with concepts of relative deprivation, status equilibrium and structural violence. Thus intra state relations have a critical role to play in the international system. Conflict will either be settled or there will be a stalemate.³⁷ This is based on view that in any system anarchy exists and power will be the central driver. Conflict is therefore settled by

³⁵ Groom J A (1990). *Paradigms in conflict; the strategists, the conflict researcher and peace researcher.*

³⁶ Ibid.

³⁷ Burton J & Dukes F (1990). *Conflict : readings in management and resolution.*

use of war. Force is used to force change in behavior of an actor by a more dominant actor. In terms of wildlife related conflict, strategists tend to come up with strategies that are coercive or that lead to a stalemate.

2.3.2 Conflict Researcher Approach

For conflict researcher, cause of conflict is not a result of an instinct in man- a drive to dominate. Conflict behavior is a response to an actor's perception of the environment. It is a learned behavior triggered by circumstances and to the extent that the environment can be manipulated so can conflict behavior which is dysfunctional.

Conflict is functional or rational in that it intends to serve a useful purpose. Conflict researcher sees conflict as ubiquitous. This is because the world consists of large numbers of separate decision making centers. The output from those centers on any conflict will likely be incompatible. Thus conflict will be endemic in any society. The wildlife related conflict will therefore be endemic and the difference is how they are managed. Social Darwinism explains that biological explanation of conflict has their roots in Darwinism.³⁸ Social Darwinism was based on the notion of the survival for the fittest. There is natural selection in favor of the more aggressive.³⁹

³⁸ Charles Darwin (1985). *The Origin of Species* .

³⁹ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

2.3.4 Psychological Theories

The two main psychological theories of conflict are the transaction aggression theory and relative deprivation theory.⁴⁰ Frustration Aggression theory has two major propositions; that all aggression is a result of frustration and all frustrations is aggression. This theory however challenged since there are other sources of aggression except frustration.

Conflict is also natural and endemic. It can serve useful social functions and can often be accommodated constructively, provided a rational and sensitive approach is adopted, it is anticipated in advance and use is made of available insights and expertise.⁴¹

2.3.5 Nature versus Nurture

Nature debate argues that human beings are by nature violent and aggressive. This derives an innate drive in human beings for domination. Therefore violent is inevitable since it's the nature of man to be violent.⁴² Nurture school argues that man is not violent by nurture. Man becomes violent but the changes of the environment. Changing the environment therefore will remove the conflict. This kind of conflict is learned and therefore can be de-learned. Managers who take the nature new in conflict will tend to use force in solving the conflict. Those who take the nurture view, view will be more accommodative and prefer negotiation to solve the conflict. According to Groom A (1990), the routinized conflict handling have failed.

⁴⁰ Ibid.

⁴¹ Muller D A (1988). *Pan on principles of communication between adversaries in South Africa*.

⁴² Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication

2.3.6 Subjective and Objective Debate

Conflicts can be classified as subjective or objective.⁴³ In subjective terms conflict cannot exist unless there is incompatibility of goals is subjectively experienced.⁴⁴ Objective conflict is one which the gains of one party are directly related to the losses of the others.⁴⁵ Those who subscribe to the objective view of conflict argue that it is possible for people to be in a state of conflict even though they do not immediately or really experience it.⁴⁶ Objectives approach to conflicts is to change the structure.

For subjectivists parties in the conflict must experience it. Conflict management therefore must be at the centre of the efforts to resolve the conflicts. Those involved may be in conflict without realizing it. The best approach to solve such conflicts is negotiation.

The world society paradigm is the one in which the conflict researcher sits most easily and congenially. This is particularly so because the conception of conflict embraces many different levels, crosses disciplinary boundaries without compunction and because it is non partisan in spirits, is supportive of all the parties without exception, so that a movement may take place towards a resolution based on a new set of legitimized relationships which is self supporting.

⁴³ Burton J & Dukes F (1990). *Conflict : readings in management and resolution*.

⁴⁴ Makumi M, (2000). *Conflicts in Africa: Theory, processes and institutions of management*, CCR publication.

⁴⁵ Burton J & Dukes F (1990). *Conflict : readings in management and resolution*.

⁴⁶ Ibid.

2.3.7 Conflict Management

Conflict Management refers to any management processes by which parties to the conflict are encouraged to come together and do something about the conflict.⁴⁷ The reason why conflicts persists is competition for power politics that blind people from seeing the opportunities for cooperation and reaching an understanding in the ensuring conflict. Conflicts operate within a system and not a single entity.⁴⁸ All players in the conflict are either affected or involved in the conflict. This involvement may be direct or through proxies. Conflicts have also arisen due to policy issues. There are reasons why people in conflict have not been attentive to administration, organizational and policy matters.⁴⁹ An organization in this case refers to an enduring collection of people conducting specialized and interdependent activities related to a common purpose. There is a relationship between conflict consensus and level of policy formulation inclusiveness. When the level of involvement is low, each group takes positional views. When the level of involvement is high there is more effective consensual approach leading to negotiations.⁵⁰ Mwangiru classifies methods of resolving conflict into two: coercive and non coercive methods. Coercive methods leads to short lived solutions while non coercive methods are long lived. Rupesinglies view of conflict management lays emphasis on the development of effective early warning system that is able to give early signals to a conflict and trigger early mitigating response. None of the methods by which conflict is carried on necessarily ends conflict unless indeed the conflict is completely conventionalized as in the game theory. A conflict is solved by

⁴⁷ Mwangiru M. (2000). *Conflicts in Africa: Theories, Processes and Institutions of Management*, CCR publications, Pp 43.

⁴⁸ Ibid Pp 79.

⁴⁹ Sandle D J and Merwe H. (1993): *Conflicts resolution theory and practice: Intergration and Publication*. Manchester University press, Pp 161.

⁵⁰ Ibid pp184.

definitive acceptance of a decision by all parties. In modern interdependent world, solution of disputes may not be stand unless accepted by many states. In democracies there is some degree of thought, expression, opinion and association not designed to suppress conflicts but to encourage advocates of policies, ideas or claims to think that eventually they may win sufficient support to achieve their objectives. There are four ways in which social conflicts can be resolved: by negotiation and agreement resulting in settlement or adjustment in a accord with the will of all parties; adjudication and decision in accord with the will, perhaps guided by legal or moral principles of an outside party; dictation or decision in accordance with one of the party to the conflict and obsolescence through agreement to disagree.

When conflict resolution mechanisms are working smoothly, all the parties with a stake have adequate representation in the forum and can create a win win outcome that satisfies at least some of the needs. If true resolution to the conflict is achieved, the outcome sticks and contributes to the ability of the system to resolve other conflicts as they arise. Conflicts resolution implies that there is joint participation of the parties in reaching the outcome.⁵¹

Conflicts change over time passing through different stages of activity, intensity, tension and violence.⁵² Basically there are five different stages of conflict; Pre- conflict: this is the latent stage, the conflict is still under the surface, is not visible but there is tension which is simmering; Confrontation : at this stage the conflict is open and parties are conflicting openly through incompatible behavior such as resistance, demonstrations or lukewarm hostilities; Crisis. This is the peak of conflict. People involved in conflict are killing each other. They are violent with accusations and counter accusations; Post conflict: the conflict has subsided and warring parties

⁵¹ Laue H J (1990). *The emergence and institutionalization of third party in conflicts*.

⁵² Machira Apollos (2008). *Working for Peace ; New thinking for peace building* Pp 29.

are coming to terms with reality of the futility of wars and now in the process of healing. This is the state to solve deep rooted conflicts.

Equally to manage any conflict, it is important to identify the factors that maintain the undesirable situation. These can be presented graphically as below;

Conflict resolution is the exhaustive satisfaction of demand of parties after a conflict. It refers to efforts to end conflicts by addressing its core causes. It is a long term process that facilitates the formation of strategic and policy level agreement on ways to address structural inequalities and deep rooted hostilities. It involves use of lengthy negotiations, and third party interventions if necessary. Whenever a conflict occurs, it triggers responses. The responses are divided into three categories; flight response that is use of force to solve the conflict and flow response which is use of dialogue to find solution to the conflict. There are various approaches used in conflict management; Use of power in which force is used to enforce behavior to the conflicting parties. This is a short lived answer to the conflict; Rights based approach use litigation. This is a zero sum approach in which one party wins and one loses. This still is a temporary and short term answer to the conflict; the interest based approach. This approach seeks to reconcile the needs, desire and concerns of the parties involved. It is a win- win situation. However the methods available in resolving a conflict may be put into two categories; the diplomatic methods and the non diplomatic approach. The diplomatic approach includes negotiation, mediation, conciliation, reconciliation and arbitration. The non diplomatic approach include use of force, litigation. For effective management of conflict peace is necessary. There are various methods of peaceful management of conflict. These include judicial approaches

(litigation and arbitration) and non judicial methods that include mediation.⁵³ Conflict management can also be coercive or non coercive. Coercive methods of conflict management are litigation and arbitration. These methods just settle the conflict rather than resolving it. This means conflict can erupt again. This is a win-lose approach that makes conflict eruption almost inevitable.

The non coercive methods of conflict management include negotiation, mediation and facilitation. The outcome of conflict entirely relies on the parties in the conflict. This is a win-win situation where parties come to a common ground through a give and take approach. This method sustains the solution of the conflict. A third party is used in this approach. The third party must be acceptable for parties and usually a facilitator to help parties come up with solution to the conflict.

⁵³ Mwangiru M (2008). Peace and Conflict Management in Kenya Pp. 76

CHAPTER THREE

WILDLIFE RELATED CONFLICTS IN KENYA

3.0 Introduction

Kenya's wildlife is one of the richest and most diversified in Africa. Several of its protected areas and wetlands are internationally recognized and protected as World Heritage Sites, Ramsar Sites and Man and Biosphere Reserves. Kenya's wildlife resource also constitutes a unique natural heritage that is of great importance both nationally and globally. Wildlife resources contribute to the local and national economy through revenue generation and wealth creation.¹

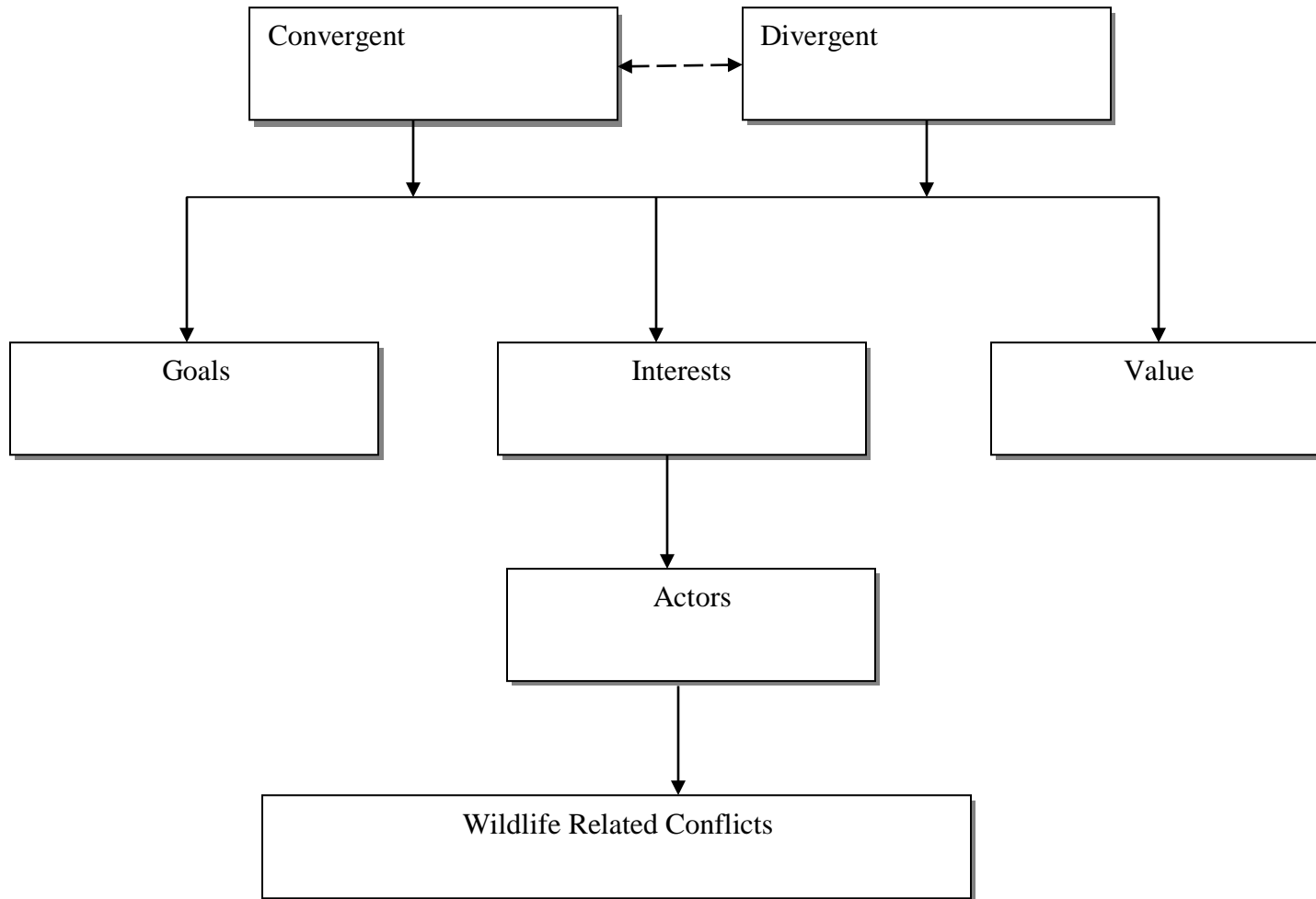
Wildlife related conflicts have occurred since the dawn of humanity. They occur on all continents, in developed as well as developing countries, yet the problems vary according to the particular environment and animal's way of life. These conflicts are more rampant in Africa, where wildlife problems are particularly common and pronounced. Rural and peri-urban communities are affected all over the continent. Consequences of wildlife conflict can be both direct, including injury and death from encounters with dangerous animals, and indirect, including loss of crops and livestock and damaged infrastructure. Crocodiles, hippopotamuses, elephants, lions and baboons are among the main aggressors. There are so many causes of wildlife related conflicts in the World today. However, not only these large animals pose threats to human beings; mass aggregations of birds, rodents or insects can devastate agricultural crops in a short time.²

¹ Ministry of Tourism and Wildlife. 2007. *Draft Wildlife Policy*.

² Beresford, M. and A. Phillips; 2000; *Protected landscapes: A conservation model for the 21st century*; Forum, 17 (1), pp. 15–26.

3.1 Wildlife Conflicts

Figure 4: Schematic presentation on Wildlife related conflicts



Source: Researcher (2013)

3.2 Species Habitat Loss, Degradation and Fragmentation

Species habitat loss, degradation and fragmentation are also interconnected with population growth and land use change. In Sumatra, the alteration of forest areas into agriculture and grazing land has restricted the Sumatran tiger's. Crocodiles have an ancient lineage dating back to the Mesozoic era, and have remained functionally unchanged for longer than the human species has been in existence. It is likely that crocodiles have attacked and eaten humans and their predecessors in Africa over the last four million years. Egyptian historical records reveal that in 2000 BC, hippopotamus in the Nile delta in Egypt fed on cultivated crops that had encroached on their natural habitat while crocodiles ate livestock and occasionally humans who were too close to their natural environment. It is no coincidence that the Egyptian god of evil was depicted as the crocodile-headed deity Sobek.³

Another adverse cause effect wildlife conflict is the killing of domestic animals by predators. The number and type of domestic animals killed by wildlife varies according to the species, the time of year, and the availability of natural prey. In the savannah and grasslands where pastoralism remains the main source of livelihood for many people, attacks on livestock are an issue. On a national level the losses are hardly significant, but for the individual stock owner, they can be catastrophic. For a small-scale herder, losses to wildlife can mean the difference between economic independence and dire poverty. Large carnivores are the principal culprits. Patterson *et al*, for example, analysed 312 attacks claiming 433 heads of livestock over a four-year period on two neighbouring arid-land ranches adjoining Tsavo East National Park in Kenya. Lions were responsible for 86 percent of the attacks while the rest were carried out by

³ Irandu, E.M. 2003. *Wildlife tourism and local communities in Kenya*. Paper presented at ATLAS-Africa Conference, held in Arusha, Tanzania, 20–22 February 2003.

hyenas and cheetahs. Lions and hyenas attacked mainly cattle and at night, whereas cheetahs nearly always took smaller sheep and goats. Some other smaller carnivores are also responsible for attacks on livestock.⁴

Wildlife in many protected areas is under threat from human encroachment, insularisation, poaching for commercial or subsistence purposes, habitat degradation, encroachment of incompatible land uses, loss of migration, land degradation and dispersal areas, and ever increasing human-wildlife conflicts. Where wildlife-induced damages to human property and life are neither controlled nor compensated, negative local attitudes towards conservation and wildlife resources become entrenched. This is made worse when local communities do not benefit from wildlife resources and are alienated from wildlife-related economic enterprises such as the lucrative tourism industry. When local communities feel that both governments and conservation stakeholders value wildlife more than their lives, livelihoods or their aspirations, retaliation and opposition to conservation initiatives can be swift and uncompromising.⁵

Pollution by human activities continues to cause drastic modifications of wildlife habitats. The introduction of solid wastes and other pollutants into water and land intentionally or accidentally negatively affects wildlife populations causing death or their impairment.⁶

⁴ Okello, M.M. and J.W. Kiringe 2004. *Threats to biodiversity and their implications in protected and adjacent dispersal areas of Kenya*. Journal of Sustainable Tourism, 12 (1), pp. 54–69.

⁵ Ibid.

⁶ Ibid.

3.3 Increasing Livestock Populations and Competitive Exclusion of Wild Herbivores

Growing densities in livestock populations can create an overlap of diets and forage competition with wild herbivores, resulting in overgrazing and decline or local extinction in wild herbivore populations according to Mishra *et al.*⁷

In Kenya, domestic animals often outnumber wild ungulates within protected areas, reaching densities of up to 1,500/km² and it has been ascertained that livestock graze in 73 percent of wildlife sanctuaries and 39% of protected areas. Under these circumstances, livestock becomes an important source of prey for predators Mishra *et al.*⁸

Virtually all of the world's large carnivore species have experienced major declines and range contractions in the last hundred years, such that many are now considered globally or regionally endangered. Conflict with farmers over livestock depredation has been a major cause of these declines. Indeed, killing of animals considered predators of livestock has driven the extinction of several species, including the Falkland Island wolf.⁹

Independent data on livestock depredation by wild-dogs were gathered through analysis of 1576 scats collected throughout the study area. These scats were collected in the course of a parallel study of wild dog ecology which involved monitoring radio-collared dogs, following up sightings, and surveying for wild dog activity; only a minority of scats were collected by Community Liaison Officers. We recorded the location where each scat was found, whether it was found close to a known den, and, where possible, which pack had produced it. Scats were air

⁷ Mishra, C., Allen, P., McCarthy, T., Madhusudan (2003), *The role of incentive programs in conserving the Snow Leopard*. Conservation Biology.

⁸ Ibid.

⁹ Treves, A., Karanth, K.U., 2003. *Human-carnivore conflict and perspectives on carnivore management worldwide*. Conservation Biology 17, 1491–1499.

dried, and then broken apart to examine the prey remains inside. Prey species were identified by comparing the gross appearance of hairs, hooves, bones and teeth found inside scats with reference material collected in the study area from animals killed by other predators or in road accidents.¹⁰

3.4 Climatic Factors

Although not often mentioned, perhaps because they cannot be controlled, climatic trends are an important cause of wildlife conflict. Seasonal changes in rainfall are directly correlated with predation intensity in Kenya. In Tsavo National Parks, Patterson *et al.* quantified a positive association between monthly rainfall and attacks, demonstrating that in this region lions are more likely to attack livestock during seasonal rains. During drought periods, ungulates spend most of their time near a limited number of water sources and thus they are easily found and killed; when rain fills seasonal pools, lions disperse into their habitat, change their diets, and prey on easier targets.¹¹

In Zimbabwe, in proximity to the Sengwa Wildlife Research Area, the correlation between seasonal changes and intensity of livestock depredation is also found to be strong. However, contrary to the Kenya Tsavo case, wild predators are more likely to attract attention and attack domestic animals in the dry season months, when the vegetative cover does not facilitate the hunting strategies of lions and leopards that are based on surprise.¹²

¹⁰ Woodroffe, R., 2003. *African wild dogs and African people: conservation through coexistence*. Third annual report of the Samburu-Laikipia Wild Dog Project, University of California.

¹¹ Patterson B. D., Kasiki S. M., Selempo E. and Kyas R.W. (2004). *Livestock predation by lions (*Panthera leo*) and other carnivores on ranches neighboring Tsavo National Park, Kenya*. Biological Conservation,

¹² Ibid

These sporadic events are difficult to forecast and prevent, yet also have an impact on human wildlife conflicts. During 1997-1998, an El Nino Southern Oscillation caused drought and fires, a combination of factors, which resulted in the destruction of large areas of Sumatran forests. During that period, lions fleeing burning areas near Nairobi National Park in Kenya were reported to have killed a person.¹³

Globally, the climate is changing resulting in direct physiological impacts on individual species, changes in abiotic factors, changed opportunities for reproduction and recruitment and altered interactions among species. Climate change may also produce more conducive conditions for the establishment and spread of invasive species, as well as change the suitability of microclimates for native species and the nature of interactions among native communities. There is inadequate data on the impacts of climate change on biodiversity. Bushmeat and deforestation are twin plagues ravaging the biodiversity of East Africa's savannas – both extract natural resources far faster than they are regenerated. Due to harsh climatic conditions, most private lands have already been harvested for charcoal or for construction materials. This forest and other scrubs provide perfect hideout for wild animals, and once this has been stripped – the animals now begin to wonder around looking for a place to shelter themselves. Episodic drought and fluctuating elephant populations (which trample and destroy trees) have also contributed to deforestation.¹⁴

¹³ Weladji, R.B. & Tchamba, M.N. 2003. *Conflict between people and protected areas within the Bénoué Wildlife Conservation Area, North Cameroon*. *Oryx*, 37(1): 72–79.

¹⁴ Ibid.

3.5 Abundance and Distribution of Wild Prey

Many authors recognize that when native prey is abundant, wild predators consume it in preference to livestock and that impoverishment of prey populations is one of the major causes of carnivores shifting their diets to livestock. Clearly, this is due to the ease of capture and limited escape abilities of livestock. In Venezuela, in Hato Pitiero commercial cattle ranch, the correlation between alteration of prey availability and local livestock depredation is evident by the fact that the highest depredation rates have been recorded in areas where prey abundance and diversity are relatively low time Polister *et al.*¹⁵ According to Polister *et al.* Invasive alien species are a major threat to wildlife resources particularly in arid and semi arid areas and aquatic ecosystems. Invasive alien species can transform the structure and species' composition of ecosystems by repressing or excluding native species, either directly (outcompeting them) or indirectly (changing the way nutrients are cycled through the system). The control of these invasive species is a major management challenge, often involving very high environmental and financial costs.

3.6 Land Use Transformation

This driving force is very much associated with many other factors, as the transformation of forests, savannah and other ecosystems into agrarian areas or urban agglomerates is a consequence of the increasing demand for land, food production, energy and raw materials. In Kenya, in many areas with abundant wildlife, such as Samburu, Trans-Mara, Taita and Kwale,

¹⁵ Polister, M, Phillips S, and Lay Lockon; 2000; *Wildlife landscapes: A conservation model for the 21st century*; Forum, 17 (1), pp. 15–26.

conflict is intensified by land use subdivided and sold as smallholdings and cultivated with commercial horticultural crops according to Kenya Wildlife Service.¹⁶

Rampant land transformation combined with the increase in various recreational activities and growing public interest in charismatic species, such as large carnivores and endangered species, have increased the human presence in protected areas and raised concern about capacities to manage and regulate public access and large-scale use of protected areas. Associated with the four global trends is a fifth cluster connected to alteration of natural food and water availability.¹⁷

3.7 Increasing Wildlife Population As a Result of Conservation Programmes

In recent years, the successful recovery of declining or near extinct species populations through wildlife management and protection from overexploitation (Messmer)¹⁸ has also led to new conflicts.

Effective protection and habitat management within the Gir National Park and Sanctuary in the Indian state of Gujarat doubled the Asian lion (*Panthera leo persica*) population between 1970 and 1993. The social organization, habitat and prey requirements of the species were difficult to accommodate within the human-defined home range, and resulted in many lions straying out of the reserve into local villages. In the ranches of North America, European

¹⁶ Kenya Wildlife Service; *Wildlife-human conflicts, Sources, Solutions and Issues*; (1996); [www document] Available at: <http://www.safariweb.com/kwild/wildlife.htm>.

¹⁷ Treves, A. & Karanth, K.U. 2003. *Human carnivore conflict and perspectives on carnivore management worldwide*. *Conservation Biology*, 17(6): 1491–1499.

¹⁸ Messmer T.A. (2000); *The emergence of human–wildlife conflict management: turning challenges into opportunities*. *International Bio-deterioration & Biodegradation*, 45 (3-4): 97-102.

settlement almost exterminated wolves. Recent recovery programmes, however have contributed to the recolonization by wolves of their original home range, including rural areas; and in the process have increased the potential for conflict, especially where domestic livestock is a major economic activity according to Messmer.¹⁹ The human-wildlife interface surrounding conservation sites in Kenya is characterized by conflictive relationship between humans and their wildlife neighbours. Boundaries of conservation areas are often blurred and vague thereby creating conflicts in the land use patterns between the wildlife habitats and their surrounding areas, which are normally used for human settlement, pasture land, farmland, commercial and/ or other social functions.²⁰

Occasionally often during migratory periods, wildlife invades and occupies the human inhabited land bordering conservation sites thereby preying upon, transferring disease to, and competing for grazing and water with domestic stock and threatening human life through physical injury or death and damage to crops and other private property.²¹

3.8 Poor Formulation and Implementation of Wildlife Policy

A catastrophic loss of wildlife resources on this scale is evidence of a major failure in both the formulation and implementation of policy, and clearly more than corrupt officialdom and wily poachers are involved. Norton- Griffiths²² identified three important contributory factors.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Colin, Michael Gachanja, Christian Lambrechts and Bongo Woodley. *Aerial Survey Of The Destruction Of The Aberdare Range Forests*. Division of Early Warning and Assessment. United Nations Environment Program. April 2003.

²² M. Norton-Griffiths [1998], *The Economics of Wildlife Conservation Policy in Kenya*, in *Conservation of Biological Resources* (E.J. Milner-Gulland and R. Mace, eds.), Blackwells, Oxford.

First, the major conservation problem lies not so much within the formal network of protected areas but on land outside, land owned, managed and used by Kenyans for agricultural and livestock production. The great majority of wildlife in Kenya are found outside the protected areas (GOK), either on a permanent basis or as part of their seasonal migrations: rates of loss outside the PAs are 55% compared with 30% from inside. Second, conservation outside the PAs is closely related to secure tenure and property rights: loss rates are 30% where land is adjudicated to individual or group ownership compared with 44% where land remains largely unadjudicated and under communal tenure.²³ Third, while tourism clearly provides flows of benefits to finance national conservation activities (loss rates are lower (32%) in the areas frequented by wildlife tourists compared with 53% in areas where tourists rarely venture) it is the distribution of these benefits which is critical. Only where benefits have flowed transparently to landowners and land users, rather than to Central Government, County Councils or tourism cartels, has wildlife either held its own or even increased.

Wildlife policies and relevant property rights regimes in wildlife conservation comprise private property where wildlife is found on private lands, common property where wildlife is found on communal property or property owned by a group and government ownership where the government owns wildlife and wildlife protection areas. Open access situations also obtain where wildlife is found on no one's land or where common property support structures have disintegrated. Wildlife raises special problems at times conflict of ownership since it is a fugitive resource which in its in situ condition cannot be associated with a particular user as its owner²⁴. Moreover, wildlife does not recognise property boundaries and its movement cannot be restricted

²³ Ibid.

²⁴ David Western; (1974); *Road Development Plan: Amboseli National Park, based on the Criteria and Rationale for Reconciling Conservation and Recreational Use*; Kenya.

to national parks and reserves. Thus wildlife invariably avails itself of the space and forage available on private and group land since ecosystem boundaries do not follow the property ones. Species are also often found at the boundaries of different parcels of property, which may be no one's land, and seasonal migration necessitates the availability of corridors between different parcels of land.²⁵

Kenya is rich in biological diversity to which wildlife resources contribute a significant proportion. Many of the regions with abundant and diverse wildlife communities remaining in East Africa are occupied by pastoralists. Recent studies show that the majority of the local people around protected areas have negative feelings about state policies and conservation programmes. The alienation of grazing land for the exclusive use of wildlife and tourists has a very direct impact upon the pastoralist communities, and prompts them to raise questions about African wildlife policy – as if it leads to a ‘people versus animals’ conflict. Nevertheless, large areas of pastoral rangelands have been expropriated for exclusive wildlife conservation use. This has commonly been justified by the argument that pastoralists overstock, overgraze and damage their range while wild animals are seen as existing in harmony with their surroundings. Utilization in conservation areas. Such conflicts do not solve this problem, however, but adversely affect the biodiversity. They harm people and property, and lead to the retaliatory killing of wildlife in 82% of the protected areas.²⁶

²⁵ Ibid.

²⁶ Okello, M.M. and B.E.L. Wishitemi 2006. Principles for the establishment of community wildlife sanctuaries for ecotourism: *Lessons from Maasai Group Ranches, Kenya*. African Journal of Business and Economics, 1 (1), pp. 90–109.

3.9 Colonial Alienation of Parks

In the name of development the Maasai have lost a huge part of their ancestral land. Alienation of Maasai land for agriculture, national parks and for the interest of wildlife conservation is one of the main blights facing the Maasai in both Kenya and Tanzania.²⁷

It is said Maasailand extends from Mkomazi through Upare to the southern foothills of Mount Kilimanjaro and runs northward between Mount Kilimanjaro and Mount Meru, Olong'elata. To the West the Maasai took in the whole of Maasai Steppe extending southwards to include today known villages on the Handeni-Kondoa road, Swakini, Kijungu and Mgera. The extreme westerly limit is the West of the Serengeti. It is a large territory covering a total of 105,105 square kilometres. The Kenya/Tanzania border line cuts across Maasailand for kilometres stretching from West of Mara River to the eastern slopes of Kilimanjaro Mountain. During colonial time Maasailand was divided into four administrative Districts namely Narok and Kajiado in Kenya and Monduli and Kiteto in Tanzania.²⁸

The Maasai are victims of 'development' in general but wildlife conservation in particular. Serengeti National Park, Tarangire National Park, Lake Manyara National Park, Arusha National Park, Ngorongoro Conservation Area, Maasai Mara Reserve, Amboseli National Park, Nairobi National Park, Tsavo [East and West] National Parks, Mkomazi Game Reserve, to mention a few examples, are in or adjacent to what was, and still is, the Maasai territory. What do they get out of wildlife conservation?²⁹

²⁷ Keiwua, M. (2002). 'Maasai Land: Part 1- A History' *whoseland*, October.

²⁸ Ibid.

²⁹ Chachage, C.S.L. (2000). *Environment; Aid and Politics in Zanzibar*, Dar es Salaam: Dar es Salaam University Press (1996) Ltd.

In the two countries, the tourism industry is based on wildlife conservation. It is considered the jet engine empowering the exchequers. The two Governments benefit financially and rhetorically from the tourism sector. It is often argued that policies must serve political, social, and cultural as well as economic ends. But the revenue earned from the tourism sector is much more of a priority for the international multimillion companies and Governments officials than the plight of rural people, especially the poor. Land allocated to wildlife conservation is reserved for tourists and investors who are mostly foreigners. Foreign investors reap as much profit as possible. In both Kenya and Tanzania ‘much of the foreign currency that comes in through such sectors as tourism gets siphoned out’,³⁰

Meanwhile conservation areas, many of them in the Maasai territory, were established. The largest concentration of wildlife as well as wildlife-protected areas remaining on earth is in pastorals territories in East Africa. In Kenya alone they are Masai Mara Reserve, Amboseli National Park, Nairobi National Park, Tsavo [East & West] National Parks, Nakuru National Park and a host of private game sanctuaries out’³¹

In Laikipia District 38 settlers whose ancestors came to Kenya during colonial times hold over one million acres leaving almost nothing to well over 40,000 Maasai. In Narok and Kajiado Districts Britain tests its new military hardware. ‘The British army has conducted live-fire weapons training in Kenya since 1945, when London was still the colonial ruler’ (visit irinnews.org). Two complex issues arise from the British military training in Maasailand. One, it has pushed the Maasai pastoralists off from their rangelands. Two, an ‘estimated 500 Maasai

³⁰ Ibid.

³¹ Ibid.

herders from northern Kenya have been killed or seriously injured by ammunition left on the firing range' out',³²

The larger herbivores (elephants, buffalo and hippopotamus), large mammalian carnivores (lions, leopards, cheetahs, spotted hyenas and wild dogs), and crocodiles are traditionally seen as the animals representing the greatest threat to humans and responsible for the majority of human-wildlife conflicts. This may be due to the fact that local communities often regard the large wild animals as government property, as was the case under previous colonial legislation, and therefore feel prohibited from dealing with the problem themselves. The impact of the activities of large mammals on farmers and their livelihoods is enormous and even traumatic when people are killed. These incidents are often newsworthy, and generally attract the attention of political representatives who demand action from governments out',³³

3.10 Actors as Source of Conflicts

Crop damage is the most prevalent form of human-wildlife conflict across the African continent. The occurrence and frequency of crop-raiding is dependent upon a multitude of conditions such as the availability, variability and type of food sources in the area, the level of human activity on a farm, and the type and maturation time of crops as compared to natural food source.³⁴

A wide variety of vertebrates conflict with farming activities in Africa. These include birds, rodents, primates, antelopes, buffalos, hippopotamuses, bush pigs and elephants. While it is

³² Rutten, M. (2002). *Parks Beyond Parks: Genuine Community Based Wildlife Eco-tourism or Just Another Loss of Land for Maasai Pastoralists in Kenya?* London: IIED.

³³ Weladji, R.B. & Tchamba, M.N. 2003. Conflict between people and protected areas within the Bénoué Wildlife Conservation Area, North Cameroon. *Oryx*, 37(1): 72–79.

³⁴ Ibid.

widely recognized that in most cases elephants do not inflict the most damage to subsistence agriculture, they are generally identified as the greatest threat to African farmers. Elephants can destroy a field in a single night raid. Most peasant farmers are unable to deal with the problem of elephant damage themselves and governments rarely offer any compensation out'³⁵. In most cases the adult male elephants carry out crop-raiding, while the female herds prefer to keep away from areas inhabited by humans. It is worth noting that during dry seasons elephants can also break into storage bins and steal grain. When they do so the consequences for food security are even more serious. Hippopotamuses can cause substantial damage to fields while feeding at night. Cultivations at risk are those close to rivers or lakes such as rice, vegetables and other crops grown on river banks during a drop in the water level, or crops grown directly in the water such as bourgou (*Echinochloa stagnina*), which is cultivated in the Niger river.

Crocodile attacks on humans elicit an emotional response in the immediate family of the victim but also in the public at large, albeit from different perspectives and with different intensity. This is possibly the psychological root of the fascination that such incidents seem to hold for print, visual and electronic media, particularly when the victim is of European or American origin. For example, the fatal attack by a crocodile on an 18-year old British student in Kenya led to pages of headline coverage in the European press, while a summary of eight recent deaths of Kenyan citizens received only one paragraph on an inside page of a local newspaper.³⁶

³⁵ Ibid.

³⁶ Ibid.

3.11 Management Interventions As Source of Wildlife Related Conflicts

Wildlife conflict can turn affected communities against wildlife conservation initiatives and, in some cases, cause local governments to de-gazette protected areas. Local resentment over damage by wildlife can preclude discussion of other environmental issues, such as soil erosion, pollution, and water management. Downplaying or ignoring the problem can generate added resentment. Perceptions of HWC influence complaints, tolerance for wildlife, approval of management, and cooperation in proposed solutions. Local perceptions of HWC are complementary to systematic, scientific measures of loss and equally important in managing the problem.³⁷

³⁷ Smith, M., J. Linnell, J. Odden, J. Swenson. 2000. "Review of Methods to Reduce Livestock Depredation II: Aversive Conditioning, Deterrents and Repellents." *Acta Agriculturae Scandinavica, Section A Animal Science* 50: 304-15.

CHAPTER FOUR

FINDINGS OF WILDLIFE RELATED CONFLICT MANAGEMENT STRATEGIES

4.1 Introduction

Wildlife related conflict can be managed through a variety of approaches. Prevention strategies endeavor to avoid the conflict occurring in the first place and take action towards addressing its root causes. Protection strategies are implemented when the conflict is certain to happen or has already occurred. Mitigation strategies attempt to reduce the level of impact and lessen the problem. The main difference between the options is the moment at which the measure is implemented. By definition management techniques are only cost-effective if the cost of implementing the technique is less than the value of the damage, taking into account the fact that a short period of active management may have a continued effect, by installing longer-term protection of crops or herds.

4.2 Wildlife Related Conflict Management Strategies in Kenya

The central investigation in this study was to come up with a new framework on which conflicts in wildlife sector will be solved with emerging concept of conflict about wildlife. The objectives were to examine the causes and issues of human wildlife conflicts and to examine the current strategies in solving human wildlife conflicts in Kenya.

Wildlife related conflicts can be managed through a variety of approaches. This include, prevention strategies endeavor to avoid the conflict occurring in the first place and take action towards addressing its root causes. Protection strategies are implemented when the conflict is certain to happen or has already occurred. Mitigation strategies attempt to reduce the level of impact and lessen the problem. The main difference between the options is the moment at which

the measure is implemented. By definition management techniques are only cost-effective if the cost of implementing the technique is less than the value of the damage, taking into account the fact that a short period of active management may have a continued effect, by installing longer-term protection of crops or herds.

4.2.1 Wildlife Related Conflict Field Findings

The field data for this study was collected using Semi-structured questionnaire and Focus Group Discussion guide in Liakipia and Rumuruti area and among many key wildlife stakeholders.

A semi-structured questionnaire is a mix of unstructured and structured questionnaires. Some of the questions and their sequence were determined in advance, while others evolved as the interview proceeded. The researchers chose to use interview administered semi-structured questionnaires or surveys in order that they can make generalizations, the surveys were based on carefully selected samples. The questionnaires consist of the same set of questions that were asked in the same order and in the same way in order that the same information can be gathered.

A focus group discussion (FGD) was a good way to gather together people from similar backgrounds or experiences to discuss the specific topic of interest. The group of participants from Laikipia and Rumuruti was guided by a moderator (or group facilitator) who introduced topics for discussion and helped the group to participate in a lively and natural discussion amongst themselves. The strength of FGD relied on allowing the participants to agree or disagree with each other so that it provides an insight into how a group thinks about an issue, about the range of opinion and ideas, and the inconsistencies and variation that exists in a particular community in terms of beliefs and their experiences and practices. FGDs were also used to

explore the meanings of survey findings that cannot be explained statistically, the range of opinions/views on a wild-life related conflict and to collect a wide variety of local terms.

Data analysis was done using descriptive statistics and thematic analysis. Measures of central tendency and measures of dispersion were used. Several themes were used for the thematic analysis, some of the emerging themes included; poaching, wildlife related conflicts, deterrents for wildlife, fencing, wild-life control, strategic of wildlife related conflicts, human wildlife conflicts and other sub-themed related to the main topic under study.

4.2.2 Socio-demographic Information

A total 20 questions were sent out to various stakeholder, and only 15 questionnaires were returned successfully completed by respondents for the study. Thus 15 questionnaires were subjected to analysis. The focus group discuss was held in two groups, each with about 20 persons, from different areas are most affected by the wild-related conflicts.

The general information considered in this study for the respondents included: gender, age, length of time worked, job designation and the level of education.

4.2.2.1 Age of respondent in years

On age, the study found out that a majority 89 (57.7%) of the key wildlife stakeholders were in the age bracket of between 35-45 years. Generally, the stakeholders were well distributed across the age profile.

4.2.2.2 Gender of respondents

The study found out that (60%) of the respondents were male while (40%) of the respondents were female. This in part explained the existence of observance of gender equality and affirmative action by the management of Key wildlife stakeholders.

4.2.2.3 Name of the Organizations

The study interviewed various wildlife stakeholders, from various sectors. The study found that Kenya Wildlife Service (53%), Conservancy (26%) and Governors (21%) respectively.

4.2.2.4 Marital Status

The study revealed that the marital status of the respondents was as follows single (13%), married (80%) and widowed (7%) respectively.

4.2.2.5 Awareness of Concept of Human Wildlife Related Conflict

The study revealed that when it came to the concept of Human Wildlife Related Conflict (86%) were aware, while (14%) were unaware.

4.2.2.6 Personal Experience of Concept of Human Wildlife Related Conflict

The study aimed to establish the personal experience of human wildlife related conflict and found out that, (66%) had experienced while (34%) had not experience the concept.

4.3 Human Management of Wildlife Related Conflict in Kenya

The study was keen to established some of the ways of tackling the wildlife related conflicts in Kenya, and the group discussion established that various strategies, to overcome this challenge.

4.3.1 Community Awareness

Awareness-raising can be carried out in the community at different levels, for instance in schools or in adult education arenas such as farmer field schools. Educating children, coupled with awareness raising among adults through the traditional authority of chiefs and headmen, would certainly be highly cost effective means of managing conflict.

Education and training activities could be directed towards disseminating innovative techniques, building local capacity for conflict prevention and resolution, and increasing public understanding of human-wildlife conflict. Educating rural villagers in practical skills would help them deal with dangerous wild animal species and acquire and develop new tools for defending their crops and livestock. Over time, it would result in a change of behaviour among local populations and would contribute to reduced risks, improvements in local livelihoods and a reduction in their vulnerability. In an optimistic case, education and training would promote commitment towards conservation, raise awareness of the essential role of wildlife in ecosystem functioning and its ethical and economic value, as well as its recreational and aesthetic importance.¹ Finally, allowing community members to observe a captured animal would provide a new perspective on the risks they take on a daily basis. Rural Africans are largely unaware of the size and strength of adult crocodiles, possibly because these are normally seen with only their heads above the water and are not approachable in daylight.² Prevention strategies endeavour to avoid the conflict occurring in the first place and take action towards addressing its root causes. Protection strategies are implemented when the conflict is certain to happen or has already

¹ Ibid.

² Wanjau, M.W. 2000. *Resolving conflicts between people and crocodiles: a case study of Athi River, Kibwezi, Tsavo ecosystem*. Report to Kenya Wildlife Services.

occurred. Mitigation strategies attempt to reduce the level of impact and lessen the problem. The main difference between the options is the moment at which the measure is implemented.

4.3.2 Compensation

The community vouched very strongly for compensation when it came to the wild-life related conflicts. Direct compensation through the payment in the event of loss is usually confined to a specific category of loss, such as human death or livestock killed by predators or elephants.

These schemes are often funded by a conservation organization, although government schemes also exist. All are designed to increase damage tolerance levels among the affected communities and prevent them taking direct action themselves, such as hunting down and killing the elephants, lions or other species involved.³ In sub-Saharan Africa, some compensation schemes for losses caused by wildlife exist. Most African countries do not pay compensation for damage caused by wildlife, arguing that compensation schemes can do little to reduce the wildlife related conflicts and need to be modernized in order to become less bureaucratic, more reactive and transparent.⁴

The IUCN African Elephant Specialist Group and Human-Elephant Conflict Task Force also advise against using compensation for elephant damage and argue that it can only at best address the symptoms and not the cause of the problem. The failure of most compensation schemes is attributed to bureaucratic inadequacies, corruption, cheating, fraudulent claims, time and costs involved, moral hazards and the practical barriers that less literate farmers must overcome to

³ Treves, A. & Karanth, K.U. 2003. Human carnivore conflict and perspectives on carnivore management worldwide. *Conservation Biology*, 17(6): 1491–1499.

⁴ Kenya Wildlife Service. 1996. Wildlife-human conflicts, sources, solutions and issues. Available at: www.safarweb.com/kwild/wildlife.htm.

submit a compensation claim. They are also difficult to manage, requiring among other things reliable and mobile personnel, able to verify and objectively quantify damage over wide areas. This often leads to delays in decision-making, low rates, irregular and inadequate payments or the rejection of compensation claims. All these factors discourage farmers from submitting complaints.⁵

4.3.2.1 Insurance scheme

Insurance scheme is an innovative compensation approach where farmers pay a premium for cover against a defined risk, such as livestock depredation. The premium can be set at the true market rate or be subject to subsidy provided by conservation organizations. The method also requires an accurate assessment of the cause of crop damage, livestock depredation, human injury or death, but because it operates on a more local scale, reports can be more easily verified. Although the insurance scheme can impose certain practices which need to be undertaken by participating farmers to avoid human-wildlife conflict, overall the method seems promising.⁶

4.3.2.2 Indirect compensation

Indirect compensation is an alternative compensation systems rely on giving out licenses to exploit natural resources, through tourism, hunting or collecting fuelwood, timber, mushrooms, fodder, etc. This type of compensation scheme, also known as the “settlement of rights” to use natural resources, appears to be a more practical solution than monetary payment. Indeed, the

⁵ Muruthi, P. 2005. *Human wildlife conflicts: lessons learned from AWF's African heartlands*. AWF Working Papers. Nairobi, Kenya, African Wildlife Foundation.

⁶ Ibid.

benefits derived from the legitimate use of natural resources influence the attitudes and perceptions of rural residents.⁷

4.4 Production Management

The study was keen to establish some of the ways of tackling the wildlife related conflicts in Kenya, and the group discussion voiced the various strategies, including production management.

4.4.1 Intensifying Human Vigilance

Vigilance is an important component of crop or livestock protection and human-wildlife conflict management. The fear of humans normally dissuades animals from committing damage. In Kibale National Park in Uganda, elephants waited at the forest edge until farmers left the fields before they would enter, suggesting an aversion to the presence of humans. Elephants in the area around the Kakum Conservation Area in Ghana appear to avoid farms where people are present.⁸ Guarding herds and taking steps to actively defend them are essential features of animal husbandry. Where herdsmen are present, the rate of depredation is generally lower than in free-ranging herds. In East Africa, where human herders are effective and fearless in warding off predators, herders are reported to challenge and scare away dangerous carnivores such as lions, hyenas and cheetahs with nothing more than simple weapons such as spears, knives or firearms.⁹

⁷ Sekhar, N.U. 1998. Crop and livestock depredation caused by wild animals in protected areas: the case of Sariska Tiger Reserve, Rajasthan, India. *Environmental Conservation*, 25(2): 160–171.

⁸ Stander, P.E. 2000. Conservation of lions and other large carnivores in the Kunene region, Namibia. *African Lion News*, 2: 8–9.

⁹ Breitenmoser, U., Angst, C., Landry, J.-M., Breitenmoser-Wursten, C., Linnell J.D.C. & Weber, J.-M. 2005. Non-lethal techniques for reducing depredation. In R. Woodroffe, S. Thirgood & A.R. Rabinowitz, eds. *People and wildlife: conflict or coexistence?*, pp. 49–71. Cambridge, UK, Cambridge University Press.

On the other hand, some species such as baboons show less fear, and simple vigilance therefore gives less effective results. Determined troops of baboons can intimidate guardians, particularly women, who are often chased away. Baboons will adapt rapidly to measures taken against them and are remarkably quick to find weaknesses in the guarding of crops.¹⁰ Watchtowers providing good vantage points, built around cultivated fields, can increase the farmers' chances of being alerted to the presence of potentially harmful wildlife before damage has occurred. Farmers need to cooperate among themselves to manage the watchtowers and set up duty rosters, as is widely practised in Zimbabwe, Mozambique and Zambia. Farmers can cooperate by means of a rotating system of guard duty whereby only a few of them patrol during the night. If an elephant is sighted, other farmers are woken to chase them away. Simple alarm systems, using a network of cowbells or tins filled with stones connected along a length of twine, can also be effective and avoid the farmer having to stay alert all night long¹¹.

4.4.2 Guard Animals

Guard animals provide an alternative to a herder monitoring a flock, which is labour-intensive, time-consuming and costly. To be successful, a guard animal must bond with the animals they are to guard. This bonding, combined with the guard animal's natural aggression toward predators, can make a guard animal an effective protector.¹² Dogs can be effective in protecting homesteads and livestock from attack by predators. The dogs are trained to alert people to the

¹⁰ Ibid.

¹¹ Treves, A. & Karanth, K.U. 2003. Human carnivore conflict and perspectives on carnivore management worldwide. *Conservation Biology*, 17(6): 1491–1499.

¹² La Grange, M. 2005. Problem lion control – methods and general observations related to the control of problem lions. In *Wildlife management*, Vol. II, *Problem animal control*. Report to the International Foundation for the Conservation of Wildlife (Fondation IGF), Harare, Zimbabwe.

presence of predators, rather than chasing predators. These dogs are raised from puppyhood with sheep or cattle and live with the herd full-time. Several new training aids are now available to the dog handler including “shock collars” to provide stimuli to the animal in obedience training and are used in conjunction with whistles and global positioning system (GPS) collars in the event of animals becoming lost.¹³

Donkeys have also been used as guard animals in many parts of the world. In some areas of Kenya one or two donkeys per herd of cattle have been used to guard against lions. Donkeys appear to have a higher defence instinct than cattle and are naturally more alert and aware of predators. They make formidable opponents, they are not afraid and will find predators and chase them away, even by biting and kicking. Mares with foals are particularly protective. Foals should be raised with livestock. However, stallions tend to break fences and become aggressive during Breeding.¹⁴

4.4.3 Fencing

The focus group discussion with the community revealed some form of preventive measures for the wild-life reacted conflicts. The community voiced strongly fencing as an effective way to manage this conflict, there was a huge concern on the use of fencing in these conflict areas.

When they are properly designed, constructed and maintained, fences can be almost completely effective in preventing conflict between people and wild animals. Fences are used to protect crops and to protect people and livestock. They are also used to insulate protected areas;

¹³ Ibid.

¹⁴ Ibid.

communities seem increasingly to opt for separation rather than integration of culture and nature in the landscape, as a result of increasing human-wildlife conflict and scarce human involvement in or direct benefit from conservation. Fenced wildlife sanctuaries enable people to benefit, yet be separated, from wildlife, so that they can practise other land uses such as pastoralism and agriculture.¹⁵

Fences also help prevent the transmission of certain endemic contagious diseases such as foot-and-mouth disease, African swine fever and theileriosis. The establishment of control areas, game-proof fences, sanitary cordons and movement control to separate wildlife from domestic livestock has frequently given the best results. This method has generally been used in countries with an advanced land-use policy where nomadic pastoralism is not practised. It is less likely to succeed against endemic arthropod-borne infections such as trypanosomiasis, epizootic hemorrhagic disease, African horse sickness, and Rift Valley fever, where vaccination and vector control may be required to reduce transmission. Although the introduction of fencing is a good way to manage human-wildlife conflict, it also brings a number of environmental and economic disadvantages and is never 100 percent efficient. Several types of fences are used throughout Africa for various purposes.¹⁶

¹⁵ Ibid.

¹⁶ Timber Producers' Federation. 2006. *Timber industry statistics for the year*. Harare, Zimbabwe.

4.5 Crop or Herd Management

4.5.1 Agriculture

The community in the focus group discussion also voiced agricultural strategies as some of the ways to manage the wild-life related conflicts. Other agricultural practices such as changing the time a crop is planted or harvested can also result in a decrease in crop-raiding. This can be done by using special varieties such as open pollinated maize varieties which can be harvested earlier than other food crops and consequently are less vulnerable to crop damage, which tends to occur late in the growing season. By intensifying agriculture, increasing inputs and boosting yields, farmers are able to maximize their returns from smaller plots of land which are also much easier to defend against crop-raiding elephants. Intensification can be facilitated through the introduction of practical, environmentally sensitive practices such as mulching, and the use of organic fertilizers and liquid dung.¹⁷

Small islands of crops scattered across a landscape inhabited by wildlife are more vulnerable to destruction than those that are clustered together. A landscape approach to reducing human-wildlife conflict might therefore involve growing crops in large communal fields with straight edges, fences or thorny or spiny hedges, and also removing nearby cover and habitat for wildlife. In that respect, a cleared margin of about 50 metres around crops does help as a preventive measure, since both baboons and bush pigs are wary of crossing these open areas.¹⁸

¹⁷ Ibid.

¹⁸ Ibid.

4.5.2 Animal Husbandry

Livestock raids can be minimized through good husbandry practices, such as herding during the day, keeping livestock in a predator-proof enclosure at night or avoiding predators' home territory. Additionally, a livestock keeper can remove thick cover from near animal holding areas. Equally herders should systematically avoid taking livestock to water points which are known to be inhabited by large crocodiles. Good husbandry also requires vigilance and a willingness on the part of the owner to confront predators when the need arises. This is a daunting task when the farmer is not properly equipped for it, especially since confrontations usually occur at night.¹⁹

4.6 Non-lethal Control

4.6.1 Deterrents

Deterrent methods are designed to repel animals from the targeted resource. They can be grouped into several categories according to the sense they target: hearing, sight, smell, taste and touch.

4.6.1.1 Acoustic deterrents

Acoustic deterrents are those that shock wildlife away by emitting an unexpected loud noise or specific sounds known to scare wildlife. Traditional acoustic methods are widely used by farmers throughout Africa, mainly against elephants: such as beating drums, tins and trees; using whips in addition to shouting, yelling and whistling; and setting off explosive devices such as “bamboo blasters” using calcium carbide or fertilizers, pipe bombs.

¹⁹ Tjaronda W. 2007. Namibia: conservancies suspend compensation schemes. *New Era* (Windhoek, Namibia), 6 November.

Disturbance shooting (firing gunshot over the heads of crop-raiding elephants) has been a long-standing deterrent, but it needs the intervention of problem animal control units or administration representatives. People have used shotgun blasts to scare off lions in commercial ranches in Laikipia, Kenya. Cracker shells are 12 bore cartridges which launch a small charge that explodes near the predator, presumably providing greater shock value than gunshot coming from a boma.²⁰

In order to scare baboons, the use of shots, cannon noise or predator sounds can be used. Sound aversion barriers generating a frequency that causes pain have also been considered but this technique is impractical for large areas, and has several other disadvantages: it is difficult to trigger; the signal generation is expensive; and it can potentially cause auditory damage to non-target species. Disturbance shooting at roost sites is a method easy to implement once all roost sites are known. However, baboons may return to their roost sites once the disturbance ends. The destruction of roosts is a more permanent solution, but as in the case of disturbance shooting, it may cause major changes to range use and transfer the problem to a new area.²¹

Alarm systems established at the boundary of farms and set off by a tripwire alert farmers to the presence of elephants, but also have some deterrent effect. Some more sophisticated techniques using tape recordings are currently being tested in Kenya, where play-back of Massai cattle noise to elephants in Amboseli National Park scared off elephants which are periodically hunted or injured by the local Massai tribesman.²²

²⁰ Tjaronda W. 2007. Namibia: conservancies suspend compensation schemes. *New Era* (Windhoek, Namibia), 6 November.

²¹ Thouless, C.R. 1994. *Conflict between humans and elephants in Sri Lanka*. Report for the Global Environment Facility (GEF). Oxford, UK. (Unpublished).

²² Ibid.

4.6.1.2 Visual deterrents

Visual deterrents are a traditional method. Brightly coloured cloths and plastic may be hung from a simple fence at the edge of fields. Scarecrows could have a potentially deterrent effect, but they are not as successful against lions as they are against leopards according to Woodroffe. The flames and smoke of fires lit on the boundaries of fields or burning sticks carried by farmers can deter wildlife. Burning tyres produce a lasting and noxious smoke which affects both visual and olfactory senses, and increases the deterrent effect.²³

4.6.2 Translocation

Translocation consists of moving a certain number of animals from a problematic zone to a new site. In spite of the risk of exporting the problem to another site, it may be a practical and politically correct approach in some cases, especially where suitable habitats with territorial vacancies are available.²⁴

In some situations, translocation can be a pre-emptive action before human-wildlife conflict occurs. For instance, the presence of a lion in a cattle ranching area or large crocodiles in water bodies close to human habitation can often be detected before the animals have caused a problem. These potential problem causing animals can then be removed and translocated before they kill livestock or people. In addition, the sale of live animals to private reserves or crocodile farms can provide additional income.²⁵

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

This technique has been used more or less successfully with elephants, crocodiles and other carnivores. Trapping and translocating baboons is feasible and can potentially provide an immediate solution to the bark-stripping problem within the troops range. However because baboons are abundant and widespread, there are few interested recipients. On the other hand, removing the problem troop potentially leaves an empty range that may be occupied by another bark-stripping troop.²⁶

4.6.3 Contraception

The fertility of wild animals can, at least in theory, be controlled by using a variety of mechanical, surgical, endocrine-disruptive or immuno-contraceptive methods. One problem limiting many of these methods is the difficulty of administering drugs to, or capturing, free-ranging animals. Moreover, several health-related issues need to be resolved before fertility control becomes acceptable. The contraceptive used must not have harmful effects on the target animals, non-target wildlife, or on humans who might consume the meat.²⁷

4.7 Lethal Control

Lethal control means killing the animals concerned. This strategy is still widely used in Africa, but rather with the purpose of maintaining social peace than resolving the human-wildlife conflict problem definitively.²⁸

In general, shooting a problem-causing animal is believed to be the best way of warning the others away. With lethal control it is obviously desirable to focus on those individuals

²⁶ Ibid.

²⁷ Ibid.

²⁸ Thouless C.R. 1993. *The Laikipia elephant project*. Final report. Nairobi, Kenya, Kenya Wildlife Service and World Wide Fund for Nature Eastern Africa Regional Office.

actually causing the problem, or at least to target the group of animals whose home range includes the site where the problem is occurring. In reality, it is often difficult for wildlife managers to obtain permission to shoot an animal quickly, thus making killing the culprit virtually impossible. Any individual is then killed to satisfy the demand for action and revenge by the aggrieved community, especially in the case of loss of human life or the killing of livestock. The killing of some animals often has only a short-term effect. The reduction of the wildlife population can have adverse effects on the species killed, on sympatric species or even on the environment.²⁹

Similarly, profound changes to the local flora and landscape can occur as a result of the elimination of elephants. Finally, this method is increasingly criticized by the public. For this reason, there has been no lethal control of baboon populations in South Africa since the voluntary moratorium in May 2006 which followed a public and media outcry against implementation of the “trap-and-shoot” protocol. Elephant culling has been abandoned in favour of non-lethal techniques.³⁰

²⁹ Treves, A. & Naughton-Treves, L. 1999. Risk and opportunity for humans coexisting with large carnivores. *Journal of Human Evolution*, 36: 275–282.

³⁰ Ibid.

CHAPTER FIVE

CONCLUSION

5.1 Conclusion

The study concluded that wildlife related conflicts have been in existence for as long as humans and wild animals have shared the same landscapes and resources. Human-wildlife conflict does not occur only in Africa. Nowadays human wildlife conflict exists in one form or another all over the world. All continents and countries, whether developed or not, are affected by human wildlife conflict. However there is an important distinction to be made between the level of vulnerability of agropastoralists in developing countries and that of well-off inhabitants of developed nations.

Based on the findings, the study concludes that human-wildlife conflict can be managed through a variety of approaches. Communities that once coexisted with wildlife are now up in arms against the same animals they once cherished. From definitions of conflicts by the scholars, for conflict to occur two or more actors must be in play. These actors must be human beings. Consequently there is need to evaluate the notion that human wildlife conflict exists in its context. This means that the strategies that are currently being used in conflict management in wildlife sector are based on this concept and it is important to find out if this has any bearing to the current challenges in the wildlife sector. The reason why conflicts persist is competition for power politics that blind people from seeing the opportunities for cooperation and reaching an understanding in the ensuing conflict. Conflicts operate within a system and not a single entity. Wildlife related conflicts are most prevalent around protected areas (PAs), where wildlife populations are greatest, and between protected areas where migratory corridors cross

unprotected community land. While there are many ecological factors that regulate the levels of conflict, the intensity of conflict is primarily affected by land use zoning, or the lack of it, with high intensities of opposing forms of land use in close proximity coming into direct conflict. Human wildlife conflict is therefore in many regards a form of land use conflict.

The causes of human-wildlife conflict are diverse and it is important to consider ecological factors, human factors and land use factors, but addressing land use factors through effective land use planning possibly provides the best approach to successfully mitigating for human wildlife conflict in the long-term. The approach taken for the assessment of wildlife conflicts within the main area under study is directed towards addressing human-wildlife conflict as, primarily, a land use issue. While all forms of conflict mitigation pertinent to the Kenya situation will be taken into consideration to help reduce the current levels of conflict, it is believed that identifying effective land use options provide the best way forward.

Education and training activities could be directed towards disseminating innovative techniques, building local capacity for conflict prevention and resolution, and increasing public understanding of wildlife related conflicts. Educating rural villagers in practical skills would help them deal with dangerous wild animal species and acquire and develop new tools for defending their crops and livestock. Over time, it would result in a change of behavior among local populations and would contribute to reduced risks, improvements in local livelihoods and a reduction in their vulnerability. In an optimistic scenario, education and training would promote commitment towards conservation, raise awareness of the essential role of wildlife in ecosystem functioning and its ethical and economic value, as well as its recreational and aesthetic importance. From the focused group discussions it's clear that direct benefits from wildlife is critical as a strategy for mitigating conflicts.

In order to effectively deal with wild-life related conflicts in Kenya and the World, a science based approach is required. Long-term research on the population dynamics of wildlife populations has shown how the age and sex structure of populations is affected by different environmental impacts, so that management must be tailored to the specific structure of the population, rather than just the population's size. Long range planning is therefore essential when making large-scale land use changes that affect wildlife populations. An in-depth understanding of the dynamics of wildlife populations, such as birth rates, death rates and age structure and assessing how these are affected by land use change, environmental fluctuations and development impacts is the best approach for ensuring effective long-term management.

The study objectives were achieved through the literature and the data collected using questionnaires and focused group discussions. In the conceptual frame work the causes of conflicts is identified as structural, proximate and triggers. This frame work was usefull in thye study. It came out clearly in the group discussions with the communities that the three levels are play a role in wildlife related conflicts from the legislation made by the government, insecurity and mainly food insecurity as a result of crop destruction by wildlife to trigger such as livestock predation. Equally poverty levels play a critical role as it came out clearly that charcoal burning within the study areas in the forest contribute to wildlife related conflicts and communities associate it to poverty.

5.2 Recommendations

In order to effectively deal with wild-life related conflicts in Kenya and the World, a science based approach is required.

Long-term research on the population dynamics of wildlife populations has shown how the age and sex structure of populations is affected by different environmental impacts, so that management must be tailored to the specific structure of the population, rather than just the population's size.

Long-term planning is therefore essential when making large-scale land use changes that affect wildlife populations. An in-depth understanding of the dynamics of wildlife populations, such as birth rates, death rates and age structure and assessing how these are affected by land use change, environmental fluctuations and development impacts is the best approach for ensuring effective long-term management.

The land use policy in Kenya be finalized and implemented to help reduce wildlife related conflicts.

Wildlife is made a competitive land use through enabling legislation and equally compensation be fully handled for the crops and livestock through legislation.

Communities are fully involved in conservation and management of wildlife in Kenya. Involvement is one way of mitigating wildlife related conflicts.

Appendix 1: Structured Questionnaire

Serial No.....

The questionnaire is meant to collect information that will help to establish a new framework upon which conflicts in wildlife sector will be solved in the new concept of conflict about wildlife. Kindly answer the questions by writing a brief statement or ticking in the boxes provided as will be applicable. This research is intended for an academic purpose only.

SECTION ONE: SOCIO-DEMOGRAPHIC INFORMATION

1. Age of respondent in years

- a. 18-25 []
- b. 26-33 []
- c. 34-41 []
- d. 42- 49 []
- e. 50-57 []
- f. 57-64 []

2. Marital status

- a. Single []
- b. Married []
- c. Separated []
- d. Divorced []

3. Religion

a. Catholic []

b. Protestant []

c. Muslim []

d. None []

4. Name of your organization?.....

5. Occupation of the respondent?.....

6. Education level

a. No formal education []

b. Primary []

c. Secondary []

d. College []

e. University. []

7. Are you familiar with the concept of human animal conflict?.....

a. Yes []

b. No []

8. Have you ever experienced human animal conflict?.....

a. Yes []

b. No []

SECTION TWO: EXAMINE THE CAUSES AND ISSUES OF HUMAN WILDLIFE CONFLICTS

The following are statements about the causes and issues of human wildlife conflicts in Kenya. To what extent do you agree with these statements? Guide: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)

No	Description	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
i.	That in the savannah and grasslands where pastoralism remains the main source of livelihood for many people, attacks on livestock are major issue of human-animal conflict.					
ii.	That wildlife in many protected areas is under threat from human encroachment, insularisation, poaching for commercial or subsistence purposes, habitat degradation, encroachment of incompatible land uses, loss of migration, land degradation and dispersal areas, and ever increasing human-wildlife conflicts.					
iii.	That pollution by human activities continues to cause drastic modifications of wildlife habitats.					

iv.	That climate is changing resulting in direct physiological impacts on individual species, changes in abiotic factors, changed opportunities for reproduction and recruitment and altered interactions among species.					
v.	That when native prey is abundant, wild predators consume it in preference to livestock and that impoverishment of prey populations is one of the major causes of carnivores shifting their diets to livestock.					
vi.	That those local communities often regard the large wild animals as government property, as was the case under previous colonial legislation, and therefore feel prohibited from dealing with the problem themselves.					
vii.	That crop damage is the most prevalent form of human-wildlife conflict across the African continent.					

SECTION THREE: EXAMINE THE CURRENT STRATEGIES IN SOLVING HUMAN WILDLIFE CONFLICTS IN KENYA

The following are statements about the current strategies in solving human wildlife conflicts in Kenya. To what extent do you agree with these statements? Guide: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)

No	Description	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
i.	That community education, coupled with awareness raising among children and adults through the traditional authority of chiefs and headmen, would certainly be highly cost effective means of managing conflict.					
ii.	That vigilance is an important component of crop or livestock protection and human-wildlife conflict management. The fear of humans normally dissuades animals from committing damage.					
iii.	That guard animals like dogs provide an alternative to a herder monitoring a flock, which is labour-intensive, time-consuming and costly.					
iv.	That when they are properly designed, constructed and maintained, fences can be almost completely effective in preventing conflict between people and wild animals.					

v.	That the technique of translocation has been used more or less successfully with elephants, crocodiles and other carnivores. Trapping and translocating baboons is feasible and can potentially provide an immediate solution to the bark-stripping problem within the troops range.					
Vi	That lethal killing as a strategy is still widely used in Africa, but rather with the purpose of maintaining social peace than resolving the human-wildlife conflict problem definitively					

Appendix 2: Focus Group Discussion

Instrument Title: Discussion Guide for Focus Groups

The purpose of the study is to determine the causes and issues of human wildlife conflicts.

Introduction

Good morning. My name is Mr. Roberr Njue, a University of Nairobi student. First, I would like to thank you all for taking the time to be with us today.

We will be discussing your thoughts and ideas about causes and issues of human wildlife conflicts. Our discussion will provide us with information that will help us improve our program and come up with a new framework upon which conflicts in wildlife sector will be solved in the new concept of conflict about wildlife.

1. How long have you lived in this area?.....
2. How old are they?.....
3. Have you ever heard of human-animal conflict?.....
4. Ever experience human-animal conflict?.....
5. What are the cause of human-animal conflict?.....

6. What are the main cause of human-animal conflict?.....
7. What are the consequences of human-animal conflict?.....
8. How can the community overcame human-animal conflict?.....
9. What would you propose as a solution to human animal conflict?.....
10. Comets on human animal conflict?.....

That's all the questions I have. Thank you for participating in this discussion. Your comments will be invaluable in the development of educational materials.

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