NORWEGIAN UNIVERSITY OF LIFE SCIENCES

Declaration

I, Rannveig Knutsdatter Formo, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Date: August 16th 2010

Signature ……………………………..

"Human knowledge of nature comes to us already socially constructed

in powerful and productive ways…ecology is a discourse,

not the living world itself"

-David Demeritt 1994

Acknowledgements

Abstract

In the last few decades there has been a rise in community-based, participatory approaches to conservation and natural resource management. In Tanzania, the new conservation paradigm has to a large extent replaced the previous conservation strategy which was characterized by exclusion of local populations and strict enforcement of protected areas. The community-based approach to wildlife management was implemented in the wildlife legislation of the 1990s and, by the turn of the millennium, so called Wildlife Management Areas (WMAs) were introduced as a standard model for community-based buffer-zone management of wildlife located alongside the country's larger national parks and game reserves.

This thesis applies a historical analytical approach to study the shift in practices and discourses of conservation from the colonial period until the present. In this, it argues that there is a strategic relationship between the politico-economic interests of particular groups of actors, the knowledge of wildlife management which at any time dominates the discourse on conservation, and the models of conservation which are adopted.

After placing the development of the WMA model in a historical perspective, this thesis investigates the performance of one of Tanzania's first WMAs: Ngarambe-Tapika WMA located in the buffer-zone of the Selous Game Reserve. The empirical findings from this research reveal several issues of interest. For one thing, while management had been successfully devolved to local level, the villagers were unable to both fully control the wildlife use within their area and reap a substantial part of the benefits from tourist hunting.

With the empirical findings as a starting point, this thesis applies some Foucauldian concepts and investigates the way in which the WMA regime encourages the production of environmental subjects. In this, the thesis argues that the WMA model does not represent any radical structural change to the way conservation is practiced; rather, it can be understood as a non-coercive instrument of power through which the conservation interests of dominant actors are achieved.

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List of Abbreviations

AA	Authorized Association
AWF	African Wildlife Foundation
CAMPFIRE	Communal Areas Management Program For Indigenous Resources
CBC	Community Based Conservation
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CWM	Community based Wildlife Management
EIA	Environmental Impact Assessment
EKOSIASA	from two Swahili words: *'ekologia'* and *'siasa'* meaning 'ecology' and 'politics'
EPIQ	Environmental Policy and Institutional Strengthening Indefinite Quantity
GDP	Gross Domestic Product
GR	Game Reserve
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IRA	Institute of Resource Assessment
IUCN	International Union for the Conservation of Nature
LUP	Land Use Plan
MNRT	Ministry of Natural Resources and Tourism
MUNGATA	'Jumuya ya Hifadhi Ngarambe-Tapika' or 'The Association of Conservation of Ngarambe and Tapika'
NGO	Non Governmental Association
NP	National Park
PA	Protected Area
SCP	Selous Conservation Program
SPFE	The Society for the Preservation of the Fauna of the Empire
TANAPA	Tanzania National Parks
TAWIRI	Tanzania Wildlife Research Institute

TNRF	Tanzania Natural Resource Forum
UNDP	United Nations Development Programme
URT	United Republic of Tanzania
WCA	Wildlife Conservation Act
WD	Wildlife Division
WCST	Wildlife Conservation Society of Tanzania
WMA	Wildlife Management Area
WPT	Wildlife Policy of Tanzania
WWF	World Wide Fund for Nature

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PART I

1 Introduction

Tanzania, home to some of the most spectacular wildlife in the world, receives about one-third of its annual Gross Domestic Product (GDP) from tourism (Tarimo 2009). The number of tourists who travel to the East African country has increased steadily since the mid-20th century (Neumann 2002), and currently more than three-quarters of these tourists visit solely to see the wildlife of the country's great national parks and game reserves (Tarimo 2009). Concurrent with the increase in tourism, the last fifty years have seen a steady growth in protected areas. In fact, the latest official figures show that forty percent of Tanzania's entire land surface is under protection (Tarimo 2009). This is much higher than the global average, which is estimated to be somewhere between three and five percent (Goldstein 2005: 482). But despite its immense wildlife resources and high numbers of tourists, Tanzania remains one of the world's poorest and least developed countries. According to the United Nations Human Development Report for 2009 the country barely makes it into the 'medium human development category' with its ranking as number 151 (UNDP 2009).

Conservation of large areas such as the Serengeti National Park in the north, or the lesser known but much larger Selous Game Reserve in the south, comes at a price. For the greater part of the 20th century, conservation in Tanzania – as in Africa at large - has been characterized by what is commonly called 'fortress conservation' or 'fences and fines' (Adams and Hutton 2007, Brockington et al. 2008, Hutton et al. 2005). 'Fortress conservation' is an appropriate term because the conservation model does not allow human settlements within the boundaries of the protected area. The fortress approach regulates all use of park resources, and often places great restrictions on local communities. Due to its exclusive nature, fortress conservation has often resulted in the eviction of local inhabitants and conflicts between central authorities and park-adjacent communities (Adams and Hutton 2007, Brockington and Igoe 2006, Neumann 2001). In Tanzania - where bushmeat makes up a substantial part of the rural diet (Roe 2008) - conflicts between local groups and central wildlife authorities culminated in the 1980s with military operations against poaching (Baldus 2009, Songorwa 1999). By the end of the 1980s an increasing number of actors, both within and outside the country's borders, challenged the fortress approach. As a reaction to the

fortress conservation paradigm, a community-based, participatory model for conservation was developed (e.g. Adams et al. 2004, Gibson 1999).

In Tanzania, Community-based Wildlife Management (CWM) was introduced in several communities adjacent to national parks and game reserves, and in 1998 the Wildlife Policy of Tanzania incorporated CWM in its policy vision (URT 1998). In addition, the policy promoted Wildlife Management Areas (WMAs) as a new category of protected areas where "local people will have full mandate of managing and benefiting from their conservation efforts" (URT 1998: §5.0). In 2003, 16 pilot WMAs were established throughout the country with the aim to combine wildlife conservation, tourism and rural development. By diverting wildlife management and benefits to local level the ambition is to turn the villagers from poachers to conservationists.

While advocates of the Community Based Conservation (CBC) approach present it as an ideal win-win situation for local inhabitants, central authorities and biodiversity alike, critical researchers have argued that there is often a great discrepancy between CBC rhetoric and the actual performance of the projects. While some researchers have questioned the success of the devolvement, participation and benefit-sharing in CBC projects (e.g. Brockington 2008, Igoe and Croucher 2007, Nelson et al. 2007) others have criticized the powerful role of conservation NGOs in using the CBC narrative to their own ends rather than for the benefit of locals (Brockington et al. 2008, Chapin 2004). Much critical research on protected area management in developing countries falls under the category of political ecology – a critical approach to the study of environmental problems and natural resource management. Political ecology research frequently sets out to deconstruct dominant environmental narratives. In doing this, political ecology shows how hegemonic environmental concepts and practices are socially constructed and sustained in relationships of power.

It is against this backdrop that this thesis on the political ecology of Tanzania's WMAs is set. The thesis is part of a larger project known as EKOSIASA,[1] which researches the political ecology of community-based forest and wildlife management in Tanzania. While earlier EKOSIASA theses have focused on aspects of participation, devolution of management, and level of benefits of the CBC projects (Kistler 2009, Minwary 2009, Nilsen 2009), this thesis will investigate additional aspects of the WMA model. In particular, this thesis differs from earlier theses in that it applies the French philosopher Michel Foucault's concepts and ideas in

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[1] The word EKOSIASA derives from two swahili words: *ekologia* and *siasa* meaning 'ecology' and 'politics'.

the analysis of the emergence and performance of the WMA model. Foucault, who is widely drawn upon throughout the social sciences, has been particularly influential for the more post-structuralist branch of political ecology to which this thesis belongs (see Agrawal 2005, Escobar 1996; 1998, Robbins 2007).

The case study for this thesis is Ngarambe-Tapika WMA situated alongside the north-eastern border of the Selous Game Reserve, and for which the fieldwork was conducted in the fall of 2009.

1.1 Aim of Study

I aim to do three things in this thesis. First, I apply Foucault's historico-analytico approach to discourse analysis - his *geneaology,* to study the development of wildlife management in Tanzania with a focus on discourse, knowledge and the practice of wildlife management. In doing so, I aim to show that there is a strategic relationship between the politico-economic interests of particular groups of people, the knowledge of wildlife management that they produce, the values they give to wildlife, and the manner in which these are expressed through national legislation and conservation practices. Second, I present and discuss the empirical findings from my case-study in Ngarambe-Tapika WMA while focusing on issues concerning devolved management, benefit sharing, participation by villagers, and the wildlife-related costs the villagers experience in living in a wildlife-area. Third, I apply the Foucauldian concepts of *modes of power* and *subjectivation*, and investigate the relationships of power embedded in the WMA regime. In addition to Foucault's work I lean on Arun Agrawal's research on environmental subjectivity in participatory forest management in India (2005) and I study how the WMA can be explained as a technique of power which seeks to make the villagers into 'environmental subjects'.

1.2 Study Objectives and Research Questions

Objective one: To conduct a brief historical discourse analysis (a genealogy) of wildlife conservation in Tanzania from the colonial period until the present, focusing on actors, development of knowledge and concepts related to wildlife conservation, and the outcome of these in terms of changes in legislation and practice.

1) What has been the major changes in Tanzania's wildlife conservation since the early colonial period until the present?

2) What specific groups of actors and interests can be seen as the driving forces behind the discourse on wildlife conservation in Tanzania throughout the colonial and post-colonial period?

3) In what way has the dominant discourse on wildlife conservation at any time produced specific knowledge of wildlife, hunting, and the role of the rural Tanzanian population in wildlife conservation?

4) How was the WMA model developed, was there any opposition against it, and what are the main features of this conservation model?

Objective Two: To investigate the empirical aspects of Ngarambe-Tapika WMA with a focus on devolved management and benefit sharing, transparency and accountability of the WMA management, participation by the villagers, benefits and costs of the WMA regime.

1) What is the system of management, responsibilities, and benefit sharing in Ngarambe-Tapika WMA?

2) Is the management of the Authorized Association (AA) and the village councils characterized by transparency and accountability?

3) What is the villagers' level of participation, knowledge, and general perception of the WMA regime and management?

    a. How do villagers participate in the management of the WMA?

    b. What is their level of knowledge about the WMA?

    c. What is their perception of the AA?

    d. What is their perception of the need for the protection of wildlife in the area?

4) How does living with wildlife affect the livelihoods of the villagers of the WMA?

    a. What are the average losses per household due to wildlife?

    b. What has been done to mitigate wildlife conflicts?

Objective Three: To study the CBC concept in general and the WMA model in particular through a Foucauldian lens with a focus on discursive power and *subjectivation*.

1) In what way can the shift from fortress to community-based conservation be studied using Foucault's concept of changes in *modes of power*?

2) How can the Foucauldian concept of *subjectivation* be applied when investigating the way in which the WMA model seeks to make conservationists of the villagers?

1.3 Outline of Chapters

Part I of this thesis provides the background for the analysis and consists of three chapters. **Chapter 1** gives a short introduction to the thesis' focus of study, its aim, research objectives and research questions. **Chapter 2** provides the theoretical and conceptual framework for the thesis with a particular focus given to political ecology as a specific approach to the study of conservation regimes. The chapter further describes the main tools which have been used in part II of the thesis: critical discourse analysis, some central Foucauldian ideas, as well as political ecology concepts on conservation discourse. In addition, the chapter provides an overview of the common critiques of political ecology. The last chapter of the thesis' first part, **Chapter 3**, describes the methodology which I adapted for my sampling, collection and data analysis. In addition, chapter 3 describes the study area where the fieldwork for this thesis was conducted in November 2009. **Part II** of this thesis consists of three chapters and presents the findings, analysis and conclusion of the thesis. **Chapter 4** is a 'geneaology of wildlife conservation in Tanzania', conducted from the colonial period until the present. The particular historico-analytical approach to discourse which I apply in this chapter is inspired by Foucault's historical approach to the study of discourse, the production of knowledge and power, and also by contemporary political ecology research on conservation discourses. While chapter 4 places the WMA model in a historical discursive perspective, **Chapter 5** presents the findings of my empirical research in Ngarambe-Tapika WMA. The chapter primarily looks at issues related to devolved management, benefit sharing and revenue streams, participation by villagers, and wildlife conflicts in the WMA. Furthermore, the chapter studies how the WMA model, when analyzed through a Foucauldian lens, is an expression of a particular mode of power which makes villagers into 'environmental subjects'. Finally, the last chapter of this thesis, **Chapter 6**, provides some concluding remarks and reflections on the findings of the study and on future research on Community-based Wildlife Management in general and on the Wildlife Management Areas in Tanzania in particular.

2 Theoretical and Conceptual Framework

"All things are subject to interpretation. Whichever interpretation prevails at a

given time is a function of power and not truth."

- *Friedrich Nietzsche* (in Lissitz 2009)

2.1 Chapter Overview

This chapter provides the theoretical and conceptual framework for the thesis and will begin by illuminating my epistemological and ontological position, which is based in a constructivist way of perceiving the social world. As the thesis is written within the framework of political ecology, the chapter will define political ecology and briefly outline the academic roots of this approach to the study of environmental phenomena. I move on to look at one of the main characteristics of political ecology research, which is to contest dominant environmental narratives about human-environmental relationships. As an example of this, I refer to some oft-cited political ecology research which has studied the history behind specific environmental narratives, and the alternative stories which these political ecologists offer. The chapter continues by looking at some of the ideas and concepts of the French philosopher Michel Foucault, whose work has been pivotal for much political ecology and especially its post-structuralist branch. In the section on Foucault I look at the concepts that are applicable in my own study of the development and implementation of Tanzania's WMA model in part II of the thesis. I look at Foucault's concepts of discourse, knowledge and power, and the relationship between these. I give special emphasis to the Foucauldian concepts of *subjectivation* as the process whereby individuals produce themselves as subjects, and *counter-conduct* as the process whereby individuals oppose *subjectivation*. In addition, I present Foucault's historico-analytical method to the study of discourse – his *genealogy,* as this is the main discourse analytical method I will apply in chapter 4. I also present some work on critical discourse and narrative analysis on conservation that has been undertaken by contemporary political ecologists. Finally, the chapter looks at some of the main critique of political ecology.

2.2 Epistemological and Ontological Considerations

Epistemology is the theory of knowledge and concerns the "question of what is (or should be) regarded as acceptable knowledge in a discipline" (Bryman 2008: 13). Epistemological debates evolve around how research defines what is knowledge. For example, one can view the methodological paradigms of positivism and interpretivism as representing polar opposites in the debate on epistemology. Simply put, positivists maintain that natural science methodology leads to objective knowledge about both the social and the natural world, and is therefore the best model for all disciplines. Interpretivists contest this and argue that the social sciences are fundamentally different from natural sciences and therefore need to employ nonpositivist methods of research.

By contrast, ontology is "the theory of underlying structures in biophysical or social entities" (Forsyth 2003: 15). It refers to different ways of understanding the relationship between social or natural phenomena and social actors. Here, the two opposing positions are objectivism and constructivism. While objectivists assert that social phenomena exist independent of social actors, constructivists hold that social phenomena are constantly being formed and defined by the social actors entangled in them (Bryman 2008).

As with much other political ecology research, this thesis is based in an interpretevist epistemology and ('soft') social constructivist ontology. In other words, when studying a phenomena such as conservation and natural resource management, this thesis holds that social actors actively produce knowledge about conservation and conservation practices. Moreover, concepts such as 'conservation', 'poaching' and 'wilderness' do not have an existence prior to or independent of the social actors who produce them. In a continuation of this, I argue that while the *concept* of e.g. 'wilderness' is socially produced, the biophysical world is not. Once again it is tempting to refer to geographer David Demeritt who holds that "Human knowledge of nature comes to us already socially constructed in powerful and productive ways (…) ecology is a discourse, not the living world itself" (Demeritt 1994: 177). This position constitutes what Paul Robbins, drawing on Demeritt (1998), refers to as 'soft constructivism' and is the ontological position of this thesis (Robbins 2004: 113-116).

In studying how environmental concepts are produced, this thesis draws on prior work in political ecology (e.g. Adger et al. 2001, Svarstad et al. 2008) and argues that powerful actors produce social phenomena through discourse. While this thesis is influenced by political ecologists work on conservation and their focus on actors in producing and sustaining

discursive knowledge, it is equally inspired by Foucault's approach to discourse. Foucault has been criticized for not giving the relationship between actors and discourse enough attention (e.g. Benjaminsen and Svarstad 2009, Fox 1998). If Foucault does not point his finger at specific actors, then this is because his focus is on the underlying rules which govern and make discursive truths possible, and not on the actors who communicate them. Instead of looking at what one particular actor expresses, Foucault looks at what makes the statement possible (Foucault 1982: 785-86, Gutting 2005a).

2.3 Defining Political Ecology

Political ecology emerged as a subfield of geography in the late 1970s and is a discipline that studies human-environmental relationships with a special focus given to political factors underlying and affecting environmental change and natural resource degradation. Political ecologists sometimes trace their discipline back to the 19th century Russian geographer and anarchist philosopher Peter A. Kropotkin (Robbins 2004), but Eric Wolf first coined the term 'political ecology' in the title of an academic article (Wolf 1972). While there exists a variety of definitions of political ecology, many scholars (e.g. Forsyth 2003, Robbins 2004, Walker 2005) refer to Blaikie and Brookfield's definition as it is presented in their seminal book *Land Degradation and Society* (1987). In this book Blaikie and Brookfield hold that

> "The phrase 'political ecology' combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself" (Blaikie and Brookfield 1987: 17).

Political ecology has gone through many changes since the 1980s and today political ecology encompasses a variety of different research agendas - something which is particularly noticeable when it comes to the weight given to the 'ecology' side of studies of antropogenic influence on the biophysical world. Still, it is possible to delineate some characteristics which most political ecology research shares. Paul Robbins, a text-book writer on political ecology, holds that the main characteristic of political ecology is that research within this field is something essentially different from 'apolitical ecology' (Robbins: 2004: 7). In other words, political ecology can be recognized by the very fact that it assumes that "environmental change and ecological conditions are the product of political process" (ibid: 11). Robbins proceeds by explaining that political ecology is "something people *do*" (Robbins 2004: 13, original emphasis). Political ecologists utilize a contextual approach which aims at exploring the origins and consequences of human-environmental relationships, with special attention

given to underlying political processes and with a particular consideration to affected marginalized groups of people. By doing this, Robbins holds that political ecology takes a "hatchet" to dominant apolitical explanations to environmental change and resource degradation in that it deconstructs the explanations and reveals their political context (Robbins 2004: 12). Also, by providing more nuanced accounts of environmental changes, political ecology becomes the "seed" through which more just policies can be made (Robbins 2004: 13).

2.4 The Roots of Political Ecology

Political ecology can be seen as a continuation of cultural ecology, a sub-discipline of anthropology, which studies traditional natural resource management and environmental knowledge among rural populations in the developing world (Forsyth 2003). Hazards research, which began as a women's activist movement in North America concerned with human-induced environmental hazards in urban areas, but today is mostly known under the label of 'environmental justice', is recognized as another important root of political ecology (Robbins 2004, Walker 2005). Both of these movements have influenced the work and development of political ecology, but to fully understand the background from which political ecology emerged, one needs to turn to disciplines such as peasant studies, common pool resource theory and Marxist theory, where the latter has been conclusive for the development of political ecology.

The Western academic interest in farmers of the developing world emerged in the 1960s and '70s partly due to a growing concern with and interest in the numerous agrarian revolutionary movements emerging at that time. While both 'modernization' proponents and Marxist planners viewed the rural peasantry of the developing world as irrational and inefficient, researchers adhering to what was to be called Peasant Studies (e.g. Scott 1985) criticized their reductionist view and provided alternative explanations to the logic of the peasant economy and behavior (Robbins 2004).

While political ecology research was still in its early phase, common property theory, a school which studies collective ways of managing common pool resources, evolved. Common property theory mainly arose as a critique of tragedy-explanations to common pool resource degradation, a position that is represented Garrett Hardin's much-cited article *Tragedy of the Commons* (Hardin 1968). In this article, Hardin argues that collective use of natural resources is bound to result in over-exploitation and resource depletion. This mode of thinking is rooted

in one of the core assumptions of neo-classical economics: that rational behavior for individuals is to maximize their own individual utility (Vatn 2005: 87). Following Hardin's example, each herdsman utilizing the common pasture will exploit the resource as much as he possibly can, and when this is coupled with inevitable population growth,[2] resource degradation becomes unavoidable. Moreover, because the negative consequences of resource utilization are divided equally between the herdsmen, these 'externalities' lose their function as incentives to sustainable use. Not surprisingly, Hardin's solution to the tragedy of the commons, as well as many 'tragedy'-proponents after him, is state control or private market solutions to common pool resource management (Hardin 1968, Robbins 2004). Political ecology has been influenced by common property theory which rejects simplified tragedy-explanations to resource degradation and holds that the resource regime which Hardin describes is not managed under a common property regime, but an 'open access' regime (Vatn 2005). Common property theorists have turned to empirical examples of 'collective stewardship' where common pool resources have been managed sustainably, and argue that failure in these management regimes are due to flaws in the internal rules and regulations of the management and not the regime per se (Ostrom 1990, Robbins 2004, Vatn 2005).

Much early research in political ecology came from the academic left and evolved first and foremost as a critique of neo-Malthusian explanations to problems in the developing world (Bryant 2001). Early political ecology can often be linked to the neo-Marxist school of thought and is recognized by its focus on describing exploitive first/third world relationships, class inequalities, and explanations to environmental resource degradation in the developing world which often take the form of the global capitalist system exploiting the rural farmer in the south. A good example of this early neo-Marxist influence in political ecology is Piers Blaikie's (1985) *Political Economy of Soil Erosion in Developing Countries*. Later work with a clear neo-Marxist argumentation is Dan Brockinton et al.'s *Nature Unbound* (2008) which studies the relationship between capitalism and conservation and argues that mainstream conservation must be understood as a product of neoliberalism. The book uses Marx' concept of commodity fetishism when discussing the lack of knowledge that consumers have about

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[2] In fact, the main focus of Hardin's article is on the issue of population growth and its link to environmental resource degradation. Following a clear neo-Malthusian mode of thinking, Hardin holds that over-population is inevitable (as people will seek to maximize their own utility or 'happiness') and that unless the state interferes by inflicting "mutual coercion" which is "mutually agreed upon by the majority of the people affected" (1968: 1247) then the "freedom to breed will bring ruin to all" (1968: 1248). As this chapter will show, political ecologists have taken a 'hatchet' to neo-Malthusian explanations to environmental degradation.

the social and environmental consequences of the production process of consumer goods, leaving the buyer in a 'bubble' of ignorance.

As the above section has shown, what the roots of political ecology – from peasant studies to common pool resource theory and to neo-Marxist approach to conservation have in common is that they question dominant notions about the environmental problems and natural resource management. In doing so, researchers adhering to these disciplines often take the side of the rural poor and call attention to exploitive first/third world relationships. The next section will depart from the roots of political ecology and look at the specific environmental narratives which are often criticized by political ecologists.

2.5 Environmental Narratives Contested by Political Ecology

As mentioned at the outset of this chapter, one of the main characteristics of political ecology research is that it contests dominant stories or narratives of environmental problems. It aims to seek out the political factors that underlie these stories and offers counter-narratives based on these investigations. Forsyth (2003) identifies three main environmental narratives challenged by political ecology: desertification, soil erosion and deforestation. Examples of this type of research are Swift (1996) and Benjaminsen and Berge (2004), who challenge the prevailing narrative of a Sahel desertification by showing that its origin is a flawed study from the mid- 1970s and that the narrative has been upheld largely because powerful actors gain from keeping it that way.[3]

The dominant understanding of soil erosion often leans on demographic explanations of the problem, and Forsyth (2003) explains how this narrative is linked to the experience of the 1930s 'Dust Bowl' and the 'Universal Soil Loss Equation' of the 1960s and '70s. Political ecology shows how the production of universal explanations for environmental problems poses big problems, as these explanations are often very simplistic and do not give room for the complexity of the problem. In addition, simplistic narratives tend to leave out that while environmental change can be negative in some respects, it can also have positive effects for both the environment and human actors. Blaikie and Brookfield express this notion when they argue that "one farmer's soil erosion is another's soil fertility" (Blaikie and Brookfield 1987

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[3] Swift (1996) identifies three 'winners' of the desertification narrative. First, some African governments gained from the narrative because it justified state control over natural resources and strict environmental policies that affected the livelihoods of rural poor, in particular pastoralist groups. Second, aid agencies and UN agencies in particular gained through funding for anti-desertification projects. Finally, some scientists gained through increased funding of their projects.

in Forsyth 2003: 31). Similar to prevailing explanations about soil erosion, popular notions of the destructive sides of slash- and burn agriculture have also been challenged by political ecology research (eg. Forsyth and Walker 2008).

Although much political ecology research has been devoted to contesting widely held beliefs about environmental problems, this does not mean that the approach or the researchers adhering to it refute the existence or the legitimacy of these problems. As such, political ecology should not be confused with 'brownlash' literatures,[4] which dismiss the existence of these problems altogether (Forsyth 2003). Rather, political ecology research shows how popular narratives of human-environmental relationships often are simplistic and inaccurate. Furthermore, since these narratives tend to give demographic explanations to environmental problems they legitimize policies that are often highly unfavorable for marginalized groups of people who depend on the very resources in question. The following section will look at demographic or neo-Malthusian[5] narratives as well as modernization narratives in relation to environmental problems, and how these have been contested by political ecologists.

2.5.1 Neo-Malthusian and Modernization Narratives

Robbins (2004) presents two main narratives that are characteristic of many popular explanations to environmental problems – ecoscarcity and modernization narratives. Ecoscarcity explanations are rooted in a neo-Malthusian line of argument, where population pressure is seen as the main cause of resource depletion. Paul Ehrlich's *The Population Bomb* (1968) and the Club of Rome's *Limits to Growth* (Meadows et al. 1972) are often-used examples of early neo-Malthusian literature, while the environmental security literature, most notably presented by Thomas Homer-Dixon (1991, 1994) serves as a good example of a current neo-Malthusian explanation. Political ecology recognizes three main problems with neo-Malthusianism. First, it puts the blame for resource scarcity and environmental degradation on countries with a rapid population growth and high population density, and not on the global village's rich minority living in the northern hemisphere and consuming the majority of the planet's natural resources (Robbins 2004, Benjaminsen and Svarstad 2002). Second, neo-Malthusian explanations of environmental problems can be used to justify

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[4] One example of this kind of literature which is sometimes referred to (e.g. Svarstad et al. 2008, Forsyth 2003) is Bjørn Lomborg's (2001) *The Skeptical Environmentalist*.

[5] Neo-Malthusian explanations to environmental problems describe a line of argumentation which holds population growth as the main cause of environmental problems. This line of argument was first presented by the 18th century British scholar Thomas Malthus, who argued that when the human population exceeds the capacity of the environment to sustain it, the result is starvation and famine (Malthus 1992).

policies that suppress and control the freedom of already marginalized groups (Robbins 2004). The third problem with the neo-Malthusian narrative is that it draws a picture of nature and natural resources as something finite. A number of empirical studies by political ecologists show that natural resources are often socially constructed as scarce (e.g. Fairhead and Leach (1996) on deforestation in Guinea, Forsyth and Walker (2008) on deforestation in Thailand).

A second popular mode of explaining environmental problems can be grouped under the category of 'modernization narratives'. These narratives are characterized by how they present modern technical and market-based solutions to environmental problems and assume Western environmental knowledge as superior to that of populations in the developing world. Instead of population control, property rights and access to the global market are seen as idea solutions to natural resource management. Similar to the neo-Malthusian line of argument, political ecologists have found fundamental problems with the modernization accounts. Early political ecology leaned on common property theory and contested privatization of environmental resources and showed how the opening up to global markets resulted in environmental devastation rather than development (e.g. Franke and Chasin 1980). More recent political ecology has looked at how environmental conservation has become a major global business with conservation NGOs making huge profits by marketing their projects as 'community-based' and 'participatory' despite the fact that this might not correlate with the actual performance of these projects (e.g. Brockington et al. 2008, Chapin 2004).

Through detailed analysis of how popular, dominant narratives of environmental change and resource degradation came into being, political ecology offers critical counter-narratives and describes how the dominant narratives can have highly problematic consequences for marginalized groups in the developing world. Taking this line of argument one step further one can argue that the narratives also have a negative impact on the environment and on the global environmental movement at large, because false assumptions about environmental degradation in the long run are likely to delegitimize the environmental movement and the need for environmental protection (Cronon 1995).

2.6 Foucault and Conservation Regimes

In the second part of this thesis I will apply some of Michel Foucault's concepts in my analysis of the WMA model of Tanzania, and it is therefore necessary to elucidate these concepts beforehand. I will not attempt to cover the wide range and complexity of Foucault's

work; rather, I will concentrate on those concepts that are relevant for my own analysis in chapters 4 and 5. In chapter 4 I present a brief *genealogy* of Tanzania's wildlife management, and study the role of different actors, the knowledge of wildlife they produce, and how this in turn affects legislation and models of wildlife conservation. With regard to this, Foucault's concept of power-knowledge is useful and will be discussed in the following section. I will then proceed by investigating the relationship between power and the subjects on which power is acted out. In this I will give special emphasis to what Foucault calls *subjectivation* or the process whereby individuals produce themselves as subjects in a power-relationship. This concept has proven particularly useful for me, and I employ it in chapter 5 of where I analyze the WMA as a model that makes the villagers into 'environmental subjects' (Agrawal 2005). Although I do not explicitly apply Foucault's concept of *counter-conduct* in my analysis, I will give some room for the concept in the following section as it will be of use in clarifying the concept of *subjectivation*.

2.6.1 Foucault and Power-Knowledge

One of Foucault's most used concepts is 'power-knowledge'. Foucault was highly skeptical towards notions of objective truths and "believed modern rationality to be (…) a force focused on controlling the minds of individuals rather than opening them to many possibilities" (Peet and Hartwick 2009: 204). Actors construct knowledge(s) and truth(s) in accordance with their particular social, political, and economic agendas – in this sense, whichever truth dominates at any given time is a product of power, rather than an indication of an identifiable 'objective' reality. In his constructivist approach to the study of knowledge, Foucault was particularly interested in the way that knowledge is presented as being objectively true. For Foucault, truths are conveyed within powerful discourses that are comprised of "careful, rationalized, organized statements made by experts" and which therefore are capable of supporting "responsible action" (Peet and Hartwick 2009: 205).

While some discursive truths become dominant, other truths, such as the knowledges of indigenous peoples and other marginalized groups remain relatively powerless outside of their own circles. These alternative truths are what Foucault refers to as subjugated knowledges: the "ways of thinking and doing that have been eclipsed, devalued, or rendered invisible within dominant apparatuses of power/knowledge" (Gutting 2005b: 381-382). For Foucault, power and knowledge are in fact two sides of the same coin. While a dominant form of knowledge relies on power to maintain its influence, those who are able to wield power –

however provisionally - regulate knowledge, often to control and legitimize the marginalization of certain groups of people.

Although alliances of actors can temporarily harness power to pursue their own ends in specific situations, Foucault asserts that power cannot actually be continually held by a state, sovereign, individual or institution (Foucault 1977: 26, Smart 2004: 70, Fraser 1981). In this, his notion of power differs from both 'social contract' political philosophies (e.g. Thomas Hobbes or John Locke) and Marxist theory. Instead, Foucault detangles the power-concept from economic and institutional explanations by arguing that power can only be accessed by networks of actors that achieve 'discursive alignment' by propagating a certain brand of truth (Rouse 2005: 112). In his own words, power is "exercised rather than possessed" (Foucault 1977: 26) and is "better conceived as a complex, shifting field of relations in which everyone is an element" (Fraser 1981: 283).

2.6.2 Counter-Conduct and Subjectivation

In Foucault's article on *The Subject and Power* (1982), he outlines the way in which one should approach the study of power. "Power", he holds, should be investigated through "forms of resistance" to power (ibid.: 780). The nature of the resistance to power which he speaks of, is characterized by being in "opposition to the effects of power which are linked with knowledge, competence, and qualification" (ibid.: 781). They are a kind of resistance which questions and oppose identities and modes of behavior which are expected of them. Counter-conduct, then, is a resistance to power by individuals who "asserts the right to be different" (ibid.: 781). It is a resistance to a special kind of power "which makes individuals subjects" (ibid.: 781) and as examples of counter conduct he refers to feminist movements, and the opposition against the power of psychiatry over the mentally ill. Counter-conduct is contrasted to *subjectivation*, which is the process whereby an individual not only is "formed as a subject, but also *wishes to be the subject*" (Andersen 2003: viii emphasis original). The process of subjectivation is one where the individual actively produces himself as a subject, and must be understood in relation to a special kind of power which developed in the modern period, and which Foucault studied in his genealogy of the Western legal system (Foucault 1977).

In *Discipline and Punish: The Birth of the Prison* (1977) Foucault describes the change in the nature and functioning of power from pre-modern to modern Europe. In this, he investigates what he distinguishes as two distinct modes of power – what he calls "the punitive city" of the

pre-modern society (Foucault 1977: 113), and the "disciplinary" mode of power of modern Europe (Foucault 1977: 215). He uses the change and development of the Western legal system as metaphor to study this shift in mode of power, but his insights are equally applicable to other institutions in society. Moving from the public executions and the scaffolds of pre-modern European cities, to the enclosed, supervised cells of the modern prison, Foucault explains how the modern mode of power is essentially different from its pre-modern form. While the pre-modern mode of power was characterized by public displays of force, the modern mode of power is characterized by surveillance and its disciplining effect on the individual. In one sense, the disciplinary mode of power is a reversal of the 'punitive city' in that spectacle and physical punishment is replaced with enclosure and self-discipline (Gutting 2005b: 98).

2.6.3 Genealogy as a Historico-Analytical Approach to Discourse

Foucault's historico-analytical approach to the study of discourse and power- knowledge is called *genealogy*. In his own words, it is "the form of history which can account for the constitution of knowledges, discourses, (and) domains of objects" (Rabinow 1984: 59). By using the term genealogy he implies his connection to Friedrich Nietzsche, who was the first to use genealogy as a method in his dissertation *On The Genealogy of Morality* (Nietzsche 1998, Gutting 2005a, Andersen 2003). Since Foucault developed his genealogical method late in life, the only completed work where he employs the method is in *Discipline and Punish* (Foucault 1977, Gutting 2005a: 44[6]). This genealogy deals with the relationship between changes in discourse, power and empirical outcomes with regard to the changes in legal institutions (Foucault 1977). In other words, his genealogical method seeks to "open up the discursive field through tracing *practices, discourses and institutional lines of descent*" (Andersen 2003: 30, my emphasis).

Foucault dismissed the assumption that history evolves gradually towards a more enlightened era. Instead, he argues that the history of human society must be perceived as something that is undergoing constant change, but not in any specific direction (Peet and Hartwick 2009: 206, Gutting 2005a: 35). Furthermore, a genealogist will typically seek "discontinuities rather than great continuities in history" (Peet and Hartwick 2009: 205, see also: Andersen 2003: 19). In *Discipline and Punish* this discontinuity was the shift from public executions to a

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[6] Gutting notes that Foucault's *The History of Sexuality* (Foucault 1979) is often referred to as a genealogy, but then this book was only an introduction to a series of genealogies on sexuality that was never completed (2005: 44-45).

paradigm of individual rehabilitation through self-discipline. In my own genealogy in chapter 4 this discontinuity is embodied in the shift from fortress- to community based conservation.

2.7 Political Ecology and Critical Discourse Analysis of Conservation

One strategy when studying conservation and Protected Areas (PAs) management is discourse analysis. While there exists a variety of ways of conceptualizing 'discourse', one is that discourses "constitute systems of knowledge and belief" (Svarstad et al. 2008: 118). Influenced by thinkers such as Foucault, political ecologists tend to emphasize how discourse not only expresses meaning about social phenomena, but actively produces knowledge, often presenting this knowledge as objective truths. This approach to studying discourses falls under what is called critical discourse analysis. This approach to the study of discourse is attributed to the contemporary linguist Norman Fairclough and typically "emphasizes the role of language as a power resource that is related to ideology and socio-cultural change" (Bryman 2008: 508). Critical discourse analysis differs from the more linguistically focused analysis in that it gives special focus to non-discursive elements which affect the discourse. As such, critical discourse analysis does not primarily study the way language is used in a discourse, for example studying the ways in which arguments are constructed, but rather investigates the extent to which discourses can be traced back to interests of particular groups rather than well-studied research of the biophysical world. The focus of the analysis then tends to be on the actors producing and sustaining discursive truths and on the power of the discourse in making empirical changes affecting the lives of people and the environment.

Investigating the international debate on conservation and PA management one can find a variety of different discursive positions, each emphasizing different 'truths' about the cause of natural resource degradation and proposing varying solutions to the problem. The next section presents two articles which, through the lens of critical discourse analysis, define and delineate a variety of discursive positions in the international debate on biodiversity use and protection. Combined, Adger et al. (2001) and Svarstad et al. (2008) define six different discourses. Although the latter draws on the analysis of the former article, and the discursive positions presented by the two overlap to an extent, I find it valuable to include all six in order to give a broad description of the different positions existing on conservation and natural resource management.

2.7.1 Discursive Positions on Conservation

Adger et al. (2001) investigates the narratives and discourses concerning four global environmental issues: deforestation, desertification, biodiversity use and climate change. From this investigation they identify two distinct kinds of discourses: the managerial and the populist. The managerial discourse leans on neo-Malthusian explanations of environmental degradation and proposes market-based solutions such as bio-prospecting to sustainable environmental management. The populist discourse contests this and holds that natural resource degradation in the global South is due to external forces such as global capitalism and policies which marginalize rural groups, and not population growth. The market-based solution to environmental management is projected as a fraud that only serves the capitalist institutions and not the rural poor and the environment. Rather, the solution to the environmental crisis can be found in a more just distribution of the world's resources and less consumption in the global North (Adger et al. 2001).

A more recent example of political ecology discourse analysis is Svarstad et al. (2008) who departs from Adger et al.'s (2001) investigations and separates the discourse on environmental change and natural resource management into four different discourses: the preservationist, the win-win, the traditionalist and the Promethean discourse. While the preservationist discourse is characterized by bio-centrism and emphasis on the negative anthropogenic impacts on nature, the win-win discourse gets its name for proposing solutions to environmental management in the global South which leave both the environment and the rural poor as winners. One example of the win-win discourse is the community-based approach to resource management and conservation, where decentralization of power, local cooperation with private enterprises and revenue sharing are presented as the key to sustainable management. The win-win discourse overlaps with the managerial discourse in its emphasis on market-based solutions to conservation and development. Typically, advocates of the win-win discourse are conservation NGOs and other actors who are involved in the implementation of such community-based projects. In contrast, the traditionalist discourse stresses the ability of local communities to manage their local resources without the interference of external actors. In short, the traditionalists hold that natural resources belong to the local communities, and that win-win projects are just another example in the long history of exploitation of rural groups which legitimize theft of their resources. The traditionalist discourse overlaps with the populist discourse in its emphasis on the rights of local peoples and the negative role played by external actors. The last discourse that Svarstad

et al. (2008) identify is the Promethean discourse, which challenges the severity of the environmental crisis-narratives that have become more prominent in global debates over the last few decades. Proponents of this position view nature and its resources as valuable goods which should be exploited by humans and reject any notion of intrinsic value of nature. Within this discourse, solutions to environmental problems come in the form of technical innovations.

The following table outlines these six discourses on conservation and protected area management, their main views and proposed solutions to environmental problems and management.

Discourse	Views on Conservation	Proposed Solution
Managerial/ Win-Win	Holds neo-Malthusian explanations to environmental degradation. Protection of biodiversity is primary concern. Conservation necessary to limit environmental degradation caused by exponential population growth.	International regulations and conservation necessary. Bio-prospecting and other market-based solutions seen as good conservation strategies. Win-Win proponents stress participation, devolved management and revenue-sharing as solutions to both conservation *and* development.
Populist/ Traditionalist	Environmental degradation due to external, capitalist forces that marginalize groups of people and result in poverty which in turn causes over-exploitation of natural resources. Local ownership of local resources with no involvement of external agents such as NGOs. Holds that win-win approaches represent nothing new and are simply a continuation of exploitation of local people's rights. Humans seen as an integral part of the ecosystem.	Fair distribution of the world's resources. Decrease in over-consumption in the North and local ownership over local resources in the South. Local ownership over resources with no involvement from outside.

Preservationist	Views human-environmental conflicts from a bio-centric viewpoint where humans have no place in 'wilderness'. Negative perception of local people's impact on the environment.	Fortress conservation to conserve biotopes, species and landscapes.
Promethean	Environmental resources there to be exploited. Nature only valuable as long as humans perceive it so. Questions the severity of environmental crisis-arguments.	Environmental problems solved through technological innovation.

Figure 1: Table Showing Discursive Positions on Conservation.

2.8 Critique of Political Ecology

Political ecology research has been criticized on a number of issues. One strong critique is Vayda and Walters (1999) who criticize political ecology for being too based in social sciences and for not giving proper attention to the bio-physical aspects of environmental change. They claim that much research within political ecology assumes political factors prior to research and this makes it blind to other (non-political) factors affecting environmental change (Vayda and Walters 1999: 168). In the same article, the authors propose 'event ecology'[7] as a tool for political ecology research to be "guided more by open questions about why events occur than by restrictive questions about how they are affected by factors privileged in advance by the investigator" (ibid.: 170). Other authors have noted this lack of attention to the "ecology" in political ecology as well. Tim Forsyth (2003), remarks on the lack of a congruent definition of the term "ecology" in political ecology research and notes that little work within the discipline has actually provided a definition of the term. Walker (2005: 73) follows Vayda and Walters and asks "Political Ecology: where is the ecology?" Like Bryant (2001), Walker (2005) relates this lack of bio-physical aspects in the research mainly to the post-structuralist branch of political ecology. Walker predicts that unless political ecologists engage in "mature collective reflection" (2005: 80) over the future of the field, there is a risk that it may become a purely philosophical exercise in studying environmental politics. This would have a negative effect and would likely weaken the field's

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[7] The method of 'event ecology' proposed by Vayda and Walker in this article reminds a lot of the 'chains of explanation' proposed by Blaikie and Brookfield (1987) which has been a very important tool for much political ecology research (Benjaminsen 2009).

capacity to influence policy-debates on environmental management.

In another article, Walker (2007) criticizes political ecology research for not giving attention to the ethical obligation of giving back to its research subjects. More so than other disciplines, political ecology should commit to this concern, first because political ecology research tends to place the concern for marginalized groups in the centre, and second because it makes a point of not just being a 'hatchet', but equally a 'seed' to new ways of managing natural resources (Robbins 2004: 12-13). The argument of the above-mentioned critics is that if political ecology is to remain (or maybe become) politically powerful and not just an academic exercise with little implications outside its own circles, it needs to strengthen its ability to influence decision making processes of environmental management.

3 Research Methods and Study Area

3.1 Methodology and Research Design

The previous chapter provided the theoretical and conceptual framework of this thesis and has already placed it within the tradition of interpretivist epistemology and social constructivist ontology. The chapter further delineated my position to one of soft constructivism, indicating that my approach to the 'study of knowledge' both stresses the importance of social actors in producing knowledge of environmental phenomena while simultaneously maintaining that there is an objective, material reality that exists independently of the social world.

I adapted the research design of a single case study of Ngarambe-Tapika WMA. Case studies are often used in social scientific research in general, and in political ecology research on conservation regimes in developing countries in particular (e.g Brockington 2008, Igoe and Croucher 2007). Political ecology tends to favor case studies because this research design makes it possible to draw a link between the global discourses on conservation and development and the effects these have on the lives of groups of people in the developing world. For this purpose, case study is a good design because it allows the researcher to conduct an in-depth analysis of the case at hand and then to situate the case within a wider theoretical discussion. While case studies are good at giving detailed information about the situation in a particular case, case studies as a design has often been criticized for providing little means for scientific generalization (Yin 2003). Whereas case studies are in fact generalizable to theoretical assertions (de Vaus 2001, Walliman 2006, Yin 2003), which is just what political ecologists aim to do. Another pitfall of this research design is loyalty to specific research outcomes, allowing biased views to infiltrate data collection and findings (Yin 2003). Since I am positioned within a social constructivist tradition, I argue that this critique of researcher 'objectivity' is applicable to all research designs and that positivist researchers are also biased in favour of specific research outcomes. Furthermore, I believe that the social constructivist researcher, because of her affinity for reflexivity[8] is more likely to be conscious of her pre-defined assumptions regarding the study at hand than the positivist researcher.

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[8] Bryman (2008: 698) defines reflexivity as a "reflectiveness among social researchers about the implications for the knowledge of the social world they generate of their methods, values, biases, and mere presence in the very situations they investigate".

Other aspects that should be mentioned in relation to my research approach are flexibility and epistemological instability. Flexibility in research involves that the researcher is open to changes in objectives, research questions and research methods throughout the research process. According to Bryman (2008: 389) the flexible approach is likely to "enhance the opportunity of genuinely revealing the perspectives of the peoples you are studying". Subsequently, flexibility has been a central aspect of my research process where the experiences in the field influenced the direction of the research. Epistemological instability is another aspect of empirical case studies like mine that should be emphasized. As a researcher studying a social phenomenon at a particular point in time, the findings and analysis are bound to represent only a snapshot of the social reality as the researcher interpreted it (Walliman 2006).

3.2 Fieldwork Overview

The research for this thesis was conducted in Tanzania during the period of October 2009 until mid-January 2010. The research period can be divided into three phases. In the first phase I interviewed relevant people in Dar es Salaam and prepared for my fieldwork in Ngarambe-Tapika WMA. In the second phase I conducted my research in the WMA by undertaking household interviews and interviewing key informants at local and district level. I undertook two trips to the WMA, the first being a reconnaissance trip with my local and main supervisor as well as a Tanzanian student from the University of Dar es Salaam who also conducted a study of the WMA. The purpose of the first trip was to introduce ourselves and our research to the district officials, the Kingupira Selous Camp, and the local WMA officials. Another purpose was to do a pilot of the household questionnaires and to sort out logistical issues. My second stay in the WMA lasted for about two weeks and, as this was during the first weeks of November, was hastened by the oncoming rainy season which threatened to make access to the villages very difficult. The third period of my research was in part conducted in Dar es Salaam where I interviewed people I had not been able to get hold of prior to my fieldwork, and also put follow-up questions to informants I had already spoken with. During this period I also had some documents from the WMA authorities and the district translated from Kiswahili to English. In addition I made a trip to Arusha in northern Tanzania where I interviewed key informants and attended a conference held by Tanzania Wildlife Research Institute (TAWIRI). At this conference I was able to meet and interview some key informants with relevant information to my study area.

My research design can be described as a 'holistic' case study (de Vaus 2001: 220), in that my approach to the case was to investigate the multiple levels of actors and influences in the WMA in order to get as broad an understanding of the case as possible. As shown in the following table, I have identified four levels of informants whom I interviewed during the course of my fieldwork: village residents, local key informants, district key informants and key informants at the local level.
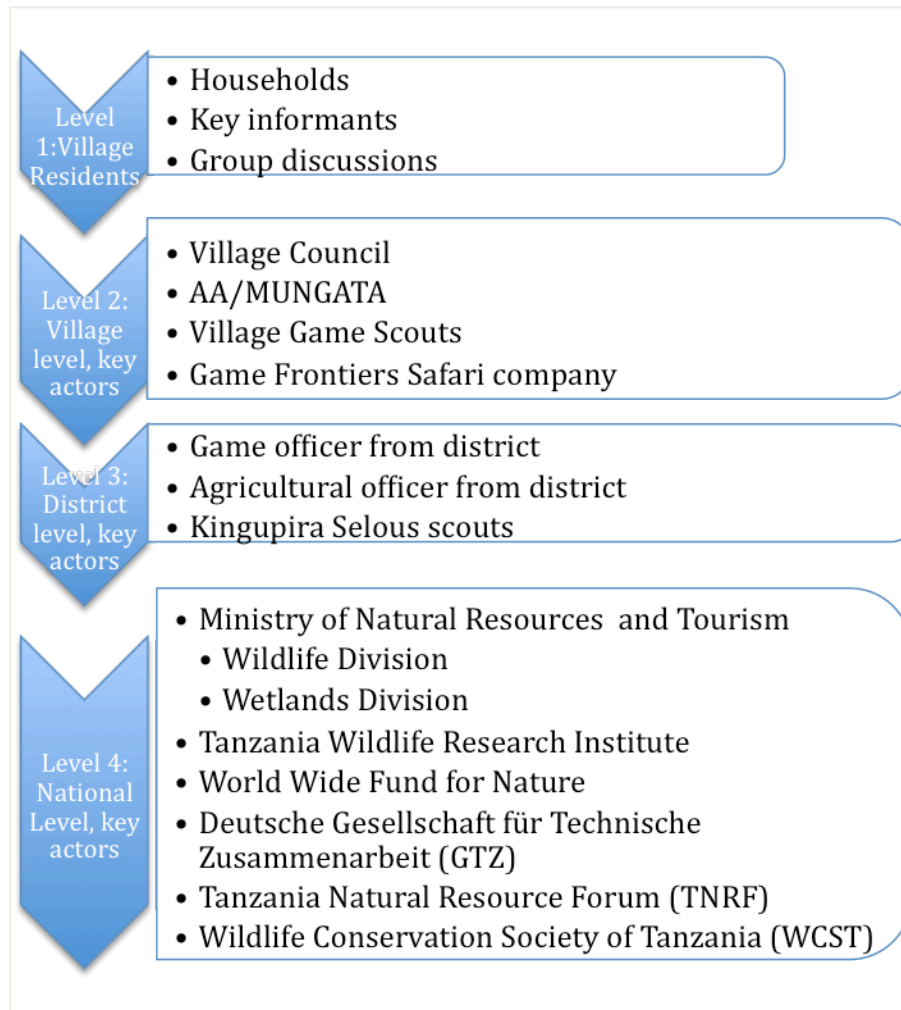
Figure 2: Levels of informants interviewed during my fieldwork.

3.3 Data Sampling and Collection of Primary Data

During my fieldwork I used three methods: household interviews, key informant interviews and focus group discussions. To each of these methods I applied different methods of sampling, data collection and analysis. This use of multiple methods is called 'triangulation' and is commonly used by qualitative researchers helping them to combine perspectives, cross-

check information and subsequently provide "a more substantive picture of reality" (Berg 2001: 4).

3.3.1 Household Interviews

At village level I conducted 74 household interviews among the households in the two main villages and the two sub-villages of the WMA. This meant a sample size of a minimum of 10% of the households in each village. As I wanted to cover as broad a cross section of the community as possible I adapted a systematic probability sampling method for the household interviews. I approached every third household I passed, and, since there were not any proper roads with intersections in the villages, I alternated turning right or left every time I came to a crossroad in the path. This method worked well during the first part of my fieldwork, but in the last few days the rain had drawn most of the villagers of working age to the agricultural plots that were located some distance from the houses and the decision was made to instead walk to these areas and interview people as we met them in the fields. When selecting the interviewees I chose to set a lower age limit to sixteen years as only adult villagers are allowed to attend village assemblies. I also made sure to get a balanced number of women and men, young and elderly for my interviews.[9]

For data collection in the household interviews I used a questionnaire[10] that consisted mainly of qualitative questions which can be grouped into four topics. First, I would ask a few questions of mainly demographic nature so as to keep record of the representation of gender and age of the sample size. I also asked some questions concerning the interviewee's history in the area and his or her attendance at Village Assemblies as this is an important arena for providing information and engaging the villagers in the decision-making of the management of the WMA money. Second, I would ask questions concerning knowledge of and participation during the early process of the WMA establishment. Third, I would ask questions concerning the knowledge of the activities and responsibilities of the Authorized Association (AA), which is the community-based organization that is responsible for the management of the WMA in the village. I would also ask if the interviewee believed that the AA distributed the WMA benefits to the best of the villagers. The fourth section of my questionnaire was related to human wildlife conflicts where I asked about crop loss and other

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[9] In total I interviewed 34 women and 40 men. The age distribution of those interviewed was approximately: 37% being of the age 16-25, 34% being of the age 26-35, 15% being of the age 36-45, 8% being of the age 46-55, and about 4% being of the age 55 years and above.

[10] The household questionnaire is attached in Appendix II of this thesis.

losses due to wildlife. I also asked about their perception of the WMA and whether they thought there was a need to protect the wildlife in the area. After each interview I would ask follow-up questions where this was of interest. This could for example be if the person interviewed told me that he or she had been active in the early process of establishing the WMA, or if the interviewee had strong opinions on the WMA. I would also ask if the interviewee had any questions for me, and would take time to answer them. The household interviews lasted about twenty minutes on average.

3.3.2 Key Informant Interviews

I conducted more than twenty key informant interviews from the four levels of informants outlined in the above figure (figure 2). The interviews lasted anything between thirty minutes to one and a half hours and were both with individuals such as representatives from the Wildlife Division or nongovernmental organizations (NGOs) and groups of people such as the village game scouts and members of the AA. For the key informant interviews I chose to adapt a purposive sampling method which, as opposed to the sampling method used for the household interviews, is a non-probability method (Berg 2001). Due to the qualitative character of my research and my social constructivist approach to the case, I considered purposive sampling to be the best method to seek out my key informants. The method of data collection was unstructured interviewing, as the interviews were more like conversations than formal interviews (Bryman 2008). Prior to the interviews I prepared check-lists[11] which I used as guide-lines. According to Bryman (2008: 700) this use is compatible with the characteristics of unstructured interviews. In addition to this I used a tape recorder during most of the interviews and I later transcribed these interviews.

At village and district level, the main aim of the key informant interviews was to get specific information about Ngarambe-Tapika WMA from informants with particular knowledge about this particular WMA. A second aim was to get these actors general perceptions of the WMA model and the CWM concept. At national level, I sought out some informants who had specific knowledge about Ngarambe-Tapika WMA, but the majority were interviewed with the aim to get their general perceptions of the CWM concept and the WMA regime.

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[11] The check-lists can be found in Appendix I of this thesis.

3.3.3 Focus Group Discussions

In addition to the household interviews and the key informant interviews I conducted one focus group discussion in each of the two main villages of the WMA, namely the villages of Ngarambe and Tapika villages. The sampling method was purposive, and the participants were chosen because of their particular knowledge of the early process of establishing the WMA and/or strong interest in discussing the WMA. The two focus groups consisted of four to five participants and lasted for not more than forty-five minutes each. The method of data collection was an unstructured discussion where my translator, who by then was well informed about the purpose and main objectives of the study, acted as facilitator of the discussion. Both of the group discussions were recorded. The purpose of the group discussions was to get the participants to debate general issues concerning the WMA model: what aspects of the WMA were they content with, what aspects were problematic, issues concerning wildlife conflicts, the presence of a tourist company and so on. The main advantage of an unstructured focus group discussion is that the participants are able to debate those issues which they feel are most important, and this gives the researcher a deeper understanding of "*why* people feel the way they do" (Bryman 2008: 475, emphasis original). By allowing groups of individuals to discuss in plenum, focus group discussions also often reveal social structures, rules and taboos which would not have been apparent in another interview setting (Berg 2001: 114). Although I was only able to conduct two focus group discussions, they turned out to be very helpful for me and they revealed aspects of the WMA which had not come to the forefront in the household interviews.

3.4 Data Sampling and Collection of Secondary Data

A large part of this thesis relies on secondary data and therefore a few words about the methods of sampling and collection are necessary. The sampling of the data has been purposive in that I have sought out articles, books, theses and reports which have been relevant to my research. In this research, the collection of data has been an ongoing process and the method applied has varied according to what data I have been searching for. During my stay in Tanzania, I retrieved relevant data at the village level from the AA, the village councils and the District Office. As some of this data was in Kiswahili, I later had them translated into English. In Dar es Salaam and Arusha I collected relevant data from the University of Dar es Salaam, several NGOs, the Wildlife Division and TAWIRI. The data collected in Tanzania was primarily related to the WMA of my study, relevant legislation, laws and guidelines, as well as studies and reports on the Selous Conservation Program

(SCP)[12] and the WMA model. The secondary data collected following my fieldwork has mainly been collected from academic journals and books and has provided the basis for the theoretical and conceptual framework of this thesis.

3.5 Data Analysis for Primary and Secondary Data

The analytical approach I have applied to my qualitative data can be described as 'iterative' (Bryman 2008: 539) in that the data collection and analysis took place simultaneously during my stay in Tanzania. While my analysis at this point was only field notes and ideas for my thesis, my broadened understanding of the dynamics of the WMA and the hypotheses that crystallized in this process, influenced the direction of my research. Similarly, following my return from fieldwork, the gathering of secondary data and analysis has been a continuous and parallel process. This iterative approach is related to the flexibility of my research design, which is also discussed above (see paragraph 3.1.1).

For part II of this thesis, I have adapted two analytical approaches. In chapter 4 my main analytical approach to the data collected is Foucault's historico-analytical approach to discourse – his *genealogy*. In this I also lean on political ecology research on discourse and narrative analysis of conservation. I have already described my analytical approach to discourse in the theoretical and conceptual framework of this thesis. In chapter 2 I presented the Foucauldian concepts of power, knowledge, discourse, and the subject, and placed particular emphasis on Foucault's concept of *modes of power*, *subjectivation* and *counter-conduct*. These last concepts have been particularly important in my study of the WMA model in the last part of chapter 5.

The other analytical approach, which I have adapted in analyzing my data, has been to seek out discursive patterns from the primary data. In this I searched for themes and categories in my collected interviews and this analytical approach resembles what is often called qualitative content analysis (Bryman 2008). In addition I have analyzed my household questionnaires using a similar approach to the data: by dividing the answers into categories and then calculating the percentage of respondents giving the different replies.

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[12] I will come back to the Selous Conservation Program later in this chapter. For now it will suffice to inform that the program was a community based wildlife management project initiated in the area of the WMA prior to the introduction of the WMA regime.

3.6 Ethical Considerations

There were several ethical issues I had to address in my research. First, because I wanted to obtain as accurate and honest information as possible of the villagers perceptions' of the benefits and problems of being under a WMA regime, it was important that they were well informed about how I would use the information they gave me, and that their identity would be protected. Oral informed consent was obtained before each of my household, key informant and group interviews as well as the focus group discussions. During my research in the villages it was my translator, whom the villagers already knew and trusted, who undertook this task. Also, after each interview I would ask if the interviewee had any questions for me, giving them an opportunity to either elaborate on their perceptions of the WMA, or to question me about the implications of my research. A second ethical issue was the anonymity of the research subjects, which at household level was secured in that I avoided noting down the names of the interviewee. The issue of confidentiality[13] as regards to key informants at district was somewhat different, since most of these were official representatives from an NGO or a central or district governmental body. However, in the same manner as with the villagers at household level I obtained their oral informed consent prior to every interview, explaining that I would not use their names in the written records of my research.

A further ethical aspect of my research is what can be called the "politics in social research" (Bryman 2008: 130) and concerns the influence of values in the research process (ibid. 130-32). As my thesis is part of the larger research project which is located within the framework of political ecology, the objectives of my study were influenced by interests and discursive position of the political ecology approach from the outset. In addition, post-structuralist theory and thinking have influenced the way I perceive and question hegemonic claims of knowledge as well as the very process in which knowledge is produced. The 'ethical' consequences of this evolve around the extent to which I am biased and discriminating in my research findings. However, as already discussed above (see paragraph 3.1.1) my social constructivist position leads me to believe that full objectivity is impossible and that awareness of my biased position is the best means to deal with this issue.

One of the major problems I see in much research on development and resource use in developing countries is that it entails few tangible benefits for the people who participate in

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[13] Bruce L. Berg (2001: 57-59) makes a distinction between *anonymity,* which means that the researcher never notes down the names of the research subjects, and *confidentiality,* which means that the researcher makes sure to remove any evidence from the records which links the subject's identity to the data.

the research. In my study I asked the villagers to give of their valuable time and energy to provide me with data without giving anything back to them. While researchers sometimes give small gifts when conducting interviews at village level, I made a deliberate decision not to do so. The reason being first of all that such a gift could have an affect on the answers I got from the interviewees. The area already had a long history of (often Western) NGO workers coming to encourage them to adopt the SCP or later the WMA model, and although my translator and I did our best to carefully explain the objectives of my research and stress that I was not affiliated neither to an NGO nor to the wildlife department, many were clearly skeptical to my person and what I was representing. Wildlife management is a sensitive subject, particularly in areas which has a history of anti-poaching propaganda, and I believe that gifts would have influenced the answers I got from the villagers. Also, as a Tanzanian student was doing household interviews at the same time as me, we both thought it was important that we applied the same practice in relation to gifts and she was not inclined to giving gifts either.

The only direct benefits of my study for the local people was a small research fee which I paid to the AA and which would be redistributed to conservation efforts in the villages. The indirect benefits, I hope, is that my study will contribute to the ongoing debate on natural resource management and development. Situated within a critical wing in this debate I hope this thesis will shed light on problematic aspects of the WMA model, and subsequently benefit the villagers indirectly through the positive changes that this debate may produce.

3.7 Research Limitations

In addition to limitations to qualitative research and the critique of the political ecology approach which have already been addressed in this and the previous chapter, some additional limitations to my research and fieldwork should be mentioned. First, there is the issue of language. While I managed to pick up some Kiswahili, this was far from enough to communicate with my interviewees in the villages. I was therefore reliant on a translator throughout my stay in the WMA. Although I have full confidence in my translator and the job he did, cultural references, subtle meanings of words and the like do get lost in translation. A further issue is the sensitive subject of illegal hunting. The area of Ngarambe and Tapika villages have a long history of poaching and anti-poaching control, and the WMA is just one in a history of efforts to reduce illegal hunting by the villagers. Although poaching has declined in the last couple of years, several informants in the villages explained to me that poaching and the sale/purchase of bush meat are still very common, and the villagers live

under constant fear of being caught. A consequence of this was the already mentioned skepticism showed by several of my respondents, and according to my translator some thought that I came from the police and was searching for poachers. An additional limitation was the time frame of my fieldwork. Most likely the skepticism from some of the villagers would have been reduced had I had more time in the villages. More time would also have given me the chance to get a better understanding of the many aspects of the WMA. Despite this, because my WMA only consisted of two main villages and two sub-villages it was possible for me to get all the information and the interviews that I set out to obtain.

3.8 Study Area

This second part of chapter 3 will go through the main characteristics of the study area in which I conducted my fieldwork. The section will look at the geographical location of the WMA, its ecology and climate, demographic and socio-economic traits, and finally its infrastructure and local governmental structure. In this I will give particular focus to wildlife and agriculture as these are the main sources of problems in the WMA, and are important for the analysis and discussion later in the thesis. In addition this section will place the WMA model in a historical perspective and briefly look at the previous conservation regimes of the area. Besides from presenting important features of the study area, which are a necessary component of a case study, this section has two main objectives. First it aims to illustrate how the villages of the WMA are situated geographically in what can be seen as anthropogenic islands inside a larger area of bushland. Second, it aims at describing how the WMA is only one in a succession of conservation regimes which have been

Figure 3: Map showing Tanzania's protected areas and the location of Ngarambe-Tapika WMA. Adapted from Baldus 2009: xvi.

imposed by external actors and which date back to the colonial period. Both of these issues are important features of the WMA, which I will return to in the presentation of findings and analysis in part II the thesis.

3.8.1 Geographical Location

Ngarambe-Tapika WMA borders the Eastern Sector of the Selous Game Reserve which is situated in south-eastern part of Tanzania. The reserve is recognized as the largest game reserve in the world and covers an area of about 50,000km^2 or roughly 5% of Tanzania's total land surface (Baldus 2009). The Selous Game Reserve stretches into the Ruvuma region in the south, the Morogoro region in the west, and the coastal regions Pwani and Lindi in the northeast and east. Ngarambe-Tapika WMA is located in the southern part of the Rufiji District which takes its name after the country's largest river and which makes up one of the six districts of the Pwani region. While the Rufiji River runs north of the WMA, it is the Lung'onya River which separates the WMA from the Selous Game Reserve that serves as the area's main water source (LUP 2002).

Ngarambe-Tapika WMA consists of two villages and two sub-villages and covers a total area of about 719 km^2 (RMZP 2003). Ngarambe is connected to the district headquarters of Utete by a dirt road which runs from Utete through Ngarambe and to Kingupira - the headquarters of the Eastern Sector of the Selous GR (LUP 2002). This road is traversable about eighty percent of the year and is classified as a district road, but due to the lack of transportation in the villages, most supplies from Utete are transported by bicycles. The distance from Ngarambe to Tapika is 70 km, and on a good day this is about an hour and a half by car. Tapika village is more remote and is located 20 km northeast of Ngarambe village, about one hour on a dirt road. Tapika is also located more in the highlands than Ngarambe, and the road there is in a much worse condition than the district road and is not traversable during most of the rainy season. In addition to Ngarambe and Tapika, there are two sub-villages which come under the WMA. Both of these are located along the district road. Ngarambe's sub-village is Nyamakono, which lies about a twenty minute drive north of Ngarambe by an intersection with another road which leads to Tapika to the northwest. Tapika`s sub-village is Kungurwe,

another   twenty   minutes   north   of   Ngarambe   and   north   east   of   Tapika.
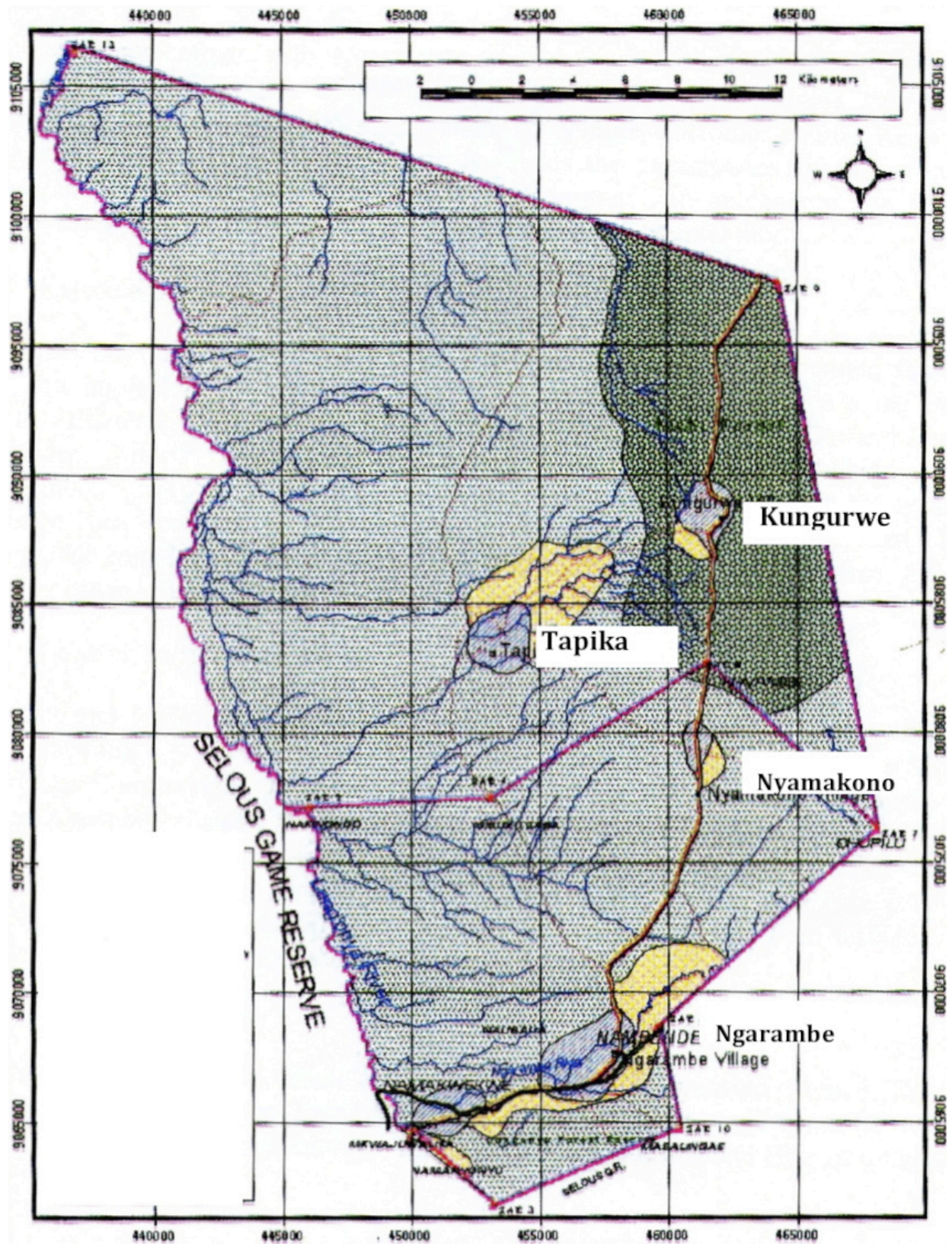
Figure 4: Map of Ngarambe-Tapika WMA showing the location of Ngarambe, Tapika, Nyamakono and Kungurwe. Adapted from LUP 2002: 36.

3.8.2 Ecology and Climate

The major part of the WMA is natural habitat. Human settlement and agricultural land covers only about 7% of the total area (LUP 2002: 35). The ecology of these natural habitats is forests, bushland and river-systems, which serve as habitat for a variety of wildlife. The forests consist mainly of *miombo* woodlands, which is the most common tree species of the coastal areas. *Mninga* vegetation is also present, although to a much lesser extent than earlier (LUP 2002). The *miombo* woodlands stretch throughout the area, but are particularly dominant in the Kichi hill forest in the northeastern corner of the WMA (RMZP 2003). Grass and thickets cover the banks of the Lung'onya River, which follows the western border of the WMA (LUP 2002). Together, these forests and grasslands provide essential nutrition for plant and animal species, and the forests are important habitats for the larger mammals during the dry season. The upland Kichi forests also serve as catchment forests and contain a high level of biodiversity and vegetation cover (LUP 2002). An additional water source is the wetlands, which cover about 8% of the WMA and which are connected to the main river system – the Lung'onya (LUP 2002). The Lung'onya provides water to the fertile flood plains in the southern corner of the WMA where also the Ngarambe River runs, an essential water source for the agriculture in the area. The WMA provides habitat for a variety of animal species. Of the more known mammal species are the large herbivores: elephant, hippo, buffalo, and zebra as well as species of antelopes such as impala, waterbuck, wildebeest and hartebeest. Carnivores include lion, leopard and hyena. Baboon and vervet monkey are the most common species of primates. The area further harbors an abundance of bird species, especially noticeable when the first rains come in November and the birds migrate to the flood plains of Lung'onya.[14]

During my fieldwork in November 2009, I spotted and distinguished the tracks of many species of wildlife. Almost daily I saw groups of baboons, warthogs and guinea fowls as well as other day-active species such as zebra, waterbuck and impala. I also spotted a family of elephants a few times, but during the day they keep some distance from the villages. Signs of them, however, such as tracks and dung were very common in the agricultural patches, which they raid at night. Tracks of hyena, hippo and lions were common around the Kingupira Selous Camp where we stayed at night and buffalo could often be seen in the morning hours.

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[14] The last days of the fieldwork, when the rainy season began to set in, I spotted many bird species that had not been present earlier, such as bee-eaters, love-birds and pairs of hornbills.

The landscape of the WMA is largely defined by the tropical climate of the area with temperatures ranging between 13°C- 41°C with higher temperatures in the southern lowlands around Ngarambe village and Kingupira camp, and lower temperatures in the north-eastern Kichi hill forest as well as the higher altitude areas in the centre of the WMA (LUP 2002). The area has a unimodal rainfall pattern with annual precipitation around 750 mm. The dry season begins in late May and lasts until early November when the beginning of the rainy season is marked by torrential storms normally towards the end of the month (LUP 2004).

3.8.3 Demographic and Socio-Economic Traits

The population of Ngarambe, Tapika and the two sub-villages has grown steadily during the last few decades. In 1967, the number of people living in the area which today demarcates the WMA was about two and a half thousand. Three decades later, in 1996, this number had increased to about five thousand three hundred, indicating an average annual growth rate of 1.6% (LUP 2002: 18). Information retrieved during fieldwork showed that the number of households in the four villages and sub-villages came to 677 households and 3086 persons. The information concerning the number of villagers and households was retrieved from the Authorized Association (AA) in the two villages and is confirmed by figures from the Land Use Plan (2002, 2004) and the Resource Management Zone Plan (2003) when population growth is taken into account. The only inconsistency is the population of Tapika, which the AA set to two hundred households. My personal observation while in Tapika was that the number was much lower. A district officer who informed me that Tapika most likely set the number higher in order to get more benefits from the WMA confirmed this suspicion. However, because I was not able to get any precise figures I have made the decision to use the ones I received from the AA. Ngarambe village was the largest of the two villages and was divided in two: Ngarambe West and Ngarambe East.

Ngarambe village was generally richer than Tapika and the two sub-villages due to its proximity to the Kingupira Selous Camp and the economic benefits which this entailed. The sub-village of Tapika, Kungurwe, was the village with the least resources of the four and also the one with the highest number of persons per household.

		Households	Population
Ngarambe	East	170	880
	West	205	759
Nyamakono		72	289
Tapika		200	833
Kungurwe		30	325
TOTAL		677	3086

Figure 5: Overview of households and population of study area. Source: Fieldwork.

The main ethnic group in the area is the Wangindo. Other groups are mainly Wapogoro and Wamatumbi. The Wangindo are a Bantu people who originally lived off shifting cultivation in addition to hunting and gathering within the area that is now the Selous Game Reserve (LUP 2002). Since the colonial period, hunting without a license has been banned, and today subsistence farming is the main livelihood strategy for the villagers in the WMA. The presence of tsetse flies in the area has made it difficult to keep cattle, goats and sheep, and as nearly all the villagers are Muslims they refrain from breeding pigs. As a consequence, the only form of livestock that is kept by nearly all households are chickens.

As there is no livestock grazing in the area, the most dominant land use is agriculture. Nearly all households have agricultural plots which are located close to or within half an hour walk away from the settlements. The average plot size is 0, 75-1, 25 hectare and several types of crops are grown (LUP 2002: 8). The most common crops are rice, maize, millet, green peas, sweet potato, pumpkins, banana, tomatoes, okra, groundnuts and cassava, with rice being the most important crop grown by three-quarters of the households in the WMA (LUP 2002: 30). All of these crops are primarily grown for subsistence, with the exception of groundnuts, which are commonly sold for cash in the village centers.

Some groups of women make pots of clay which they sell or trade with other villagers, and quite a few make reed mats for the same purpose. During my fieldwork I encountered several women making these mats, which are standard household items in the villages. Other sources of income for young men in the WMA is day-labor at the Kingupira Selous Camp, some are hired for forestry and some work as security guards for the one tourist camp in the WMA, situated in the northern part of the WMA.

In addition to agriculture, some forestry and beekeeping are also practiced. Besides from subsistence firewood gathering and some charcoal production by the villagers, commercial loggers from nearby towns and cities are the main exploiters of local forests. Although this activity is regulated by the district, control is weak and there is concern that important forest species, such as the *nyambo* and *mninga* are being over-exploited (LUP 2002). The subsistence use by the locals, however, is generally not considered a threat.

3.8.4 Infrastructure and Local Governmental Structure

The villages in the WMA have a very basic infrastructure. While the two main villages Ngarambe and Tapika each has a primary school, a dispensary,[15] a mosque and a water pump, neither of the sub-villages had these facilities. Ngarambe, Nyamakono and Kungurwe are all located along the district road and are thus connected to the district headquarters in Utete, while the road to Tapika is in poor shape and not traversable in the rainy season. This said, there are no cars in any of the villages and the villagers either depend on getting rides by the Selous game scouts or on bicycles for their transport. The only village with access to electricity is Ngarambe, where Swedish ABB and the WWF donated a generator in 2005. The generator, which was to have been fueled by *jetropha* oil produced in the villages, was not working at the time of my fieldwork.

Two local governmental bodies are important for an understanding of the WMA management: the Village Council, which is the highest governmental body at village level, and the Authorized Association (AA), which is the community-based organization (CBO) with the main responsibility for the WMA management. In Tanzania, all villages have a village council, as stipulated by the Villages Act of 1975. The highest position of the Village Council is the Village Executive, and the Council is elected every five years at a Village Assembly meeting where all residents of adult age can attend and vote (Brockington 2008).

At village assembly meetings, which are normally held four times per year, the villagers decide which communal projects to be given priority and it is the Village Council which manages the funds for these projects. While the village council initially functioned as a conduit for Julius Nyerere's socialist political agenda of the 1960s and '70s, it has since then been promoted as a means to devolve governmental power to local villages (Brockington

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[15] The dispensary in Tapika was being built during the time of my fieldwork.

2008). However, the arrangement has been criticized for resulting in corrupt Councils, elite-capturing of resources and little transparency and accountability (Brockington 2008).

The village assembly play an equally important role in the establishment of the WMA, and it is at such an assembly that the decision to start the process of establishing WMA on village land is made. At the same meeting, the members of the AA are elected, and these members cannot hold any positions in the village council.

3.9 History of Conservation Regimes in Study Area

Africans have been living in the area that is now Ngarambe-Tapika WMA since before the colonial period and have traditionally had their own taboos and rules concerning the utilization of wildlife and other natural resources (RMZP 2003, Majamba 2001). Since the early colonial period, the inhabitants of the area have been relocated twice due to the political agenda of the central government. The first resettlement was in 1945, when the British colonial administration moved the villagers to an area north of the Rufiji River, due to a sleeping sickness epidemic in the area (RMZP 2003). This tactic of dislocation as a response to tsetse flies differed from the French and Belgian colonial administrations who turned to medical treatment instead of relocation (Neumann 2001).

According to Neumann's historical study (2001) of British colonial history in Liwale District, which is just south of the Rufiji District, both the relocation of people as a result of tsetse epidemics and the presence of the flies themselves, can be explained by an overall colonial agenda and a 'civilizing mission' (ibid.: 641). Neumann's argument is that increased protection of wildlife, coupled with bans on local firearms, made life so hard for the farmers that they were forced to leave their traditional areas. As once fertile agricultural land turned to bush, the tsetse fly population increased and by the mid-1940s the area had indeed become a harsh wilderness. Consequently, under the auspices of the colonial tactic dealing with the sleeping sickness epidemic, more than 30,000 people in Liwale alone were relocated and the area in which they had lived was incorporated into the Selous Game Reserve (Neumann 2001). The example from Liwale shows how the local people paid the cost of expanding the reserve and how the wilderness of the reserve - as an inhospitable, tsetse-infested place - in parts was *created* through the removal of people. Contrast to the residents of the Liwale-area and those other villages which were relocated during the same period, the residents of Ngarambe requested, and were subsequently allowed to move back to the village in 1956 (RMZP 2003).

In 1974, only two decades after the return to Ngarambe, the villagers were again relocated to the north along the Rufiji. This time the resettlement was part of Nyerere's national villagisation program and again the villagers were displeased with their new homes and requested to move back. The reasons they gave for wanting to move back were partly that they had to change their livelihood base from agriculture and hunting to mono-agriculture and fishing, which they were not familiar with. Many farmers drowned when they had to cross the Rufiji to get to their agricultural plots, and there was an additional loss of lives in cholera and malaria epidemics. This all added to their desire to return to their old areas (RMZP 2003, LUP 2002). In 1976, only two years after the second relocation, the villagers were allowed to move back. The villagers who moved this time returned either to Ngarambe village or to Tapika, which had been established by a handful of families in the late-1940s (LUP 2002).

Towards the end of the 1970s, commercial poaching became an increasing problem in and around Tanzania's PAs, and the Selous was no exception. The poaching caused declines in elephant and rhino populations in particular, and by the mid-1980s an estimated 5000 elephants were killed annually (Baldus et al. 2001). In the areas around the Selous where locals did not keep livestock, poaching became for many the only source of animal protein as well as an important cash income (Baldus 2009, Songorwa 1999). Intensive anti-poaching campaigns, such as the militant Operation *Uhai* led to an outright war between villagers and wildlife officers with many local arrests. As the first example of a participatory approach to wildlife management, the Selous Conservation Program (SCP) was initiated in 1988 among communities in the buffer zones of the Selous Game Reserve (Hahn and Kaggi 2001). One of these villages was Ngarambe, and although the village did not officially join the SCP before 1995, the German development agency Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) had been carrying out anti-poaching work in the village since the 1980s.[16]

The Selous Conservation Program involved three main activities. To start, each of the villages received a hunting quota from the Wildlife Division, which they could use to hunt and sell at a price which the villagers could afford. This practice was kept up with the WMA arrangement, and in the fall of 2009 this price was set at 300 TSH per kilo.[17] Ten game scouts per village undertook the meat harvesting. The scouts were also responsible for patrolling the

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[16] Information regarding the implementation of the SCP and later the WMA process was retrieved from interview with: AA secretary 30.11.09, Ngarambe Village Chairman 12.11.09.

[17] 300 TSH is equivalent to 1,28 NOK or 0,20 USD.

area, reporting any poachers, and for helping the villagers deal with any problem animals that were destroying crops. Furthermore, another ten villagers were chosen for a Village Natural Resource Committee which would deal with the income from the meat sales and redistribute these and other funds to social projects in the village. In 1995, a building was raised in the centre of the village with an office for the resource committee, the Village Council and also a sales outlet for bush meat hunted by the village game scouts. In 1997, WWF took over as facilitators of the Selous Conservation Program and GTZ pulled out. In 1998, Tapika village joined the Selous Conservation Program with a similar set up.

The process of establishing the WMA began already in the late 1990s facilitated by the WWF, but it was not until the area was officially chosen to be one of the pilot WMAs that the necessary arrangements began. In 2002 the Joint Land Use Plan was prepared and so was the Resource Management Zone Plan. In 2004, the CBO MUNGATA got its certificate of registration by the Ministry of Home Affairs. In February 2007 the WMA received its user rights from the Wildlife Division and simultaneously the CBO got status as an Authorized Association.

PART II

4 A Genealogy of Wildlife Conservation in Tanzania

This chapter sets out to conduct a brief genealogy[18] of wildlife conservation in Tanzania from the colonial period until the present. In this I am influenced by Foucault and his genealogical method as a historical analytical approach to the study of changes in practice and discourse. As Foucault's method prescribes, I will seek 'discontinuity' rather than 'continuity' in my study of the changes in and development of conservation models in Tanzania (Andersen 2003, Peet and Hartwick 2009). In other words, it is the *shift* in discourse and practice – from fortress conservation to community-based conservation – which is the main focus of my genealogy. In an attempt to describe how this shift came about, I will trace the development of wildlife conservation in Tanzania back in history to specific actors, social trends and external influences which shaped this development.

The chapter divides Tanzania's history on wildlife conservation into two main periods: the first is the colonial period from the late 20th century ending with independence in 1961, and the second is the post-colonial period. The post-colonial period is in turn divided into two parts: the first half ends with President Julius J. K. Nyerere leaving office in the mid-1980s, and the second half is from that point until the present. The objective of splitting up Tanzania's wildlife history in this manner is to show how different types of political interests - colonial, African socialist, and neoliberal - have produced different sets of wildlife conservation. The political agendas of these periods were shaped by the interests of actors such as conservation agencies and NGOs as well as a broader, international discourse on development and conservation. Therefore, it is the aim of this chapter to emphasize how particular actors and trends have shaped the development of wildlife conservation in Tanzania. An integral part of this objective is to investigate how particular perceptions of human-wildlife/human-wilderness relationships are embedded in different conservation regimes, and how these regimes not only reinforce these perceptions but result in actual changes to the landscape. Finally, this chapter sets out to place the development of the Wildlife Management Area (WMA) concept in a historical perspective, investigate the national legislation and policies which made the WMA model possible, and to question the participatory, devolved nature of the wildlife management supported by this legislation.

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[18] A complete genealogy of Tanzania's wildlife management would most likely fill several volumes, and is naturally beyond the scope of this thesis.

4.1 Wildlife Conservation During the Colonial Era

Hunting restrictions existed in traditional African culture prior to European colonial rule. Examples include taboos concerning the killing of animals on sacred grounds, during particular times of the year and certain species of animals with totemic importance for individual tribes (Baldus 2009, Majamba 2001, Mkumbukwa 2008). Modern wildlife conservation, where consumptive wildlife use is centrally regulated through legislation, was introduced in Tanganyika by the Germans who colonized the area from 1885 until the end of the First World War.

It was the Germans who instituted the first wildlife regulation in Tanganyika in 1891, and the Wildlife Decree of 1896 introduced hunting licenses for all hunting (Majamba 2001). The Kaiser implemented these regulations to ensure sustainable wildlife utilization because the area was suffering from a decline in wildlife populations which was partly due to excessive hunting, but also due to a rinderpest epizootic which claimed high numbers of wildlife in the 1890s (Neumann 2001). This was also the era of the Arab slave and ivory trade which caused a steady drop in elephant and rhino populations throughout the 19th century (Baldus 2009, Nelson et al. 2007). As a response to this, the first game reserves were established in the mid-1880s in what was to become the Selous Game Reserve (Baldus 2009). Furthermore, the Wildlife Act of 1911 put an end to all commercial culling, introduced measures to control all hunting and gave full protection to certain vulnerable species (Baldus 2001). Although local communities living within the reserves were not relocated, all hunting was regulated and traditional hunting techniques such as snares and pits were banned (Nelson et al. 2007).

After thirty-five years of German rule, the British took over the colony in 1919 and initiated a more consistent approach to regulation of wildlife use (Majamba 2001, Nelson et al. 2007, Neumann 2002). The British established the Game Department in 1921 and passed three Game Ordinances in 1921, 1940 and 1951 (Majamba 2001, Neumann 2002). Without going into detail about this legislation, a few characteristics should be noted. First, these ordinances mainly concerned restrictions on commercial hunting. Africans living outside the Protected Areas (PAs) had customary rights to wildlife throughout the colonial period, meaning that hunting for subsistence was permitted. Second, near the very end of British rule, local communities that originally lived inside the PAs maintained customary rights to the land and restricted user rights to wildlife (Nelson et al. 2007). This gradually changed in the period after the Second World War, a period which Roderick Neumann (2002: 22) calls "the Conservation Boom in British Colonial Africa". This period is characterized by a growing

polemic against African traditional hunting and a push for PAs without human settlements (Neumann 1996, 2002). The pressure came mainly from European and British conservationists who had been lobbying for PAs for a long time. But while their pleas had not materialized in substantial projects before the war, the British colonial administration now acknowledged how PAs would benefit their development agenda for the modernization of the colony, and also increase the economic potential in tourism (Neumann 2002). With these interests as a backdrop, the wildlife laws became increasingly hostile to African populations living inside PAs. It all culminated in 1959 when the Serengeti National Park was re-gazetted by the British and the Maasai people resettled outside the park (Nelson et al. 2007, Neumann 2002). The same year a new game ordinance was passed withdrawing all customary rights for people living inside existing and all future national parks in the country (Goldstein 2005, Nelson et al. 2007).

The establishment of the Serengeti NP and the Ordinance of 1959 can be seen as a final move in a process towards a rigid form of conservation that had been going on since the end of the Second World War. This approach to conservation, which is commonly called 'fortress conservation', was embraced and promoted by specific actors who had a vested interest in the implementation of this kind of conservation strategy. The following section will investigate the roots, development, and characteristics of fortress conservation in Tanzania.

4.1.1 Anglo-American Conservation Model Brought to Africa

When Yellowstone National Park was established in 1872 it was the first of its kind in North America and it set the standard for what was to become the dominant conservation strategy of the 20th century, namely fortress conservation (Adams and Hutton 2007, Brockington et al. 2008, Hutton et al. 2005). Fortress conservation, alternately called the 'fences and fines' approach (e.g. Siege 2001) or the 'American National Park model' (e.g. Songorwa 1999) is a conservation strategy which is founded in a perception of pristine nature as untouched by humans. Embedded in the fortress idea is a conceptual boundary between humans and nature; in other words, it is a vision of 'wilderness' as something distinctly lacking the presence of people (Adams and Hutton 2007, Cronon 1995). This particular conservation model, which was exported to Africa through colonialism, was grounded in specific social trends and historical processes of 19th century North America and Britain (Cronon 1995, Neumann 1996, 2001).

The environmental historian William Cronon identifies two specific social trends in 19th century North America which he argues brought about the national parks movement: romanticism and 'frontier nostalgia' (1995: 2). While the romantics celebrated the sublime in nature and primitive living, they also nurtured a nostalgia for the settler period and the direct contact humans had with wild nature in this early period of American history. The romantics believed that this contact nurtured particular virtues and a 'settler individualism' which had been lost with urbanization and industrialization. The movement for the preservation of North America's 'last wilderness', then, was largely brought on by anthropogenic interests and was spearheaded by the urban bourgeois who wanted to use the PAs for recreation and spiritual enlightenment (Brockington et al. 2008, Cronon 1995). Across the Atlantic, industrialization brought about major changes to the British landscape and it was not until the 1940s and '50s that PAs like the Lake District, the Peak District and Dartmoor were established (Adams and Hutton 2007). However, these areas were perceived more as 'human-fashioned landscapes' than as wilderness (Adams and Hutton 2007: 155). In Britain, it was the aristocracy who, in search for new hunting grounds, turned to the British colonies in Africa and pushed for the establishment of PAs to protect what was deemed some of the last untouched wilderness in the world (Adams and Hutton 2007, Brockington et al. 2008).

According to Roderick Neumann's (1996) study of this period in British colonial history, the push for PA establishment in British Tanganyika mainly came from one elite conservation organization in England: the Society for the Preservation of the Fauna of the Empire (SPFE). The members of the SPFE were powerful landowners from the English aristocracy, and the time coincided with a period where this particular social class was losing wealth and status in England. The large estates and hunting grounds of the aristocracy were dwindling and this threatened their social identity. In despair they turned to the African colonies where "they could still (…) shape park and wildlife (…) to their own designs" (Neumann 1996: 89). Neumann's argument is that the Anglo-American conservation regime which was introduced in British Africa, mainly in the form of PAs, was directly linked to the fall in social rank of the British aristocracy.

The discourse on conservation in Africa which was advocated by this elite group was rooted in a colonial ideology of racial superiority. The SPFE described African native hunting as wasteful and unsustainable, while simultaneously portraying European trophy hunting as synonymous to conservation (Neumann 1996: 88). The agenda of these conservationists would not have been successful, however, had the British colonial administration not

developed an interest in PA establishment of their own (Neumann 2002). Indeed, Goldstein (2005: 494) notes that Britain practiced indirect rule throughout and never fully committed to Tanganyika "except in the realm of conservation" and in the post-Second World War period the British administration used PAs as a means to strengthen the control over rural populations in Tanganyika (Neumann 2001, 2002). By pushing local people out of their traditional areas, either by making life very difficult or by forced evictions, the colonial administration actively changed the landscape from agricultural to bush land. Neumann further notes that while the British claimed that they were preserving the wilderness, the areas that came under protection "were not (…) pre-modern landscape, but rather (…) a product of colonizers' modernization efforts" (2001: 646). The British also had purely economic interests in the PAs, and after American tourists started showing an interest in the colony in the 1940s, national parks soon became a "key economic development strategy" for the colonial administration (Neumann 2002: 37).

To conclude, wildlife conservation in colonial Tanzania imposed a great number of restrictions on the rural African population. Although PAs existed throughout the colonial period, the rigid fortress approach which entailed resettlement of populations and a ban on traditional hunting was first introduced towards the very end of colonial rule. It was embedded in a Western conception of wilderness, urged on by an elite conservation group and made possible when it concurred with the economic interests of the colonial administration. Furthermore, inherent to the wildlife conservation model was a prejudiced perception of African hunting as opposed to European sportsman hunting. History tells us that while traditional African hunting was condemned as destructive, it was in fact the hunting of the European settlers that caused the decline in wildlife (Baldus 2001, Majamba 2001). Furthermore, while the Europeans legitimized the relocation of local populations with appeals for the protection of biodiversity, several researchers have noted that subsistence agriculture and foraging shaped those very landscapes which the conservationists aimed to protect (Adams and Hutton 2007, Goldstein 2005, Neumann 2001, Robbins 2004). When investigating the colonial history of Tanzanian wildlife conservation and focusing on specific actors and trends that influenced the implementation of fortress conservation, it becomes clear that the conservation model which was implemented and the human-wilderness dichotomy which was imbedded in it, was due to the interests of particular powerful groups. When Tanzania gained independence, they inherited not only a specific model of conservation, they

also inherited the colonial conceptual dichotomies of nature/society, human/animal, and hunting/poaching.

4.2 Wildlife Conservation in Post-Colonial Tanzania

"The survival of our wildlife is a matter of grave concern to all of us in Africa. These wild creatures amid the wild places they inhabit are not only important as a source of wonder and inspiration but are an integral part of our natural resources and of our future livelihood and well being. In accepting the trusteeship of our wildlife we solemnly declare that we will do everything in our power to make sure that our children's grand-children will be able to enjoy this rich and precious inheritance. The conservation of wildlife and wild places calls for specialist knowledge, trained manpower, and money, and we look to other nations to co-operate with us in this important task the success or failure of which not only affects the continent of Africa but the rest of the world as well."

- Mwalimu J. K. Nyerere, 1961 (URT 1998: 1-2)

The above quotation is taken from Mwalimu J. K. Nyerere's oft-cited Arusha-Manifesto. Nyerere became the nation's first president after Tanganyika's independence in 1961. Three years later Zanzibar and Tanganyika united and became the United Republic of Tanzania as we know it today (Mkumbukwa 2008). The Arusha Manifesto outlines what were to become the main features of wildlife conservation in the independent state for the coming decades and can be used as a stepping-stone when studying conservation trends of this period. In this respect, three points are of interest. First, in the early period after Tanzania's independence the new government endorsed the colonial conservation strategy. Rigid fortress conservation resulted in evictions and conflict with park-adjacent communities. This was also a period when a growing number of areas came under protected area status. Second, international conservation agencies have from the very beginning played an influential role in the development of Tanzania's strategies for wildlife conservation. While donors and conservation NGOs were important in the early process of fortress conservation, they were even more prominent when the community-based conservation strategy was introduced in the mid 1980s. Third, the emphasis on wildlife preservation was clearly linked to economic interests in wildlife-based tourism, and income from tourism has played an increasing role as an incentive for wildlife conservation. This is particularly the case with Tanzania's Wildlife Management Areas (WMAs) which were established in the mid-1990s and are rooted in a Community Based Conservation (CBC) mode of thinking where both tourism and conservation NGOs play important roles.

4.2.1 Colonial Fortress Heritage and Increase in Protected Areas

When Nyerere and his Tanganyika African National Union party came into power in December 1961, they inherited a colonial conservation strategy which was rooted in North American and European ideas of wilderness and their inherent dichotomy of humans and nature. One can sense this perception of nature in the Manifesto when Nyerere speaks of nature in terms of "wildlife and wild places" and declares that "we will do everything in our power" to protect it (URT 1998: 1). Indeed, during Nyerere's reign the conservation strategy in Tanzania was a top-down fortress approach with little room for the participation of local communities (Goldstein 2005, Nelson et al. 2007). This is reflected in the Wildlife Conservation Act (WCA) of 1974, which replaced the Fauna Conservation Ordinance of 1951 and remained in force for thirty-four years, only to be replaced by the WCA of 2009 (Nelson et al. 2007). In the WCA of 1974 local people are only mentioned in relation to prohibitions and punishments (Goldstein 2005) and the special user-rights, which some hunter-gatherer tribes had enjoyed until then, were not supported by the WCA of 1974 (Nelson et al. 2007, Siege 2001). Parallel to the continuation of rigid fortress conservation was the establishment of new PAs and the expansion and upgrading in protection status of old PAs (Mkumbukwa 2008, Nelson et al. 2007). As an example,[19] from independence in 1961 and until Nyerere left office in 1985, Tanzania gazetted[20] 13 Game Reserves (GR) comprising more than 38,000 km^2 of Tanzania's land. Three out of these were re-gazetted as national parks soon after,[21] and together with Mahale and Mikumi NP they made up five NPs that were gazetted in this first part of the post-colonial period.

The increase in PAs led to an increase in the resettlement of people living within these areas, a move which was in tune with the government's 'villagization' programs of the 1970s. Villagization was part of Nyerere's socialist vision *ujumaa*[22] and also included the centralization of managerial power and discouraged local governmental structures and tribalism. The aim was to strengthen the national identity and prevent tribal conflicts (Goldstein 2005, Siege 2001). All of these issues - the increase in PAs, the rigid 1974 WCA, centralization of wildlife management and villagization - resulted in tensions between local

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[19] These numbers are calculated from Mkumbukwa's (2008) table over Game Reserves and National Parks in Tanzania starting from 1922 till 1994.

[20] The term 'gazettement' refers to the process whereby the Director of Wildlife officially declares and area for a protected area by publishing it in the Wildlife Division's periodical 'the Gazette'.

[21] Tarangire was re-gazetted as NP in 1970, Katavi in 1974 and Rubundo Island in 1977.

[22] Ujumaa derives from the Swahili word for extended family or brotherhood.

villagers and wildlife authorities. It has been argued that the poaching crisis of the 1970s and '80s was brought on by this very tension between villagers and central authorities (Siege 2001).

4.2.2 The Role of Conservation NGOs and the Community Approach to Conservation

The presence of conservation organizations in Tanzania did not end with independence. The Arusha Manifesto, where President Nyerere proclaimed that "we look to other nations to co-operate with us in this important task" (URT 1998: 2), was in fact composed by an international conservation agency (Goldstein 2005). Since then, international conservation NGOs and donors have been instrumental in shaping Tanzania's position on wildlife conservation.

Like in other countries in East Africa, a multitude of international actors have been active in Tanzania in the last few decades; however, in relation to wildlife conservation, some actors have been more important than others. Looking at the conservation NGOs first, there is the International Union for the Conservation of Nature (IUCN) which was established in the late 1940s and originated from the already mentioned British SPFE. In turn, the IUCN played a key role in the establishment of the World Wide Fund for Nature (WWF) (Chapin 2004, Neumann 1996). Besides these two, the African Wildlife Foundation (AWF) and the Frankfurt Zoological Society (FZS) should also be mentioned. Together with the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and the WWF these four agencies and NGOs facilitated the early process of the first WMAs (Igoe and Croucher 2007).[23] Important bilateral donor agencies include the GTZ, which was instrumental in the first part of the CBC period but pulled out of all work related to wildlife in the mid 1990s (Nelson et al. 2007: 241). Finally there is the USAID, which has been an important donor throughout and is one of the last remaining large donors of the WMAs (Adams and Hutton 2007). These actors stand for a fair bulk of the budgets for governmental bodies such as the Tanzania National Parks[24] (TANAPA) and subsequently influence the development of these (Goldstein 2005).

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[23] The GTZ operated in the pilot WMAs around the Selous, the WWF in the southwestern part Tanzania, FZS around the Serengeti, and AWF in the northeastern part of the country.

[24] According to Goldstein (2005: 481), international NGOs and donors stand for more than 17% of TANAPAs budget.

In the sixties and seventies, Tanzania saw an increase in international financial support from conservation NGOs and donors. The same period also experienced drastic declines in wildlife populations due primarily to commercial, but also to subsistence poaching (Baldus 2009). Estimates show that more than half of the country's elephant population and close to all black rhinos were killed during the first three decades following independence (Baldus 2001, Nelson et al. 2006). This increase in illegal hunting was arguably brought on by the economic despair which came in the wake of Nyerere's abandoned socialist project and was exacerbated by the war with neighboring Uganda in 1978-79 (Baldus 2009, Nelson et al. 2007). Poaching was also a result of the *ujamaa,* which centralized wildlife management and where the wildlife authorities lost much of their control over the protection of the PAs (Goldstein 2005, Siege 2001). In an effort to stop the excessive poaching, the Wildlife Department initiated a two-year anti-poaching operation called Operation *Uhai* (life) in 1989 (Baldus 2009, Songorwa 1999). At this time, every local villager was considered a potential poacher and Operation *Uhai* was a violent operation which involved both the Tanzanian military and the police (Siege 2001). The operation was effective in the sense that it curbed the trend in poaching and resulted in arrests of people and confiscation of tons of ivory that is still kept at the Wildlife Division's headquarters in Dar es Salaam (Baldus 2009). The war against poaching was strengthened when the ban on ivory trade from 1989 was included in Appendix 1 in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) of 1988 (Baldus 2009: 111). While the operation was effective in reducing illegal hunting, it can also be described as an outright war with local villagers which often led to open fire between poachers and game officers. Although the poachers were villagers and game scouts from areas bordering PAs, the 'big men' behind the poaching industry were politicians, businessmen and hunting operators, many of whom were not charged and certainly did not have to face the bullets of the anti-poaching force (Baldus 2009). In an effort to regain the trust between local villagers and wildlife officials, the Tanzanian government asked the GTZ to establish a community-based wildlife management project in the villages around the northern sector of the Selous Game Reserve. The Selous Conservation Program (SCP) was initiated in 1987 and became one of the first in a line of many projects which embraced the community approach to conservation (Baldus 2001, Siege 2001).

Community Based Conservation (CBC), sometimes referred to as 'conservation for the people' (e.g. Murphree 2001) developed in the 1980s as a response to the increasing international recognition of the social impacts of fortress conservation (Adams and Hutton

2007). This new discourse on wildlife conservation held that strict PA management was *against* the people, that exclusionist conservation led to conflicts and illegal use of resources, and that the time had come for a community-friendly approach to wildlife conservation. In the case of Tanzania, it was clear that the fortress approach had been unsuccessful in protecting wildlife and CBC-proponents argued that to ensure wildlife conservation one must also get the local populations living in the border zones of the PAs to participate in conservation (Songorwa 1999). Simply put, the aim was to change the mindset and behavior of local villagers and to transform them from poachers to custodians of wildlife. The proponents of Community Base Wildlife Conservation (CWM) asserted that the solution lay in devolved management, participation, and tangible benefits from wildlife-based tourism.

The community-based approach was supported by a succession of international conventions and agreements in the 1980s and early '90s. While the IUCN had put sustainability in conservation on the agenda with the World Conservation Strategy of 1980 (Adams and Hutton 2007), it was the Brundtland Report in 1987 which made the idea of a fusion of conservation and sustainable development into an internationally accepted global goal (Hutton et al. 2005). The Rio Conference in 1992 and the Third World Parks Congress in Bali the same year, further emphasized the importance of conservation and consideration of local communities. This change in discourse is also reflected in the development theory and strategies from this period, where top-down and centralized projects were replaced with bottom-up participatory approaches which sought to devolve the management of natural resources to the local level, often placing the managerial power in the hands of elected Community Based Organizations (CBOs) (Hulme and Murphree 2001).

The shift in discourse from centralized to devolved management must also be viewed in light of the structural adjustment programs of the International Monetary Fund and the World Bank, as well as an overall neoliberalization of the world economy. In Tanzania, the African socialist dream was abandoned when Nyerere left office, and as the country accepted the structural adjustment loans of the International Monetary Fund, they also opened the door to a liberal market based economy (Goldstein 2005). This change is reflected in many of the CBC initiatives from this period, where market-based solutions became an integral part of the conservation projects (Igoe and Croucher 2007, Nelson et al. 2007, Songorwa 1999). Also, while international conservation donors and NGOs were influenced by the global trends in economy and discourse on conservation, they were equally dependent on adapting to these so as to get support for their projects (Adams et al. 2004, Hulme and Murphree 2001, Hutton et

al. 2005).

International donors and conservation NGOs were therefore both drivers of the change in conservation discourse as well as subject to it. On one hand, these actors embraced the CBC concept as it was the first feasible strategy for protecting wildlife outside established PAs which is where a large part of Tanzania's wildlife exists (Baldus 2001, Siege 2001). Subsequently, the first CBC projects dealt with wildlife management and was heavily subsidized by outside donors (Murphree 2001). In all of Africa the most commonly referred to example of such a project is CAMPFIRE[25] in Zimbabwe (e.g. Brosius et al. 2005, Gibson 1999, Hulme and Murphree 2001, Siege 2001) and in Tanzania the first examples of CWM projects were the above mentioned Selous Conservation Program initiated by the GTZ and a similar project around the Serengeti NP (Baldus 2001, Siege 2001). On the other hand, donors and NGOs were undoubtedly subject to the change in conservation discourse and felt complied to take the international critique of fortress conservation seriously. For example, Hutton et al. (2005: 343) argue that the easy shift from 'fortress' to 'community-based' conservation was due to the "self-interest of the conservation constituency", as these actors recognized that fortress conservation would not survive the international and national critique for very long.

4.2.3 Tourism as an Incentive for Conservation

The British began to see the potential in tourism during the post World War Two period (Neumann 2002), and President Nyerere must have shared this vision when he declared in the Arusha Manifesto that wildlife was to be "an integral part of (…) our future livelihood" (URT 1998: 1). He is also quoted as saying that "I personally am not very interested in animals (…) Nevertheless (…) I believe that after diamonds and sisal, wild animals will provide Tanganyika with its greatest source of income" (in Nash 1982: 342 as quoted in Nelson et al. 2007: 238). History tells us that Nyerere's vision was correct and, marketing the country as the 'Land of Serengeti, Kilimanjaro and Zanzibar', Tanzania has earned a substantial income from international tourism. About three quarters of this tourism is wildlife-related (Tarimo 2009), either as consumptive such as trophy hunting or non-consumptive such as photographic safari by vehicle or on foot. In an attempt to avoid the negative environmental effects of mass-tourism which neighboring Kenya has seen, the National Tourism Policy (URT 1999: §5.2) advocates eco-tourism and generally opts for high-end, low-density rather

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[25] CAMPFIRE is short for Communal Areas Management Program for Indigenous Resources.

than mass-tourism (Goldstein 2005). Despite this, the number of tourists has kept rising in the last decades, and in 2008, tourism generated 1.3 billion USD or 33% of Tanzania's GDP (Tarimo 2009). This is a significant increase from 1995 when 'only' 740 million USD or 16% of the country's GDP was attributed to tourism (Goldstein 2005). According to the Director of Wildlife (Tarimo 2009) tourism is the fastest growing economic sector in the country with an annual increase of 15% from 2003 to 2008. As the following table shows, the number of tourists coming from abroad has risen from 300,000 visitors in 1995 to more than 770,000 in 2008.

Growth in Tanzania Tourism : 1995-2008
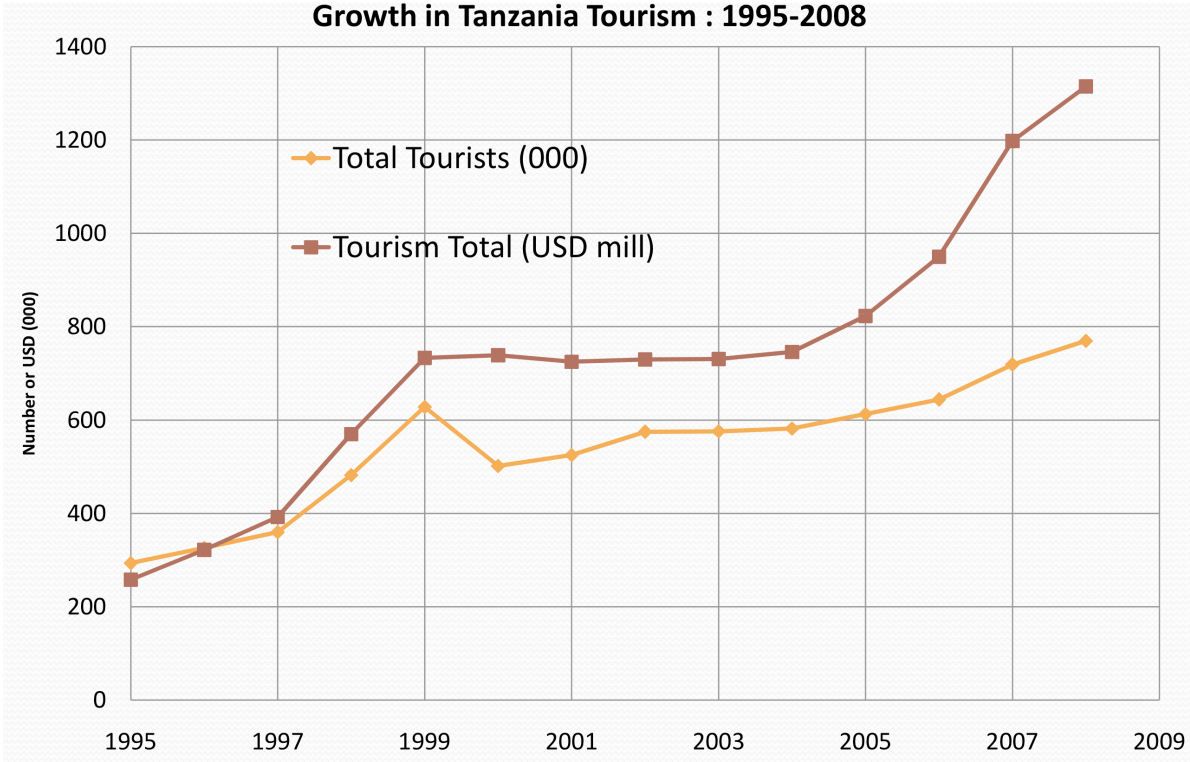
Figure 6: Growth in Tanzania Tourism. Source: adapted from Tarimo 2009.

Tourism is a highly important part of Tanzania's economy, and congruent with the growth in tourism is also the growth in PAs. Since the 1950s the size of land that has come under PA status has more than doubled, and today approximately 40 percent of Tanzania's entire land surface is protected (Tarimo 2009). In addition, tourism plays an important role in the CBC projects where revenues from tourism is the main income for the local communities. The most prominent example of this are the Wildlife Management Areas (WMAs) which are a form of community-based buffer-zone management of wildlife where parts of the tourist-revenue are retrieved by the local communities living on the borders of national parks and game reserves.

4.3 The Wildlife Management Areas of Tanzania

The Community-based Wildlife Management projects that were introduced in Tanzania in the mid-1980s were smaller donor-driven projects that promoted an incentive-based approach to reduce poaching among communities situated alongside PAs. The WMA model, which evolved in the 1990s, built on these CWM projects and is similarly dependent on donor funding. As opposed to the projects in the 1980s, however, the WMA framework institutionalized the CWM concept by integrating it in national legislation and by implementing WMAs in buffer zones throughout the country. As such, Tanzania's WMAs are a good example of how changes in the international discourse on conservation – from fortress to community-based – have led to radical changes in national policies on wildlife management with subsequent implications for the livelihoods of rural communities.

In short, the WMAs are a new category of PA located in the buffer-zones of already established national parks and game reserves (URT 1998: §3.3.1). As opposed to national parks and game reserves, the WMAs are managed locally and the managerial power is devolved to a CBO that produces plans for land use which delineate village land to be set aside for wildlife conservation. The process of establishing a WMA is usually facilitated by a conservation NGO or a donor agency since the CBO rarely has the capacity to produce these plans on its own. The WMA gives the CBO user rights over wildlife, thus enabling the village to venture into business agreements with tourist operators. The underlying premise is that the revenues accrued from this agreement will provide an incentive for the community to protect the wildlife from poaching and thereby ensure conservation. The WMAs were made possible with the 1998 Wildlife Policy of Tanzania (WPT) and formalized in the Wildlife Management Area Regulations of 2002[26] (IRA 2007, Nelson 2007). As these policies and laws have been presented as participatory and 'pro-community', the following sections investigate whether they in fact facilitate devolved wildlife management and an equitable system of benefit sharing.

4.3.1 The 1998 Wildlife Policy of Tanzania

The 1998 WPT was the result of a long process to radically change the wildlife management in the country (Nelson 2007) and became the independent nation's first comprehensive

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[26] This document is alternately referred to as the Wildlife Conservation Regulations or the Wildlife Management Areas Regulations. I will refer to the document using the latter title, and while the first edition was published in 2002, I will use the 2005 edition which is the one currently in force.

wildlife policy (URT 1998). The WPT draws on the vision set forth by Nyerere in the Arusha Manifesto[27] and, like the Manifesto, places an emphasis on the need for international assistance (URT 1998: §2.8, §3.2.4) as well as on the economic importance of wildlife-based tourism (URT 1998: §§2.4.1-2.4.2). A new aspect of the WPT is the focus on "rural communities and the private sector" as important actors who must be involved in wildlife management in order to ensure conservation and sustainable use (URT1998: §3.2). In this, the WPT reflects the international shift in conservation discourse from a singular focus on biodiversity conservation within PAs to an emphasis on the importance of protecting wildlife corridors, migratory routes and buffer-zones (Igoe and Croucher 2007, IRA 2007, URT 1998: §3.2.1). The 1998 WPT further mirrors international trends in that it promotes WMAs as a potential strategy for both sustainable wildlife management *and* rural development. In light of this, the WMA model can be described as a neoliberal approach which promotes devolved wildlife management as opposed to centralized control, and which encourages cooperation with private companies as a means to rural development (Sosovel et al. 1999, URT 1998: §3.2.1).

When the WPT was passed, it was relatively progressive in that it recognized the costs of local people living close to wildlife habitats and gave them wildlife user rights (URT 2008). The ownership over wildlife, however, remained with the state in accordance with the Wildlife Conservation Act of 1974. Following the inauguration of the policy, some critics argued that unless villagers were made co-owners of wildlife, the WMA strategy was simply 'old wine in new bottle' since it merely turned village land into PAs and did not acknowledge local people as equal partners in wildlife management (Shauri 1999).

The same year, a roundtable discussion of representative stakeholders[28] on CWM in the country brought forth additional concerns (Sosovele et al. 1999). Among these was a concern that the WPT lacked a clear system of benefit sharing for the proposed WMAs and that the WMAs still represented a top-down approach to wildlife conservation because the bulk of power was vested in the Director of Wildlife. In relation to the WMA model, concerns were raised about the amount of power wielded by the facilitating NGOs. Additional concerns were

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[27] The WPT opens with a longer quote from the Arusha Manifesto which is the same as the one quoted earlier in this chapter.

[28] Participants at the roundtable discussion which was held in Bagamoyo, Tanzania, in January 1999, were among others representatives from: the Wildlife Division, Sokoine University of Agriculture, Tanzania National Parks (TANAPA), WWF, the Selous Project, University of Dar es Salaam and Africare (Sosovele et al. 1999: 37).

raised about the use of WMAs as a standard model for CWM, as this model might not be suitable for many local conditions and that a "cocktail of different approaches" would be a better alternative (Sosovele et al. 1999: 12). The USAID-funded EPIQ[29] report, which was developed as a proposal for the 2002 WMA regulations (Mabugu and Mugoya 2000), raises many of the same issues as the roundtable discussion. Also, since the WPT is in conflict with existing legislation on wildlife and land use, it must be harmonized with these (*ibid*: 6). The conflict in question concerns the contradictory relationship between the Village Land Act and the Wildlife Conservation Act. While the former gives local communities ownership to village land, the latter stipulates that the state has ownership of all wildlife, even on village land. Establishing a WMA means that the villagers give up land to wildlife conservation, but since they do not have ownership to the wildlife, they only get a portion of the income from the consumptive and non-consumptive use of this wildlife.

Despite the recommendations of the EPIQ report and criticism such as presented by the roundtable discussion, the revised WPT of 2007[30] did not entail any major changes in terms of ownership to wildlife or the amount of power entrusted in wildlife authorities (URT 2007). Also, when the WPT of 1998 was passed there was no legislative framework to support it, because the only legislation in force was the WCA of 1974 which did not support the participatory aspects of the wildlife policy (Nelson et al. 2006). In order to bridge this legislative gap, the Wildlife Management Areas Regulations were introduced in 2002 and later revised in 2005. The new Wildlife Act, which had been called for by many actors since the early 1990s was not finalized till 2009, when it was signed by the President. However, by the time of my fieldwork in the fall of 2009, the Act had still not been implemented by the Minister of Natural Resources and Tourism, and according to the Wildlife Division this was not likely to happen until the spring of 2010.[31] A number of actors have argued that the new WCA is in fact a re-centralization of wildlife management rather than the next step in a process of devolving the management to local level.[32] If this recentralization truly takes place in the next years, then wildlife management in Tanzania can be seen in relation to the wider

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[29] EPIQ is short for Environmental Policy and Institutional Strengthening Indefinite Quantity.

[30] The main new aspect of the revised Wildlife Policy of 2007 was that it brought wetlands under increased protection. This was a consequence of Tanzania signing the Ramsar Convention on Wetlands of International Importance in 2000 (URT 2007, Tarimo 2009).

[31] Interview Wildlife Division, CBC officer 22.10.09, Dar es Salaam.

[32] Interview with Tanzania Natural Resource Forum (7.12.09) and representative from the Belgian Technical Cooperation (2.11.09). The former is an independent, membership-based interest organization facilitating WMA debates, and the latter is a bilateral development agency working in one of the newest WMAs around the Selous Game Reserve.

international trend in conservation, which some have argued is moving away from the participatory, community-based approach and back to fortress conservation (Hutton et al. 2005).

4.3.2 The WMA Regulations: Establishment, Benefit Sharing, and Management in the WMA Model

The WMA regulations of 2002 marked the inauguration of the 1998 WPT and designated 16 pilot WMAs that were to be implemented over a period of three years (IRA 2007, Nelson et al. 2006, URT 2001). The Regulations spell out the process and requirements of establishing a WMA, the responsibilities of different stakeholders and actors involved in a WMA as well as general regulations related to the utilization of wildlife in a WMA (URT 2005, Nelson et al. 2006). Three central issues that are often discussed in relation to the regulations (e.g. Igoe and Croucher 2007, IRA 2007, Nelson et al. 2006) are first, the cumbersome process of establishing a WMA. Second, the lack of explicit regulations on benefit sharing of the revenues accrued in the WMA. Finally, instead of devolving the management to local level, the bulk of power is still vested in the Director of Wildlife and the Minister of Natural resources and Tourism (hereafter referred to as Director and Minister).

The process of establishing a WMA is laid out in the WMA regulations and has been criticized for being unnecessarily difficult and long (Igoe and Croucher 2007, IRA 2007, Nelson et al. 2006, Shauri 1999). Nelson et al. (2006: 7-9) outline the twelve steps[33] that are required for the full gazettement of WMAs when the villagers seek to have tourist hunting in the WMA. It is unnecessary to describe each of these steps in order to get the idea that the process of establishing a WMA is a long one. However, a look at the most important of these steps will give an idea of the WMA process and simultaneously shed light to the power-relations and importance of the different actors involved in the process. Since trophy hunting is the only tourist activity undertaken in the WMA investigated by this thesis, Ngarambe-Tapika WMA, each of these steps were relevant in the establishment of this WMA.

To start, the village holds a Village Assembly meeting where they decide that they wish to begin the process of establishing a WMA on village land. At this meeting a Community Based Organization (CBO) is formed which in turn produces a constitution and registers the CBO. Prior to this the Wildlife Division and/or a conservation NGO has sensitized the

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[33] These steps draws on the procedures for designation of WMAs as laid forth in the WMA regulations of 2005, §§ 12-21.

villagers of the area and informed them about the benefits and costs of establishing a WMA. After this the CBO produces, among other documents, a Land Use Plan (LUP) which will be subject to Environmental Impact Assessment (EIA) and applies to the Director for status as an Authorized Association (AA).[34] Because the CBO needs to supply a number of documents[35] along with the application, this part of the process often takes a long time, even when the CBO is assisted by a conservation NGO. The Director has ninety working days to endorse or reject the application, and another fourteen to forward the endorsement to the Minister for further declaration of AA status. If the application is granted by the Minister, the CBO obtains AA status and concurrently the WMA is gazetted. After this, the AA has to apply to the Director for user rights over wildlife as well as an allocation of a hunting block within the WMA. This is a prerequisite if the AA wants to venture into a business agreement with a hunting company. Any contract with such a company has to be approved by the Director of Wildlife as well (Nelson et al. 2006: 7-9, URT 2005: § 31.g).

It can take many years from the point where the Village Assembly decides to begin the process of establishing a WMA and until the AA gets user rights over wildlife in the WMA, even with help from a NGO which in the WMA Regulations is given the responsibility to facilitate the WMA establishment (URT 2005: §77). As an example, only four out of the sixteen pilot WMAs had obtained AA status and user rights by the end of the three-year pilot period which ended in August 2006 (Nelson et al. 2006). A representative of the Wildlife Division interviewed agreed that the WMA process was long.[36] But he also argued that the procedures were necessary, and that the only possibility for shortening the process was if the government produced the land-use plans rather than the CBO. This, however, would mean that the villagers would give up their decision-making power in deciding what part of the village land that would be set aside for conservation, and this would be in conflict with the idea of a devolved, bottom-up approach to wildlife management.

Maybe the most central aspect of the WMA concept is revenue sharing, which is meant to be an incentive for the villagers to preserve wildlife (URT 1998). Both the roundtable discussion

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[34] This is a category of village-based organization that is provided for by the WCA of 1974 §26 (1).
[35] The documents that needs to be supplied as according to the 2005 WMA Regulations are: (1) minutes from the Village Assembly meeting where the decision to establish a WMA was made, (2) information about the area, (3) a copy of the certificate of CBO registration, (4) a copy of the CBO constitution, (5) a Land Use Plan, (6) a Map over the proposed WMA, (7) a boundary description, and finally (8) a draft of the Resource Management Zone Plan.
[36] Interview with CBC officer from the Wildlife Division 22.10.09.

and the EPIQ report raised the issue of the need for clearly defined rules for benefit sharing. The latter held that "the <u>primary</u> beneficiaries of the WMAs will be the communities/villages forming the AA. The <u>secondary</u> beneficiaries of the WMAs will be the Wildlife Division and the District Council" (Mabugu and Mugoya 2000: 18, underline original). At the moment, the system in place is that the Wildlife Division collects all of the revenue accrued by the WMA and then a certain percentage of this goes back to the AA. The problem, however, is that both the 2001 and the revised 2005 edition of the WMA Regulations fail to assess the exact percentage that shall go to the villagers and merely states that benefit sharing shall "comply with circulars issued by the Government from time to time" (URT 2001: §72, URT 2005: §73.1). According to information from the Wildlife Division,[37] this percentage is at the moment 25% for consumptive tourism and 65% for non-consumptive tourism. This is far from the recommendations made by the EPIQ report and also, because the tourist fees go straight to the Wildlife Division, the AAs do not have any means of ensuring that the money they receive is the full amount they are entitled to.[38] Neither the WMA regulations nor the new Wildlife Act deal with this problem, and the Act also avoids specifying the exact percentage which the AAs are entitled to (URT 2009: §31.2).

Regarding how the money which the AAs get from the Wildlife Division is meant to be divided, the regulations are quite clear. From the revenue retrieved by the AA, at least 15% shall be reinvested in conservation, at least 50% shall be divided between the village councils of the villages that are part of the WMA, and at least 25% shall go to the management of the AA (URT 2005: §73.2). This means that there is 10% of the revenue remaining, which the AA can use where it deems it most needed.[39]

WD 75%	**AA 25%**	15% for conservation
		25% to the management of the AA
		50% for the village councils of the member villages
		10% allocated where AA deems it needed

Figure 7: Benefit sharing for revenues from consumptive tourism in WMAs. Source: URT 2005, fieldwork.

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[37] Information from interview with Wildlife Division staff 22.10.09, 27.10.09 and 06.01.10.
[38] Interview with MUNGATA, the AA of Ngarambe-Tapika 30.11.09.
[39] Interview with CBC officer from the Wildlife Division 22.10.09.

A final aspect of the Wildlife Policy and the WMA regulations is the amount of power which, despite a vision of devolving the wildlife management, is still vested with the Ministry of Natural Resources and Tourism (MNRT) represented by the Minister and the Director. As an example, aside from having the power to reject or accept WMA applications, the Minister has authority to designate any land that "he may deem fit" a WMA (URT 2005: §17.3). While the Minister is the one with the final say in the WMA process, the Director is active throughout the process of establishing a WMA and also in the case of de-gazettement. Furthermore, the Director is the one to allocate hunting blocks, hunting quotas and to oversee the investment agreements made between an AA and a tourist company (URT 2005: §31, §66.5). When asked, the Wildlife Division explained this interference with the AA management as being to the best of the villagers, because tourist companies often attempt to cheat the villagers.[40] What this means in reality, however, is that the central wildlife authorities have full control over the management of the WMA, and make up an aspect of the WMA regulations that is far from the devolved vision of the CBC approach and the Wildlife Policy. In reality, the "Wildlife authorities (…) retain overall responsibility for the management of all wildlife PAs" (URT 2007: §3.2.6a).

4.4 Conclusion

This chapter set out to conduct a genealogy of wildlife conservation in Tanzania from the colonial period until the present date and to place the development of Tanzania's WMAs within this historical framework. This chapter has shown that throughout the colonial period and the first half of the post-colonial period, wildlife management in Tanzania was characterized by strict, even paramilitary fortress conservation where local people were resettled and subsistence hunting restricted and prohibited. This hostile view of local use of wildlife resources was advocated by British conservationists in the post-Second World War period and reinforced by the lobbying of international conservation NGOs following Tanzania's independence. When Nyerere became the independent nation's first president, he inherited the country's colonial approach to wildlife conservation. Also, the fortress approach concurred with Nyerere's socialist experiment and the result was that wildlife conservation in Tanzania developed into an outright war between wildlife officers and local inhabitants, culminating in the violent anti-poaching Operation *Uhai* in the late 1980s. The 1980s also witnessed a major shift in the country's political regime, and as Nyerere left office in the mid-1980s, the African socialist, centralized government gave way to decentralization projects and

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[40] Interview with CBC officer from the Wildlife Division 22.10.09.

a neoliberalization of the economy. This shift had major implications for wildlife management. Influenced by an international shift in discourse on conservation, new community-based wildlife management projects were implemented. The most recent of these models are the WMAs, which institutionalized the CWM concept and were made possible by changes in national policies and legislation. When examining these policies, however, one finds that instead of facilitating devolved management and tangible benefits to local communities, they make the WMA management cumbersome and bureaucratic, and - because the central wildlife authorities retain the bulk of the decision-making power - fail to devolve power to local level and to provide an equitable system of benefit sharing.

In light of the above reflections on the shift from fortress to community-based wildlife management, some issues stand out. The most apparent is the way in which the discourse on conservation produces specific knowledge about local people which in turn is used to legitimize action. While the fortress polemic emphasized local use of wildlife as wasteful and unsustainable and thus legitimized exclusion from PAs and punishment for subsistence hunting, the community-based conservation discourse presents the villager as a potential co-partner in conservation. Instead of punishment to make the villagers adapt to the conservation regime, the emphasis is on creating *incentives* for the locals so that they willingly take part in conservation. I find two main problems with the community based conservation model. The most obvious problem is the above mentioned half-hearted performance of Tanzania's wildlife legislation in terms of actual benefits and devolved management. The second problem is that the CWM discourse is based in a series of pre-defined assumptions of wildlife, wildlife-use and conservation which are presented as objective knowledge. At closer inspection, however, it becomes clear that hegemonic notions of wilderness, conservation, and the role of local populations are in fact socially constructed and sustained by actors governing the discourse.

It is against this backdrop that the next chapter is set. Chapter 5 investigates the performance of Ngarambe-Tapika WMA, where I conducted my fieldwork in the fall of 2009. In this I focus on aspects of devolved management, revenue-sharing, participation, and wildlife conflicts. I also analyze the WMA model through a Foucauldian lens in order to show how the WMA model can be seen as a technique of power which aims to win the villagers over to the CWM discourse by making them into 'environmental subjects'.

5 The Case Study of Ngarambe-Tapika WMA

The previous chapter focused on my first research objective and looked at the development of conservation discourse and practice in Tanzania and situated the emergence of the WMA model within this historical frame. This chapter will focus on the second and third research objective and first present and analyze the findings from my research in Ngarambe-Tapika WMA, and then study the *mode of power* and the process of *subjectivation* of the WMA model. For the purpose of my line of argument in this chapter, I present the findings and analysis in four sections which I have chosen to call 'the four pillars of the WMA model'. The four pillars constitute what I perceive as the most essential aspects of the conservation model, namely: 1) devolved wildlife management and benefit-sharing, 2) good governance and participation at village level, 3) benefits versus the wildlife-related costs of living in a WMA, and finally 4) the process whereby the villagers are transformed into 'environmental subjects'.[41]

Chapter 4 serves as a backdrop to the empirical findings since it investigated how conservation models and wildlife legislation in Tanzania are founded in socially constructed notions of 'wild landscapes' and 'conservation'. To extend this link between discourse and empirical realities, the first part of this chapter will investigate the relationship between the WMA legislation and how they are implemented in Ngarambe-Tapika WMA. My approach is to first focus on the first three WMA pillars and look at the extent to which the management of wildlife is being devolved to the village level, to examine how the villagers are given the means to participate and influence the decision-making in the WMA, and to appraise the benefits and costs of living with wildlife. In this I will also address what factors that seemed to be most influential on the villagers perception of the WMA and the WMA management. The second part of this chapter is devoted to the fourth pillar which I have adapted from Arun Agrawal's work on *Environmentality: Technologies of Government, and the Making of Subjects* (Agrawal 2005). In this part of the chapter I investigate the WMA model through a Foucauldian lens and look at how *subjectivation* as an instrument of power (Andersen 2003, Foucault 1982) is used to win villagers over to the CWM discourse.

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[41] I am aware that in literature on participatory resource management, aspects relating to devolved management and participation are often discussed together. I have, however, decided to discuss these separately as this approach will better present this chapter's line of argumentation.

5.1 Devolved Wildlife Management and Benefit Sharing of the Wildlife Resources

The first pillar of the WMA model is devolved management and benefit sharing of the wildlife resources. The devolution of wildlife management is clearly described in the wildlife policy, where one of the policy statements is to "devolve the responsibility of protection, conservation, management and development of wildlife (…) to village communities" (URT 2007 §3.2.6). In the WMA, management and benefit sharing are intertwined and at the centre is the Authorized Association (AA), whose purpose is to manage the WMA at the local level. In addition, each of the villages has a village council, which plays an important role in the management of WMA revenues. In order to understand the aspects of the WMA revenue sharing scheme, one must know how the responsibilities are shared between the villages that make up AA, which in Ngarambe-Tapika WMA is called the MUNGATA.[42] In addition, it is important to highlight the role which the village councils play in the WMA.

While the main office of MUNGATA is situated in Ngarambe village, the two villages Ngarambe and Tapika divide the responsibilities and the positions of the AA between them. This sharing of responsibility is stipulated by the MUNGATA constitution (AA 2003: §4.6.1) and means, for example, that while the chair person lived in Ngarambe village, the vice chair and the secretary lived in Tapika. In addition to the twenty positions in the MUNGATA, the two villages had an equal number of ten village game scouts each.[43] In short, the main responsibilities of the MUNGATA are to oversee the work of the village game scouts and the meat sale to the villagers. It is responsible for venturing into business agreements with Game Frontiers, which is the only tourist hunting company operating in the area, and for selling part of the resident hunting quota to this company. In addition, the AA manages the finances of the WMA and reports to the village councils of both villages. Through the work of the village game scouts, the MUNGATA is responsible for the overall control of problem animals and for protecting wildlife from poachers.

The role of the Village Council has already been addressed earlier in this thesis (see section 3.8.4) but a few words is needed concerning the relationship between the MUNGATA and the village councils. First, each village has its own council, which is the highest governmental body in the village. The council shall hold village assemblies every third month of the year,

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[42] The name MUNGATA is an acronym for 'Jumuya ya Hifadhi Ngarambe-Tapika', which can be translated to 'The Association of Conservation of Ngarambe and Tapika'.
[43] Interview MUNGATA Ngarambe 30.10.09.

and members are not supposed to retain their positions for more than five years. Also, council members are not allowed to be members of the AA. It is the role of the council to monitor the work of the AA and to report to the villagers through the assembly meetings. Because there is only one AA but two village councils, the success of the WMA may vary between the villages and is dependent on the local organizations' ability to cooperate.

5.1.1 Benefit Sharing in Ngarambe-Tapika WMA

The scheme for benefit sharing in the WMA is stipulated by the WMA Regulations (URT 2007: §73) and has already been discussed to some extent in chapter 4 of this thesis (section 4.4.2). Only consumptive tourism is conducted in the WMA, and as a result the MUNGATA receives 25% of the tourist hunting revenues collected by the Wildlife Division, as opposed to 65% in the case of non-consumptive tourism.[44] The reason for this lies in the property rights to wildlife and land respectively.[45] In Ngarambe-Tapika WMA, the revenues generated from wildlife are divided equally between the MUNGATA and the village councils of the two villages. In addition to the revenues from the Wildlife Division, MUNGATA obtains funds from the sale of meat, which is harvested with the village resident quota. The MUNGATA further receives some funds from selling parts of its resident quota to the tourist company Game Frontiers,[46] who in turn sell the licenses to tourists. In addition to buying permits from the MUNGATA, Game Frontiers has a hunting block within the WMA, which it has been allocated by the Wildlife Division. MUNGATA's funds are primarily spent on salaries to village game scouts, AA members and the management of the MUNGATA. The Village Council controls the funds that shall be spent on development projects in the village. The following table gives an overview of the flow revenues in Ngarambe-Tapika WMA.

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[44] Interview with CBC officer, Wildlife Division 22.10.09.

[45] Wildlife belongs to the state as according to the Wildlife Conservation Act of 1974 (URT 1974) and village land belongs to the Village Council as according to the Village Land Act (URT 1999).

[46] The owner of the Game Frontiers, board is one of the most powerful safari operators in the country, owning and running several safari companies, such as the large Northern Hunting in the country's north (Minwary 2009, Sachedina 2008).
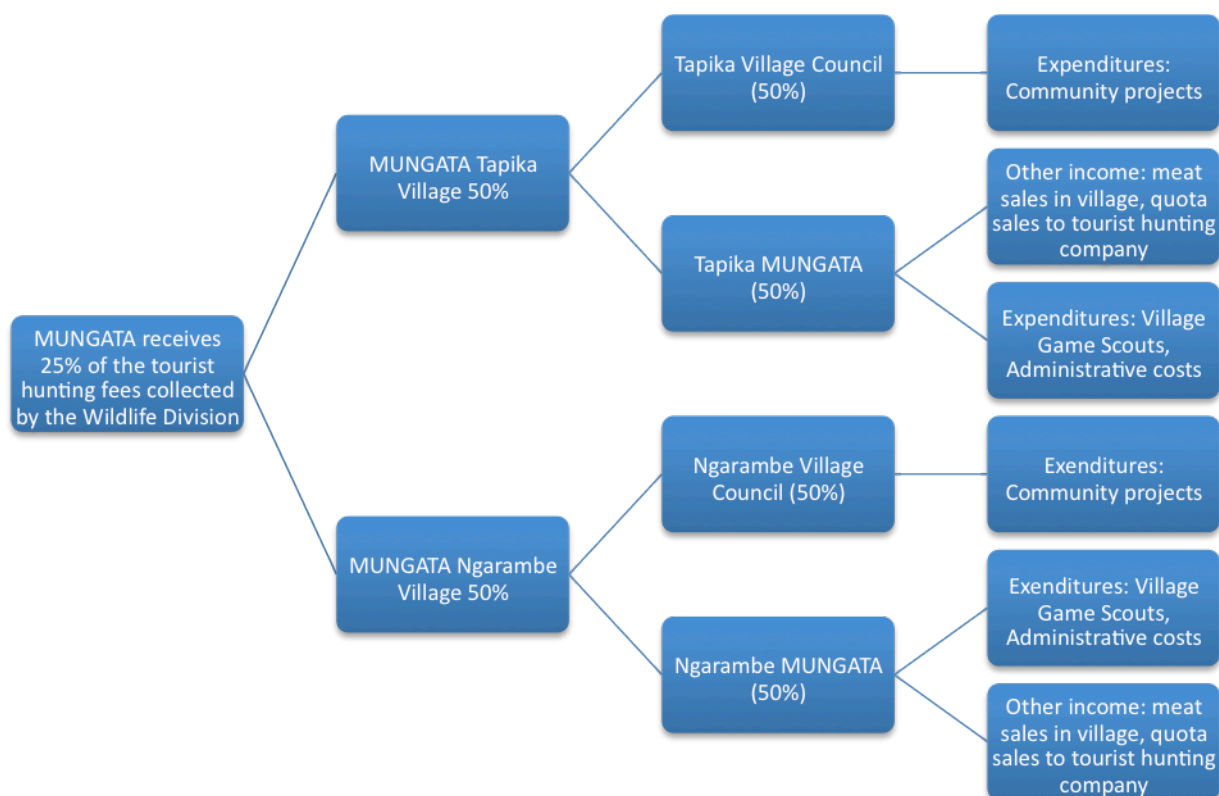
Figure 8: The revenue sharing of the WMA income in Ngarambe-Tapika WMA. Source: fieldwork.

In the same way as with the sharing of the responsibilities, one purpose of the revenue-formula is to ensure accountability within the WMA management by dividing the money between the AA and the village councils. There is one main problem with the revenue-sharing formula, however, which is that the villagers do not have any means of verifying that the money they receive from the central authorities is in fact the 25% they are entitled to.[47] This is because the money for the tourist permits goes through the Wildlife Division before the 25% is returned to the MUNGATA. When asked why the AA could not receive the money directly from Game Frontiers, the answer from the Wildlife Division was that *"the villagers and the AA are not able to collect that money from the investors (…) once they are able to proceed to collect their own data for the visitors entering into their area, then they can collect right there."*[48] This statement is in contradiction with the devolved and participatory agenda of the

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[47] Interview MUNGATA Ngarambe 30.10.09.
[48] Interview CBC officer, Wildlife Division 22.10.09.

wildlife policy and is also peculiar considering that the MUNGATA already has many years of experience with direct quota-sales to the Game Frontiers.

According to the WMA regulations, the villagers do in fact have one way of observing the number of animals hunted by the tourist company. The regulations state that the village game scouts shall assist the tourist hunting company while on safari (2005: §23g). In addition to providing the scouts and their families with extra cash income, this would give the MUNGATA a means to calculate the percentage they should receive from the Wildlife Division at the end of each hunting season. This was unfortunately not the case in Ngarambe and Tapika. At the time of the fieldwork, game scouts from the district rather than the village were supervising the trophy hunting.[49] Both the MUNGATA and the village game scouts were well aware of this and especially the scouts were unhappy with not being employed by Game Frontiers. One game scout from Tapika expressed his frustration in this way: "*Instead of supervising the hunting, we are only allowed to supervise the luggage of the tourists.*"[50] What this mean is that the only employment the game scouts had with the hunting company was as security guards at the tourist camp. When asked about the cooperation between the hunting company and the villages, the camp manager at the Game Frontiers tourist camp[51] was somewhat reluctant to specify whether or not they used the village game scouts or district game scouts for tourist hunting. He did, however, confirm that the camp sometimes employed the village game scouts as security guards.[52]

This example shows that although the management of the wildlife is meant to be devolved to village level, the reality in the WMA is that the tourist hunting largely takes place outside of the villagers' control. The villagers have no way of verifying that the money they receive from the Wildlife Division is the amount they are entitled to and are left with having to trust the central wildlife authorities.

That said, the MUNGATA budgets do show a high increase in income in the last couple of years. As an example, in the 2004-2005 period,[53] MUNGATA's total income was just over five and a half million Tanzanian Shillings (TSH), while the year following WMA

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[49] Interview village game scouts Ngarambe 13.11.09. Interview village game scouts Tapika 13.11.09.
[50] Interview village game scouts Tapika 13.11.09.
[51] The tourist camp is located not far from Tapika and is used by the tourists during the hunting safari.
[52] Interview camp manager, Game Frontiers bush camp 16.11.09.
[53] The financial year of the MUNGATA lasts from July 1st to June 30th as according to the AA Constitution (2003) §7.8.

gazettement in 2007-2008, the income had increased to almost forty-four million shillings.[54] The next question that needs to be investigated is who benefits from these funds.

5.2 Good Governance and Participation at Village Level

The second pillar of the WMA model is good governance and participation at village level, which is inevitably linked to the devolved aspect of the WMA model. While the above section addressed problems related to the degree of village control over wildlife management and revenues, this section will discuss aspects of accountability and transparency of the MUNGATA and the village councils, and also look at the level of participation among the villagers in the management of the WMA. First, the section will present the findings from Ngarambe village where there were some concerns of poor governance in the WMA management, and which to a certain extent can be attributed to a loophole in the WMA regulations. Furthermore, the section will look at villagers' perceptions of the work of the MUNGATA and the level of accountability of the AA. I argue that there is a correlation between villagers' attendance to village assemblies and their level of knowledge and attitude towards the WMA management.

5.2.1 Transparency and Accountability of the MUNGATA and the Village Councils

The WMA regulations outline several mechanisms of monitoring, which are meant to ensure good governance of the AA, to prevent corruption, and to minimize resource capturing by AA members. As addressed above, the most important of these is that the AA and the village councils split the WMA revenues. In addition, the WMA regulations stipulate that the AA is accountable to the village councils, that the council is responsible for monitoring the activities of the AA, and that the council must report on these matters to the village assembly and the District Council (URT 2005: §21-§22). The Village Council is in turn accountable to the villagers through the assembly meeting and to the district authorities through the District Council. Due to the fact that the councils are not monitored by the AAs, corrupt village councils can easily become 'bottlenecks' in the WMA management in situations where the link between district and village government is weak. During my fieldwork I found that this was the case in one of the villages of the WMA.

In Ngarambe village, I found some indicators of poor governance with the Village Council. While the documents of the AA (budgets, reports etc.) were mostly in order,[55] the documents

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[54] 5.7 million TSH equals 3840 USD/24770 NOK. 44 million TSH equals 29649 USD/191213 NOK.

of the Village Council were both unorganized and lacked important documentations of income and expenditures. Most notably, a fairly large sum of money was kept in a bank account resided over by the village council members. According to their budgets, this balance was over ten million shillings in 2008,[56] and two and a half of these were recorded to be located in the village and with the Village Council. Two and a half million shilling is a lot of money in a Tanzanian rural village, and the fact that they were kept with the Village Council, triggers a question of the accountability and transparency of Council. In addition, the impression I got from the villagers in Ngarambe was that there was a general distrust with the Village Council. In addition to rumors of embezzlement, the Village Executive had held her position for thirteen years,[57] which is in violation with existing legislations that allows only five years of having the position (Brockington 2008). Also, the MUNGATA complained that the Village Council often failed to pass the annual budgets and plans of the AA on to the Village Assembly and the District Council like they are meant to according to the WMA Regulations (URT 2005: §21f).[58]

In Ngarambe, the villagers were generally very skeptical towards the accountability of both the MUNGATA and the Village Council. More than half of the respondents accused the MUNGATA of 'eating the money', which is a popular way of saying that someone is corrupt. Only one third of the respondents in the village believed that the AA distributed the money in the best interests of the villagers, in contrast with Tapika, where all of the respondents said they felt the AA was accountable. The problems in accountability and transparency of the WMA management in Ngarambe can be attributed to several factors. First, the members of the Village Council and the MUNGATA lacked necessary skills in areas such as accounting, records keeping and negotiating with private companies.[59] This was however also the situation in Tapika[60] and since both villages had received the same kind of training I do not see how this could be the main reason for the skepticism showed by the Ngarambe villagers. Another factor is the above-mentioned loophole in the WMA regulations where the AA is monitored by the village council and the village assembly, but where sufficient mechanisms of monitoring the village councils are lacking. More importantly, I believe low attendance to village assemblies in Ngarambe had a large impact on the governance of the WMA

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[55] A few issues were noticeable, such as some questionably high expenditures.
[56] 10 million TSH equals 6622 USD/40958 NOK.
[57] Focus group discussion Ngarambe 20.11.09.
[58] Interview MUNGATA Vice Chair, Ngarambe 20.11.09.
[59] Interview MUNGATA Vice Chair in Ngarambe 20.11.09.
[60] Interview MUNGATA Tapika 13.11.09.

management. While assemblies are meant to be held every third month, this was not always the case in Ngarambe where meetings at times were cancelled due to low attendance.[61] Apart from being an important mechanism of monitoring, assembly meetings represent the core forum where villagers participate in the WMA management. The following section will look at the villagers' level of participation, knowledge and perception of the WMA management.

5.2.2 Villagers' Participation, Knowledge and Perception of the WMA Management

Participation is an integral part of the WMA model and villagers participate through devolved management either as members of the village council, of the AA, as game scouts, or as participants at the assembly meetings. As stressed above, assembly meetings functions as a mechanism of monitoring as well as the main forum where villagers receive information about the WMA. Also, villagers' participation is intended to evoke a sense of ownership over wildlife among the villagers. "*The wildlife,*" as one Wildlife Division officer put it, "*is their resource. This* (the WMA) *is their shop!*"[62] The following section will present the findings from my household interviews and look at the level of villagers' attendance to village assemblies, their level of knowledge of the WMA management, and their perception of accountability of the WMA management.

The Village Assembly is the main forum where information about the work, budgets and progress of the MUNGATA is presented and where villagers are given the opportunity to participate in the WMA management through discussing and deciding upon how the WMA revenues shall be spent. All adult villagers are invited to the assemblies and it is the responsibility of the Village Council to forward the information from the AA to the villagers.[63] Since the assemblies are such an important forum for spreading information, the level of attendance to them serves as a good indicator of the villagers' level of knowledge about the WMA. In Tapika as many as 90% of the respondents said they attended village assemblies regularly, while roughly 65% gave the same response in Ngarambe. In the sub-villages Kungurwe and Nyamakono very few attended assemblies and was in part due to the distance to the main villages where the assemblies were held. The level of attendance correlates with villagers' general level of knowledge[64] concerning the work of the MUNGATA and how the WMA money was spent. In Tapika more than half of

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[61] Interview MUNGATA Vice Chair, Ngarambe 20.11.09.

[62] Interview CBC officer from the Wildlife Division 22.10.09.

[63] Interview MUNGATA Vice Chair, Ngarambe 20.11.09.

[64] The level of knowledge which the villagers showed was based on their answers to questions under section D in the household interviews (see Appendix II), and was later grouped into three levels: 'high level', 'some level' and 'little or no level' of knowledge.

the respondents showed a 'high level' of knowledge and the remaining 45% had 'some level' of knowledge. In Ngarambe the percentage of respondents showing a 'high level' of knowledge was only about 25%, about 50% had 'some level' of knowledge, and the remaining 25% had 'little or no' knowledge compared to none of the respondents in Tapika. In Nyamakono and Kungurwe the level of knowledge was generally low. In particular, I found that the villagers of Ngarambe often were unaware that the AA and the Village Council split the WMA revenues between them. Many thought that the MUNGATA controlled all of the WMA funds and this may have contributed to the villagers' skepticism towards the AA relative to the Village Council.

In turn, the villagers' perception of the accountability of the MUNGATA varied a lot between the two main villages. As already mentioned, there was a huge variation between the two villages, and while all the Tapika villagers were positive towards the WMA management, as much as half of the villagers in Ngarambe accused the MUNGATA of embezzlement. In the sub-villages, the respondents in Nyamakono were more positive towards the work of the MUNGATA than the villagers of Kungurwe. To visualize the findings from this section, the following graph shows the level of: village assembly attendance, high knowledge of WMA management, and confidence in the AA of the two main villages of the WMA.
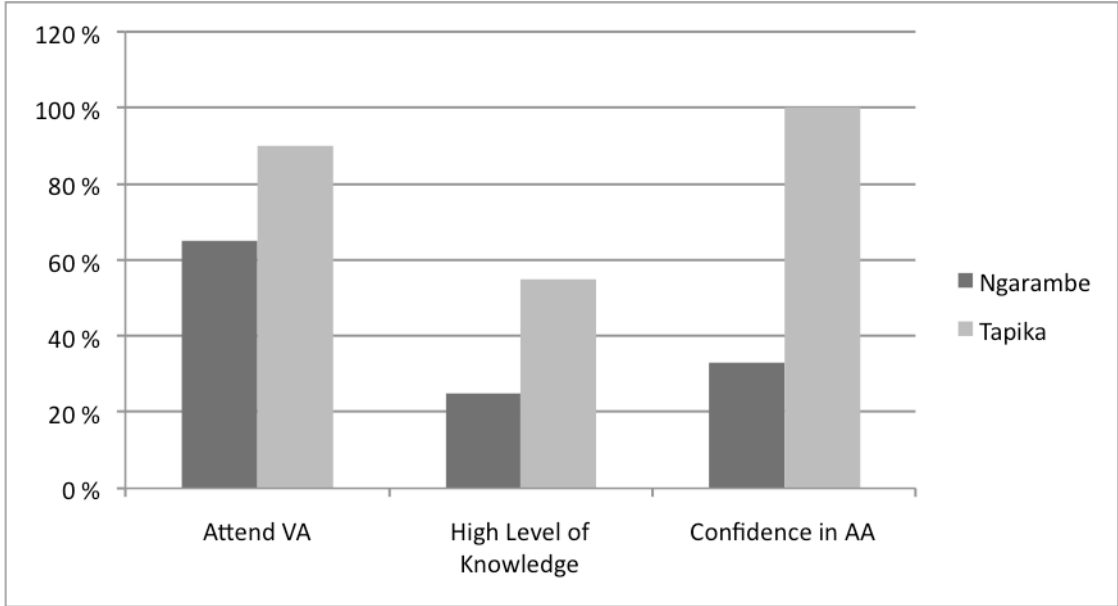

Figure 9: The percentage of villagers interviewed who: attended village assemblies, showed a 'high level' of knowledge of the WMA, and expressed confidence in the work of the MUNGATA, in Ngarambe and Tapika respectively. Source: household questionnaires, fieldwork.

In sum, the villagers of Tapika were much more active in attending village assemblies than their neighbors in Ngarambe. These assemblies are the main forums where villagers are informed and sensitized about the WMA work, and not surprisingly the Tapika farmers showed a much higher level of knowledge about the work of the WMA than those living in Ngarambe. Also, the inhabitants of Tapika expressed a great deal more trust in the MUNGATA than the villagers of Ngarambe. While I would argue that there is a clear correlation between the two first issues, there may be other reasons why the villagers of Ngarambe did not trust their AA. First, there was the above mentioned issue of lack of transparency of WMA management. Also, a political divide in Ngarambe village may have contributed to the distrust. In Ngarambe, a large group of the farmers were in support of the political opposition in the country, and I was told that this was the reason why so many of them were skeptical towards governmental-introduced institutions like the AA and the WMA.[65]

5.3 Benefits and Wildlife-Related costs of Living in a WMA

"The primary beneficiary of the WMA shall be the villager of the village(s) forming the Authorized Association"

-Wildlife Management Areas Guidelines 2003: 33

The third pillar of the WMA model is the benefits versus the wildlife related costs of being in a WMA. The understanding that local communities have to benefit from wildlife on village land for them to have an incentive to protect it is at the very core of the CWM discourse. The WMA model, which arose from this very discourse can be described as a mechanism that distributes the benefits of wildlife to the communities who bear the costs of sharing land with wild animals. This emphasis on benefits is reflected in the wildlife policy, which holds that "local communities (…) have a role of protecting and benefiting from wildlife" (URT 2007: § 3.1.4). According to the above quoted WMA Guidelines "the primary beneficiary of the WMA shall be the villager of the village(s) forming the Authorized Association" (URT 2003: 33) and the WMA Regulations clearly state that the AA's "primary objective is to conserve wildlife resources for the benefit of local community members" (URT 2005: §3).

The objective of this section is to look at the tangible benefits the locals were receiving from the WMA and how this varied dependent on which village they lived in. Furthermore, the

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[65] Interview, District Agricultural Officer 18.11.09.

section will look at the wildlife conflicts which the villagers were experiencing and whether they felt that the benefits or the costs were highest. In addition to this, the section will assess some of the attempts that have been made in the villages to mitigate wildlife conflicts.

5.3.1 Benefits from Living in the WMA

In Ngarambe village the WMA revenue has funded several projects. The money had primarily been spent on construction of houses such as shops in the village centre, a granary, a house for the corn mill, a dispensary, and the rehabilitation of the primary school. In addition, some of the money had been spent on a generator which was intended to give the community electricity and provide energy for the water pump situated in the village centre.[66] It is important to emphasize, however, that the WMA money far from covered the total expense of these projects. The majority of the funding came from external actors such as the WWF, Swedish ABB,[67] and the World Bank.[68] In addition, Ngarambe has a long history of receiving donations from the owner of Game Frontiers. Examples of such donations were food supplies in periods of drought, metal roofing materials, vocational training scholarships for students, and uniforms and tents for the village game scouts. The owner, who is a Muslim, had also built a mosque in both Ngarambe and Tapika.[69] According to the MUNGATA secretary, Game Frontiers depends on goodwill from the villagers so that the AA will continue to sell parts of its resident hunting quota to the company. Also, because the contract for the hunting block within the WMA will expire in 2010, the company depends on a good reputation if it wants to obtain a new contract with the central authorities.[70]

Tapika village has also initiated several projects with the WMA funds. Money had been spent on construction of an office for the Village Council which it shared with the MUNGATA members, a milling machine for the use of the villagers, a house for the primary school teacher, the primary school building, as well as a dispensary in the village centre which was under construction during the time of my fieldwork. Future plans were to support women's working groups and build a new MUNGATA office as the AA members were not happy with

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[66] The water pump was a World Bank project where the village contributed with 25% of the costs. At the time of my fieldwork, the pump was functioning and frequently used by all villagers.

[67] ABB is a Swedish-funded company that works with power products and systems worldwide, and who donated a generator to Ngarambe in 2005.

[68] Interview Village Executive Ngarambe 20.11.09.

[69] Interview MUNGATA in Ngarambe 30.10.09.

[70] Interview CBC officer from the Wildlife Division 22.10.09.

the current arrangement of sharing the small office with the Village Council.[71] Like Ngarambe, Tapika village had received several donations from the owner of Game Frontiers. Examples were food rations, a water pump and also a mosque in the village centre.[72] In contrast to Ngarambe, the village did not have a long history of development projects by NGOs as the village only joined the Selous Conservation Program in 1998. Compared to Ngarambe, Tapika seemed more successful in terms of distributing benefits in the villagers' best interest. Also, while Ngarambe seemed to be heavily dependent on external funding for its projects, Tapika appeared more self-sustaining and had managed to fund many of its projects without too much support from external donors. As an example, the dispensary was fully paid for by the WMA funds. For the other projects, the district had never contributed more that half of the costs.[73]

While Ngarambe and Tapika received a fair amount of community benefits from the WMA funds, this was not the case with the two sub-villages Nyamakono and Kungurwe. Neither village had schools, dispensaries or water-pumps. The water situation was particularly burdensome as the villagers had to collect water from small streams in the vicinity or simply from puddles in the road. In dry periods, villagers of Kungurwe had to walk a distance of four hours forth and back when collecting water.[74]

While both of the main villages had initiated a number of projects with a varying degree of external support, the perceptions among the locals to whether the benefits they received from being in the WMA outweighed the problems related to wildlife, varied greatly. In Tapika village 95% of the respondents said that the benefits outweighed the costs of being a part of the WMA, while in Ngarambe this number was down to about 25%. In Ngarambe, many of the villagers emphasized that while they experienced the costs directly, the benefits were indirect and some felt that the MUNGATA members were cheating them. One villager expressed this by saying that *"the losses are higher than the benefits because the benefits are for the leaders while the losses are for villagers like me."*[75] Others, like this farmer in Ngarambe, argued that *"we cannot get money from our crops because the losses are so high. Even the dispensary wants a bit of money, but if we don't have any money, then how are we*

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[71] Interview MUNGATA, Tapika 13.11.09.
[72] Interview MUNGATA chair, Tapika 13.11.09.
[73] Interview MUNGATA chair, Tapika 13.11.09.
[74] Household interview nr 73, Kungurwe, male 60 years old. 21.11.09.
[75] Household interview nr 55, Ngarambe West, female 28 years old. 19.11.09.

supposed to benefit from our benefits?"[76] In other words, this villager was describing a vicious cycle of crop loss, which led to no cash income and which in turn resulted in the villagers being unable to benefit from social services like health care and meat from the MUNGATA. In Kungurwe and Nyamakono villages, where no projects had been initiated, the villagers felt that they did not benefit from the WMA. In Kungurwe all of the people asked said that the costs were higher than the benefits, and in Nyamakono five out of the six who answered said the costs were higher than the benefits.

5.3.2 Wildlife Conflicts in the WMA

Due to the presence of tsetse flies, the villagers of Ngarambe-Tapika WMA rely on farming and poultry for their sustenance. Because of the wildlife in the area, their levels of crop loss and loss of chickens are very high. During periods of drought the problem increases as wildlife become desperate and venture out of the bush and into human settlements and cultivated plots in search of food.

In the WMA elephants seemed to be the major problem in terms of crop loss, and in Tapika about half of the respondents of the twenty household interviewed had lost more than half of their crops to wildlife last season. Of these, four respondents had lost all of their crops, while three had experienced no crop loss last season. Ngarambe village showed similar numbers with about half of the forty-two respondents having lost more than half of their crops last season to wildlife. Again elephants were the major problem, but baboons and warthogs also ate villagers' seeds and vegetables. About five percent of the respondents had lost all of their crops, and only one farmer said he had not experienced any crop loss last season. In Nyamakono, five out of eight respondents lost more than half of their harvest, and one of these lost all of his crops to wildlife. The remaining four had lost between one fourth and one third of their crops, and one respondent said she did not lose any crops. In Kungurwe sub-village three out of the four farmers interviewed said they lost all of their crops last season to wildlife.

In addition to crop loss, about half of the seventy-four villagers interviewed said they lost chickens to predators. In Tapika village, the biggest problem animals were leopards, servals and hyenas. In Ngarambe farmers mainly complained about baboons, servals and jackals snatching their chickens. In addition to loss of chickens, villagers in Ngarambe complained

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[76] Household interview nr 60, Ngarambe West, male 35 years old. 19.11.09.

about elephants raiding and destroying fruit trees at night. In Nyamakono and Kungurwe, monkeys were a major problem and ten out of the total twelve respondents said they had lost chickens to baboons or vervet monkeys. Somewhat surprisingly, the village that showed the most positive attitude toward the WMA and the work of the village game scouts was also the one which had the most problems with wildlife attacks on humans. In Tapika, the villagers claimed to have experienced several attacks by leopards and lions in recent years. According to the villagers, the attacks increased during periods of drought. Children are especially vulnerable to attack from leopards and sometimes these predators would enter the huts at night through the thatched roofs. There seemed to be some confusion about the exact number of persons attacked, but some said that four children had been killed in the last two years.

5.3.3 Attempts to Mitigate Wildlife Conflicts

It is clear from the above section that wildlife conflicts pose a serious problem for the villagers of the WMA. For those farmers who lost most of their crops to wildlife, their means for survival depend on external support. In the last couple of years, long periods of drought has resulted in high crop loss and the villages have been dependent on food supplies from the district administration and Game Frontiers.[77] Having to rely on external support is not sustainable for the villages and two main strategies have been applied to mitigate the wildlife conflicts in the area. The first strategy involves the village game scouts, whose job it is to help farmers with problem animals. The second strategy is a project that is not directly linked to the WMA, but has been initiated by the WWF and tried out in the two main villages. The following section will look at the level of success of these strategies in reducing the wildlife problems.

5.3.3.1 The Role of the Village Game Scouts

Tanzania has no state compensation scheme for farmers who have lost crops and property to wildlife, nor are there any plans for introducing such a scheme (URT 2007: §3.2.3). Instead, control of problem animals is devolved to the local governments. For villages that are part of a WMA this responsibility is given to the village game scouts (URT 2007: §3.2.3). In Ngarambe-Tapika WMA, where village game scouts have been employed since the Selous Conservation Program, I found that the WMA model weakened the scouts' power to deal with

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[77] Interview District Agricultural Officer 18.11.09, interview MUNGATA chair Tapika 13.11.09.

problem animals. Instead of assisting the farmers, their job has largely been reduced to protecting wildlife and to hunting the resident quota.

Since the Selous Conservation Program, the protection of wildlife had been intensified, and under the WMA the village game scouts are no longer allowed to shoot wildlife that harm property and crops. During the previous conservation regime, if an elephant family kept coming back to raid crops in the village, the village game scouts were authorized to kill the elephant leader.[78] The scouts' permission to kill problem animals, which is provisioned for under the Wildlife Conservation Act (URT 1974: §50), was one of the main reasons why the villagers were convinced to join the Selous Conservation Program in the 1990s.[79] This changed with the WMA regime and many villagers expressed frustration over the new situation where the game scouts were only allowed to use flares against the elephants.[80] Also, the game scouts explained how some of the elephants had become used to the flares and therefore continued to come back to the same crops every night.[81] In situations like these, the only recourse for the village scouts was to contact the scouts at the Kingupira Selous Camp who were authorized to shoot problem animals in cases of severe damage. However, the Selous scouts were not always available and sometimes days could go by before the problem animals were dealt with.[82] In sum, my general impression was that the villagers had little confidence in the village scouts' ability to protect their crops. From talking with the scouts and the MUNGATA, it seemed like the job of the scouts was mainly to patrol for poachers and hunt the resident quota.

5.3.3.2 The Chili Project

The second strategy for mitigating the wildlife conflicts was a project initiated by the WWF in 2005 where chili was utilized to scare away crop-raiding elephants. The project was modeled on similar initiatives in Tanzania and neighboring countries and has proved a success in several cases (e.g. Osborn and Parker 2002). During the course of the chili project, villagers of Ngarambe and Tapika were taught how to mix chili, elephant dung and used motor oil, place the dung around the agricultural plots and set them on fire in the evening which is the time of the day when the elephants are actively raiding crops. The resulting chili

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[78] Interview village game scouts, Ngarambe 13.11.09
[79] Focus group discussion Tapika 16.11.09.
[80] Focus group discussion Tapika 16.11.09.
[81] Interview village game scouts Ngarambe 13.11.09. Interview village game scouts Tapika 13.11.09.
[82] Interview village game scouts Ngarambe 13.11.09. Interview Kingupira game scout 18.11.09. Interview MUNGATA Ngarambe 30.10.09

smoke would keep the elephants away as their trunks are highly sensitive.[83] In both Ngarambe and Tapika the project was described as a success during the project period, but failed to be sustainable when this initial period was over. The reason was that the villagers were unwilling to grow chili crops on their farms and they depended on supplies of chili and oil from WWF throughout. As a result, when the NGO supplies stopped, the project came to a halt. In many ways the chili project can be seen as a good example of how development projects that are imposed from the outside fail to be sustainable because they are not adapted to local conditions and needs from the outset. While the need to protect crops certainly is present in the villages, chili is not traditionally grown in the area.[84] Farmers from both villages expressed frustration concerning the chili project. One MUNGATA member from Tapika explained the villagers' reluctance to adapt to the project in this way: *"How many hectares of chili is needed to sustain all the farms in the village? (...) we would be cultivating chili from here and all the way to Morogoro!* "[85]

Instead of adapting the chili project, some of the villagers found their own solutions to the wildlife problems. In Tapika, some villagers used ropes and tin cans to create 'sound traps', so that when animals came in contact with the ropes the cans would rattle and scare off the intruders. Also, in all of the four villages I encountered farmers who had built chicken houses that were raised on poles, thus protecting the chickens from predators at night. Those villagers whom I spoke with said that these adaptations worked well in terms of protecting crops and chickens, and especially the raised chicken houses had proved successful.

In Ngarambe, the villagers' negative attitude towards the project may have been consolidated by other unsuccessful development projects in the village. Another WWF initiated project was a buzz saw that was donated by the WWF as a potential income generating activity and alternative to farming. During the construction of the shed for the saw, the WWF had provided the materials, while the villagers had contributed the manual labor to build the shed. At the time of my fieldwork, both the buzz saw and the shed were there, but because the saw was too small to handle the local logs, it had never been used. Another project was the before mentioned generator which had been provided by Swedish ABB and the WWF in 2005. While the generator was intended to run on jetropha oil grown and produced locally, by the

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[83] Interview with WWF representative who were in charge of the chili-project 04.01.10.

[84] Interview District Agricultural Officer 18.11.09, Interview MUNGATA Tapika 13.11.09.

[85] Morogoro district as well as Morogoro town is located north east of the WMA and the distance between the WMA and Morogoro town is approximately 200km. Interview MUNGATA, Tapika 13.11.09.

time of my fieldwork this had not yet happened and the project was facing several problems.[86] For one, there were not enough farmers willing to grow jetropha plants. Also, due to poor crops the production of the oil had not yet begun and the generator was dependent on diesel supplied by the WWF. Although the MUNGATA paid for half the diesel, they were dependent on the WWF to pay for the other half, and also provide the mechanical help when the generator broke down. Throughout the course of my fieldwork the generator was not working and the villagers were waiting for assistance to fix the machine.

5.4 Summary of Findings

Before I move on to the next part of this chapter, a short summary of the findings from the fieldwork could be useful. The first WMA pillar was concerned with the devolved management and system of benefit sharing in the WMA. My findings show that the management has been successfully devolved to the different actors at local level. I also found that the main problem with the benefit-sharing was that the villagers were not able to monitor the use of wildlife resources in their area and therefore do not know if the money they receive from the central authorities is the accurate amount. The second pillar concerned good governance and participation at village level. I found that the WMA management in Tapika seemed to be more transparent and accountable than in Ngarambe where the Village Council posed a particular problem and rumors as well as some indicators of poor governance was present. I also found that the participation among the villagers was much higher in Tapika than in Ngarambe and I argued that there was a correlation between attendance to assemblies and knowledge of the WMA. The third pillar was concerned with the benefits of living in the WMA contrasted the wildlife-related problems in the area. In this, my findings showed that both Ngarambe and Tapika had initiated several projects funded by the WMA revenues, but that Tapika was more self-sufficient than Ngarambe, which was more dependent on external support. I also found that the average crop-loss was more or less equal in the two main villages and that the villagers of the WMA had such high losses that they were dependent on external food support to evade food shortage. Throughout I emphasized how the villagers of the two sub-villages were bypassed by the main villages and did not reap any of the WMA benefits. In sum, there were several differences between the two main villages participating in the WMA, but the most obvious was the level of participation, knowledge and trust in the WMA management. It seemed that this, rather than level of crop loss or benefits, was the

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[86] Information about the generator in Ngarambe is retrieved from interviews with WWF 04.01.10 and interview with the MUNGATA in Ngarambe 30.10.09.

determining factor influencing the villagers attitude towards the WMA and the WMA management.

Throughout my fieldwork I was puzzled by one oft-repeated scenario. I would interview a farmer who was telling me about high personal losses to wildlife and it was not uncommon that villagers had lost all of their crops as well as chickens, seeds and sometimes fruit trees. The same person would also say that he or she did not trust the management of the WMA and had little or no knowledge of what the WMA money was spent on. Despite this, when we came to the question about the need to protect wildlife and the necessity of the WMA, this same person would almost always tell me that its crucial to protect wildlife because the village benefit from tourism, and that wildlife should be protected because of their economic and intrinsic value. What puzzled me was not only that the villager expressed a positive attitude towards the protection of wildlife, but also that the villager would use the language of the CWM discourse and speak of 'participation', 'benefit-sharing' and 'revenues from tourism' in the same vein as the conservation NGOs and Tanzania's wildlife authorities do. One way of studying this phenomenon where the villagers actively use the jargon of the CWM discourse is to investigate the relationship between power/discourse and subject in the WMA regime. The next section will look at how the villagers of the WMA are won over to the CWM discourse through a process of *subjectivation* where the villagers are made into custodians, into keepers of wildlife.

5.5 The Making of Environmental Subjects

"The Long-term success of wildlife and wetlands conservation depends largely on the way conservation is perceived by the public"

- Wildlife Policy of Tanzania 2007: 36

The above quote is taken from the Wildlife Policy of Tanzania and serves as a good introduction for the objective of this section - to investigate the WMA model as a technique of power which aims to win villagers over to the CWM discourse. As the policy holds, conservation – that is conservation in the way it has been defined and implemented by powerful actors – is dependent 'on the way conservation is perceived by the public'. For the WMA regime to succeed in reducing poaching and conserving wildlife, the very mindsets of the villagers have to be transformed, and they themselves have to take an active role in this process. In other words, the WMA regime not only subjects the villagers to the CWM

discourse, it equally imposes on them an identity, a role, which they are disciplined into actively take on. This process of transforming people's behaviour and perception of themselves in relation to environmental conservation is what Arun Agrawal (2005) refers to as 'the making of subjects'. In this, Agrawal actively employs Foucault's concept of *subjectivation* as a technique of power (Foucault 1977, 1982).

The following section is influenced by Agrawal's work on subjectivation in participatory forest management in India (Agrawal 2005) and aims at analyzing the exercise of power in the WMA regime through a Foucauldian lens. The section will first investigate the change in Foucault's 'modes of power' in the transition from fortress conservation to community-based wildlife management, and how the devolved, participatory nature of the WMA regime makes subjectivation possible. The section will then move on to investigate the process of subjectivation in the WMA regime. In this I investigate the WMA model's regulatory self-disciplining mechanism(s) which aim to transform the villagers from poachers to keepers of wildlife.

5.5.1 Changes in the Mode of Power – From Punitive City to Regulatory Rule

In chapter 2 of this thesis I described the 'modes of power' that Foucault investigates through his genealogy of the Western legal system in *Discipline and Punish* (1977). I presented Foucault's description of the 'punitive city' (Foucault 1977: 113), where the technique of power was public executions, and where the source of power – represented by the state sovereign - was just as exposed as the criminal. Agrawal describes the punitive city as one where "The lessons of the punitive city (…) make the concrete relationship between crime and punishment obvious through public examples" (2005: 161). To make this clear, the punitive city represents a technique of power where the asymmetrical relationship between the actor who wields power and the ones who are subjected to power is exposed. In this process the will, interests and biases of the sovereign are equally exposed. Foucault's example of this is the vivid description of the torture and execution of Damiens the regicide in 1757, France. Poor Damiens had to undergo the worst of all punishments because he committed the worst of all crimes: he had attempted to kill the King (Foucault 1977: 3-7). Only three decades later, the French Revolution overthrew the monarchy, and as monarchy gave way, so did the public displays of power to the modern prison where surveillance and self-discipline rather than physical punishment becomes the instrument of power. The aim of imprisonment is to induce an inner change in the convicts and to transform them into law-abiding citizens

who embrace the hegemonic norms of society. The discourse on right and wrong is no longer something that is pushed onto the people by one visible source of power, but is interwoven into multiple centers of power and projected onto the people through society's educational, social and legal institutions (Foucault 1977).

The dispersion of power into multiple centers makes possible what Agrawal calls 'regulatory rule' (2005: 162). Regulatory rule differs from the punitive city in that the technique of power is self-discipline, which "creates awareness and knowledge through direct participation in the various elements and stages of regulation" (2005: 163). In other words, there has been a shift from coercion and explicitly brutal displays of power to self-discipline through participation.

I assert that it is possible to adopt Foucault's concept of 'punitive city' and Agrawal's 'regulatory rule' when investigating the transition between techniques of power in Tanzania's conservation regimes. Under the colonial and post-colonial period up to the mid-1980s, wildlife management was controlled through the central government. It was the state authorities and cooperating actors who owned, controlled, and benefitted from wildlife management. The will of the state was exercised through game officers working in the district. As all wildlife belonged to the state, hunting without a license was deemed to be poaching and was punished accordingly. The conflict between state authorities and rural Tanzanians intensified with population growth and ivory demands from a growing international market, and peaked with the military crackdown on poaching with Operation *Uhai* in the 1980s. In light of the above observations, the 'mode of power' in this period of Tanzanian wildlife management can be seen as an example of Foucault's 'punitive city'. Rural Tanzanians were subjected to the power of the central authorities through rigidly enforced fortress conservation; simultaneously, the source, interests and biases of power were equally exposed.

With the WMA regime, management of wildlife is devolved to the local level. The management is divided between multiple levels which are made up of central wildlife authorities, district authorities and wildlife officers, assisting conservation NGOs, village councils, AAs, village game scouts, and finally the villagers participating in village assemblies. This new mode of power is an example of what Agrawal calls 'regulatory rule' and the fragmentation of government for 'governmentalized locality' (2005: 162, 89). In light of this, the WMA regime can be described as 'regulatory rule' that regulates the behavior of local villagers - not through brutal displays of power such as the Operation *Uhai*, but through

the self-disciplining mechanisms of the WMA regime. Under this example of regulatory rule, the object is to invoke an inner transformation of the individual where he or she willingly embraces the truth-claims of the CWM discourse. The rural villagers are no longer simply subjected to the dominant discourse on conservation, but made to actively produce themselves as subjects. This process is what Foucault refers to as subjectivation, and in the study of the WMA regime can be adopted when investigating the process of 'making environmental subjects' of the villagers (Agrawal 2005, Foucault 1982). The following section will look at how the WMA regime transforms the villagers from poachers to environmental subjects and keepers of wildlife through self-disciplining mechanism of the WMA model.

5.5.2 Subjectivation and Self-Discipline in the WMA Regime

In chapter 2 of this thesis I offered an interpretation of Foucault's concept of subjectivation, which is the process whereby an individual or a group not only accepts being the subject of power, but also produces themselves as subjects (Andersen 2003, Foucault 1982). Agrawal uses the concept of subjectivation in his study of 'the making of subjects' in participatory forest management in India (Agrawal 2005). Agrawal explains how subjectivation is made possible due to the devolved and participatory nature of the resource management, which he calls 'intimate government' as opposed to 'government at a distance' (2005: 195). The concept of intimate government can be adapted to the WMA management in Tanzania where the management is characterized by its devolved, participatory nature. As government becomes increasingly fragmented and decentralized, so too is the regulation and monitoring of resource use devolved to the local level. Ultimately, it is these regulatory mechanisms – which can be characterized as 'self-disciplining' - that make subjectivation of the villagers possible.

The most powerful self-disciplining mechanism of the WMA regime is first and foremost participation and village monitoring. In Ngarambe-Tapika, a network of actors was involved in the management of the WMA, and each of these actors had a particular role in monitoring the WMA management. As an example, the village game scouts patrolled the area for poachers, the village councils oversaw the work of the MUNGATA, and the villagers themselves monitored the WMA management through participation in the village assemblies. More importantly, the high number of villagers participating in the WMA had a regulating effect as 'neighborhood monitoring'. Through participation and dispersal of management, the monitoring was no longer a top-down exercise, but was something that all adult villagers

could be involved in. This process of neighborhood monitoring can be interpreted as a form of Foucault's oft-cited 'panoptic mechanism' (1977). In *Discipline and Punish*, Foucault goes to great lengths to describe the panoptic mechanism, which in his words is a 'technology of power' which "induces in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power" (1977: 201). To visualize the panoptic mechanism, Foucault uses Jeremy Bentham's *Panopticon* – an architectural model used for prisons where the prison cells are placed in a circle around a watch tower, allowing the guards a full view of the cells while never allowing themselves to be exposed (Foucault 1977: 200-202). The panopticon de-individualizes power by giving anonymity to the prison guards. Further, the permanent visibility of the inmates has a self-disciplining effect because the prisoners never know when they are being watched (Foucault 1977). The WMA is not a prison, nor is it necessarily a 'panoptic institution'; rather, I argue that the panoptic mechanism is active in the devolved, participatory nature of the WMA management regime. Like the inmates in Bentham's prison, the villagers never really know when their actions are being monitored. Their neighbors could be 'conservationists' and report illegal hunting to the WMA management and the village game scouts. In the 1970s and 80s, illegal hunting was a widespread practice among the villagers, and there was a clear distinction between 'us' (villagers) against 'them' (game officers from the district, conservation NGOs) (e.g. Baldus 2009). With the Selous Conservation Program and later the WMA regime this division of actors has become more blurred, and there is no longer a clear division between 'us' and 'them'. Through the WMA model, the villagers are offered the role of co-partners in conservation.

In the case of Ngarambe-Tapika I would argue that the self-disciplining mechanism was more successful in Tapika than in Ngarambe. As the findings in the first half of this chapter showed, participation in and knowledge of the WMA management was much higher in Tapika than in Ngarambe village. Since the benefits and crop losses were about the same in the two villages, I argue that participation and good governance in the WMA management regime is the determining factor for how the villagers perceive the WMA regime. In light of the above remarks on intimate governance and self-discipline through participation, I find it legitimate to argue that the self-disciplining mechanism in Tapika influenced the level to which the villagers perceived the WMA as a success. This does not mean that the process of subjectivation was a failure in Ngarambe village, but rather that the self-disciplining mechanism was less powerful there because of the low level of participation among the

villagers. The next section will look at another indicator of subjectivation in the WMA - namely, how the villagers actively used the language of the CWM discourse.

5.5.3 From Poachers to Keepers of Wildlife

Above I looked at the self-disciplining mechanism of the WMA regime. Instead of using physical punishment to change villagers' behavior, self-discipline through participation and village surveillance is the technique which transforms the villagers from poachers to keepers of wildlife. In investigating the degree to which the villagers 'produce themselves as subjects', one can look at the way the villagers express the need to protect wildlife and their own role in conservation.

This section of chapter 5 was introduced by the observation that many villagers used the CWM language when discussing the need to protect wildlife. Villagers would typically voice expressions similar to this Ngarambe respondent: *"The WMA is important because it can give us foreign money that will help the village and the nation."*[87] Others would speak of the importance of revenues from tourism similar to this Tapika villager: *"Yes, there is a need to protect wildlife because we get money from the tourists coming."*[88] In general, while there were many variations between the two main villages on other issues, the responses to the question of the *need* to protect wildlife did not vary between the villages. In Ngarambe village, more than eighty percent said that they felt it was important to protect wildlife. Of these, the majority said that protection was important because the villagers received benefits through tourism, while others spoke of potential benefits in the future. Yet others said that conservation was important because it served the interests of the nation and that poaching therefore needed to be reduced. In Tapika village the percentage of those who said it was important to protect wildlife was just a bit higher. Eighty-five percent of the respondents claimed that conservation was important and either referred to tourism which brought benefits to the villages or stated that the wildlife needed to be protected from poaching. As to how the villagers expressed their perception of their own role in conservation, one particular phrase was often repeated. In Ngarambe village, the villagers tended to describe their relationship to the wildlife as being analogous to the relationship between a farmer and his livestock. The

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[87] Household interview number 31. Ngarambe East, male 30 years old. 17.11.09.
[88] Household interview number 21. Tapika, female 21 years old. 15.11.09.

typical phrase was that 'we keep them'.[89] For example, in Ngarambe West as many as thirteen out of the twenty-four respondents used this phrase. That the villagers used the CWM language does not necessarily mean that they have been successfully transformed into environmental subjects. But it does show that the large majority of the villagers knew the language of the CWM discourse and used it when I asked them about the need to protect wildlife.

Another way of investigating the extent to which the villagers had been transformed into conservationists is to look at their actions. According to all my sources there had been a drastic reduction in poaching among the villagers.[90] The most positive of the informants was a WWF representative who stated that: *"in the past they used to be poachers (…) now the situation has changed by a hundred percent. The people are no longer poachers."*[91] While the WWF and the central authorities presumably were biased in their presentation of the success of the WMA, the assertion that poaching had declined because of the WMA regime was confirmed by the Selous game scouts, the district game scouts, and game scouts from the village. Despite this, during my stay in the villages there were two incidents where Selous game scouts arrested poachers in the area and one of the arrests was of farmers from Ngarambe village.[92] From the information I retrieved by my informants, then, I conclude that there had been a decrease in illegal hunting among the villagers, although perhaps not 'by a hundred percent'.

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[89] This phrase is worded in the way my translator described it to me. I do not know the exact Kiswahili words the villagers used, but my translator explained to me how the villagers repeated the same phrase every time, and that 'we keep them' was the best translation.
[90] Information from the Wildlife Division, the WWF, the GTZ, the TAWIRI, the Selous Game Scouts, and the villagers themselves all said that there had been a reduction in illegal hunting since the introduction of the community-based wildlife management projects were introduced.
[91] Interview WWF representative 04.01.10
[92] Interview Kingupira game scout 18.11.09. District agricultural officer (personal communication).

6 Concluding Remarks

The aim of my study was to apply the tools of political ecology to investigate the emergence of the CWM paradigm in Tanzania and the performance of community-wildlife management in one of the country's WMAs. Being situated within the post-structuralist branch of political ecology, it was natural to adopt a Foucauldian approach to my study. Still, I have not exclusively relied on Foucauldian concepts, but have equally been inspired by political ecologists and their persistent focus on actors.

In my study of the development and performance of the WMA model, I have attempted to show three things. First and foremost, this thesis demonstrated that both conservation and the models through which conservation is practiced are socially constructed. The notion that it is necessary to either fence off vast stretches of land or to make local communities into co-partners in wildlife preservation are notions which are produced and sustained by groups of powerful actors. This relationship between discourse, knowledge, and influential actors becomes particularly clear through the investigation of the transitions between different modes of wildlife conservation in Tanzania from the colonial period until the present. By conducting a genealogy of wildlife conservation, I foregrounded the role of actors, global trends, and political agendas in producing and sustaining dominant truth(s) about wildlife management.

While my genealogical study of the discourses on conservation in Tanzania focused on the shift from one discursive paradigm to another, it was equally concerned with the empirical manifestation of these in national wildlife legislation and the subsequent models of conservation that were introduced. In this I placed special emphasis on the emergence of the WMA model and the discrepancy that exists between the participatory, devolved goals of the wildlife policy and the extent to which the WMA regulations successfully facilitate community-based management that produces tangible benefits for local communities.

Second, in my study of the performance of the WMA model in Ngarambe-Tapika WMA I found several issues of interest. Amongst other, I found that the villagers had no means of verifying that the money they received from central authorities was the 25% they were entitled to. Additional issues concerned weak WMA monitoring systems in which the village

council had become a bottleneck for the flow of information through the WMA system. In terms of benefits for the villagers, I found that a number of WMA-funded community projects had been implemented in the two main villages but that the sub-villages had been largely by-passed in terms of benefits. Further issues related to wildlife conflicts where the farmers throughout the WMA suffered high losses of crops and where projects to mitigate the conflicts so far had been unsuccessful. An additional aspect of this was that the village game scouts, whose job it is to protect the crops of the farmers, had largely been reduced to protect wildlife instead.

Third and finally, I used my empirical findings as a point of departure for a Foucauldian investigation of the WMA model that focused on the ways in which the conservation regime encourages the production of environmental subjects. My argument was that dispersal of power and the participation of all villagers through the devolved management of the WMA had a self-disciplining effect on the villagers. Instead of fortress style conservation through coercion, the conservation of wildlife in Ngarambe-Tapika WMA is now secured through the conversion of villagers from poachers to keepers of wildlife.

In sum, I argue that the WMA model does not represent a revolutionary structural change in the way conservation is practiced. Had this been the case, the villagers would for example receive all of the revenues from wildlife tourism conducted on village land. Rather, the WMA model can be seen as a non-coercive means of implementing the conservation interests of dominant actors. Instead of coercion, the villagers are provided with the means through which they can actively produce themselves as conservationists. Finally, I like to emphasize the importance of investigating conservation regimes with a focus on relations of power, discourse, knowledge, and processes of subjectivation, which I believe enriches our understanding of the politics of environmental management.

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Appendix I: Checklists Interviews

Checklist AA members

- Personal history in AA
  - How he/she joined
  - Knowledge about the WMA before joining
  - Reasons for joining
  - Position in community
- Structure and operation of AA
  - Period membership
  - Meetings
  - Information of work to community
- Cooperation with WWF/GTZ
- Information given to local communities during the process of establishing the WMA
- Cooperation with Game Frontiers Safari Company
- Money from hunting fees
  - How much money received
  - How the money is spent
  - Any regulations on how the money should be spent
  - Information/sensitization of the communities
  - Future community projects

Checklist focus group discussion

- CBC program 1995-2003
- Information about WMA prior to the Village Assembly meeting
- The Village Assembly meeting and the process of electing CBO members
- The early process of establishing the WMA with a special focus on:
  - Participation of non-CBO villagers
  - Role of GTZ, WWF
- Revenue sharing in the communities
  - Information from AA about WMA income and expenses
  - Information from AA about community projects funded by WMA revenues
- Human wildlife conflicts
  - Before and after the WMA process. Views on the future
  - The WWF elephant project, why it has not worked. Other projects?
- Views on the future of the WMA and the village

Checklist Safari Company

- History of relationship with the community
- Business agreement with the villages before the area was gazetted as a WMA
- Business agreement with the villages after the area was gazetted as a WMA
- Conflicts with local villagers
- Relationship to AA and village scouts
- Relationship with District Council and District Game Officer
- Development of wildlife in the area
    - Poaching

Checklist Village Game Scouts

- Information about the individual game scout
    - When and why he joined
    - Training received
    - Salary
    - Views on future as a village game scout
- Wildlife situation in the WMA
    - What species has increased
    - What species has decreased
    - Resident and tourist hunting annual off take
    - Poaching
- Human wildlife conflicts
    - What are the main conflicts
    - Methods used to mitigate conflicts and their effectiveness
- Cooperation with: WWF, DC, DGO, AA, villagers
- Hunting quotas and hunting blocks

Appendix II: Household Questionnaire for Ngarambe-Tapika WMA

A. **Background information questionnaire**
1. Questionnaire number:
2. Date:
3. Village:

B. **Demographic data**
4. Gender: (a) male (b) female
5. Place of birth: (a) in the village (b) not in the village
6. For how many years have you lived in the village?_____
7. Main occupation: (a) farmer (b) small business (c) employed
   (d) unemployed (e) other_____

8. Have you a position in any of the bodies of the village government? Yes/No, what position:_____
9. Do you attend Village Assemblies? Yes/No

C. **Knowledge of and participation in the establishment of Ngarambe-Tapika WMA**
10. Are you aware that your village is a part of a WMA? (a) yes (b) no
11. If yes, how did you learn about the WMA? _____
12. Were you present at the village assembly meeting where the decision to establish the WMA was made? (a) yes (b) no
13. If yes, besides from participating, did you contribute to the meeting in any way?
    _____
    _____

14. Do you think that participation in the WMA management by the local people in the communities is a good thing? Why/why not? _____
    _____
    _____

D. **Knowledge of the AA and benefits from the WMA**
15. Do you know about the AA? (a) yes (b) no (skip to 4d)
16. If yes, what is the role of the AA?
    _____
    _____

17. Would you say that you have received (a) a lot (b) some (c) little (d) none information about the WMA from the AA?
18. Do you know if the village has received money from the WMA? (a) yes (b) no
19. If yes, do you know how much money the AA has received? How did you get this information?_____

   _____

20. Do   you   know   how   the   money   is   being   spent?
   _____

21. Do you believe the AA distributes the money to the villages in a way that benefits the village? Why/why not?_____

   _____

22. Do you know about any community projects funded by the WMA revenues that are planned for the future? (a) yes (b) no.
23. If yes, what are these projects?_____

E. **Human-Wildlife conflicts and its impact on individual households**
24. Has your household experienced damage to crop the last year from wildlife? If yes, give an estimate of the value lost:_____
25. Has your household experienced other damage by wildlife? What have these been, please give an estimate of the value lost:_____

   _____

26. Has there been an (a) increase or (b) decrease in wildlife-related problems the last few years? Why?_____
27. Do you think that the benefits outweigh the costs of being in a WMA? _____

   _____

28. Do you think that there is a need to protect the wildlife in the area from illegal hunting? Why/why not?_____