Communities and conservation in West Kilimanjaro, Tanzania: Participation, costs and benefits

Lokalsamfunn og naturvern i Vest-Kilimanjaro, Tanzania: Deltakelse, kostnader og nytte

Philosophiae Doctor (PhD) Thesis

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Abstract

This thesis contributes to the current debate on how to balance conservation and development objectives. The extent of land under protection globally has increased enormously over the last 30 years, and there are still plans to expand the current protected areas (PAs) and create new ones. Their establishment is associated with impacts on local communities who live in the proximity of such areas. Different actors have proposed local participation and benefit sharing for people affected by these conservation initiatives. Despite their implementation over three decades, the social, economic, and political impacts of establishing and maintaining PAs remain debatable. It is in this context that this study was conducted in the Enduimet Wildlife Management Area (WMA), the Kilimanjaro National Park, and the West Kilimanjaro Forest Plantation in Tanzania.

The specific research questions of the study are:

i. What are the social and economic impacts of the expansion and establishment of conservation areas on local people in West Kilimanjaro; and how are the impacts distributed along gender lines?
ii. How are the conservation benefits shared with local communities in West Kilimanjaro?
iii. How do the conservation benefits and costs affect local peoples' attitudes towards and perceptions of conservation?
iv. What are the factors that drive human-wildlife conflicts?

Data were collected using qualitative methods through the combination of in-depth interviews, focus group discussions, informal interviews, and participant observation. Secondary data in the form of written sources on the study area were used in addition to the primary data gathered. The research results are presented in four separate but interrelated papers.

Paper I investigates the gendered impacts of the creation of the Enduimet WMA and expansion of the Kilimanjaro National Park during recent years. The results of Paper I indicate that the establishment of these PAs has caused local people to lose rights to land and resources, harassment by PA staff, and increased conservation costs. The costs were found to be distributed along gender lines. However, women are affected more than men, due to inequality in the

division of labour and resources at household level. Furthermore, relatively wealthy men and women suffer less compared to their poor counterparts because they are capable of buying natural resources such as fodder and firewood, an option which is less available to the poor. Furthermore, women in female-headed households suffer more, compared to women in male-headed households, because they lack sufficient labour power for collecting natural resources and thus spend more time and energy in doing so. In addition, some are poor – hence they lack the money to purchase these resources, while others are of old age and do not have relatives willing to help. Collecting natural resources forces poor women to spend more time and labour, which affects their health and restricts their time for participating in economic activities.

Paper II explores the local benefits and transparency concerning the collection and distribution of tourism revenues from the Enduimet WMA. The results of Paper II show that the benefits channelled to local people who bear the costs of conservation are modest, and the system lacks transparency. The Enduimet Community-Based Organisation is entitled to receive 65 % of non-consumptive tourism revenues accrued from the WMA. In practice, it receives less than 65 % after the revenues collected have passed through the non-transparent central government system. In 2011 each village received about 3.6 % of the tourism fees, and altogether the member villages received 32.5 %. When taking into account the uncompensated costs that some villagers bear in terms of increased crop damage, livestock loss, and loss of human life caused by increasing wildlife populations, the practice does not match the 'win-win' discourse, that the Enduimet WMA will secure a sustainable source of income for local communities.

Paper III compares the Kilimanjaro National Park and the West Kilimanjaro Forest Plantation in terms of local participation and benefit sharing, and how these affect relations between local communities and the two areas. The results of Paper III show that the Kilimanjaro National Park earns about 17 million USD per year, but from the inception of the park outreach programme in 1994 to 2011 (17 years), the park has spent only about 1.6 million USD to support 39 out of 90 neighbouring villages. Only one village among the three studied was supported by the park in 2002/03, in the form of the construction of a water intake and storage tank worth 13,571 USD. The headquarters claim that they offer 7.5 % of the park's operational budget to neighbouring villages, but in practice, it is much less. Revenue sharing in the park is affected by bureaucratic

procedures hampering applications for community projects, political influence, lack of transparency, mismanagement, and misuse of funds by national parks headquarters. It was found that some income was used to support parks that generate insufficient income. In addition, there is generally a lack of communication between the park and villagers. Villagers feel resentment towards the park that leads them to withdraw park resources illegally. They referred to the park staff as 'enemies' who do not care about their livelihoods. On the contrary, the West Kilimanjaro Forest Plantation has had a positive impact on neighbouring villages. Local communities benefit through the legal collection of forest products, farming opportunities, logging businesses for registered customers, and casual labour opportunities. Income from casual labour and agriculture serves as a source of income for them and their families. Nevertheless, casual labourers are paid too little (2.5 USD/day) and the process of allocating farming plots is affected by favouritism. The differences observed between the two areas are related to sectoral legal reforms in the 1990s to accommodate locally-based and decentralised approaches to natural resources management following the economic crisis of the late 1970s to the early 1980s, and the resulting declining capacity of government agencies.

Based on inspiration drawn from the field of political ecology, Paper IV applies 'webs of relation' approach to unwind inter-related factors behind cases of elephant killings in West Kilimanjaro. In recent years, there has been a considerable increase in elephant killings in Africa, for ivory. However, the ivory market is not the only reason why elephants are killed illegally. The results of Paper IV show that resistance to conservation is a reason behind elephant killings in this case, following appropriations of large tracts of land for conservation by external actors without the participation of local people. Local people suffer costs such as crop raiding, property damage, livestock deaths, and a threat to their own lives as they try to sustain a living on the remaining land that lies between conservation areas. In addition, they lack government support in chasing wildlife away from their fields, and they are not compensated for wildlife damages. They are denied access to natural resources in the PAs, they are ill treated when found in the PAs, and they receive little or no benefits from conservation. Moreover, they lack land security, as there are more proposals from conservationists to create new conservation areas. This leaves people with an increased feeling of being marginalised and disempowered, with limited possibilities of

influencing the situation through democratic means. Thus, local people resist conservation by killing wildlife.

All areas studied (Enduimet WMA, Kilimanjaro National Park, and West Kilimanjaro Forest Plantation) share a centralised structure in terms of decision making on the management of natural resources and benefit sharing. Local people are not able to participate in decision making in the management of the areas, and it is difficult for communities to influence or challenge the way the structure operates. In Enduimet, the WMA was proposed as community-run conservation area. In practice, the communities do not have the power to collect revenues, decide on shares, or to verify whether they receive the income they are entitled to receive. The central government collects the revenues and channels the percentage to local people. The Kilimanjaro National Park was found to involve local people only when there is a fire outbreak; thus local people claimed to be used as 'tools'. The park management system does not allow space for local people's opinions. Most of the collected revenues are retained by the national parks headquarters and local people do not have any power or influence over the revenues. In practice, the park operates under a strict 'fences and fines' or 'fortress conservation' strategy. In the West Kilimanjaro Forest Plantation, local people do not have any power or share of the revenues collected from the sale of logs and poles, apart from payment received from casual labour. The income from logs sold is remitted to the central government. In all three areas, participation is used as 'means' to improve environmental conservation and a way to accrue more revenue for the government.

Sammendrag

Denne avhandlingen er et bidrag i den pågående debatten om naturvern- og utvikling. Omfanget av vernede arealer på verdensbasis har økt enormt de siste tretti år, og fortsatt planlegges det å utvide de nåværende verneområder og opprette nye. Etableringen av slike områder får følger for omliggende lokalsamfunn. Forskjellige aktører har foreslått lokal deltakelse og gevinstdeling for mennesker påvirket av disse naturverntiltakene. Til tross for at innføringen av verneområder har foregått i over tre tiår, er de sosiale, økonomiske og politiske følgene av etableringen og videreføringen fortsatt omstridte. Det er i denne sammenhengen at denne studien ble utført i Enduimet Wildlife Management Area (WMA), Kilimanjaro Nasjonalpark, og i Vest-Kilimanjaro Skogplantasje i Tanzania.

De konkrete forskningsspørsmålene i denne studien er:

i. Hva er de sosiale og økonomiske konsekvensene for lokalbefolkningen i Vest-Kilimanjaro av utvidelsen og etableringen av verneområder; og hvordan fordeler disse følgene seg i forhold til kjønn?
ii. Hvordan blir naturverngevinstene delt med lokalsamfunn i Vest-Kilimanjaro?
iii. Hvordan påvirker naturverngevinster og tap lokalbefolkningens holdning til og oppfatning av naturvern?
iv. Hvilke forhold forårsaker konflikter mellom mennesker og ville dyr?

Det ble brukt kvalitative metoder i datainnsamlingen med en kombinasjon av dybdeintervjuer, fokusgruppediskusjoner, uformelle intervjuer og deltakende observasjon. Sekundærdata i form av skriftlige kilder om studieområdet ble brukt i tillegg til de innsamlede primærdata. Forskningsresultatene blir presentert i fire separate, men tematisk sammenkoplete vitenskapelige artikler.

Artikkel 1 undersøker de kjønnsmessige konsekvensene av etableringen av Enduimet WMA og utvidelsen av Kilimanjaro Nasjonalpark de siste årene. Resultatene i artikkel 1 tyder på at etableringen av disse verneområdene har ført til tapte rettigheter til jord og ressurser for lokalbefolkningen, trakassering fra ansatte i nasjonalparken og økte vernekostnader. Det ble funnet at kostnadene kjønnsmessig fordeler seg likt. Men kvinner blir mer påvirket enn menn på

grunn av ujevn fordeling av arbeid og ressurser på husholdningsnivå. I tillegg blir forholdsvis rike menn og kvinner mindre skadelidende enn fattige, fordi de har mulighet til å kjøpe naturressurser slik som tørrfôr og ved; en mulighet de fattige i mindre grad har. Dessuten lider kvinner i husholdninger med kvinnelige overhoder mer enn kvinner i husholdninger med mannlige overhoder, fordi de mangler tilstrekkelig arbeidskraft til å sanke ressurser fra naturen og dermed bruker de mer tid og energi på dette. Noen av disse er i tillegg fattige og mangler derfor penger til å kjøpe disse ressursene, mens andre er gamle, uten slektninger som er villige til å hjelpe. Innsamling av naturressurser tvinger fattige kvinner til mer bruk av tid og arbeidskraft, noe som påvirker helsen deres og begrenser tiden de kan bruke til andre økonomiske aktiviteter.

Artikkel 2 utforsker de lokale gevinstene og gjennomsiktigheten i forbindelse med innkreving og fordeling av turistinntekter fra Eduimet WMA. Resultatene fra artikkel 2 viser at gevinstene kanalisert til den lokalbefolkningen som må bære tapene fra naturvern er liten, og ordningen mangler gjennomsiktighet. Enduimet Community-Based Organisation har retten til 65% av statens innsamlede turistinntekter. I virkeligheten mottar de mindre enn 65% etter at de innkrevde avgiftene har passert gjennom statsapparatet. I 2011 mottok hver landsby omtrent 3.6% av turistavgiftene, og totalt mottok medlemslandsbyene 32.5%. Tatt i betraktning av de udekkede tapene som noen landsbyboere opplever i form av større avlingsskader og tap av buskap og menneskeliv på grunn av den økende villdyrbestanden, passer ikke praksisen inn i vinn-vinn-diskursen om at Enduimet WMA skal være en bærekraftig inntektskilde for lokalsamfunn.

Artikkel 3 sammenligner Kilimanjaro Nasjonalpark og Vest-Kilimanjaro Skogplantasje på områdene lokal deltakelse og gevinstdeling, og hvordan disse påvirker forholdene mellom lokalsamfunnene og de to områdene. Resultatene fra artikkel 3 viser at Kilimanjaro Nasjonalpark har en inntjening på cirka 17 millioner USD per år, men fra starten av parkens støtteprogram i 1994 til 2011 (17 år) har parken kun brukt cirka 1.6 millioner USD til støtte for 39 av 90 omliggende landsbyer. Kun en landsby blant de tre i studien ble støttet av parken i 2002/03, i form av byggingen av et vanninntak og en samletank verdt 13,571 USD. Parkledelsen påstår at de tilbyr 7.5% av parkens driftsbudsjett til omliggende landsbyer, men i virkeligheten er det mye mindre. Overskuddsfordelingen i parken påvirkes av byråkratiske prosedyrer som hindrer

søknader til lokale prosjekter og lokal politisk innflytelse, og bidrar til mangel på gjennomsiktighet og vanskjøtsel og muliggjør parkledelsens misbruk av midler. I tillegg er det en generell mangel på kommunikasjon mellom parken og landsbyboerne. Landsbyboerne er sinte på parken, og dermed bruker de parkens ressurser ulovlig. De omtaler parkansatte som «fiender» som ikke bryr seg om levebrødet deres. Vest-Kilimanjaro Skogplantasje har derimot hatt en positiv innvirkning på sine omliggende landsbyer. Lokalsamfunn tjener på lovlig innhøsting av skogprodukter, nye landbruksmuligheter, og midlertidige jobber. Inntekt fra midlertidige jobber og jordbruk er en inntektskilde for dem og deres familier. Men de midlertidige tilsatte er underbetalt (2.5 USD/dag), og prosessen med tildeling av jordbruksområder er preget av favorisering. Forskjellene man ser mellom de to områdene har sammenheng med sektorielle lovreformer på 1990-tallet, som skulle understøtte lokale og desentraliserte tilnærminger til naturressursforvaltning etter den økonomiske krisen sent på 1970-tallet og tidlig 1980-tallet, og den påfølgende svekkelsen av kompetanse i statlige etater.

Med inspirasjon fra fagfeltet politisk økologi brukes det i artikkel 4 en tilnærming som fokuserer på nettverk av årsaker for å nøste opp sammenhengende faktorer bak tilfeller av elefantdrap i Vest-Kilimanjaro. De siste årene har det vært en betydelig økning i elefantdrap for elfenben i Afrika. Men elfenbensmarkedet er ikke den eneste grunnen til at elefanter blir ulovlig drept. Resultatene i artikkel 4 viser at motstand mot naturvern er en av grunnene til elefantdrapene i Vest-Kilimanjaro, etter at store arealer har blitt reservert for naturvern og nå kontrolleres av eksterne aktører uten medvirkning fra lokalbefolkningen. Folk lokalt sliter med tap som for eksempel ødelagte avlinger, skader på eiendom, tap av husdyr, og trusler mot egne liv når de prøver å skaffe seg et livsgrunnlag på de gjenværende arealene mellom naturvernområdene. I tillegg får de ingen støtte fra regjeringen til å jage ville dyr vekk fra åkrene, og de får ingen økonomisk erstatning for skader ville dyr medfører. De blir nektet adgang til naturressursene i verneområdene, de blir dårlig behandlet når de blir oppdaget inni verneområdene, og de nyter få eller ingen gevinster fra naturvern. I tillegg har de ingen eiendomstrygghet da det foreligger flere forslag fra naturvernere om opprettelse av nye verneområder. Dette gir folk en økende følelse av å være utstøtt og maktesløse, med få muligheter til å påvirke situasjonen gjennom demokratiske virkemidler. Derfor kjemper lokalbefolkningen mot naturvern ved å drepe ville dyr som elefanter.

Alle de studerte områdene (Enduimet WMA, Kilimanjaro nasjonalpark og Vest-Kilimanjaro Skogplantasje) har den samme sentraliserte organisasjonen når det gjelder forvaltningsavgjørelser for naturressurser og deling av gevinster. Lokalbefolkningen har ingen medvirkningsmulighet i forvaltningsavgjørelser for områdene, og det er vanskelig for lokalsamfunnene å påvirke eller utfordre måten det er organisert på. Enduimet ble foreslått som et naturvernområde drevet av lokalsamfunnet. I realiteten har ikke lokalsamfunnene rett til å kreve inn inntekter, ta avgjørelser angående andeler, eller verifisere at de får den inntekten de har rett på. Den sentrale regjeringen samler inn inntektene og formidler prosentandelen til lokalbefolkningen. I Kilimanjaro Nasjonalpark så man at lokalbefolkningen kun ble involvert ved brannutbrudd, og derfor påsto lokalbefolkningen at de ble brukt som «redskaper». Mesteparten av inntektene beholdes av nasjonalparkens hovedkvarter, og lokalbefolkningen har ingen makt eller innflytelse over inntektene. I realiteten utøver parken en streng strategi med «gjerder og bøter» eller «festningsnaturvern». I Vest-Kilimanjaro Skogplantasje har lokalbefolkningen ingen makt og får ingen andel av inntektene fra salget av tømmer og stolper utover betalingen de får for midlertidige jobber. Inntekten fra salg av tømmer overføres til den sentrale regjeringen. I alle tre områdene blir medvirkning benyttet som et «middel» til å forbedre effektiviteten i produksjonen og/eller naturvernet.

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1. Mariki, S.B. Gendered impacts of wildlife conservation in West Kilimanjaro, Tanzania. *(Revised version submitted to Forum for Development Studies)*

2. Mariki, S.B., Svarstad, H. and Benjaminsen, T.A. *(Forthcoming)* Ecotourism in Enduimet: Examining transparency and local benefits in a Wildlife Management Area in Tanzania. In: M. Rutten & V. Wijngaarden (Eds.) *Eco-Tourism in Africa: Experiences from Kenyan and Tanzanian Maasai land*. Leiden: Brill, African Dynamics Series.

3. Mariki, S.B. (2013). Conservation with a human face? Comparing local participation and benefit sharing from a national park and a state forest plantation in Tanzania. *Sage Open*, 3(4):1-16.

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1. Introduction

1.1 Background to the thesis

The contemporary system of protecting nature began formally in the 19th century when Yellowstone National Park was created in the United States of America in 1872. Following the United States conservation exemplary, protected areas (PAs) became a worldwide phenomenon (Adams and Hutton, 2007). Ninety years later, in 1962, the first International Union for Conservation of Nature (IUCN) World Parks Congress marked the start of the PAs movement. It prepared initial assessments, definitions and requirements for PAs and recommended the United Nations (UN) list of PAs and the category system (Borgerhoff Mulder and Coppolillo, 2005). In 1972, the Stockholm Declaration of the UN Conference on the Human-Environment endorsed the conservation of representative samples of all core ecosystems as a basic requirement of national biodiversity conservation programmes. Since then, conservation has been encouraged by UN resolutions, such as the World Charter for Nature (1982), the Rio Declaration on Environment and Development (1992), the Millennium Declaration (2000), and the Johannesburg Declaration on sustainable development (2002). PAs have become a main indicator of international commitment to environmental conservation, in documents such as chapter IV of the Millennium Declaration and the UN Convention on Biological Diversity.

From less than 1,000 PAs in 1940 (Veit and Benson, 2004), the network expanded immensely to more than 161,000 by 2010, representing about 13 % of the world's terrestrial surface area (UN MDG, 2010). The Aichi Biodiversity Target 11 of the Convention on Biological Diversity, signed by over 190 parties in 2010, set a target that a minimum 17 % of 'terrestrial and inland water' and 10 % of 'coastal and marine' areas should be 'conserved effectively and equitably managed' by 2020 (CBD, 2012). Information from the World Database on Protected Areas indicates that 49 parties had 17 % or more of their land protected as of 2010. Furthermore, over 40 parties have almost attained Target11, with between 10 % and 17 % of their terrestrial surface area being protected (CBD, 2012).

The growth of PAs has been particularly pronounced in third world countries where biodiversity is the greatest (Naughton-Treves et al., 2005). PAs have been identified as an important tool to counteract biodiversity loss (Adams and Hutton, 2007). Neo-Malthusian narratives of

environmental degradation go hand in hand with proposals for more PAs (Adams and Hutton, 2007). There is still much pressure from international conservation non-governmental organisations (NGOs), donors, governments, and other external actors to conserve more areas, including land used by small-scale farmers, pastoralists, and indigenous people. In 1994, the IUCN published six categories of PAs, ranging from the strictest – with a primary objective of biodiversity conservation − to PAs which allow some aspects of resource utilisation. Most of PAs under the strictest IUCN categories (categories I and II) are found in developing countries (Naughton-Treves et al., 2005). The IUCN defines a PA as 'a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values' (Dudley, 2008, p. 8).

The establishment of PAs has been associated with a philosophy of protectionism (a 'fortress' or 'fences and fines' approach) (Brockington and Schmidt-Soltau, 2004; Chatty and Colchester, 2002). This strategy tends to displace communities forcefully from their land, change land-use rights (most notably denial of natural resources access previously held), and impose punishments for breaking PA-based laws (Brockington and Schmidt-Soltau, 2004). Chape et al. (2008) indicate that about 72 % of PAs worldwide, representing more than 58 % of the PA network, implement restrictive and exclusionary management regimes.

Since the 1970s, the top-down exclusionary conservation model has been increasingly questioned on ethical and practical grounds (Borrini-Feyerabend et al., 2004; Swiderska et al., 2008; Wilshusen et al., 2002). The recognition of high administrative and social costs, concerns about long-term success of conservation, as well as an emphasis on participatory development approaches and decentralisation, have brought a shift towards more decentralised and inclusive forms of natural resources management (Adams and Hulme, 2001; Adams et al., 2004).

Participatory approaches can be viewed as a better way to solve conflicts between local communities and PAs, to conserve wider wildlife areas outside core PAs (Newmark and Hough, 2000), and to merge conservation and development activities (WCED, 1987). Various international development institutions, NGOs, private tourism investors, and government

agencies have gradually incorporated local people into their conservation programmes (Levine, 2004). The role and importance of PAs in sustainable development have been emphasised in international policy instruments such as Convention on Biological Diversity and the Millennium Development Goals (Scherl et al., 2004). The Fifth IUCN World Parks Congress recommended that: '….PA establishment and management should contribute to poverty reduction at the local level, and at the very minimum must not contribute to or exacerbate poverty' (IUCN, 2003, p. 210).

So far, different types of participatory approaches have been developed. However, some studies have criticised these approaches for failing to attain the win-win outcomes of nature conservation and development (e.g. Barrett et al., 2001; Gillingham and Lee, 1999; Nelson, 2007; Newmark and Hough, 2000; Sachedina, 2008). Hostility and resentment towards biodiversity conservation and PAs staff are still prevalent in many cases (Gibson and Marks, 1995; Loibooki et al., 2002).

Some arguments prefer the strict categories of PAs for effective nature conservation (e.g. Brandon, 1998; Bruner et al., 2001; Oates, 1999; Terborgh 1999). Proponents argue that the community-based conservation approach dilutes conservation initiatives in existing PAs, and undermines the creation of more strict PAs in the future that are essential for the effective conservation of biodiversity (Locke and Dearden, 2005). However, Sachs et al. (2009) argue that with escalating global challenges such as over-consumption of ecosystem services, human population growth, and climate change, there is a need to combine biodiversity conservation and community development agendas. There is an on-going debate on how the dual goals of biodiversity conservation and development may be reconciled (Adams et al., 2004; Brockington et al., 2006). The challenge is how to find the right equilibrium between the desire to live in harmony with nature, and the need to utilise natural resources for sustaining life and economic development (CBD, 2004).

Although the win-win discourse has become increasingly popular over three decades as a conservation strategy, its success has been limited (Nelson, 2007; Sachedina, 2008). There is a mismatch between theory and practice. Thus it is important to engage in rigorous scientific

research in order to obtain scientific evidence so that informed decisions can be made. This is the context for this study in West Kilimanjaro, Tanzania.

1.2 Study objectives and research questions

The study aims to: 1) investigate the social and economic impacts of conservation on local people in West Kilimanjaro, Tanzania, and their distribution along gender lines; 2) investigate the theory and practice of the current win-win discourse advocated by external actors and employed in the study areas in West Kilimanjaro, Tanzania. The chapters and four papers in this thesis contribute to the biodiversity conservation/community development debate by elaborating on impacts of conservation on local communities, costs and benefits sharing, and the reaction of local communities towards conservation.

In order to address the objectives, I investigated the following four interlinked research questions:

1. What are the social and economic impacts of the establishment and expansion of conservation areas on local people in West Kilimanjaro; and how are these impacts distributed along gender lines?
2. How are conservation benefits shared with local communities in West Kilimanjaro?
3. How do the conservation benefits and costs affect local people's attitudes towards and perceptions of conservation?
4. What factors contribute to human-wildlife conflicts?

1.3 Organisation of the thesis

The first part of the thesis is an introduction that includes the background to the problem, and provides an overview of conservation in sub-Saharan Africa and contemporary conservation issues. It presents the political ecology approach, introduces the study area, and gives a detailed account of the research methods applied for data collection and analysis (further details of the study methodology are provided in each individual paper). In addition, it gives a brief summary and synthesis of the main findings from the four individual but interrelated studies that are presented in the second part of this thesis. Finally, it draws conclusions and provides some policy recommendations.

The second part of the study constitutes the four individual but interrelated papers, which are referred to in the text by the roman numerals (I – IV).

2. A brief background of wildlife conservation in sub-Saharan Africa

2.1 Conservation in pre-colonial societies

Evidence suggests that ancient people used to set aside certain areas for social purposes such as hunting and religion (Furze et al., 1997; Shafer, 1999). The sacred groves established in various areas on the globe could be regarded as the oldest method of nature conservation and habitat protection (Bhagwat and Rutte, 2006; Laird, 1999, 2001).

Although pre-colonial societies in Africa did not employ contemporary concepts such as maximum sustained yields, carrying capacity, wildlife census and indices to assist them, for instance, in setting harvest quotas, these societies used several management strategies (DeGeorges and Reilly, 2009). A strict social hierarchy through clans and families was employed to control access to natural resources such as wildlife, fish, grazing and agricultural land, and tree products; mostly such control was under the authority of religious leaders, chiefs or elders (Hinz, 2003). Other means that were used to control access to natural resources include taboos/totems against the hunting and eating of certain species of animals, territoriality, royal game areas, harvest regulations and seasons, and habitat manipulation (Boone, 2003; Hinz, 2003; Kideghesho, 2006; Kjekshus, 1996). This led to control over access to natural resources, and thus sustainable exploitation. Although rules and regulations concerning access to natural resources were not written down, they were precise and organised (DeGeorges and Reilly, 2009).

2.2 Protectionism

In the 19th century, the PAs movement began with the establishment of early national parks in the USA (Neumann, 2002). These parks were protected by public law that prohibited the settlement of Native American populations and denied access to resources within the PAs (Adams and Hulme, 2001; Goldstein, 2005; Nash, 1967). People were perceived to be a threat to the environment; thus, the separation of humans and nature was regarded as a solution (Robbins, 2004). This hegemonic conservation model, with criteria on what ‘nature’ ought to look like, was

copied worldwide and later imposed on third world countries during colonial times (Adams, 2003; Adams and Hutton, 2007; Hutton et al., 2005; Neumann, 1998).

This conservation model was based on a myth of nature/wilderness that was perceived to be pristine, untouched, and free of human influence (Murombedzi, 2003). The model operated by fencing an area off from local people, either physically or by legal and/or economic regulations, using a militaristic law enforcement strategy. Those who trespassed were fined, or in extreme situations, were killed; hence, the terms 'fences and fines' or a 'fortress conservation' approach. This conservation model was employed for almost all of the twentieth century (Hutton et al., 2005). However, archaeological evidence proves that many areas claimed as 'wilderness' are actually cultural landscapes that have a long history of human habitation (Woodroffe et al., 2005). Some studies have challenged the 'wilderness' concept by tracing its origins and debating the constructed character of the concept (Neumann, 1998; Robbins, 2004).

At the time of the World Parks Congress (1962), there were around 1,000 official PAs worldwide, covering a land surface area of approximately 1 million km^2 (Borgerhoff Mulder and Coppolillo, 2005; Veit and Benson, 2004). After that point in time, African postcolonial governments, following the Anglo-American 'wilderness' model, established and expanded the number of 'wilderness' areas very quickly (Bonner, 1993; Neumann, 2002). A partial driver for establishing PAs was a realisation of the economic potential of wildlife tourism; the expansion was also partly due to active encouragement by foreign NGOs and development agencies (Bonner, 1993; Chapin, 2004; Levine, 2002). In some places, this conservation regime was strengthened and intensified (Nelson et al., 2007). Many existing reserves were upgraded to game reserves and national parks; this meant that all forms of local community consumptive activities were banned, and the emphasis was placed on law enforcement to curb illegal activities.

Local communities became marginalised and alienated from ancestral land, and restricted in their use of natural resources (Neumann, 1998). The protected areas were created without local people's consent or consideration of local land use practices, and in most cases led to forced evictions (Brockington and Igoe, 2006; Schmidt-Soltau and Brockington, 2007), uncompensated

resettlement, alienation, and other detrimental consequences for local people (Scheyvens, 2002). A study by Geisler and de Sousa (2001) suggests that there may be 14 to 24 million environmental refugees on the African continent alone, as a result of exclusionary conservation.

In the 1970s, the fences and fines approach underwent a crisis, since conservation goals were not being achieved (Neumann, 1992; Wells and Brandon, 1992). Poaching increased and many wildlife species were close to extinction (Kideghesho, 2006). Conflict between PAs and local people reached a critical level. The seriousness of the crisis deepened when the costs of biodiversity conservation fuelled people's resentment towards biodiversity conservation laws (Neumann, 1992; Wells and Brandon, 1993; Western, 1984). Local people took revenge against conservation initiatives in the form of illegal activities in PAs, violence, and vandalism of resources, thus threatening the survival of wild animals (Kideghesho, 2006).

2.3 Emergence of community conservation

The community conservation approach was brought to prominence by the World Conservation Strategy (IUCN, 1980), the Third World Congress on National Parks in Bali in 1982 (McNeely and Miller, 1984), Our Common Future (WCED, 1987), Caring for the Earth (IUCN/UNEP/WWF, 1991), and the Rio Summit (UNCED, 1992). The shift from the fences and fines conservation approach to community-based and decentralised approaches was based on several arguments. First, there was increasing concern about wildlife extinction rates, global scale environmental issues, human impacts on the environment, and the notion that conservation must move beyond the borders of PAs. In addition, there was criticism about the high costs, poor results, and inefficiency of the protectionist paradigm of conservation (e.g. Adams, 2004; Fabricius et al., 2004; Western et al., 1994). Second, there were concerns about the economic impacts of PAs on local people, and the exacerbation of poverty resulting from biodiversity conservation (Sunderlin et al., 2005; Western et al., 1994). These concerns included the impoverishing impacts of PAs, inequitable sharing of costs and benefits of conservation at the local, national, regional and international levels (Ferraro, 2002), and human rights violations, especially forced evictions from PAs and the militaristic management strategy of PAs (Neumann, 2004). Lastly, there was increasing awareness of the ability of local people to

manage natural resources based on common-pool resource theories (Ostrom, 1990), the new international policy agenda, together with neoliberal economic theory (Virtanen, 2005).

Thus the community conservation narrative emerged to address the crises in many PAs in third world countries. It was perceived as an ideological framework within which programmes should be designed to meet both conservation and development requirements by involving local communities, to a range of extents, in the process of natural resources conservation (Hulme and Murphee, 2001; Western et al., 1994). The participatory conservation paradigm became a mainstream approach in conservation in third world countries. It was promoted by conservation multinationals and development multinationals, as well as many national departments for international cooperation (Inamdar et al., 1996). This new paradigm in conservation recognises the involvement of local communities as the key focus for success of the conservation agenda, and the importance of biodiversity in serving both conservation and development goals. It also recognises the importance of establishing markets to provide incentives for conservation.

The participatory approach entailed a shift of conservation focus from nature as protected through exclusive state-led, top-down, technocratic control, to nature as managed through inclusive, bottom-up, participatory endeavours (Brosius et al., 1998; Songorwa, 1999). This new paradigm was grounded on the argument that 'if conservation and development could be simultaneously achieved, then the interests of both could be served' (Berkes 2003, p. 621). This amalgamation of conservation and development aims has often been termed a 'win-win' solution, or 'pro-poor' conservation (Adams et al., 2004).

Many programmes and projects were developed to motivate local communities and enable them to support conservation objectives. New activities were targeted to create better relationships between communities and conservation authorities, facilitate the sustainable use of resources, and improve welfare conditions of people around the conservation area in compensation for not using the core area (Adams and Hulme, 2001). Projects and programmes under the community conservation label aimed to involve local people in decision making about natural resources (Adams and Hulme, 2001) and benefits sharing, and compensate them for the costs they suffered as a result of conservation initiatives (Wells and Brandon, 1992).

An example of such initiatives in the late 1970s to 1990s is the WINDFALL (Wildlife Industry New Development for All) project, a top-down programme for the distribution of the benefits of elephant culling, launched in Zimbabwe in 1978 (Kasere, 1996). Others include: the Communal Areas Management Program for Indigenous Resources (CAMPFIRE) in Zimbabwe which started in 1986 as a follow-up to WINDFALL (Martin, 1986); the Luangwa Integrated Rural Development Project (LIRDP) and the Administrative Management Design (ADMADE) wildlife utilisation programme in Zambia; the community-based conservation project in the Kunene Region in Namibia which evolved to ensure that the community benefits from wildlife resources; the Wildlife Management Areas (WMAs) in Tanzania; and the park outreach programmes in some national parks in Africa.

Conversely, it has been reported that some community-based conservation programmes in southern Africa have resulted in local communities losing access to and control of land and resources due to restrictions being imposed that were not previously in place (Jones, 2003). For example, the Government of Botswana apportioned about 20 % of its land in an effort to combine conservation and development (Twyman, 2000). Elsewhere, programmes have aided states to further their authority over community land uses beyond the boundaries of PAs, where in some countries buffer zone management may extend up to 50 km beyond the park (Neumann, 1997). All these cases indicate that many community-based conservation approaches may, in fact, have similarities to conventional approaches (Berkes, 2007).

Despite widespread adoption of the participatory approach, many countries have not yet empowered communities through decentralisation and devolution of decision-making powers (Khadka and Nepal, 2010; Singh and Sharma, 2004). In fact, several examples of devolution indicate some instances of recentralisation taking place within a programme of decentralisation (e.g. Benjaminsen et al. 2013; Pulhin and Dressler, 2009). ‘Recentralising while decentralising’ is a system where the devolution of power to local level institutions continues to serve and answer central interests (Ribot et al., 2006; Schafer and Bell, 2002).

Participation in conservation has been employed as a strategy rather than as a conservation principle (Vedeld, 2002), and community development is used simply as a method to facilitate conservation agendas (Barrett and Arcese, 1995). Community conservation programmes have sometimes been implemented as a way to buy favour in order to maintain the old, strict management approach (Kaltenborn et al., 2008). Often, livelihood alternatives and related social activities are designed to compensate for conservation costs, rather than to prevent them (Springer, 2009).

Cooke and Kothari (2001) argue that facilitators of participatory approaches are able to ignore existing and legitimate local decision-making processes, and possibly 'reinforce the interests of the already powerful' local actors, thus creating a 'tyranny of method' (Cooke and Kothari 2001, p. 8). Similarly, Mohan and Stokke (2000) claim that such approaches not only tend to ignore existing inequalities and local power relations (by considering local communities as homogenous entities), but they also underplay the role of broader economic and political forces.

2.4 Return to fortress conservation?

The overriding premise of community-based conservation approaches is that when local people participate in conservation endeavours and perceive and/or receive benefits from the intervention, then they will support conservation. Although it appear to be promising, community-based approaches have faced criticism from conservationists, social scientists, and development economists alike. Several studies reveal that, after three decades of operation, community conservation has failed to meet either conservation or development goals effectively (e.g. Blaikie, 2006; McShane and Wells, 2004). The wildlife-related benefits are usually too small to offset costs (such as damage by wildlife), and economic development is often inadequately linked to conservation (Kiss, 1990; Lewis and Phiri, 1998; Wells and Brandon, 1992). In addition, elite capture is a persistent problem and reinforces existing intra-community power structures instead of alleviating livelihood struggles of the poorest, who often have no alternative besides illegal resource extraction (Colchester, 2002). It turns out that the assumption that when local people obtain some direct benefit from conservation, they will be motivated to conserve protected areas, and will take steps to do so, is not always the case. There are, however,

a few successful and convincing case studies which show a positive correlation between local people's livelihood improvement and conservation activities (Wells et al., 1999).

Some studies argue that community conservation dilutes conservation initiatives in current PAs, and weakens the possibility of creating more strictly controlled PAs in the future, for purposes of biodiversity conservation (e.g. Bruner et al., 2001; Locke and Dearden, 2005). As a result, many conservation biologists have repeatedly called for a return to the protectionist approach (e.g. Brandon et al., 1998; Locke and Dearden, 2005; Oates, 1999; Terborgh, 1999). Proponents of this viewpoint argue for extreme measures of protection in order to meet the current tremendous threats to biodiversity conservation, and support a return to practices such as authoritarian law enforcement (Wilshusen et al., 2002). Such calls have been heeded to some extent by donors such as USAID (US Agency for International Development) and DFID (UK Department for International Development) that have significantly reduced their support for community-based conservation support over the last ten years (Hutton et al., 2005).

These arguments indicate that the participatory approach has many weaknesses as a conservation instrument, particularly in its implementation and resulting impacts. However, McShane and Wells (2004) note that: 'Linking PA management with the interests of local stakeholders remains one of the few widely applicable approaches to site-based biodiversity conservation that offers a realistic prospect of success' (p. 7).

Bajracharya et al. (2006) and Spiteri and Nepal (2005) argue that although participatory approaches to biodiversity conservation are not always perfect, they offer the greatest hope for engendering community support for biodiversity conservation. Evidence and experience from several developing countries reveal that although difficult, reconciliation between biodiversity conservation and development is feasible, and community conservation remains a major viable conservation alternative (e.g. Adams and Hulme, 2001; Haque et al., 2009).

2.5 Neoliberal conservation

Neoliberalism, according to Harvey (2005), can be defined as a 'theory of political economic practices that proposes that human well-being can best be advanced by liberating individual

entrepreneurial freedoms and skills within an institutional framework characterised by strong private property rights, free markets, and free trade' (p. 2). Neoliberal conservation refers to 'the decentralisation of environmental governance, or a shift in responsibility for formal resource management from state to local institutions and new forms of commodification and commercialisation of nature that emerge in these contexts in order to fund conservation efforts' (Brondo, 2013, p. 10). Since the 1980s, neoliberal economic policies have dominated the economic sphere in Africa and influenced conservation policy substantially (Brockington et al., 2008; Büscher, 2010; Heynen et al., 2007; Igoe and Sullivan, 2009; Sullivan, 2006).

The win-win neoliberal thinking about PAs evolved with an emphasis on how tourism markets could generate revenues for investment and conservation. Tourism markets are believed to bring about win-win outcomes from conservation interventions by adding value to PAs through ecotourism activities and ecosystem services. This added value can pay for conservation activities and generate benefits for local communities, encouraging them to support conservation (Büscher, 2008; Igoe and Brockington, 2007). Ecotourism is among the primary sources of money to support biodiversity conservation and development (Honey, 2008); it fits in well with neoliberal priorities of decentralisation and increased private sector involvement. The neoliberal view is that business people, NGOs, and communities should share responsibility for conservation with the state (Igoe and Brockington, 2007; Peck and Tickell, 2002).

Neoliberal conservation requires biodiversity to become commodities, while local people provide labour (West, 2005). In such settings, local people may also become 'commodities', since local culture is a selling point for marketing ecotourism and people-centred conservation initiatives (Igoe, 2004). Neoliberal conservation keeps pace with development demands and is beneficial mainly to national and transnational individuals and groups, but not necessarily to local people (Brockington et al., 2008; Büscher, 2010; Büscher and Whande, 2007; Igoe and Brockington, 2007). In such situations, conservation related investments have been favoured at the expense of the needs of local communities (Brondo and Brown, 2011). Furthermore, to be successful, this model does not seek to improve the livelihoods and economy of local communities, nor the relationships of communities with local resources; actually, it can and does thrive on the dislocation of local people (Igoe and Brockington, 2007).

One element of neoliberal approaches to biodiversity conservation that is of growing significance, is the increasing 'privatisation of nature' in the management of PAs, thus 'raising complex issues of rights, governance, and legitimacy' (Adams and Hutton, 2007, p. 169). The notion of parks being managed by corporate non-state actors, or private parks, is becoming increasingly noticeable in nature conservation (Langholz and Krug, 2004). The management of PAs has shifted from being mainly by the state (with substantial support from international NGOs and development funding) to more direct participation by international NGOs, local communities, and private-sector entities such as natural resource managers (Adams and Hutton, 2007).

Neoliberal development policies work to put peripheral state intervention in markets. The state's role in the neoliberal context is to 'create and preserve an institutional framework appropriate to such practices' (Harvey, 2005, p. 2). However, state actors tend to try and maintain their intermediate role between local people and international donors (Levine, 2007). This gives them access to international development funding and enables them to exert direct influence at local level. State actors are generally not willing to strengthen the capacity of local people to become independent and address conservation matters themselves; instead they work to perpetuate local people's dependence on the state (Levine, 2007).

2.6 Conservation as 'green grabbing'

Land grabbing or 'green grabbing' (i.e. the appropriation of large tracts of land and environmental resources for environmental ends), is growing in significance across the world (Fairhead et al., 2012). Since 1990, the area of land under conservation worldwide has doubled (Dowie, 2010). The success of the global conservation movement has led to mass dislocation of indigenous peoples across the world who are increasingly expelled from their ancestral land, while others are threatened with dislocation to pave the way for environmental conservation (Benjaminsen and Bryceson, 2012; Dowie, 2009; von Braun and Meinzen-Dick, 2009; Zoomers, 2010). Through conservation and tourism, non-capitalist spaces and resources are opened up for accumulation, where local people are dispossessed of their land, and the places and resources are more valued than people (Corson, 2011; Harvey, 2003; Li, 2010).

The rush for large-scale land investments in developing countries for biodiversity conservation and tourism purposes is increasingly related to substantial negative impacts on 'access to and control over natural resources, food security, human rights, and the environment' (Global Witness, 2012, p. 1). In some cases, it involves the wholesale alienation of land; while in other cases it involves restructuring of rules and authority in terms of the access, control, use, and management of resources (Fairhead et al., 2012). Land deals are frequently agreed in secret between governments and investors, without the consent or awareness of affected local communities, who in most cases are incapable of holding governments or investors accountable (Global Witness, 2012).

2.7 Resistance to conservation

There is a rich body of scholarly literature on different forms of resistance to what is perceived as illegitimate or non-democratic governance (e.g. Gupta, 2001; O'Brien, 1996; Scott, 1985; Watts, 2001). People who are dispossessed and marginalised by conservation projects tend to resist governance in various ways (Holmes, 2007). Cavanagh and Benjaminsen (forthcoming) identify four different forms of such resistance: nonviolent, militant, discursive, and formal-legal. Illegal wildlife killings is an example of the militant form of resistance. Other examples of resistance to conservation are given by Neumann (1992, 1998), Norgrove and Hulme (2006), Weladji and Tchamba (2003), and Western (1994).

Some forms of resistance represent what Scott (1985) calls 'everyday resistance', where relatively powerless peasants seek to avoid oppressive regulations by using techniques such as 'foot dragging, dissimulation, desertion, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so on' (Scott, 1985, xvi). These 'weapons of the weak' (Scott, 1985) normally need little planning or coordination. People make use of implicit understandings and informal social networks and avoid any direct confrontation with elites or government authorities. Scott (1986) also notes that everyday forms of resistance are almost invisible, yet such resistance has been far more prevalent in history than overt rebellions.

Local people use various overt and covert 'resistance methods to challenge the hegemony of conservation imposed by protected areas authorities' (Norgrove and Hulme, 2006, p. 1100). In

addition to poaching and killing wildlife, these methods may include destroying government property, extracting resources illegally, spreading false information (Shafer, 1999), destroying resources (Harkness, 2000), and threatened or actual violence against conservation staff (Brockington, 2004; Neumann, 1998; Norgrove and Hulme, 2006; Robbins et al., 2006). Methods may also take the form of illegally using land in a protected area (Li, 2007; Cavanagh and Benjaminsen, forthcoming), destroying protected area infrastructure (Meyerson, 1998), and collaborating with poachers (Western, 1994).

Acts of resistance against conservation initiatives are usually carried out by marginalised people who suffer the costs of conservation and do not have the ability to circumvent the system through bribing officials or accessing political power (Holmes, 2007). Resistance to conservation in its various forms may also be seen as what Nixon (2011) calls 'slow violence', which stands in contrast to spectacular and instantaneous violence. Slow violence is gradual and incremental, and leads to 'delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all' (Nixon, 2011: 2). The same author mentions dispossession caused by the establishment of areas for environmental protection as an example of slow violence.

2.8 Participation in conservation

The notion of participation in conservation and development has been widely discussed and debated (e.g. Cleaver, 2001; Cooke and Kothari, 2001; Mosse, 2001; Matta et al., 2005), and there are a variety of definitions of the term. For example, Hoben et al. (1998) define participation as a process through which different groups in a community influence and share control over development initiatives, and the decisions and resources that affect them. According to Williams (2004) and Kapoor (2005), participation varies both spatial-temporally and socio-politically, and comes with concomitant costs.

Participation can be used as a *means* to ensure sustainable changes in management or as an *end* to enhance equity and empowerment (Mannigel, 2008). When participation is used as a means, people are involved in a way that seeks to acquire their support for development or conservation initiatives (Wells and Brandon, 1993). Several scholars (e.g. Arnstein, 1969; Borrini-Feyerabend,

1996; Jeffery and Bhaskar, 2001; Pimbert and Pretty, 1997; Pretty et al., 1995; Wilcox, 2003) have developed a 'ladder of participation' which one can use to assess the extent of local people's participation. The scale indicates the increasing degree of participation, generally ranging from minimal/nominal to the transfer of power and responsibilities (Figure 1).

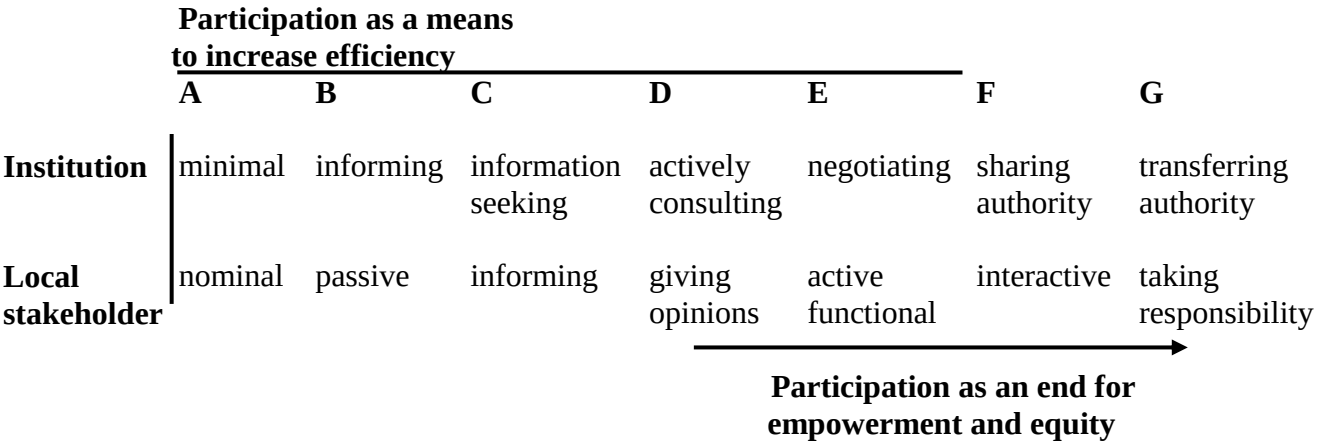

Figure 1: Different types of participation (adopted from Mannigel, 2008)

When taking into consideration the logic of acting together or taking part, the extremes 'nominal', 'passive', and 'taking over management responsibility' are not considered to be particularly participatory. This is because at those levels, local people and institutions are only distantly involved in management and decision-making activities (Mannigel, 2008, p. 500). However, in rural development and in nature conservation studies, the activities on these three levels are commonly referred to as participatory (Mannigel, 2008).

Participation in natural resources management is sometimes presented as a continuum of power sharing between the two parties (e.g. government and community) (Pimbert and Pretty, 1997; Barrow and Murphree, 2001). Participation can occur formally or informally, and can be top-down (government driven), bottom-up (community-based), or a combination of both (co-management regimes). In top-down participation, the powerful stakeholder (e.g. government) seeks to share responsibility, while in bottom-up participation stakeholders seek a greater role in management or to share responsibilities in the absence of an existing authority (Borrini-Feyerabend, 1996).

On this continuum of power sharing, a wide spectrum of conservation approaches can be identified, in both policy and practice. These approaches include:

i. Fortress conservation: the state controls an area and fences it off from local communities either physically, or by legal and/or economic regulations.

ii. PA outreach programme (conservation *for* the people) (Hulme and Murphree, 2001, p. 5): a government controls an area while addressing some livelihood and social needs of adjacent local populations, for instance sharing revenue from park fees, free visits to PAs, local employment, wildlife damage compensation, environmental education. The local people obtain some rights, but acknowledge the paramount authority, responsibility, and discretion of the government over the park and its resources. The main purpose is to enhance the biological integrity of national parks and reserves (Hulme and Murphree, 2001), while enforcing good practice, maintaining 'good neighbourliness', and providing benefits to local people in terms of sharing revenue from park fees. This type of programme has been the most prominent in Tanzania National Parks (Community Conservation Services) and in East Africa generally (Hulme and Murphree, 2001).

iii. Collaborative natural resource management (conservation *with* the people) (Hulme and Murphree, 2001): local communities or resource user groups actively manage a PA together with the government or conservation authorities, under shared rights and responsibilities (see Borrini-Feyerabend, 1997). An example of such a scheme is the Joint Forest Management programme.

iv. Community-based natural resources management (in Tanzania: community-based wildlife conservation and community-based forest management) (conservation *by* the people) (e.g. Hulme and Murphree, 2001; Western et al., 1994): aims at the conservation of 'natural resources or biodiversity protection by, for and with the local people' (Murphree, 1994). The responsibility and benefits of biological resources rest with the local community, while the government gives advice and maintains an enabling policy framework (Hulme and Murphree, 2001; Western et al., 1994). The central idea in the community-based conservation approach is the devolution of control of natural resources to local communities, as distinct from protectionism and the segregation of people and nature (Western et al., 1994, p.8).

v. Cultural protection (Posey, 1999; Laird, 1999): conservation of natural resources or ecosystems based on indigenous people's beliefs and local culture, without state or government interference, e.g. sacred forests (Posey, 1999; Laird, 1999). UNESCO labels areas under cultural protection as 'cultural landscapes'.

The park outreach, community-based conservation, and co-management regimes are commonly referred to as participatory management of natural resources. The assumption underlying participatory approaches in natural resources management is that, if local communities derive some benefits from conservation, they will be more likely to support the conservation of biodiversity (Wells and Brandon, 1992).

2.9 Evolution of wildlife conservation in Tanzania

The history of modern conservation in Tanzania can be dated back to the colonial era, when German colonists enacted the first laws in 1891 to regulate off take, hunting methods, and trade in wildlife, and to fully protect endangered species (URT, 2007). As a result, in 1904, Mount Kilimanjaro was protected under the Forest Conservation Ordinance (Kivumbi and Newmark, 1991). In 1905, the first game reserves, which form part of current Selous Game Reserve, were established (URT, 2007). Selous was gazetted as the first game reserve by the British colonial government in 1922. In 1928, the Ngorongoro crater was gazetted, followed by the Serengeti Game Reserve one year later.

Prior to World War II, hunting for subsistence was permitted in game reserves (Nelson et al., 2007). Local people who originally lived inside the PAs retained their customary rights to the land and restricted user rights to wildlife (Nelson et al., 2007). After World War II, the situation gradually changed, a period in Africa which Neumann (2002, p. 22) calls 'the conservation boom'. Traditional African hunting was opposed and local people were not allowed to settle in PAs (Neumann, 2002). In 1951 the Serengeti National Park was gazetted, incorporating the Ngorongoro crater. Later in 1959, the Serengeti National Park was re-gazetted by the British colonial administration. The process was associated with evictions of Maasai people from the park (Nelson et al., 2007; Neumann, 2002). The Wildlife Conservation Ordinance was passed the

same year, withdrawing all customary rights for local people who had been living inside PAs (Goldstein, 2005; Nelson et al., 2007).

According to Neumann (2002), the pressure came mainly from European conservationists who had been lobbying for PAs for a long time. In addition, the British colonial administration acknowledged the potential of PAs to modernise its colony, and the potential of associated tourism to increase its income (Neumann, 2002). With these interests in place, wildlife conservation laws became more and more unfriendly towards local people.

After Tanzanian independence in 1961, the government continued to establish game reserves and national parks (URT, 1998). They attempted to reform many colonial laws and ordinances (Goldstein, 2005), but the influence of colonialism remained in many of the land laws and conservation policies (Nelson et al., 2009). This is reflected in the Wildlife Conservation Act (WCA) of 1974 that replaced the colonial Fauna Conservation Ordinance of 1951. Major aspects concerning local people in the WCA of 1974 focused on punishments and prohibitions (Goldstein, 2005); but user rights, which some hunter-gatherers used to enjoy, were not reinstated (Nelson et al., 2007; Siege, 2001).

In the 1990s, local communities became more actively involved in tourism ventures. At the same time, there was increased pressure from international donors concerning the decentralisation of natural resources management to local communities (Benjaminsen et al., 2013). In 1998, the Tanzanian Government formulated a wildlife policy, which among other things, proposed the creation of community-based wildlife management areas (WMAs). WMAs were intended to be community-run conservation areas, where several villages would come together and set aside land for conservation. In return, these villages would receive a certain percentage of the tourism revenues from these areas. The policy stressed that, through safari tourism and sport hunting, WMAs could benefit local people and thus contribute to rural development (URT, 1998). Unfortunately, the WMAs have faced challenges such as continued state control over revenue collection, and heavy bureaucratic demands (Benjaminsen et al., 2013). In 2007, the wildlife policy was revised and its focus became state wildlife management, wetlands conservation and management, and the protection of wildlife corridors, including those on village lands; however,

there was little mention of participation, development and benefits for local communities (URT, 2007).

In 2009, new wildlife legislation was passed by the National Assembly. The Wildlife Conservation Act of 2009 was supposed to be 'community friendly'; instead it imposed more restrictions on grazing, farming, and settlement in game controlled areas − activities that had been permitted under the WCA of 1974 (URT, 2009). In 2013, the National Assembly repealed the WCA of 2009, and passed the Wildlife Act of 2013. Nevertheless, the inheritance of centralised control and ownership of wildlife remains vivid in the new legislation (URT, 2013). Running parallel with the continued fortress conservation regime, were the creation and expansion of new PAs and upgrading of old PAs, accompanied by forced evictions, uncompensated resettlement, and restrictions on access to natural resources (Mkumbukwa, 2008; Nelson et al., 2007).

Currently, about 40 % of the total land area of Tanzania is set aside under different categories of protection (Benjaminsen and Svarstad, 2010a). The numbers of different types of PAs and the percentage of land area they occupy are presented in the following list:

i. 15 national parks (~4.9 %) – only education, research, and non-consumptive tourism are permitted;
ii. the Ngorongoro Conservation Area (0.88 %) – multiple land use area (settlement by Maasai, grazing, non-consumptive tourism, education and research are permitted);
iii. 32 game reserves (12.98 %) – licensed hunting, non-consumptive tourism, research and education are permitted;
iv. 38 game controlled areas (5.54 %) – licensed hunting, non-consumptive tourism, research and education are permitted;
v. 23 wildlife management areas (WMAs) (2.49 %) – some restrictions on harvesting natural resources and settlement;
vi. 570 forest reserves (15 %) – of which 3 % overlaps with PAs set aside for wildlife conservation;
vii. wetland reserves/areas (10 %) − overlaps with other types of PAs (game reserves, game controlled areas and forest reserves) (URT, 2007).

The PAs are managed by different institutions under the Ministry of Natural Resources and Tourism, as shown in Figure 2.

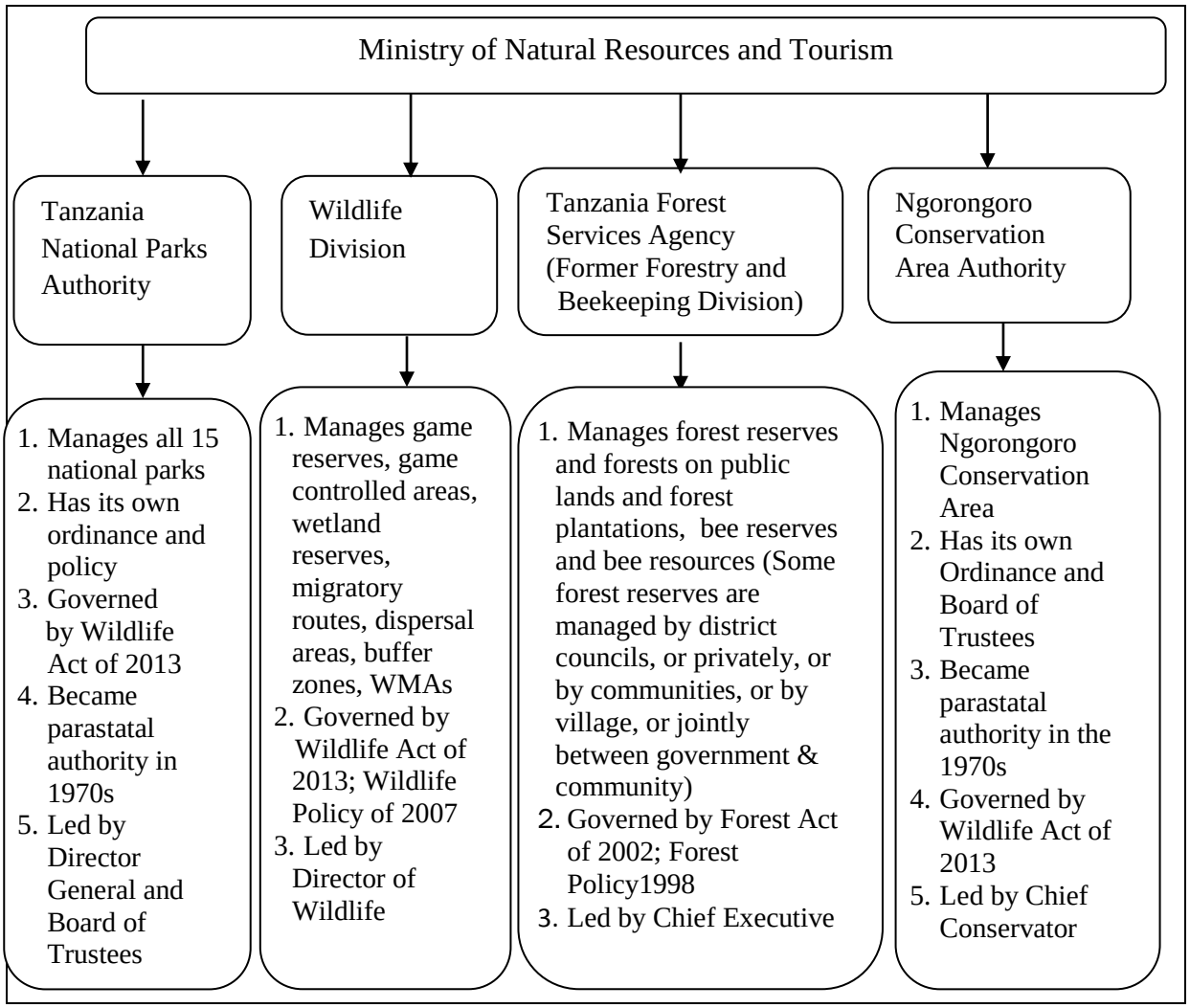

Figure 2: Terrestrial natural resources management in Tanzania (Source: URT, nd.)

Due to the failure of the protectionist approach in the 1980s, more locally based, decentralised approaches to the management of natural resources were sought (Gibson and Marks, 1995; Kideghesho, 2006; Songorwa, 1999). These approaches include park outreach programmes such as the Community Conservation Services of Tanzania National Parks, whereby 7.5 % of a national park's operating budget is used to finance community facilities (e.g. schools, dispensaries) in villages adjacent to the park. There are also co-management programmes (e.g.

Joint Forest Management), community-based wildlife programmes, and forest management programmes. An example in the wildlife sector is the establishment of WMAs − a new PA category in Tanzania, managed by local communities (Baldus and Cauldwell, 2004). In spite of their community-based goal, WMAs have been beset by some pitfalls, for example, in many cases their creation has not been a community-driven process. Rather, a 'handful of transnational conservation organisations' has driven the process to a large extent, by providing expertise, necessary resources, and technology (Igoe and Croucher, 2007, p. 537).

For instance, the African Wildlife Foundation (AWF) has facilitated the establishment of WMAs in the northeast of Tanzania; Gesellschaft für Technische Zusammenarbeit (GTZ) has worked at Selous and in its neighbourhood; the Frankfurt Zoological Society (FZS) has dealt with Serengeti and its neighbourhood; and the World Wide Fund for Nature (WWF) has supervised WMAs in the southwest of the country (Igoe and Croucher, 2007).

2.10 The main actors, interests and implications for conservation

2.10.1 Sovereign states

The first International Conference on Wildlife Preservation in Africa held in London in 1900 sought active collaboration and cooperation between sovereign states as an important prerequisite for achieving international conservation goals (Adams, 2004; Gißibl, 2006). This conservation strategy has continued to be pursued through international, regional, or bilateral treaties, conventions, and agreements. For example, Tanzania ratified the Convention on Biological Diversity (CBD) and the Cartagena Protocol of 1993, in 2003 (URT, 2012).

The CBD parties aim to extend and merge officially recognised PAs and support other effective area-based biodiversity conservation initiatives (CBD, 2010). Most national states are dedicated to meeting conservation goals and the vast majority rely for this on PA coverage that includes 'representative samples' of main ecosystems (CBD, 2010). The aim is to protect areas important for ecosystem functioning and biodiversity conservation, and to build greater networks of PAs that will lead to the protection of larger landscapes and/or seascapes (CBD, 2010).

Governments usually establish conservation frameworks through the formulation of policies and legislation, and make rules as to who can use natural resources, when, where and how (Peluso, 1993). They enforce the rules by making use of state actors such as national and sub-national agencies responsible for PA systems (e.g. parastatal agencies such as the Tanzania National Parks Authority), legislators, the judiciary, law enforcement agencies, agencies and staff from various government sectors concerned with natural resources, state commercial enterprises, PA managers and staff, and local authorities. These actors usually claim legitimate authority to enforce conservation ideology, and thus the conservation of the environment and natural resources often involves coercion, especially where communities have been expelled from the conservation areas (Peluso, 1993).

2.10.2 Local communities

Unlike the fences and fines approach that separated local people from PAs, the win-win discourse focuses on local communities as key actors in the strategy for success of conservation objectives. The term 'community' may be defined in various ways. Some studies refer to 'community' as a 'small spatial unit, a homogenous social structure, and shared norms' (Agrawal and Gibson, 1999, p. 630), while others refer to community as a spatial unit, an economic unit, or a unit consisting of a web of kingship, social and cultural relations (Dikeni et al., 1996). Kepe (1999) notes that the term 'community' is 'highly elusive, with numerous competing interpretations' (p. 418). Agrawal and Gibson (1999) suggest a more political approach, where community 'must be examined by focusing on the multiple interests and actors within communities, on how these actors influence decision making, and on the internal and external institutions that shape the decision-making processes' (p. 630).

In PAs strategy, the local community may include resident indigenous peoples; users of areas in and around the PAs (both settled and mobile communities) such as those who depend on natural resources either directly or indirectly; people from different clans, economic classes, or ethnic groups; different special interest groups, and both men and women. The community is not a homogenous entity, but rather, comprises many groups that are involved with PAs, either directly or indirectly (Agrawal and Gibson, 1999). Therefore, efforts to involve the local community

must recognise, and carefully examine the complex linkages within households, as well as the heterogeneity of groups within a particular community.

2.10.3 International aid donors

Effective biodiversity conservation requires extensive financial resources, which are usually provided by bilateral and multilateral aid donors. Miller et al. (2012) identified the top 10 biodiversity aid donors between 1980 and 2008. These were: the Global Environment Facility (GEF), the World Bank, the Inter-American Development Bank, United States of America, Netherlands, Germany, the European Communities, United Kingdom, the Asian Development Bank, and the African Development Bank. After the World Bank committed 31 % of the aid, the GEF was the second largest funder for biodiversity, providing 28 % of all biodiversity aid (Miller et al., 2012). In its first decade of operation after its founding in 1991, the GEF spent about US$4 billion on over 1000 projects in 160 developing countries (Horta et al., 2002). Kiss (2004), cited by Nelson (2009), indicates that 'estimates range from US$500 million spent annually by the international community on biodiversity conservation in the tropics, to US$778 million in bilateral development assistance alone with a biodiversity conservation component' (p. 1103).

Examples of donors involved in the wildlife sector in Tanzania since the 1990s include the following: DANIDA (the Danish International Development Agency), GTZ (Gesellschaft für Technische Zusammenarbeit), NORAD (the Norwegian Agency for Development Cooperation) and USAID (the US Agency for International Development). Donors in the forestry sector include NORAD, the World Bank, the GEF (Global Environment Facility), GTZ, DANIDA, SIDA (the Swedish International Development Cooperation Agency), FINNIDA (the Finnish International Development Agency) and DFID (UK Department for International Development).

2.10.4 International conservation bodies

Various conservation organisations have become influential agents in the developing world in recent decades through conservation activities such as funding, technical assistance, and training, in some cases pushing for the expansion and creation of more PAs. The leading conservation organisations include the World Wide Fund for Nature (WWF) (formerly called the World

Wildlife Fund, and maintaining the original name in the USA and Canada), Conservation International, Nature Conservancy, the African Wildlife Foundation, the Wildlife Conservation Society; the United Nations Environment Programme, and the International Union for the Conservation of Nature (Chapin, 2004; Dowie, 2009; Miller et al., 2012).

The large conservation NGOs have been criticised for 'growing too powerful, concentrating funds and influence, and getting unhealthily close to larger corporations and oppressive states' , whilst ignoring local environmental groups who could join hands to protect the environment (Brockington and Scholfield, 2010, p.2). For instance, the growing influence of the World Bank, bilateral agencies, and other conservation organisations has made it difficult for them to take a critical view on corporate enterprises that are socially and environmentally disruptive, such as extractive industries (Dowie, 2009). To illustrate this point, Igoe et al. (2010) give an example of the emerging partnership between the IUCN and Shell Oil, as well as between the IUCN and the Rio Tinto Mining Group (p. 5).

Sachedina (2008) highlights an example by describing how the AWF, in the course of pursuing greater amounts of donor funds led the foundation to seek closer ties with the central Government of Tanzania, leading the organisation's withdraw from 'politically laden conflicts over land tenure, money, and resource rights between pastoral communities and the State' (p. 355). In addition, Nelson (2009) notes that in the process of relying on host-country governments for the approval of aid-funded projects, memoranda of understanding, and the approval of expatriate staff work permits, NGOs face considerable barriers in addressing the political and institutional dimensions of natural resources management.

2.10.5 Tourism industry investors

The tourism industry is considered to be the second largest and the fastest growing industry in the world (Mhlanga, n.d.), with PAs playing a vital role in its expansion. The industry consists of vast numbers of small and medium-sized businesses, as well as large multinational corporations. Tourism, especially the development of ecotourism, is argued to be one of the best approaches to 'improve inequality that emerges within neoliberal conservation contexts' (Brondo, 2013, p. 11). Many PAs propose ecotourism as a way of attaining both conservation of biodiversity as well as

an alternative livelihood strategy for local people living within the PA impact zones or boundaries (Brondo, 2013). The International Ecotourism Society (TIES, 2011) defines ecotourism as responsible travel to natural areas that conserves the environment and improves the well-being of local people.

The private sector is progressively becoming prominent as an economic development and sustainability engine in Tanzania, with the private tourist sector being viewed as a partner in the PA strategy. For instance, recent institutional reforms and social-economic liberalisation policies have generated an environment that is conducive for investors. The wildlife sector in particular, has been earmarked as one of the most important areas for tourism investment (URT, 1998).

Most private tourism investors promote community-based approaches, but in many cases, the communities are invited into a tourism development venture, rather than the other way around (Spenceley, 2003). The partner (who is often the project driver) is external, and often not selected by the community, which has an impact on the amount of power and influence they have in the venture (Spenceley, 2003). In most cases, the community is perceived as the weaker partner in these arrangements (Spenceley, 2003; Nelson, 2012). Thus, there is little to substantiate the belief that the tourism-conservation sector is a saviour for poor communities (Nelson, 2012). Other pitfalls of ecotourism include: investors' unwillingness to make major investments in local areas (e.g. Duffy, 2002), unequal sharing of tourism revenues among local people (e.g. Igoe and Crouncher, 2007), increase of tourist pressure on natural resources (e.g. Puntenney, 1990), emergence of conflicts especially on land use (e.g. Hoffman, 2009), and the introduction of new practices and values between local people and their natural environment (Macintyre and Foale, 2007).

3. Contemporary issues in conservation

The previous sections have elaborated on the linkage between conservation and local people. This section gives a brief introduction to contemporary issues surrounding conservation and local people, in relation to the research questions. These issues are further elaborated in the four articles that form part two of this thesis.

3.1 Impacts of conservation on local communities

It is well known that most rural people in developing countries depend on natural resources such as fodder, firewood and bush meat for their livelihoods, including the sale of such products (Roe and Elliot, 2006; Timko et al., 2010). An estimated 1.6 billion people in the world depend on natural resources for part, if not all, for their livelihood and food security requirements (Roe and Elliot, 2006). Within poor communities, the dependence on natural resources increases with increased poverty levels (Babulo et al., 2008). For example, in rural Equatorial Guinea, households consume wild plants and animals more than half the time (Allebone-Webb, 2009).

While there is much reliance on natural resources by poor people in developing countries, their land is increasingly being converted into PAs (CBD, 2012). PAs have been the major focus of global conservation targets since the first IUCN World Parks Congress in 1962. There is growing recognition of the importance of PAs in terms of biodiversity richness, ecosystem services and mitigation against climate change, as well as reducing rate of global deforestation, preventing species extinction, and conserving land and water resources (Brooks et al., 2009; UNEP, 2009). Critics of the 'fortress conservation' approach however, argue that the creation of PAs restricts community development opportunities and increases poverty (e.g. Schmidt-Soltau, 2003; West et al., 2006). Such criticism results from evidence that PAs are associated with forced evictions with little or no compensation, changes in land tenure, and denial or restrictions on access to natural resources which communities have been using and depended upon for a long time (Gillingham and Lee, 2003).

Further hardships suffered by local communities include human-wildlife conflicts such as crop loss, property damage, livestock depredation, human deaths, injury and fear, sleepless nights while guarding crops from wildlife, and conflicts that arise from PA law enforcement activities (Brockington and Igoe, 2006; Brockington and Schmidt-Soltau, 2004; Ferraro, 2002; Kideghesho, 2006; Mackenzie and Ahabyona, 2012). In some cases, PAs deprive local communities of the opportunities necessary for their survival and development, including basic social services (Cernea and Schmidt-Soltau, 2003). Moreover, the displacement of local people from PAs results in impoverishment (Fabricius and de Wet, 2002; Nabakov and Lawrence, 2004) as they become victims dispossessed of their resources. As a result, they are exposed to higher

risks of landlessness, homelessness, joblessness, food insecurity, economic marginalisation, increased mortality and morbidity rates, and loss of environmental services and access to common property (Adams and Hutton, 2007; Brockington et al., 2008). In most cases, local communities are left without alternatives, which in the long run, results in squatting, encroachment and poaching to keep them alive (Colchester, 2002; Gillingham and Lee, 2003).

These impacts resulting from the establishment of PAs affect local people and households in different ways. For instance, politically weak and poor people, who become further disempowered and marginalised with regard to the management of natural resources, have borne most of the costs (Brockington et al., 2008). Men and women are impacted differently by the creation of PAs due to the gender division of labour, rights, and responsibilities (Rocheleau et al., 1996; Thomas-Slayter and Sodikoff, 2001). Usually women depend directly on access to natural resources such as fuel wood, fodder, and plants for traditional medicine (Asimalowo and Lipsanen, 1998; Igoe, 2006; Leach and Green, 1995; URT, 1998). The closure of large land areas for biodiversity conservation puts an extra strain on women, who bear the burden of searching for firewood and fodder (Badola and Hussain, 2003). Furthermore, women may undergo difficulties in dealing with changes that affect their livelihoods and/or the ability to realise other forms of income generating activities (Spieldoch, 2007). Men may face additional workloads such as guarding crops against raids by wildlife (Wang et al., 2006), and/or the loss of income sources. Studies conducted by Nabane (1996) and Metcalfe (1996) in the CAMPFIRE programme in Zimbabwe reveal that the programme did not address gender and intra-community aspects. Benefits from park revenues did not benefit women, for example, the electric fences increased the distance and time taken for women to search for firewood and fodder.

Nevertheless, some studies show that PAs have contributed to improving the economic situation for both men and women. For example, a study in Costa Rica shows that women's participation in handicraft projects aimed at tourists gave them more economic power than was previously the case (Vivanco, 2001).

PAs are often established with little consideration of their impacts on the livelihoods of local communities. It has become clear that it is essential to understand how the establishment and

management of PAs affect local communities. Failure to do so can lead to increased rates of community noncompliance with PA regulations and hostility, both of which have led to the failure of many biodiversity conservation objectives (Andrade and Rhodes, 2012).

3.2 Participation and benefit sharing in conservation

There is increasing realisation that for conservation to succeed, the involvement of neighbouring communities is a prerequisite (Borrini-Feyerabend et al., 2002). Some studies claim that the cost of conservation has been largely skewed towards local people; there should be equitable sharing of benefits and costs (e.g. Borrini-Feyerabend et al., 2002; Borrini-Feyerabend et al., 2004). In recent years, in particular in developing countries, there have been some efforts to involve local communities in a PA strategy to address some of the conservation related impacts described in the preceding section. Exclusionary conservation practices have been remodelled in a number of ways in order to integrate development and conservation aims (Lockwood et al., 2006; Vedeld, 2002).

PAs are beginning to be considered not only as a conservation tool, but also as a resource base to contribute to the reduction of poverty in many developing countries (Redford et al., 2008). Different actors – international conservation groups, development partners, and African governments − cite local participation as an important component in their programmes; however, they have different approaches, and perceptions of what really constitutes participation and its role in conservation (McLaughlin, 2011). An array of various initiatives have been implemented to involve and benefit local communities (Adams and Hutton, 2007; Roe and Elliot, 2006). These initiatives include: integrated conservation and development programmes, sharing tourism revenue generated from PAs such as entrance fees, provision of social services to adjacent communities, communities selling goods and services to tourists, employment opportunities (Adams and Infield, 2003; Bajricharya et al., 2006; Bedunah and Schmidt, 2004), or natural resources withdrawal from PAs (DAI, 2012).

In Uganda, 20 % of the income generated from PA entry fees is directed to local people (Tumusiime and Vedeld, 2012), while in Tanzania it is claimed that 7.5 % of the parks' operational budget is used to support local community development projects (Goldstein, 2005).

The performance of these approaches may vary depending on a myriad of aspects, such as the degree of involvement, the quantity of benefits received, and their distribution (Tumusiime and Vedeld, 2012). Some studies show that tourism rarely generates substantial benefits or provides sustainable local livelihood alternatives (e.g. Cernea and Schmidt-Soltau, 2006; Hackel, 1999). Furthermore, any benefits generated by tourism face a number of obstacles such as a lack of transparency, corruption (Benjaminsen et al. 2013; Cooksey, 2011; Nelson, 2010, 2012; Sachedina, 2008), and unfair distribution within local communities (Ferraro, 2002; Kideghesho, 2006; Kiss, 2004; Tumusiime and Vedeld, 2012; West et al., 2006).

Participatory approaches have been criticised for failing to achieve their objectives in terms of devolving decision-making powers to and/or benefiting local people while promoting conservation (e.g. Barrett et al., 2001; Newmark and Hough, 2000; Songorwa 1999). The participation of local people in conservation is often used as a promotional tool to enhance conservation initiatives, rather than to empower and benefit them. Igoe (2006) notes that 'local people believed that community-based approaches to conservation were simply a new ploy for limiting their access to the natural resources' (p. 72). Hence, for conservationists to realise conservation goals, they must make an effort to 'work with communities and give them the tools they need to improve their livelihood and environment on their own, rather than working around them' (McLaughlin, 2011, p. 16). Although the concept of participation is broadly supported, it remains a challenge to define the extent and the conditions of participation.

3.3 Costs, benefits and attitudes towards conservation

As elaborated above, PAs incur costs and offer benefits to different stakeholders. For instance, for local people, costs may be in the form of displacement to pave the way for conservation areas; prohibited access to land and natural resources; increased human-wildlife conflicts such as crop damage, livestock losses, threats to human life; and changes in land tenure (Coad et al., 2008). The benefits can comprise direct revenue from conservation (e.g. tourism, payment for ecosystem services), development projects (such as schools, water, roads) and provision of ecosystem services (Coad et al., 2008).

There is a growing realisation that most costs of biodiversity conservation are not equitably shared and it is necessary to consider ways in which costs and benefits can be allocated fairly among different actors. Studies have revealed that many of the benefits from conservation are global, but most costs of conservation, including displacement, are borne almost completely by local people, particularly poor and politically weak groups (Adams and Hutton, 2007; Balmford and Whitten, 2003). These groups may further be disempowered and marginalised in terms of natural resource management (e.g. Adams and Hutton, 2007; Balmford and Whitten, 2003; Brockington et al., 2008; IUCN, 2005; Lele, 2002). Most gains from biodiversity conservation are appropriated by the developed world, local elites, and regional users of ecosystem services (Adams and Hutton, 2007; Lund et al., 2014; Ribot et al., 2010). Both legal and illegal benefits derived from PAs 'tend to reproduce existing economic inequalities within local communities and wider societies' (Adams and Hutton, 2007, p. 161). Studies carried out in various parks in Africa reveal that poor farmers living close to PAs generally lose more than half of their per capita income due to damage caused by wildlife, thus exacerbating the hardships for people already living below the poverty line (e.g. Distefano, 2005; Mishra, 1997).

Benefit sharing has been designed as a strategy to offset conservation costs and build support for biodiversity conservation among local communities (Adams et al., 2004; Western et al., 1994). It is necessary that the benefits should match the extent and nature of the costs. Inequitable sharing of the costs and benefits of conservation is an obvious challenge that needs to be appropriately addressed in the management of PAs, as it often affects the attitude of people towards conservation (Arjunan et al., 2006; Gillingham and Lee, 1999). Attitudinal studies are increasingly being used to evaluate local peoples' perceptions towards conservation, and enable PA management to create appropriate strategies (Gillingham and Lee, 1999; Holmes, 2003; Kaltenborn et al., 2011; Kideghesho et al., 2007). Waylen et al. (2009) argue that 'attitude change is often the only tool available to conservationists when other approaches such as regulations are ineffective' (p. 350). Nonetheless, some studies show that positive attitudes alone may not directly translate into friendly conservation behaviour (Holmes, 2003; Waylen et al., 2009).

Quantitative methods for assessing attitudes, such as questionnaires, are believed to have high coverage (they can cover a large sample), they are quick to use, and generate large quantities of numerical data that can be worked with easily. However, the problem with such methods when used to assess attitudes is that it is difficult to claim validity, since the answers respondents give may be what they think the researchers would want them to say (Wiseman, 2012). Furthermore, such methods sometimes can't answer questions like 'how?' or 'why?' or describe relationships fully. Qualitative methods, on the other hand, tend to generate more in-depth data, since the method is more probing – such methods seek the reasoning behind certain things and can more directly investigate people's feelings, motives, and opinions (Wiseman, 2012). However, the data collection is expensive, time consuming and generates large amounts of data that might be difficult to analyse. Quantitative and qualitative methods can be used together to complement each other. In such situations, combining both methods can yield a clearer picture of the condition and more accurate information than either would alone (Rabinowitz, 2013).

The mismatch between local reality and conservation actions has created hostility and non-cooperation between local people and PA management. In Tanzania, the centralised system of control over natural resources has removed incentives for communities to conserve natural resources and has led to extensive poaching (Swiderska et al., 2008). In most cases, local people use covert or overt methods 'to challenge the hegemony of conservation imposed by PAs authorities' (Norgrove and Hulme, 2006, p. 1100). Shafer (1999) argues that people reflect their combative attitude by 'poaching, destroying government property, blaming the government for wandering large mammals … extracting resources [recklessly]... and spreading false information' (p. 130). Other studies reveal that people resist conservation by destroying the resources they once valued due to changes in tenure rights (Harkness, 2000), killing wildlife (Western, 1994), illegally using land in the PA (Li, 2007), destroying PA infrastructure (Meyerson, 1998), and collaborating with poachers (Western, 1994). Continued hostility from local people is clearly counterproductive to sustainable conservation efforts (Weladji and Tchamba, 2003).

Separating people from nature may solve the problem in the short term, but would not lead to successful conservation efforts (Folke, 2006). Conservation laws that are resisted by the majority

of the local people are deemed to fail (Sayer, 1991). This implies that although conventional approaches to biodiversity conservation in the developing world may claim some success, they are becoming more and more unsustainable (Vermeulen and Sheil, 2007). Colchester (1997) argues that attempting to conserve biodiversity in small PAs without taking social realities into consideration is largely unsuccessful. PAs under authoritarian regimes have been a source of PA-people conflicts, adversely affecting efforts to combine local livelihoods and biodiversity conservation (Norgrove and Hulme, 2006). These challenges underline the importance of the need to investigate various ways in which different user groups may share the costs and benefits of conservation.

3.4 Human-wildlife conflicts

This section delves into the literature on human-wildlife conflicts, focusing specifically on those between humans and elephants. Human-wildlife conflict (HWC) has become a significant and growing conservation problem around the world (Distefano, 2005; Wang and Macdonald, 2006), and can have significant impacts on both human and wildlife populations. HWC is defined as interactions between humans and wildlife where negative consequences, whether perceived or real, exist for one or both parties (Decker et al., 2002). HWC has existed for a long time in human history − as long as humans and wildlife have shared the same landscape and competed for limited space and resources (Berger, 2006; Graham, et al., 2005; Lamarque et al., 2009). Various case studies demonstrate that HWC can be most challenging for local people living inside or near PAs (e.g. Linkie et al., 2007; Weladji and Tchamba, 2003).

The suite of potential impacts of wildlife on humans comprises the following types: economic (wildlife damage negatively affects local people's income and livelihood), health and safety (e.g. diseases, injuries or even death inflicted by wildlife), and psychological (e.g. wildlife 'nuisance', fear of dangerous wildlife) (Decker et al., 2002). The most common forms of manifestations of HWC include crop raiding, property damage, livestock killing, and human injury and deaths (Inskip and Zimermann, 2009; Ogra and Badola, 2008).

Human-wildlife conflicts involve charismatic species of wildlife, with the principal culprits being birds, primates, rodents, ungulates, large and small carnivores, and crocodiles (Hill, 2000;

O'Connell-Rodwell et al., 2000). Wild animals such as elephants, hippopotamuses, buffalo, antelopes, bush pigs, rodents, primates, and birds tend to be most responsible for crop raiding (Lamarque et al., 2009).

The frequency and occurrence of crop-raiding can depend on a number of factors such as 'availability, variability and type of food sources in the area, the level of human activity on a farm, and the type and maturation time of crops as compared to natural food sources' (Lamarque et al., 2009, p. 8). Generally, elephants are identified as the major threat to farmers because a single night raid can destroy a whole field (Parker et al., 2007). During periods of drought, elephants are reported to break storage containers and steal grains (Lamarque et al., 2009). Most small-scale farmers are incapable of handling the problem of elephant damage, and governments offer hardly any help or compensation for the damage (Lamarque et al., 2009).

Crocodiles, large carnivores, large herbivores like hippopotamuses, elephants, and buffalo are reported to be responsible for human deaths or injury (Lamarque et al., 2009). Elephants attack humans when they are guarding their crops at night against crop raiding animals, or when people accidentally meet animals in areas such as water points, or encounter injured animals whose 'normal sense of caution is impaired'(Lamarque et al., 2009, p. 5). Competition for scarce resources such as water and fodder can lead to deaths of livestock, humans or wildlife. Elephants can damage infrastructure such as water systems, or tracks in PAs. In addition, wildlife can transmit diseases to both humans and domestic animals (Lamarque et al., 2009).

Human-elephant conflicts have significant implications for conservation because retaliation by affected people has been identified as one of the sources of elephant killings (Moss, 2008; WWF, 2010). Although local community losses from wildlife damage may not be economically significant at a regional or national level, such damage can be significant for the affected households (Mishra, 1997; Oli et al., 1994). Thus, understanding the social and economic strain of conflict on local peoples' livelihoods is central to abating such conflicts. Furthermore, it is crucial to learn more about local people's attitudes and experiences with wildlife and PAs, and the different forms of conflicts they suffer.

Conservationists have been testing different measures to reduce human-wildlife conflict, such as compensation schemes that are disbursed directly to individuals to offset wildlife costs. These payments may be full or partial, in the form of cash or other assistance, such as help with mitigation measures (Nyhus et al., 2003; Treves and Jones, 2010). In some instances, local people are compensated to help them tolerate wild animals on their lands (Nyhus et al., 2003; Treves and Jones, 2010). The assumption is that by removing all, or at least part of the economic burden from local people, it encourages participation of the people in conservation projects (Treves and Jones, 2010). However, Nyhus et al. (2003) argue that compensation should be carried out with caution, otherwise it 'can waste resources and do more harm than good' (p. 40). Other studies claim that compensating local communities for conservation costs can create 'perverse incentives', such as negligence in protecting their property, ultimately increasing extent of damage and exacerbating conflict (e.g. Naughton-Treves et al., 2003; Nyhus et al., 2003). In contrast, others argue that linking wildlife revenues directly to the survival of wildlife may create pro-wildlife attitudes among communities (e.g. Mishra et al., 2003; Schwerdtner and Gruber, 2007).

4. Understanding the relationship between people and environment

In understanding the relationship between people and environment this thesis uses political ecology framework. Thus, this chapter will define political ecology and briefly outline the roots of this approach to the study of environmental phenomena. I move on to look at chains of explanation, networks of explanation, and webs of relation. Finally, the chapter looks at feminist political ecology and some of the main critique of political ecology.

4.1 Defining political ecology

There are various definitions of political ecology in scientific articles, books and anthologies (e.g. Blaikie and Brookfield, 1987; Peet and Watts, 1996; Robbins, 2012; Stott and Sullivan, 2000). Some definitions of political ecology emphasise 'political economy, others point to more formal political institutions, some stress environmental change, while others emphasise narratives or stories about that change' (Robbins 2012, p. 14). Many scholars (e.g. Forsyth, 2003, Peet and Watts, 1996; Walker, 2005) refer to Blaikie and Brookfield's (1987) definition that holds 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 within classes and groups within society itself' (Blaikie and Brookfield, 1987, p. 17).

4.2 Roots of political ecology

Political ecology can be traced back to the work of Russian geographer and anarchist philosopher Peter A. Kropotkin in the 19th century (Robbins, 2012). Many authors refer to Eric Wolf as the first person who coined the term 'political ecology' in 1972 in his article *Ownership and political ecology* (Wolf, 1972). In that article, Wolf discusses how local rules of ownership and inheritance 'mediate between the pressures emanating from the larger society and the exigencies of the local ecosystem' (Wolf, 1972, p. 202). The field of political ecology made further progress in the 1970s and 1980s with the work of Enzensberger (1974), Watts (1983), Blaikie (1985), and Blaikie and Brookfield (1987), among others.

The roots of political ecology are discussed by Neumann (2005), Robbins (2012), and Peet et al. (2011). Early political ecologists were inspired by several different approaches, which are discussed in this section. Firstly, concerns emerged in the Global North in the 1960s about environmental degradation. Many studies based on neo-Malthusian assumptions linked environmental degradation with population growth (Hardin, 1968; Meadows et al., 1972). Such studies include Hardin's article *The tragedy of the commons*, in which he argues that the collective use of natural resources can lead to over-exploitation and hence resource depletion. This manner of thinking is grounded in one of the assumptions of neo-classical economics that states that 'rational behaviour for individuals is to maximise their own individual utility' (Vatn, 2005, p. 87). Hardin's answer to the tragedy of the commons was state control and/or private market solutions (Hardin, 1968; Robbins, 2012).

Today, the field of political ecology has rejected simplified 'tragedy of commons' explanations for resource degradation and argues that the resources that Hardin described are managed under an open access regime rather than common property regime (Vatn, 2005). Common property theory emerged as a critique of tragedy of commons explanations. Common property theorists give empirical examples of 'collective stewardship', in which common pool resources are

managed sustainably. They argue that any failure of such management regimes is associated with failures of the internal regulations and rules of the management, and not the regime itself (Ostrom, 1990; Robbins, 2012; Vatn, 2005).

Hardin's view strongly influenced the field of natural resources management and was used by colonial and national governments, and conservation agencies to argue for state control and dispossession of local resource users in terms of land and natural resources. Based on neo-Malthusian assumptions, natural resources management policies were designed to alienate local people from areas perceived to be important for conserving resources for national and international interests. However, various more recent studies reveal that the practices of local communities are not necessarily harmful to resource sustainability (e.g. Leach and Mearns, 1996; Schmidt, 2004). In many cases, it is in fact government policies that have played a role in the deterioration of natural resources (Dove, 2003).

Secondly, early political ecologists were inspired by cultural ecology ideas that focus on explaining human adaptations to social and physical environments, and theories about the balance of nature. This type of work combined studies in cultural practices of production and biophysical change. However, from the 1980s, political ecologists started criticising cultural ecology for ignoring the wider political economic structures that influence human actions (Bryant and Bailey, 1997; Walker, 2005).

Thirdly, early political ecologists were inspired by the hazard school (Burton et al., 1978), that emphasised the perceptual nature of environmental hazards and the ability of societies to adjust to and manage these hazards (Walker, 2005). The hazard school began as women's activist movement in North America, who were concerned about human-induced environmental hazards in urban areas; today is mostly known as 'environmental justice' (Robbins, 2012; Walker, 2005).

Lastly, early political ecologists were inspired by neo-Marxism, which offered a means to 'link local social oppression and environmental degradation to wider political and economic concerns relating to production questions' (Bryant and Bailey, 1997, p. 13). The early work in political ecology can often be linked to the neo-Marxist school of thought that focuses on describing class

inequalities, exploitative first/third world relationships, and finding explanations for third world environmental degradation. Examples of the early neo-Marxist influence in political ecology are the work of Michael Watts: *Silent violence: Food, famine and peasantry in northern Nigeria* (1983); and Piers Blaikie's *Political economy of soil erosion in developing countries* (1985).

4.3 Perspectives in political ecology

Since the inception of political ecology, most 'research has sought primarily to understand the political dynamics surrounding material and discursive struggles over the environment in the third world' (Bryant, 1998, p. 89). However, several studies have focused on similar issues in the first world (e.g. Fortmann, 1996; McCarthy, 2006). The important areas of focus in political ecology include 'the politics of environmental degradation and conservation, the neo-liberalisation of nature, and on-going rounds of accumulation, enclosure and dispossession [...] and environmental struggles around knowledge and power, justice and governance' (Elmhirst, 2011, p. 129). This coverage also takes into account the discursive, gendered, and unequal processes shaping resource access, control and management today (Schubert, 2005).

Early work in political ecology was closely connected to the field of political economy, focusing on biophysical processes alongside social and economic factors (Bryant and Bailey, 1997). Based on this framework, various studies emerged, such as Bassett (1988), Leach and Mearns (1996), among others. For instance, the 1985 book by Piers Blaikie on *The political economy of soil erosion in developing countries* addressed the failure of policies and projects to address soil erosion in developing countries. Blaikie noted that environmental degradation is intrinsically and concurrently a social, ecological, political, and economic problem. He suggested three essential lines of inquiry for investigation: 1) place-based analysis – to investigate where degradation is taking place; 2) non-place-based analysis – to incorporate social and economic factors; and 3) 'an assessment of the perceptions and rationality of not just the local land users but also of the government officials, conservationists and scientists' (Neumann, 2005, p. 31).

The Blaikie and Brookfield (1987) book on *Land degradation and society* expanded the discussion of social contexts of environmental meaning explicated by Blaikie (1985), by stressing the historical aspects of environmental change, the importance of social

marginalisation, as well as political influences on the way the environment is measured. The book covers the relationship between land degradation, the land manager, and society. The authors argue that 'degradation' is a 'perceptual' term, and they propose a chain of explanation in studying environmental problems, including three modes for analysing land degradation: 'the interactive effects of degradation and society through time; the crucial consideration of geographical scale and the scale of social and economic organisation; and the contradictions between social and environmental changes through time' (p. 13). Drawing upon these methods, they introduce the notion of 'regional political ecology' (p. 17) as an approach for studying land degradation and society.

Post-structural political ecology (e.g. Escobar, 1996, 1998; Rocheleau, 1995) focuses on the political aspects of political ecology, especially on the discursive dimension of power. This theoretical framework conceptualises the environment as being intrinsically 'politicised' (Bryant and Bailey, 1997). The same authors argue that the environmental problems faced by developing countries are not simply a reflection of a single factor such as policy or market failure, but are a manifestation of broader political and economic forces. The book *Liberation ecologies* by Peet and Watts (2004) tries to re-theorise political ecology, with its focus on political economy and resource conflicts, within poststructuralist framework interested in the discursive production of knowledge, power and truth and cultural politics.

Fairhead and Leach's (1996) *Misreading the African landscape* marks a change in approach, which appeared during the 1990s. The authors studied vegetation change in Kissidougou, West Africa, using satellite images, historical sources, and ethnographic interviews. They emphasise the importance of being aware of multiple readings and understandings of the environment. The authors adopted a pluralistic ecology approach, in which they carefully analysed biophysical data, and tracked 'alternative perspectives' by incorporating local knowledge to deconstruct deforestation crisis narratives observed in forest islands in the area. They argue that these narratives can be understood by paying attention to power and politics as state technologies to justify nationalised control over land. Drawing on the literature on agrarian change, they provide insights on how resource use and management, social arrangements, and everyday struggles evolve together with their resolution (Fairhead and Leach, 1996). Their study is one of the

political ecology studies that began to challenge the notion of a universal truth, and raised questions about different types of knowledge (Zimmerer, 2006). Aspects such as the socially constructed nature of knowledge, and the nature and power of discourse and narratives became a major focus (Forsyth, 2003).

Often the degradation discourse tends to present local people as incapable resource stewards, and stresses the necessity of external intervention to improve the situation on their behalf (Fairhead and Leach, 1996). Benjaminsen and Berge (2004) challenge the prevailing narrative of 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 have much to gain from keeping it that way. Narratives such as desertification, deforestation, and soil erosion (Forsyth 2003) tend to give demographic explanations of environmental problems and legitimise policies that are often highly unfavourable to marginalised groups of people who depend on the very resources in question for survival.

Peet and Watts (2004) describe the current perspective as political ecology's 'turn to discourse'. This produced large quantities of work such as Shiva (1991; 1993) – the 'politics of knowledge', including a gendered basis for environmental knowledge; Bryant (1998) – the dominance of Western scientific knowledge over other forms; and Neumann (2005) – a discursive construction of the environmental narrative. The focus in this phase of political ecology studies is increased interest in 'local level studies of environmental movements, discursive and symbolic politics, and the institutional nexus of power, knowledge and practice' (Walker, 2005, p. 75).

Most early work in political ecology had a tendency to favour case study research, rather than the development of coherent theories (Bryant and Bailey, 1997; Peet and Watts, 1993). However, more recent developments have contributed to building more coherent theories (e.g. Forsyth, 2003; Robbins, 2012). More often, studies within political ecology seek explanations behind problems inherent in a present situation by studying not only the present, but also various elements of the situation that have occurred over time (Benjaminsen and Svarstad, 2010b).

4.4 Chains of explanation, networks of explanation, and webs of relation

Building on the 'progressive contextualization' (Vayda, 1983), Blaikie and Brookfield

(1987) suggest a ‘chains of explanation’ for studying environmental problems. The ‘progressive contextualization’ suggests inductive observation so as to arrive at an empirically accurate explanation, starting with an analysis of actors and interactions at the individual level, progressively placing and seeing these within larger structures and the wider context in which they are situated. Political ecologists have criticised ‘progressive contextualization’ as it is inclined to deliver ‘apolitical’ explanations (Robbins, 2004).

The ‘chains of explanation’ starts by attempting to understand the agency of the individual land manager and then moves ‘upwards’ in scale. Blaikie and Brookfield (1987) describe the approach as follows:

> It starts with the land managers and their direct relations with the land (crop rotation, fuel wood use, stocking densities, capital investment and so on). The next link concerns their relations with each other, other land users, and groups in the wider society who affect them in any way, which in turn determines land management. The state and the world economy constitute the last links in the chain (p. 27).

The ‘chains of explanation’ offers similarities to that of ‘progressive contextualisation’, since the predetermined starting point is located at the micro scale. Robbins (2004) however, suggests moving from chains to ‘networks of explanation’, arguing that the ‘chains of explanation’ may be conceived as a rigid conceptual hierarchy of power that tends to neglect the interactions between actors at various scales. He thus suggests a comparative anatomy of networks, where:

> Networks organize and are organized by a range of human and nonhuman actors, through systems of accumulation, extraction, investment, growth, reproduction, exchange, cooperation and coercion. […] a network allows us a change of places for progressive political action and normative change (Robbins, 2004, p. 212).

This approach allows for a study with a starting point and focus at a range of various places and levels.

Similarly, Rocheleau (2008) proposes ‘webs of relation’, stating that: ‘The centre of gravity is moving from linear or simple vertical hierarchies (chains of explanation) to complex

assemblages, webs of relation and "rooted networks", with hierarchies embedded and entangled in horizontal as well as vertical linkages' (Rocheleau, 2008, p. 724).

As another trend, the same author identifies an increased embrace of complexity e.g. homogenous versus heterogeneous communities, and a return to ecology and science. However, these new directions largely build on and are consistent with pioneering work in political ecology and the chains of explanation, although the focus might have shifted.

4.5 Feminist political ecology

Feminist political ecology emerged in the 1990s as a subfield of political ecology, building on the previous work of political ecology and feminist scholars in agriculture, forestry, development and feminist theories ranging from socialist to reformist, and eco-feminist to post-stucturalist (Hovorka, 2006; Nelson and Seager, 2005; Nightingale, 2006; Rocheleau et al., 1996; Schroeder, 1999). Feminist political ecology has 'extended the multiple scale analysis of environment and power in political ecology to gendered relations both within and beyond the household, from individual to national scales' (Rocheleau, 2008, p. 722).

Feminist political ecology critically investigates concepts such as 'community', 'local' and 'household', as well as 'homogenous conditions' and 'shared interests' (Rocheleau, 2008). It addresses 'women as a group and gender as a category' (Rocheleau, 2008, p. 716), and considers gender as an important element in political ecology analysis. It examines the position of gender in the political ecological landscape and explores gender as a factor in political and ecological relations (Hovorka, 2006). Feminist political ecology considers gender as a 'critical variable in shaping resource access and control, interacting with class, caste, race, culture, and ethnicity to shape processes of ecological change, the struggle of men and women to sustain ecologically viable livelihoods, and the prospects of any community for sustainable development' (Rocheleau et al., 1996, p. 4-5).

The book *Feminist political ecology* edited by Rocheleau et al. (1996) highlights three key main lines of inquiry that intersect on gender and the environment. These are: (i) gendered knowledge/science (the 'science of survival') used by women to maintain and protect healthy

environments; (ii) gendered environmental rights and responsibilities i.e. control of resources, access to resources (de facto and de jure rights, exclusive and shared rights, primary and secondary rights), gendered use of resources (as inputs, products, assets, for subsistence and commercial purposes), and gendered responsibilities to produce and/or manage resources for family and community use; and (iii) gendered grassroots activism and environmental politics. The first aspect (gendered knowledge) led the authors to conclude that scientific discourse is 'gendered' because gender inequities in science deny women the knowledge necessary to address environmental problems. Rocheleau et al. (1996) thus deconstruct the 'myth of value-free objectivity and universality in science' (p. 9).

Empirical studies demonstrate how women are increasingly (re)defining their identities, and the meaning of gender to include women's interests and epistemologies, often in relation to substantial constraints (Rocheleau et al., 1996). Other studies have also contributed knowledge to 'identify and remove gendered suppression and injustice associated with environmental issues' (Benjaminsen and Svarstad, 2010b, p. 7). However, the main focus in feminist political ecology is skewed largely towards women and their place in the environment. For example, Rocheleau et al. (1996) seem to use the term 'gender' synonymously with 'women'. Nightingale (2006) warns of the danger in such a 'conceptualisation of falling back into essentialist understandings of women and their natural connection to the land' (p. 169).

In this thesis, the term 'gender' does not only imply 'sex', the set of biological, hereditary and genetic characteristics that structure men and women. Rather, it refers to the socially constructed relations and differences between women and men that define roles, identities, entitlements, and perceptions, which frame ownership of assets and access to resources, and affect structure and decision making within families, communities, and institutions (Anoko, 2008; Espinosa, 2010). These relationships can vary depending on geographical area, context, situation, and time, and can be negotiated based on position in hierarchies and based on an individual's own life cycle and agency (Espinosa, 2010). It is crucial to examine factors such as class, ethnicity and socio-cultural affiliation when studying differences between women and men in relation to conservation.

Gender based rights, roles, responsibilities and opportunities in various societies are not stationary, but are in constant change and tend to vary from place to place, over time and among individuals and households (Quisumbing and Pandolfelli, 2010). Accommodating a gender perspective in biodiversity and natural resources management, entails understanding and incorporating the differences and relations between women and men into conservation initiatives (Anoko, 2008). This includes the different roles, opportunities and rights of women and men to access, use, conserve and manage natural resources. It also involves understanding the various ways in which conservation problems affect both women and men (Anoko, 2008).

4.6 Critiques of political ecology

Political ecology research has been criticised on a number of issues. Some scholars have debated whether political ecology is sufficiently 'political' or 'ecological'. For instance, Bassett and Zimmerer (2004) argue that political ecology has focused on 'politics without paying enough attention to ecology' (p. 103). Walker (2005) criticises political ecology research for the lack of attention to biophysical aspects, mainly in the poststructuralist branch of political ecology. He poses the question as to 'whether the field is likely to (or even whether it should) retain a claim to its identity as political 'ecology' rather than a primarily social science/humanities study of environmental politics' (p. 73). Walker (2005) stresses the need for political ecologists to engage in 'mature collective reflection' (p. 80) over the future of the field, otherwise it might risk becoming a purely philosophical exercise in studying environmental politics. This may result in a negative effect and weaken the capacity of the field to influence policy debates on environmental management.

Similarly, Vayda and Walters (1999) argue that much political ecology research concentrates on factors assumed in advance to be important, thus becoming blind to other (non-political) factors affecting environmental change, or national and global economic systems (p. 168). The authors propose 'event ecology' (similar to progressive contextualisation) as a tool for political ecology research that will 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' (p. 170).

While most of the studies mentioned criticise political ecology for little or no focus on ecology, Forsyth (2003) remarks that political ecology research lacks a congruent definition of the term 'ecology'. Walker (2006), on the other hand, asks 'where is policy?' He stresses that the subfield lacks engagement with practical problem solving aspects. Walker (2007) further criticises political ecology research for not paying enough attention to the ethical obligation of 'giving back' to its research subjects. Moritz (2006) criticises political ecology studies in Africa for not paying enough attention to politics. Further, Watts (1990 in 2005) expresses the need for political ecology studies to engage with the 'rough and tumble' of environmental politics (p. 75). Moore (1993), on the other hand, calls for political ecologists to turn their attention to the 'micro-politics of peasant struggles over access to resources and [...] the symbolic contestations that constitute those struggles' (p. 381).

5. The study area and people's everyday life

5.1 The study area

This study was conducted in three villages bordering the Enduimet WMA (in the Enduimet Division) – Tingatinga, Olmolog and Sinya; and three villages bordering the Kilimanjaro National Park and/or the West Kilimanjaro Forest Plantation (in the Siha Magharibi Division) – Engare Nairobi, Matadi and Namwai. These villages are located in the West Kilimanjaro basin, in the Siha and Longido districts of the Kilimanjaro and Arusha regions respectively. The area consists of diverse landscapes including grazing lands in the rain shadow of the mountain, and agricultural fields at the lower slopes of both Mount Kilimanjaro and Meru. The altitude is between 1,230 to 1,600 m above sea level. The area experiences bi-modal rainfall. The long rains (*masika)* last from March to May, while short rains (*vuli*) are from November to December.

5.1.1 The Enduimet Wildlife Management Area

The Enduimet WMA lies on the western side of Mount Kilimanjaro in the Longido District on the border with Kenya. The WMA covers an area of 742.275 km^2, combining land from eight villages in the Enduimet Division: Sinya, Tingatinga and Ngereyani in the Tingatinga Ward; and Elerai, Olmolog, Lerang'wa, Kitendeni and Irkaswa in the Olmolog Ward. In addition, the village of Kamwanga in the Olmolog Ward is also part of the WMA, despite not having suitable land to set aside for wildlife conservation and tourism. The WMA is divided into three

management zones by the Monduli District authority in order to regulate land use: the Olkunonoi-Kitendeni Zone – a wildlife corridor; the Ronjoo Zone (80 % of the area) – a zone for economic and tourism activities; and the Embarnati Zone – a settlement area (RMZP, 2005).

The area constitutes an important transnational migratory route and dispersal zone for several wildlife populations, including elephants (Honey, 2008; Kikoti, 2009; Trench et al., 2009). Following a wildlife survey report of 1997 that attributed an observed decline in wildlife populations due to bush meat 'poaching', the area was considered in need of formal protection (Nelson, 2007). Based on these observations, the Wildlife Division proposed the establishment of a WMA in the area. The Minister of Natural Resources and Tourism approved the AWF as the facilitator of the process.

A community-based organisation (CBO) was established in 2004 to manage the area. The CBO is made up of 27 members from nine villages − two men and one woman from each village, chosen by the village assemblies. The CBO members choose their chairperson, secretary, and treasurer and form various committees. In 2007, the CBO was officially declared an Authorised Association by the Minister, and granted user rights in the WMA, based on a Resource Management Zone Plan. At that time, the WMA consisted of only eight villages, but in 2010, the Sinya village joined the WMA after initially refusing to do so, due to a range of concerns (see Benjaminsen and Svarstad, 2010a). According to the Wildlife Policy of 1998, WMAs are supposed to be 'community-based' and meet community needs. Nevertheless, the process of establishing the Enduimet WMA was externally driven and constituted by the state government and the AWF.

Villagers in the Enduimet Division are mainly pastoralists and agro-pastoralist Maasai, but on more heavily cultivated lands, there are also Chagga, Pare, Meru and Waarusha people. Agriculture is practised in eight villages (except Sinya, which is purely pastoral because their land is too arid for any farming attempts). In 2009, the Enduimet Division had a total population of 45,763 people (according to the village registers).

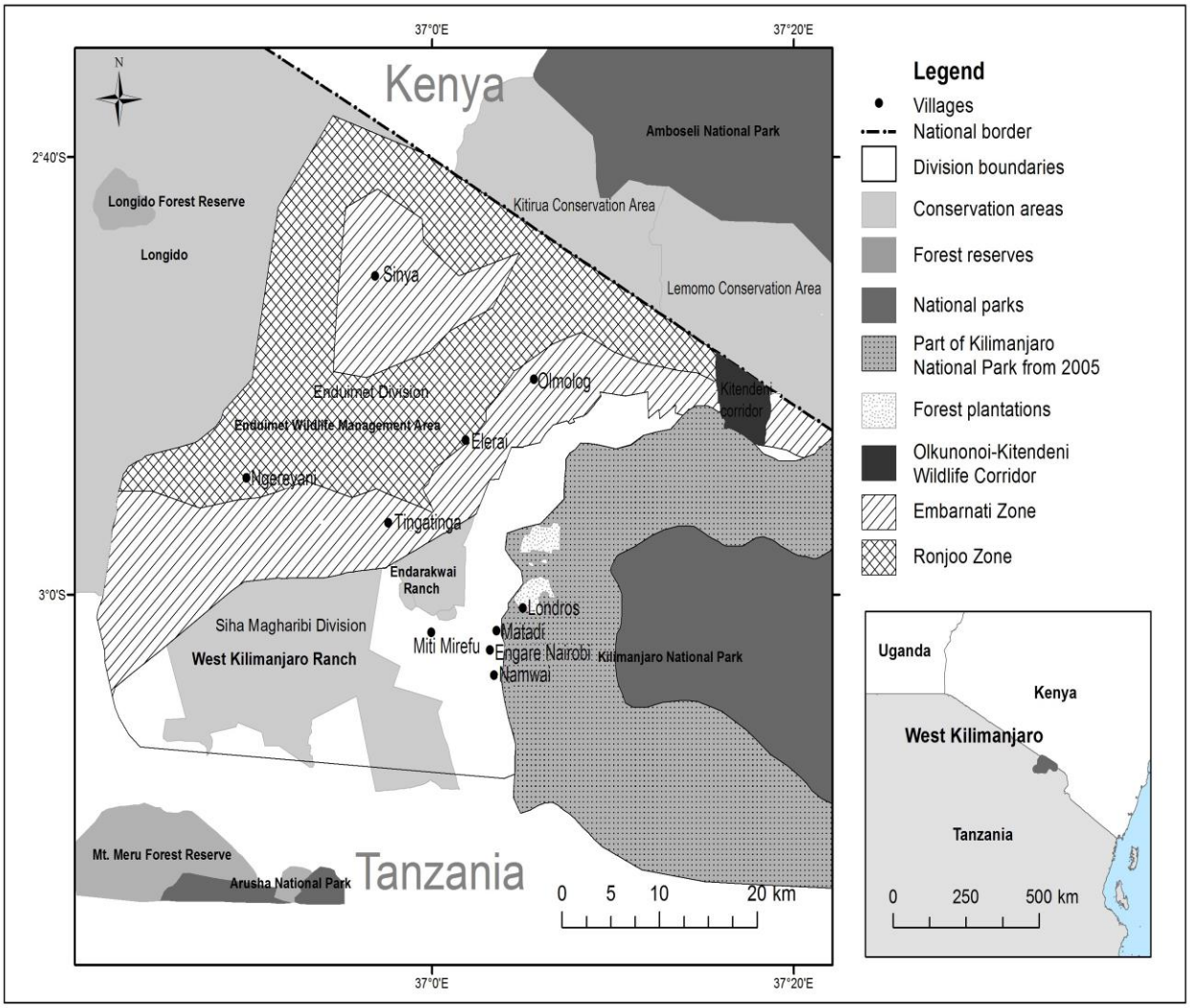

Figure 3: Map showing the study area in West Kilimanjaro, Tanzania

5.1.2 Kilimanjaro National Park and West Kilimanjaro Forest Plantation

The Kilimanjaro National Park is one of the 15 parks in Tanzania managed by the Tanzania National Parks Authority. The park was formerly known as Mount Kilimanjaro Forest, protected by the German Colonial Government under the Forest Conservation Ordinance of 1904 (Kivumbi and Newmark, 1991). In 1940, it was gazetted as a forest reserve by the British Colonial Government under the Forest Ordinance of 1921, for water catchment and forest products. In 1941, the colonial government approved the so-called 'half-mile forest strip', an area of 87.69 km^2, and width of 0.8 km, as a buffer zone in more densely populated areas between the forest reserve and the villages along the southern lower slopes of the mountain. The

motive was to provide local people with firewood, fodder, building poles, wood and non-wood products. The local Chagga Council managed this strip (Kivumbi and Newmark, 1991).

In 1973, the mountain above the tree line (~2,700 m) was reclassified as a national park covering an area of 753.81 km^2. The park was opened for visitation in 1977 and classified as a UNESCO world heritage site in 1989. The remaining part of the forest reserve, with an area of 1,078 km^2 and a boundary length of 238 km, spreading across three districts in the Kilimanjaro region (Hai, Moshi Rural, and Rombo) continued to be managed by the erstwhile Forest and Beekeeping Division (FBD). Following the formulation of decentralisation policies in the 1980s and 1990s, the participatory aspects were incorporated in the Forest Policy of 1998. Joint Forest Management was adopted in the Kilimanjaro Forest Reserve with the involvement of local people.

In 2001, the United Nations Development Program/Global Environmental Facility Small Grants Program conducted an aerial survey that revealed major threats to Mt. Kilimanjaro in the form of logging, fires, charcoal burning, *shamba* (farm) system practices, livestock grazing, forest villages (squatters), and landslides (Lambrechts et al., 2002, p. 5). The survey report initiated a process to incorporate the forest reserve into the Kilimanjaro National Park (Agrawal et al., 2003; UNESCO, 2011). Thus, in September 2005 the forest reserve, formerly managed by the FBD was officially gazetted as part of the Kilimanjaro National Park (GMP, 2006).

Currently, the park covers an area of 1,831.81 km^2 (GMP, 2006). The main activities allowed in the park are non-consumptive tourism, education, and research. The Kilimanjaro Mountain (5,963 m altitude) is one of the major attractions in the park. The park is self-sustaining, financially paying for its administrative and management costs from the tourism revenues (Durrant and Durrant, 2008). The park borders 90 villages, with 70 villages falling adjacent to the half-mile forest strip. All the bordering villages are included in the park's outreach programme.

On the north and north-western side of Kilimanjaro, below the level of natural forest and village land, there are forest plantations which were established in 1926 and 1954 respectively, during

the colonial period for timber and poles production, and expanded after independence. The total area of the plantations on north Kilimanjaro is 67.54 km^2, while that on north-western Kilimanjaro, commonly called the West Kilimanjaro Forest Plantation, is 60.19 km^2 (Ngaga, 2011). Of the latter, only 44.58 km^2 is covered by trees (TASONABI, 2001). The remaining area consists of steep slopes, valley bottoms, hills and water sources (WKFP Plan, 2008). The West Kilimanjaro Forest Plantation was established through the *taungya* system for licensed cultivators. The *taungya* is an agroforestry system in which short-term food crops are grown in the early years of tree growth in order to satisfy farmers' quest for arable land, control weeds, reduce establishment costs, generate early income, and stimulate the development of woody perennial species (Agyeman et al., 2003). The Plantation is owned by the Government of Tanzania under the Tanzania Forest Services Agency.

Mount Kilimanjaro is characterised by a bimodal rainfall pattern, with long rains from March to May, and short rains from October to December (Kaseva and Moirana, 2010). The rainfall varies with altitude and ranges from 2,300 mm in the lower parts of the forest belt to less than 200 mm at the summit (UNEP-WCMC, 2009).

Over one million people occupy the slopes of Mount Kilimanjaro (Hemp, 2006). The Chagga are the largest ethnic group on the southern and eastern slopes. The Maasai, the Safa, the Pare, and other small ethnic groups are found on the western and northern parts of the mountain. The annual population growth rate for the Kilimanjaro region was 2.9 % during the 1988-2002 intercensal period (Population Planning Unit, 2005). In 2009, the population of the study villages (Namwai, Engare Nairobi, and Matadi) in the Siha Magharibi Division was 23,411. Due to the high population density and land scarcity along the mountain slopes, many people practice zero grazing, which means that the forest is the main source of fodder. The main economic activities are small-scale farming, small-scale livestock keeping, small-scale business, and casual labour in plantations. Very few people are employed and some practice the *taungya* system in the forest plantation.

5.2 People's everyday life in West Kilimanjaro

5.2.1 Everyday life in the Enduimet Division

The Enduimet Division acts as the migratory route for wildlife to various PAs such as Kilimanjaro, Arusha, and Amboseli National Parks, and the Enduimet WMA. Due to wildlife movements, repeated cases of wildlife damage (such as crop raiding, livestock killings and threats to human lives) are common in villages located between and in close proximity to these PAs. During interviews, focus group discussions and personal observation, I learnt how people fear wildlife attacks in the evening and at night. In Tingatinga village, for instance, people avoid staying outside after 6 pm due to fear of wildlife attacks. I encountered a case where a ten-year-old boy was afraid to go home after 6 pm due to fear of elephant attacks. He spent the night with the family that hosted me. In the same family, during my fieldwork, the elephants raided and destroyed the banana garden in a single night. There were many other reported cases of livestock death, crop raiding and human-wildlife conflicts in the area.

The Enduimet Division is occupied mainly by the Maasai who are pastoralists and agro-pastoralists. On the more heavily cultivated lands, there are also other ethnicities such as Chagga, Pare, Meru and Waarusha (Trench et al., 2009). Due to the semi-arid climatic conditions, agro-pastoralists tend to depend on rainwater for agricultural activities. During periods of drought, farming is affected by water scarcity and crop raiding animals in search of pasture and water. For instance, during the severe drought of 2009, the land became bare, water and pasture were very scarce, and both domestic animals and wildlife died. Livestock grazing took place in PAs, where such activity is normally not permitted. Food aid was crucial for the people due to low or lack of harvest as crops dried up before maturing and wild animals raided the few that survived. Birds became victims, as women collected their nests as a source of fodder for small livestock. Most women (some with donkeys and/or children) walked long distances in search of water, which could take several days due to the increased distances and demand for water. Some villages in Enduimet division depend mainly on the River Simba for domestic and livestock water requirements. However, during drought seasons, the flow becomes too low; the flow of water is also affected by farmers who use water to cultivate vegetables, and tourism activities (accommodation camps) located upstream.

The Maasai are well known for their 'strong socio-cultural practices and norms that govern all dimensions of their community' (Ngoitiko 2008, p. 3). They are a very patriarchal society, where women are generally inferior, and do not have 'property ownership rights, access to social services, and the power to make decisions about their own lives' (e.g. access to health services, education, marriage) (Ngoitiko 2008, p. 2). Men own livestock and can make decisions about selling them without the involvement or consent of the wife/wives (Walsh et al., 2003). Women interviewed claimed that they do not have a right even to resources available in their own compounds (Interview nos. 38 & 39, 2009; Walsh et al., 2003). I encountered a case where a woman complained that her husband sold a cow and spent all the money in town without sparing any for family needs. Some women claimed that they are perceived to be children − always incapable of making decisions on their own (Interview nos. 37-39 & 45, 2009).

The division of labour is strongly gender based. Mainly men herd livestock; men are also responsible for protecting livestock against predators and enemies during the night. In the evening they bring the herds inside an enclosed area (fenced with thorn bushes) of the kraal (settlement) whose entrance is also sealed with thorn bushes. Women are responsible for all domestic tasks, including building huts (*bomas*) from mud, sticks, grass, cow dung, and urine. Other tasks for women include milking cows, collecting water and firewood for domestic use, cooking, looking after children, growing basic food in small farms, partly taking care of small livestock such as goats, sheep and calves, and preparing young girls for marriage. A few women also make pearl jewellery which they sell to tourists, at the markets or to wholesalers. I noticed very few women who engage themselves in activities such as small-scale business, politics, or public employment. I also noticed a man who helped his wife to fetch water.

The wealth of a Maasai man is measured in terms of the number of cattle he holds. Cattle and goats play an important role in religion, food, medicine and social relations. It is believed that the Maasai do not eat wildlife meat. However, this perception is fading away. Some villagers interviewed claimed that in critical situations such as the severe drought of 2009, some families consumed wild meat due to the lack of other food; for instance, Sinya villagers shared the meat of a giraffe. I observed a boy in Ngereyani village chasing a wildebeest with the aid of a dog.

During interviews some cases were reported where wild animals were killed for money, for food, and as a source of medicine (oil).

The Maasai try to maintain their traditions but at the same time take part in a modern lifestyle. Few families in the area, particularly 'modern' Maasai, live in iron-roofed houses, while the strict, traditional Maasai still live in grass-roofed mud houses (called *bomas*). Some men, especially those who own many cows, practice polygamy because they are capable of paying a 'bride price' of more than 30 cows. Most women in polygamous families live in different *bomas,* but in most cases in the same compound.

Every Maasai from birth belongs to a certain age set, which determines his social life, status and the tasks required of him. For instance, the warriors do not generally associate with women. However, young boys (uncircumcised) can mingle with women. When I was in Sinya village for fieldwork, I observed some women who, while having lunch together, closed the door immediately after they noticed a *Moran* (warrior) coming towards the kiosk where they were sitting. I asked them why, and they said that their tradition does not permit *Moran* to see them while eating. Elders are highly respected, and are considered decision makers (Kipuri and Ridgewell, 2008). Some people in the area still use the traditional Maasai dress (*Rubega*), while others dress in 'western' style.

It is government policy to involve women in development activities. However, in the Enduimet Division, employment is considered to be mainly men's activity. For instance, during my fieldwork, more than 47 game scouts employed by the Enduimet Community-Based Organisation (CBO) were men; not a single woman was employed in safari and hunting companies operating in the division. Of the 27 members in the Enduimet CBO, only nine were women, who are selected as a compulsory requirement. The top leadership of the CBO – that is, the chairperson, secretary, treasurer, and accountant − were all men. The CBO board has eight members only three of whom were women. In all the villages I studied, the chairpersons were men. One woman was a Councillor (through special seats reserved for women) and very few were employed. Of 12 members on the Tingatinga village natural resource committee, there were only two women members; in Sinya village, there were only six women members out of 26

membership seats in the village government. Men want to be representatives in different posts and in committees because they claim to be strong and able to fight for their families and the community.

In one of the meetings I attended at Tingatinga village, women claimed that in the seats reserved for women, men tend to elect the women they want, who do not know anything and cannot represent their fellow women. This allows men to continue dominating decisions by obscuring women's priorities. In some cases, these women are chosen because they are related to one of the village government leaders. One woman said that women who are members in the village government are fearful and cannot speak. In the women's meeting, one woman told others: 'let us be alert so that men will not oppress us. Men should give us the opportunity to choose our representatives who we know can represent women's interests in village meetings' (Women's meeting, Tingatinga village, Sept. 2009). Even when women are chosen to be representatives, they are few and are merely token appointments. One woman complained that: 'although it is the country's policy for women to be selected in different decision-making arenas, women's participation in the Maasai community is very poor' (Interview no. 38, 2009). Although the Enduimet CBO specifically sought to address this bias through the idea of increased participation of all people including women, only one woman per village is allowed to be a member of the CBO, even in cases where some villages would have more potential women representatives.

The female literacy rate is low in most Maasai communities, when compared to their male counterparts. This is because many girls are forced into early marriages, have heavy workloads, and lack support for education. During my fieldwork, several girls had passed standard seven examinations and were selected for secondary education. However, due to a lack of support from parents and donors, they failed to continue with secondary school education. Some of the girls were forced into early marriage by their fathers, because a bridal dowry adds cows to the family's livestock holdings. Nevertheless, with increased literacy levels, the young men are slowly changing, even though older men maintain cultural practices (Interview no. 52, 2009). I experienced this trend during interviews, and observations of some men who supported the education of women and girls.

Maasai women do not have the physical and cultural space to make their opinions known. One woman said bitterly: 'We are so much despised, we are nothing. We do not have a voice. Even when we have requested something to be followed up, I have never seen any action taken. We are not given a chance even if we have a point. When men accept something spoken by women, it is counted as an insult' (Interview no. 37, 2009). One woman gave an example where women marched to the District Commissioner's office, protesting the negligence of the wildlife officials after an elephant killed a man, and the district officials delayed for three days. Men forced the women to go back home and promised to solve the matter. On the contrary, the men punished the women because they claimed to be disgraced and insulted by their action (Interview no. 39, 2009).

Many young women do not generally attend meetings. I observed a group of young women in Tingatinga village going to fetch water without paying attention to the village assembly taking place. I asked some women and men about it, and was told: 'In the past, the Maasai culture did not allow women to attend meetings together with men. If women had something to present to the village meeting they used to send one representative, who was an elderly women. Currently, some women attend meetings but the young married women and young people do not generally attend because they are perceived as incapable of making decisions' (Interview no. 42, 2009).

Fear is a significant weapon against women's participation and representation. Due to strong cultural constraints, very few women (mostly the 'modern' Maasai women and non-Maasai women) feel confident enough to speak during group meetings in the presence of men. It is believed that if a woman stands boldly before men something bad might happen to her. One young man in Sinya Village gave the example of a woman who stood up, and spoke before men, and later broke her leg (Interview no. 47, 2009). In most cases, the presence of women in meetings does not necessarily imply their active and meaningful participation. A woman in Tingatinga Village said that 'when a woman speaks and asks questions, men say you have bad manners, a woman is nothing' (Interview no. 45, 2009). It is clear that a major underlying issue relating to this reluctance to speak lies in the extremely low value accorded to women's opinions and ideas in the study areas. Women themselves are not confident in expressing their own opinions and ideas.

5.2.2 Everyday life in the Siha Magharibi Division

The three studied villages in this division, are occupied by Chagga, Safa, Pare and other small ethnicities who have different cultural values. The villages are located in close proximity to one of the routes to Mt. Kilimanjaro called Londros. Most villagers live in iron-roofed houses built from timber/peg or bricks, and dress in the western style. They are small-scale farmers, small-scale livestock keepers, small-scale business people, casual labourers, government or private sector employees, and tourists' porters. Each of the three villages has a village government office and village centres. Engare Nairobi village centre is the largest, housing the divisional, ward, and village government offices; a health centre; the primary court; and small shops, small restaurants, and bars. Many people from the villages visit the centre for different services. Various vehicles arrive at the centre including lorries that pick people up early in the morning to take them to the forest plantation and bring them back in the evening. Most of these people practice the *taungya* system in the plantation and some are labourers in the forest plantation and/or large-scale farmers. Most times in the evening, several people meet at the centre for beer, soft drinks, food, and barbecue (*nyama choma*).

The villages border the Endarakwai Ranch, the West Kilimanjaro National Ranching Company (NARCO), the Kilimanjaro National Park, the West Kilimanjaro Forest Plantation, and agricultural plantations. In times of food and water scarcity, the human-wildlife conflict in these areas intensifies. For instance, during the drought period of 2009, wild animals moved from the PAs to people's farmland searching for pasture and water. On the private Endarakwai Ranch and in the Kilimanjaro National Park, it is forbidden for local people to harvest natural resources such as fodder, firewood, and plants for traditional medicine.

Although the village lands border the forest plantation and/or national park, some parts of the land are semiarid and infertile. The common crops planted by local people on their own plots include maize, beans, garden peas, banana, and potatoes. During the drought period of 2009, villagers that border the Engare Nairobi River were able to continue farming vegetables and maize in small plots using the water from the river.

The division of labour in these villages is again gender based. Women are responsible for all domestic tasks such as caring for children, collecting fodder and fuel wood, fetching water,

preparing meals, attending weekly markets, and farming. Young girls assist their mothers in these tasks and other farm tasks. When compared to the Enduimet Division, firewood and fodder are scarce in Siha Magharibi.

During my fieldwork, I observed people fetching water from the Engare Nairobi River, and watering their gardens using the canals channelled from the river. Some people were buying firewood and fodder and women were searching for firewood. I also observed people selling wildlife meat and oil on the black market. During the interviews and focus group discussions, I heard complaints concerning crop raiding and lack of compensation, thus causing hatred and resentment towards conservation. Women claimed to be more affected by such crises, particularly food shortages, because family members depend on them for food.

Men concentrate mainly on income related activities such as public or private employment, farming, timber/logs business, casual labour, and assisting tourists as porters. Few women are public employees. Due to power relations between men and women, women are forced to do activities that do not involve cash benefits, such as household chores and community development work. In the meeting I attended at Engare Nairobi village, the village leadership stated that in community activities where there are no economic issues at stake, most men usually send their wives. The village leadership said that if men continue to send their wives, women will be sent back home and men would be fined. In the meeting, many women attended and some gave their opinions, but few were able to challenge the opinions of the men who hold the decision-making power.

Women's participation in decision making and leadership is limited to village government membership, and not top leadership. The three studied villages are led by men, and the village executive officers are also men. In the village government, there are 10 out of 25 women members in Engare Nairobi, 7 out of 25 in Namwai, and 12 out of 25 in Matadi. At the household level, which is the primary platform for the division of power in the community, most households are headed by men.

6. Methodology

6.1 Research strategy

This study takes mainly a qualitative methodological approach in data collection and interpretation. Qualitative methodology is used because of its ability to provide rich in-depth information such as 'descriptions of complex phenomena, tracking unique or unexpected events, illuminating the experience and interpretation of events by actors with widely differing stakes and roles, and giving voice to those whose views are rarely heard' (Sofaer, 1999, p. 1101). My ontological position is one of social constructivism, which means that reality is socially constructed and built up from the consequent actions, perceptions and interpretations of social actors (Easterby-Smith et al., 2002; Saunders et al., 2007; Bryman, 2008). Ontology refers to the study of 'being' and is concerned with 'what is' (Crotty, 1998, p. 10).

Epistemology is about assumptions that one makes about 'the very bases of knowledge – its nature and form, how it can be acquired and communicated to other human beings' (Cohen et al., 2007, p. 7). Epistemology is concerned with the question of how people make sense of the world around them and how a researcher should set aside pre-conceptions in his or her understanding of that world (Bryman, 2008, p.15). I chose an epistemological position of interpretivism which implies that the subject matter of social science (i.e. people and institutions) is different from that of natural science (positivism) (Bryman, 2008, p.15). This position helped me to explore and understand the subjective meanings motivating the actions of social actors and the differences between people in their role as social actors (Saunders et al., 2007).

6.2 Research design

The research design guides the researcher in the process of collecting, analysing and interpreting research data. In order to gain a deeper understanding of the situation in West Kilimanjaro, I chose a case study research design. According to Bryman (2008, p. 30) a case can consist of a range of different types of groups, such as an organisation, a community, a family or a school. Yin (2009) defines a case study as an empirical inquiry that 'investigates a contemporary phenomenon in depth and within its real-life context' (p. 18). This design 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. Although case studies are good at generating detailed information about

the situation in a particular case, as a design they have often been criticised for providing little means for scientific generalisation (Yin, 2009). However, Yin (2009) suggests that case studies, like experiments, are generalisable to theoretical propositions. Schofield (1993) adds that specific ideas or conclusions from a piece of qualitative work can stimulate further research that provides information on their replicability.

6.3 Sample selection

This study is part of the larger PAPIA (Protected Areas and Poverty in Africa) and EKOSIASA (Political Ecology of Wildlife and Forest Governance in Tanzania) projects. Therefore, the study areas were selected because they are among the focus areas for these projects. The snowball sampling technique was used to choose interviewees. In this method, information gained from one interviewee is used to find the next interviewee (Weiss, 1994). The first individuals in the study area, who were purposively selected, were asked for referrals in order to identify other people considered relevant for the study. As Bryman (2008) points out, this method does not claim to produce a statistically representative sample since it relies on social contacts between the villagers to obtain new interviewees (p.184). I reached the saturation point when the new data collected did not shed any further light on the study topic (Strauss and Corbin, 1998, p. 136).

6.4 Methods of data collection

6.4.1 Primary data collection

Prior to commencement of data collection, I clarified the purpose of the study that it was academic purpose, and did not have connections with government or conservation institutions or NGOs. I sought consent from the participants and assured them anonymity and confidentiality. Primary data were collected through interviews, focus groups discussions, participant observation, and informal interviews and discussions. In-depth interviews were conducted with 161 participants, both men and women aged 18 years and over. I also conducted 17 focus groups discussions, and attended three village assembly meetings.

The fieldwork was carried out during different periods, between September and December 2009, in March 2010, between August and December 2011, and in September 2012. Most of the research was done in the field, i.e. at the case study site in the villages bordering the Enduimet

WMA and those bordering the Kilimanjaro National Park. I used a field notebook to record details of the interviews, discussions and to keep track of relevant observations, information, ideas, and experiences; and where permission was granted, I used a tape recorder. In the Enduimet WMA, two research assistants (a woman and a man) assisted me, while at Kilimanjaro National Park I had only one research assistant. This is because at Enduimet, I needed a man to assist when interviewing Maasai men, especially elders, and a woman when interviewing women. During almost all periods of fieldwork, I stayed with local people in the study villages.

Although, I am a cultural insider as a Tanzanian citizen, the areas I visited were new to me. As a PhD student, I was regarded as being of a higher social status than the majority of the people. To some extent, this affected the answers at the beginning of my research, as most people did not feel free to express themselves, because they were not sure whether my intentions were honest. However, after spending more time in the study areas and after several stays, I sensed that I had earned their trust.

On the other hand, based on customs of the Maasai tribe, women do not mix with men. The fact that I am a woman, drew more women than men to me as a researcher. Although some men felt free to express themselves (especially those with higher social status in the community), others were reluctant, particularly about discussing gender issues. To some extent, this affected the number of male interviewees I was able to attract among the Maasai.

6.4.1.1 Interviews

Primary data were collected through in-depth interview with various actors in West Kilimanjaro. These included women, men, elders, young people, porters, village natural resource committee members, governmental officials at the village, ward, and divisional levels, and political leaders.

In addition, I interviewed park staff (Community Conservation Services warden, Protection warden, and Tourist warden), the West Kilimanjaro Forest Plantation manager and staff, former forest reserve staff, and the Kilimanjaro Elephant Research and Conservation Project manager. Further interviewees included investors in safari tourism (Kibo Safaris, Shumata Camp, Olpopongi Maasai Cultural Village) and hunting tourism (Old Nyika, Northern Hunting), Non-

Governmental Organisations operating in the area (African Wildlife Foundation), and the Community-Based Organisation leadership and members. I also interviewed regional government officials, Wildlife Division representatives, the Longido District Commissioner, Longido and Siha natural resources officers, and the Longido District Game Officer. Additional interviews were carried out in the Longido District, the town of Arusha, the Siha District, and in Dar es Salaam. Furthermore, I conducted a small number of telephone interviews to clarify some of the issues that emerged during the analysis of the interview data. These interviews were conducted as part of the triangulation process in order to gain additional information and perspectives on the situation around West Kilimanjaro.

The interviews lasted for one to two hours. Most interviews were conducted in Kiswahili while a few were in English. During the interviews, I used an interview guide listing the issues I wanted to focus upon. However, I did not follow the guide very strictly, as its main purpose was to help me to stay focused on what I wanted to investigate in general, while at the same time being open to a wide range of information related to my research topic. While having a certain pre-determined direction, semi-structured interviews allow for more flexibility during the interview itself (Kvale and Brinkmann, 2009). This enabled me to gain deeper insights on the study topic. A personal aim was to conduct interviews in the form of natural conversations as much as possible, rather than formal interviews (Bryman, 2008). During all the interviews, note taking and/or recording was taking place. The recorded interviews were later transcribed.

6.4.1.2 Key informant interviews

A key informant is understood to be a knowledgeable individual with specific insight into the research topic, who is willing to serve as an informant (Mikkelsen, 2005, p. 89; Weiss, 1994, p. 20). Interviews were conducted with key informants in local communities bordering the Kilimanjaro National Park and the West Kilimanjaro Forest Plantation, and members of the Enduimet WMA. Seven key informants were selected due to their willingness, and the ability to contribute unique information, perceptions, reflections, and because they possess thorough insight into the research topic. The aim was to seek knowledgeable individuals who could offer insightful information on conservation and people, both past and present. Mikkelsen (2005) argues that key informants may provide biased information that may mislead the researcher.

However, in this case, these people have extensive knowledge about the study topic, so it was crucial to interview them.

6.4.1.3 Focus group discussions

I carried out 17 focus group discussions, with two to three groups in each study village. Generally, the groups consisted of 6 to 10 participants. These focus group discussions were used to understand collective views in the study villages about various aspects of people's lives and conservation. Despite the concomitant difficulties and special group dynamics of focus groups (e.g. dominant speakers, gender issues, fear of repression for speaking out), some important insights were nonetheless gained from these discussions.

In the early phases of fieldwork, I conducted mixed group discussions with both men and women. However, I experienced that few women attended, and those who did, remained quiet and in some instances, merely confirmed the men's statements. I observed this aspect more in the study villages around the Enduimet WMA than in those around the Kilimanjaro National Park. I solved this difficulty later by conducting separate groups for men and women. This offered women the opportunity to express their complaints freely, for instance, how tradition/power relations prevent them from airing their concerns, particularly those related to human-wildlife conflicts; how male leadership has hindered their development in terms of training, employment; and how women have little power over resources in the household. Nevertheless, in some groups where powerful women (such as wives to village leaders, wealthy women) were present, other women were reluctant to express their concerns. In such cases, I followed the matter further through key informants or/and other focus group sessions.

6.4.1.4 Participant observation

Participant observation is mainly associated with anthropologic and ethnographic research, where the researcher spends an extended period of time within a group or a social setting. This allows people to feel comfortable with his or her presence, and thus behave and act 'naturally'; it also reveals how processes or events develop and evolve over time (Bryman, 2008). In this sense, participant observation as a research method is an important tool (Bryman, 2008). Being in the case study area for several months, I became immersed in the role of a participant

observer. I was able to listen to conversations, observe behaviour, the natural environment, the social setting, people's daily activities, and the operation of the village assemblies. I was able to experience people's interaction with PAs – the extraction of resources from PAs, wildlife movements towards local settlements, crop raiding, and people's mitigation methods. My observations and experiences provided valuable data to triangulate information collected via other methods.

6.4.1.5 Informal discussions

I engaged in informal meetings and discussions that led to important insights and contributed to understanding daily life in general in the Enduimet WMA, the Kilimanjaro National Park and the West Kilimanjaro Forest Plantation. These informal ways of interaction were helpful in the triangulation of data e.g. comparing conflicting assertions and claims.

6.4.2 Secondary data

In case studies, secondary data are most important to corroborate and augment evidence from other sources (Yin, 2009). As pointed out by the same author, there is no reason to assume that written sources are necessarily more reliable than other types of sources. Written documents may be biased or even inaccurate. However, documents may be useful in the data triangulation process, and also to verify specific details, titles, and spelling.

Documentary information can take many forms (Bryman, 2008; Yin, 2009). In my study, I used a broad spectrum of documents, including books, articles published in peer review journals, reports, and international conventions and treaties related to conservation and development in order to learn about current and relevant debates. In addition, I reviewed conservation policies and legislation, land policies, wildlife regulations, declarations, governmental notices, and reports – to learn about the rhetoric and practice of conservation in Tanzania. Furthermore, I reviewed formal letters (e.g. CBO complaints about investors, CBO letter to Kibo Safaris concerning revenues), minutes (e.g. from the village of Sinya), a document describing the court case between Kibo Safaris and the Northern Hunting Company, financial documents, PA management plans, studies conducted in the area, reports, and village registers. I reviewed information from the AWF, the Tanzania Wildlife Research Institute and the Longido and Siha

district level offices. However, it was highly challenging to gain access to official documents, particularly government financial documents.

6.5 Data analysis

The gathering and analysis of data has been a continuous and parallel process. The analysis of information gathered and the insights gained gave decisive clues as to what further data I should seek. It directed my plan from day to day and influenced the direction of my research and further fieldwork. I wrote down main ideas during the data collection process, immediately after data collection, and during reviews of the audio data collected. For audio recorded data, initially I chose to make 'detailed' transcriptions (Elliot, 2005, p. 51). All pauses, repetitions, and verbal utterances were transcribed in as much detail as possible, to avoid the loss of any valuable information. However, I ended up using mostly 'clean' or 'sanitised' transcripts (Elliot, 2005) as they are easier to read, and do not involve all the extra verbal material captured on the research tape recorder. I read my field notes and the transcripts several times. This increased my familiarity with the accounts given by the interviewees and made it easier to reduce and select relevant information.

After data transcription, I read the transcripts and highlighted ideas, categories or themes that helped to answer the research questions. Then I looked for relationships that emerged from the data categories. Later, I conducted a sorting process to compile and arrange themes, codes, and illustrative quotations to explain the phenomena being researched. Quotations constitute pure data and form a separate dimension from data analysis. Mikkelsen (2005) notes that there is a tendency to present verbatim quotations as the analysis. However, in this thesis, quotations from the participants are used to support and explain some of the findings, as this may provide a thicker, richer description of reality.

6.6 Reliability and validity

Reliability and validity address issues about the quality of the data and appropriateness of the methods used in carrying out a research project (Bryman, 2008). Reliability is concerned with consistency of the data and stability, and about whether repeated application of the methods under similar conditions will yield consistent results (Bryman, 2008). Validity relates to the

extent of causal relationships examined – how the data support conclusions (internal validity), and how the results of the study can be generalised beyond the specific contexts in which the research was conducted (external validity or representativeness) (Bryman, 2008).

In order to enhance reliability, it is important to ask the same question in various ways (Ragin, 1994). In this thesis, I used multiple data collection methods to increase the reliability of the results. Multiple methods allowed for triangulation of the data and therefore reduced the possibility of misleading interpretations.

Most of the people interviewed speak Swahili, a language in which I am fluent. My position as a cultural insider offered an added practical advantage in obtaining original responses from interviewees and thus it increased validity. Nevertheless, it was a challenge to conduct interviews with conservation officials, PA managers and a few of the local people. Some tried to give answers that seemed to satisfy the researcher (i.e. 'Hawthorne effect') (Cohen et al., 2007). To avoid this, deeper probing was used, together with longer stays in the study areas. I also conducted interviews at different periods of time, which provided a good opportunity to compare and verify the answers.

7. Summary and synthesis of the main findings

There is an on-going debate about how to balance conservation and development goals. The critical literature in the field of conservation questions several aspects, including the history, policy, and practice of conservation initiatives. There is increasing recognition that 'many costs of PAs are borne locally, particularly by poor communities, while benefits accrue globally' (IUCN, 2005).

This thesis considers the social and economic impacts of conservation, how costs and benefits are shared between various actors, and the reaction of local communities towards these impacts. The previous sections provide the basic background for the four individual but interrelated studies presented in part two of this thesis. This section presents a summary and synthesis of the main findings from the four interrelated studies.

7.1 Gendered impacts of wildlife conservation in West Kilimanjaro (Paper I)

The creation of PAs goes hand in hand, in most cases, with an increase in conservation costs for communities living adjacent to these PAs. The impacts are distributed differently among various groups in the community, and gender is one of the categories. Paper I used insights from feminist political ecology to examine gendered impacts associated with recent expansion of the Kilimanjaro National Park and creation of the community-based Enduimet WMA.

The results of Paper I reveal that changes in resource access and control, as a result of land appropriation by powerful actors (the state and conservation agencies) (discussed in Paper IV), have to a great extent impacted both men and women negatively. The impacts include those associated with natural resources restrictions, illegal entry to PAs (beatings, fines, rapes, imprisonment, fear), human-wildlife conflicts, increased living costs (time, labour, and money), and bad relationships between PAs and local people. These findings dovetail with the growing body of literature on the gendered impacts of conservation initiatives (e.g. Coad et al., 2008; Ogra, 2008; Sarin et al., 1998).

Both men and women suffer the consequences of restrictions on access to natural resources. Nevertheless, women are impacted substantially worse than men, due to the gendered division of labour and inequality in access to and control of resources that exposes them to high risks as they struggle to provide for their families. An explanation for this may be found in the social construction of gender that often overlooks women's rights regarding access to and control of resources, and inequality in the division of labour. Poor men and women suffer more from strong restrictions on access to PA-based natural resources because they have limited access to alternatives. Therefore, they spend more time and energy in searching for resources. Most women in female-headed households are also impacted more strongly, because they lack sufficient labour in searching for resources, and lack power to purchase the resources.

There are variations between the two cases studied. In the Enduimet WMA, men and women have access to natural resources for household use, and obtain some direct and indirect benefits from tourism activities, while in the Kilimanjaro National Park, resource access is denied and local tourism benefits are minimal (discussed in papers II, III). This study found that the PAs'

approach to benefit sharing as a substitute for resource restrictions does not meet the felt needs of men and women. The ways in which PAs are functioning have aggravated the workload of men and women instead of addressing community interests, paying attention to their relevant livelihood needs, and improving their well-being.

Due to consequences associated with restrictions on access to natural resources, and punishments when caught inside the PAs, enmity is evident between local people and PA staff (partly discussed in Paper III). Resentment causes enmity that leads men and women to oppose biodiversity conservation goals through increased illegal activities, including collaboration with poachers (partly discussed in papers III, IV). For instance, in November 2014, Maasai pastoralists burnt 16 tourist tents and 9 vehicles in the Endarakwai Wildlife Ranch to ashes, due to conservation related costs. Western (1994) reports a case where exclusion of Maasai from the Amboseli National Park in the late 1970s led them to kill wildlife, continue with grazing, and increase collaboration with poachers. Similar cases have been reported, for example, in Indonesia (Li, 2007) and Guatemala (Meyerson, 1998).

Feminist political ecology has been useful in illuminating the injustices and struggles of both men and women in the process of trying to sustain their everyday life in the midst of changes in resource access and control (Rocheleau et al. 1996). Further, it sheds light on how access to and control of resources are affected by the social construction of gender, as well as power relations and authority that are embedded in formal and informal institutions. The discussion of the micro-politics of everyday natural resource access and control has offered a hint of understanding into the broader macro-political forces at work in natural resources conservation. This investigation of everyday gendered experiences of conservation in West Kilimanjaro highlights the mismatch between the rhetoric and practice of conservation− and the challenges in combining conservation and development agendas.

7.2 Examining transparency and local benefits from ecotourism in the Enduimet Wildlife Management Area in Tanzania (Paper II)

In the 1990s, the Government of Tanzania introduced the notion of community-based wildlife management areas (WMAs) (URT, 1998). The WMAs were proposed as community-run

conservation areas, where several villages would come together and set aside land for wildlife conservation. In return, the villages would receive a certain proportion of the tourism revenues from these areas. Safari tourism, together with sport hunting, is presented as the main source of revenue for WMAs. Various actors – the Government of Tanzania, leading conservation NGOs, some donors and parts of the tourist industry − present WMAs as a win-win solution, where local people participate in conservation activities and accrue benefits from their efforts, implying that both environmental conservation and local development goals can be achieved.

Paper II examines the collection and flow of tourism revenue, ideally and in practice, in the Enduimet WMA, and investigates whether or not the Enduimet CBO receives what it is entitled to receive. The results of Paper II show that although the WMA concept is promising, the revenue sharing as demonstrated in the Enduimet case, does not support the win-win discourse; instead, it is in line with the notion of 'accumulation by dispossession' (Harvey, 2003). The revenues that reach the villages are minimal and pass through a complicated, non-transparent system. While the local people protect the WMA, they do not collect the revenues from tourist companies operating in the area. The tourist companies pay their fees to the government through the Wildlife Division. The Wildlife Division is required to channel 65 % of safari tourism and 35 % of hunting tourism to the CBO that manages the WMA. In practice, the WMA received less than 65 %; each village received about 3.6 % of the safari tourism fees.

Several factors affect the system of revenue flows and local benefits. Firstly, inappropriate leakages as well as blatant corruption reduce revenue shares for local communities (partly discussed in Paper III). Corruption in the wildlife sector has been previously reported (see Benjaminsen et al., 2013; Cooksey, 2011; Nelson, 2009, 2010, 2012; Sachedina, 2008). The centralised collection of fees from safari tourism has provided more opportunities for state officials to appropriate this revenue. In addition, it has decreased the income in villages that previously had individual business deals with tour companies, since the total income is currently divided among more villages. Moreover, the fees paid by safari companies to Wildlife Division have increased substantially, which has led investors in Enduimet to close down or scale down their activities. This might in the long run reduce the likelihood of stable and sustainable income from the tourism sector for the villages in the Enduimet WMA.

Secondly, there is a lack of transparency by different actors – tourism investors and government − in providing detailed information about their revenues and how these are disbursed. For instance, safari investors failed to provide detailed information such as number of bed-nights and game drives, and one of the two hunting companies in Enduimet refused to share any information. Furthermore, the Wildlife Division declined to provide information about how much it has received from different safari companies and how much it has distributed to the Tanzania Wildlife Protection Fund, the District Council, and the Central Treasury. Based on the figures provided by the Wildlife Division for the Enduimet CBO, the CBO received considerably less in 2010 than what it was entitled to. This lack of transparency makes it possible that revenues disappear on the way through the system due to corruption (partly discussed in Paper III).

Thirdly, the system is not efficient, since the money flow involves several agencies in a centralised chain of transactions, which incur large transaction costs. This means that a large share of benefits goes towards paying for various types of administration fees. It is also clear that the current costs of wildlife conservation for the communities are higher than the revenues that these communities receive. The villages that incur the highest costs from wildlife conservation (crop damage, livestock killings, and wildlife attacks on people) do not receive larger shares of income from the WMAs.

In practice, the case of the Enduimet WMA leads to capital accumulation by various actors who try to extract revenues by changing community rights over land and resources, thus negatively affecting the livelihoods of communities. Although the WMAs are a mechanism to enhance wildlife conservation, they have also enabled the Wildlife Division to accrue more funds. There is no evidence, in this case, of the initial concept of rural benefits and development that was central to WMA initiatives.

7.3 Comparing local participation and benefit sharing between a national park and a state forest plantation (Paper III)

Participatory approaches to natural resources management evolved as a way of securing local people's support for environmental conservation (Scherl et al., 2004; Western et al., 1994).

Different actors (conservationists, government officials, and development partners) present participation as a win-win strategy, meaning that conservation and development can be achieved (Western et al., 1994). Paper III compares the local participation and benefit sharing strategies employed by the Kilimanjaro National Park and the West Kilimanjaro Forest Plantation, and how these affect local people's attitudes towards the study areas. The park deals with natural resources conservation by prohibiting the withdrawal of natural resources, and sharing benefits with the local people through an outreach programme. The forest plantation, on the other hand, benefits the local people in the form of access to forest products, and casual labour and farming opportunities.

The results of Paper III show that the performance of the two study areas is different, despite the fact that both fall under the same ministry. The performance of the two areas is affected by sectoral policies, and legislation that dictates the manner of involvement of local people and how they may benefit from natural resources management.

The criteria and procedures for benefit sharing for the Kilimanjaro National Park are bureaucratic, complex, and lack transparency, while those of the forest plantation are much clearer and more transparent. The Kilimanjaro National Park channels less than 7.5 % of the park's operating budget to local people. Only one village among the three study villages was financially supported in 2002/03 (partly discussed in Paper I). The scheme is affected by external political influence, with funds being diverted to areas not directly affected by the park. In addition, mismanagement and the misuse of funds by national parks headquarters officials adversely affect the benefits for local people (Juma, 2009). The West Kilimanjaro Forest Plantation has a positive impact on neighbouring villages; however, the kind of employment offered is only casual labour, and casual labourers are paid too little. Local communities opted for low pay because they lacked alternatives, and this provided a way to increase their chances of obtaining farming plots. The findings show that the allocation of farming plots is affected by favouritism.

Both areas share a centralised structure in terms of decision making on matters pertaining to the management of natural resources and benefit sharing (discussed in papers II, IV). Thus, it is difficult for communities to influence or challenge the operation of the structure (discussed in papers II, IV). The park management system in the Kilimanjaro National Park does not have

space to accommodate local people's opinions because of its top-down and para-military nature. This was revealed during the inclusion of the forest reserve into the park, with no awareness sensitisation on imminent changes to user rights; thus the process took people by surprise (discussed in Paper I). Not a single local person in the study area plays any active role in park administration or sourcing temporary employment opportunities in the park. The park takes notice of local people only when there is fire outbreak; thus local people claimed to be used as 'tools'. As a result, some do not turn up to help, while others demand payment. Local people have no opportunities to contribute to the park's planning and decision making, or to have any dialogue with park staff where they could express their problems and seek solutions for the same. Moreover, most collected revenue is retained by the national parks headquarters and local people do not have power or influence over it.

The West Kilimanjaro Forest Plantation involves local people in plantation management through different activities in the plantation. But local people do not have any influence on decision making; nor do they have any power or share in the revenues collected from the sale of logs and poles (apart from payment received for casual labour). The income from the sale of logs is remitted to the central government. The people have no influence over the amount of payment for casual labour, nor do they receive any incentive for tending trees. Moreover, local people in the forest plantation are seen as beneficiaries, and not as decision makers over forest use. In both areas, participation is used as a means to improve environmental conservation and a way to accrue more revenue for the government.

The effect of lack (or very few) benefits, denied access to natural resources, lack of buffer zones where they may harvest natural resources, ill-treated when found in the park and lack compensation for crop raiding, led people to withdraw resources from the park illegally, in spite of park ranger patrols. In addition, villagers referred to the park staff as 'enemies' who do not care about their livelihoods (discussed in Paper I). In the West Kilimanjaro Forest Plantation, benefits obtained by the local people from the forest plantation seem to have positively affected the relationship. This was revealed through local people's responses in cases of fire outbreaks, or during tree planting activities, and their attitude towards plantation staff.

The differences observed between the two PAs are related to sectoral legal reforms that occurred in the 1990s, following the economic crisis of the 1980s, and declining capacity of the central government (Nelson and Blomley, 2010). In the forestry sector, local proponents of reforms and/or donors managed to leverage the reform process due to the Forest and Beekeeping Division's lack of alternative sources of political power and financial capital. However, in the wildlife sector, donors had very little influence due to the ability of policy makers to acquire rents from tourism that provided them with financial assets and enabled them to deflect reform pressure from donors (Nelson and Blomley, 2010).

The findings of Paper III indicate that the extent of benefits received and the degree of local participation are associated with negative/positive attitudes toward the study areas. The study concludes that for local people to support conservation efforts and resist illegal activities, the PAs should allow meaningful local participation in PAs management and equitable sharing in the benefits.

7.4 Elephants over the cliff: Explaining wildlife killings in Tanzania (Paper IV)

Elephant populations in Tanzania have recently declined, after two decades of increasing numbers (Douglas-Hamilton and Poole, 2010; TAWIRI, 2010). One of the reasons for the decline in elephant numbers may be the resurgence of the ivory trade, due to a rise in demand in China and East Asian countries (Martin and Vigne, 2011; Milliken and Sangalakula, 2009). There are other reasons however, besides the international ivory trade that contribute to attacks on elephants.

Paper IV uses the political ecology inspired 'webs of relation' to unwind the interrelated causes behind the case of elephant killings in Tanzania, where numerous villagers chased a herd of elephants over a cliff, killing six of them.

The results of Paper IV show that local people's burden of conservation, such as repeated crop raiding, threats to their lives, and livestock killing (discussed in papers I, II) constitutes part of the explanation behind the elephant killings. People living in the area claimed that elephants caused more than 75 % of wildlife-related human deaths in their village. Kikoti (2009) found that

elephants stayed in the riparian forests along the Engare Nairobi North River during the daytime and raided local field crops at night. Trench et al. (2009) found that some villagers at Tingatinga have given up farming because of elephant-related problems. Similar observations have been reported in Kenya (Smith and Kasiki, 2000).

Another explanation is related to the severe drought in northern Tanzania and Kenya in 2009. The drought intensified conflict as wild animals migrated to human settlements and plantations in search of pasture and water. People tried to prevent elephant raids by guarding the fields at night, building fences and hedges, and burning chilli pepper. However, elephant raids were still significant. The government recognised the crop-raiding problem, especially in 2009, but villages did not receive any compensation from the government (partly discussed in Paper I).
Besides the above reasons, increases in the human and elephant populations escalated the conflict as both competed for limited space and resources. The human population in the area has increased substantially for the following reasons: natural increase, eviction of more than 30,000 inhabitants from the West Kilimanjaro Forest Plantation and natural forest, immigration due to farming opportunities in the forest plantation, and the establishment of several new villages in 2007. The elephant population has also increased which has led to an increase in crop raiding, the destruction of water facilities, threats to human life, and livestock killings.

While these factors constitute part of the explanation for the incident of elephant killings, Paper IV shows that land use changes add insight to the explanation in this case. Large areas have become protected in various ways during the last few decades, influenced by various actors. These include state agencies such as the Wildlife Division and the Tanzania National Park Authority under the Ministry of Natural Resources and Tourism, international conservation organisations (e.g. AWF), and tourism operators in the area (partly discussed in papers 1, II). Local people try to sustain a living on the remaining land, while encountering growing problems with wildlife. This has left local communities with an increasing feeling of being marginalised and disempowered, with limited possibilities to influence the situation through democratic means.

In the case under investigation, the elephant killings can be interpreted as a form of resistance against conservation practice and in particular, elephants taking over the space considered by the villagers as their legitimate area of use. Similar cases have been reported in India and Sumatra, where more than 60 elephants were found dead through poisoning by plantation workers (WWF, 2010).

In order to avoid human-elephant conflicts in the future, this study recommends that land use plans should demarcate conservation areas, settlements, and other forms of land use. In addition, active participation in decision making on wildlife conservation is required to give villagers a say in wildlife management. The provision of compensation for wildlife damage and fair benefit sharing are essential to enable local communities to perceive the value of wildlife conservation.

8. Conclusions and policy recommendations

8.1 Conclusions

In this thesis, I have employed a qualitative methodology to describe and analyse the social, economic, and political impacts of conservation on local people in West Kilimanjaro, Tanzania. The study also examines the theory and practice of the current win-win discourse advocated by external actors and employed in different categories of PAs.

The findings of this thesis do not support the win-win claims advocated in the study areas by various actors. There is a discrepancy between the successful stories presented by different actors at global, regional, and national levels, and how wildlife management is really practised in West Kilimanjaro. Instead of a win-win situation, where local people benefit from natural resource conservation and biodiversity protection, the findings indicate that conservation has worsened the well-being of local communities who live adjacent to the study areas.

The findings reveal that in recent years, the Government of Tanzania has appropriated large tracts of land in West Kilimanjaro for conservation purposes and vested the authority and control in the state or the private sector. Various actors have facilitated the conservation strategy in West Kilimanjaro, such as government conservation agencies (Wildlife Division, Tanzania National Parks Authority), international conservation organisations (the African Wildlife Foundation),

tourists companies, and donors. However, the expansion/creation process was done in a manner that did not consider the concerns of local communities.

As a result of the establishment of PAs, local communities face disproportionate impacts on their daily lives, including harassment by PA staff, lost land and natural resources, and conservation costs. The impacts affect people differently because of the heterogeneous nature of the community, and the gender division of labour. Both men and women are impacted by restrictions on access to resources, but women are impacted more, due to inequality in the gender division of labour and resources in the household. Poor men and women suffer more because they lack alternatives. Women in female-headed households are affected more than women counterparts in male-headed households, because they lack sufficient labour power in searching for natural resources, lack purchasing power, and some are elderly and have no relatives willing to help.

In the Wildlife Conservation Act of 2009, the Government of Tanzania legislated the possibility of consolation payments in the case of crop raiding, death, and livestock depredation. However, no consolation has been paid to local people in West Kilimanjaro, despite the fact that government officials have documented the costs.

Local participation and benefit sharing has been employed in these study areas, but the level to which it is practised in each case varies greatly. The benefits directed to local communities are insignificant for the local communities to see any value in conservation. As was elaborated by the case of Enduimet, the government, conservation NGOs, and other external actors claim that WMAs reflect a win-win situation, implying both environmental conservation and local development goals can be achieved; however the case does not support the win-win discourse. Limited benefits reach the local communities, and are not directed to the people who bear the direct costs of conservation. In the case of the Kilimanjaro National Park, the benefits distributed to local people are minimal compared to the park's income. In the West Kilimanjaro Forest Plantation, local people are involved and benefit through various activities in the forest plantation.

Many factors affect the level of participation and amount of benefits distributed to local people in all study areas. In Enduimet, the WMA concept has become a tool to promote conservation and has increased income for the Wildlife Division from wildlife conservation outside PAs. The initial concept of economic development that was central to WMA initiatives is largely absent. Instead, the WMA concept has become a form of accumulation by different actors who extract revenues by changing community rights over land and resources, thus negatively affecting the livelihoods of communities. WMAs can be seen as a non-coercive means of implementing the conservation interests of dominant actors.

The approach in the Kilimanjaro National Park does not consider the needs of the local people; tourism and conservation goals are pursued at the expense of local people's livelihood needs. Although the park claims to benefit local people through its outreach programme, it is evident that it operates under a closely monitored fences and fines strategy. The benefit-sharing scheme is affected by corruption, bureaucratic procedures, too few benefits, lack of transparency, mismanagement, misuse and deviation of funds, lack of decision-making power, minimal/passive participation, and a lack of communication and awareness. In the West Kilimanjaro Forest Plantation, there is a lack of decision-making power, low payment for casual labour, favouritism in allocating *taungya* plots, and no revenue sharing from the sale of logs and poles.

The level of involvement and benefits directed to local people affects the relationship between them and the study areas, as revealed in the case of the Kilimanjaro National Park. The attitudes of local people towards the forest plantation are more positive than in the case of the national park. The negative relationship between local people and the park is triggered by the costs of conservation such as crop raiding, harassment by park rangers, and restricted access to natural resources after expansion of the national park by inclusion of the forest reserve. The differences observed between the two areas are related to sectorial legal reforms that occurred in the 1990s following the economic crisis of the 1980s, and declining capacity of the central government.

Due to the huge burden of conservation, the lack of power to influence decisions about land and wildlife, and the lack of support from government and other actors to relieve the burdens, local people retaliate by killing wildlife in secret or by collective action, as illustrated by the Engare

Nairobi case. Furthermore, they feel resentment towards conservation initiatives and/or they engage in the illegal withdrawal of natural resources from the PAs, as was revealed in the case of the Kilimanjaro National Park.

All areas studied (the Enduimet WMA, the Kilimanjaro National Park, and the West Kilimanjaro Forest Plantation) share a centralised structure of decision making on matters pertaining to the management of natural resources and benefit sharing. Thus, it is extremely difficult for communities to influence or challenge the operation of the central structure. Local people lack full participation in decision making in the management of the PAs. In all three areas, participation is used as means to improve environmental conservation and as a way to accrue more revenue for the government.

The political ecology approach has proved to be useful in studying human-environment interactions – 'the way nature is understood and the politics and impacts of environmental action' (Adams and Hutton 2007, p. 147). This approach has helped to understand how the costs and benefits of conservation are distributed; how unequal power relations influence control, access to and use of natural resources at different levels; and who are the winners and losers in West Kilimanjaro. The 'webs of relation' has been useful for studying the factors behind conflicts over the land and natural resources. This approach highlights the hierarchies embedded and entangled in horizontal as well as vertical linkages, thus embracing different levels of complexity. It provides a framework for explaining more complex interrelationships (Rocheleau, 2008). Feminist political ecology has been useful in illuminating the injustices and struggles of both men and women in the process of trying to sustain their everyday life in the midst of changes in resource access and control (Rocheleau et al. 1996). The participatory framework has been useful in understanding the theory and practice of participation, the extent of local people's participation, and where participation has been used as a *means* or as an *end* in the study areas.

While the case study of West Kilimanjaro provides limited scope for scientific generalisation, the findings from this study offer insights into the complex relationship between communities and conservation. Moreover, the study findings seem to support recent studies in Tanzania on biodiversity conservation/development, stressing that participatory strategies have failed to meet

either conservation/development goals effectively. There is a mismatch between the rhetoric and practice of win-win claims advocated by actors of participatory approaches, and there is unequal sharing of the costs and benefits of conservation. To sum up, this thesis can be seen as an empirical research contribution to support these claims.

8.2 Policy recommendations

Based on the research findings and the conclusion of this study, the following are recommended:

1. A better way of sharing benefits with local people should be employed as a means to give them a sense that conservation is beneficial to their lives. The benefit sharing system should be transparent in terms of revenue collected and distributed.

2. In the Enduimet WMA, the current percentage of benefit sharing should be increased to be tangible to member villages. The CBO should receive at least 75 % of photographic tourism revenue and at least 75 % of hunting tourism revenue, while the remaining percentages should be set aside for district and central government and for technical support for the WMA. The CBO should also be given the power to collect the revenue and distribute it to other actors in order to reduce transaction and administration costs, so as to make the sense of 'community-based conservation'.

3. In the Kilimanjaro National Park:

i. The current percentage for local communities (7.5 % of the park's operating budget) is too low; in practice, less than 7.5 % is distributed. To be tangible, the share should be increased to at least 25 % of the park's tourist entry fees.

ii. Many of the criteria for benefit sharing and procedures for supporting community initiated projects are bureaucratic and cumbersome. These procedures and criteria should be simplified so that villagers may follow their application.

iii. For the past 17 years of community conservation services operation, less than half of 90 villages surrounding the park have been supported. Thus, the park should make sure it supports all villages, because its negligence of these villages might be contributing to the increase in illegal activities.

iv. The current focus on social projects should be extended to include other aspects such as capacity building for local people on conservation issues, to increase the chances of their employment in the park. The training can also focus on income generating activities. All such initiatives should be gender sensitive.

v. A buffer zone has proved to be very important for many PAs in many countries − a buffer zone enables communities to meet their immediate needs for firewood and fodder. In case the park cannot afford to render part of its area as a buffer zone, it could purchase a piece of land from government agricultural plantations to enable local communities to access natural resources. A buffer zone would reduce people's dependence on the park, reduce women's workload and improve their wellbeing. It would also reduce the illegal withdrawal of natural resources, resentment and hatred.

vi. While conservation is of national and international importance, the Government of Tanzania should not use its power to conserve and invest in wildlife while oppressing local communities. Rather, it should adhere to former land use plans (that were friendly to local people) or develop new ones that demarcate different land use areas (e.g. PAs, settlement, grazing, agriculture, investments, and other uses) in order to avoid future conservation related conflicts. The process must be highly participatory and include all stakeholders.

4. For conservation to be successful, full participation of local communities is necessary. The following should be considered:

i. Kilimanjaro National Park: The park should promote good communication with local communities, raise their awareness of conservation imperatives, and offer opportunities to engage in decision making, policy planning and implementation. This is of paramount importance to give local people some influence over environmental management. Giving local people the opportunity to play an active role as main stakeholders in PAs will provide them with the ability to affect conservation rules and regulations. As a result, they will have their concerns addressed, and will be able to support conservation goals. Local people must be included in planning committees and given real representation in Community Conservation Services. In order to have real local involvement, there need to be some structural changes and allocation of funds from the Kilimanjaro National Park to local communities.

ii. West Kilimanjaro Forest Plantation: The Tanzania Forest Services Agency should allow Joint Forest Management and local influence on decision making. This will create a sense of ownership of natural resources among local communities.

iii. Enduimet Wildlife Management Area: The government should give power to local people to collect and distribute revenues and make decisions over the running of the WMA.

5. Reducing conflicts between humans and wildlife is crucial for the long-term maintenance of wildlife populations and public support of conservation. Failure to resolve conflicts will lead to failure to achieve wildlife conservation objectives, based on the fact that local communities living adjacent to PAs play an important role in conservation issues. The following needs to be done to reduce the magnitude of the problem:

i. Game scouts, park rangers, and game officers need to respond on time when called upon by communities. In addition, collaboration between villagers and protection wardens/game scouts could reduce the enormity of the problem.

ii. To enable people to tolerate wildlife on their land, effective compensation schemes are necessary to pay individuals or their families, in full or in part, to offset wildlife damage (crop raiding, livestock depredation, property damage, human deaths/injury).

6. Misconceptions about relationships between the community and the environment need to be addressed by listening to those who are not often represented in the debate on what is best for the environment – the people who live adjacent to PAs and are most affected by conservation initiatives. Their stories can provide valuable insights into the pitfalls of conservation and the complexities of the human-environment relationship, perhaps legitimising the human's place in nature.

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Part II

Compilation of papers

PAPER I

Gendered Impacts of Wildlife Conservation in West Kilimanjaro, Tanzania

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Abstract

In most cases, the establishment of protected areas (PAs) goes hand-in-hand with an increase in conservation costs to communities living adjacent to the PAs. In this study, I use a feminist political ecology perspective to examine gendered impacts of the expansion of the Kilimanjaro National Park (NP) and the creation of the Enduimet Wildlife Management Area (WMA) in Tanzania. Feminist political ecology may be a useful approach to illuminate the impacts associated with conservation on gender and further consequences in everyday life. The findings reveal that the PAs impact both men and women, but the most significant impact is felt by women due to inequality in the gendered division of labour and resources at the household level. Poor men and women, together with most women in female-headed households, suffer more from strong restrictions on access to PA-based resources than other people as they have limited alternatives. The benefits of PAs in compensating for resource restrictions, were found to be modest and do not meet the needs of predominantly poor men and women. The majority of local people collect resources from PAs illegally to meet their livelihood needs, despite restrictions on resource access. This study concludes that, instead of PAs paying attention to people's relevant livelihood needs and improving their wellbeing, they have unfortunately worsened their situation.

Key words: conservation, feminist political ecology, gendered impacts, livelihoods, protected areas

Introduction

Most of the world's poor populations (an estimated 1.6 billion people) rely heavily on non-cultivated natural resources for their income and household use (Roe and Elliot 2006). In Africa, approximately two-thirds of 600 million people depend on natural resources for cash and/or subsistence income (Timko et al. 2010). Given such widespread reliance on natural resources, there is much pressure to conserve more areas, including land used by small-scale farmers and pastoralists (Kikoti 2009). This pressure is linked to growing recognition of the importance of protected areas (PAs) in conserving biodiversity richness, promoting ecosystem services and mitigating against climate change, as well as increasing rate of global deforestation, preventing species extinction, and conserving land and water resources (Brooks et al. 2009).

In modern times, the number of PAs had grown from less than 1,000 in 1940 (Veit and Benson 2004) to over 161,000 in 2010, representing over 13% of the world's land surface area (UN MDG 2010). Almost all the strictest categories of PAs (categories I and II) under the International Union for the Conservation of Nature (IUCN) are found in the developing world (Naughton-Treves et al. 2005). Governments, conservation organisations, and private entities have established PAs aimed at promoting national development and public interest, adopting conventional exclusionary approaches; however, there is minimal/ no consideration of the implications for the people who depend on these areas for their livelihoods (Scherlet al. 2004).

The majority of Tanzanians (75%) live in rural areas where they rely heavily on natural resources for their livelihoods (Nelson 2004). For instance, over 90% of inhabitants rely on wood and other vegetation to provide domestic energy (Johnsen 1999; URT 1998a). Nevertheless, about 40% of Tanzania's land area is under conservation measures (Benjaminsen and Svarstad 2010), coupled with control and access restrictions.

Although many PAs generate economic benefits, much of these benefits are enjoyed by national and international elites, while most of the conservation costs are borne almost entirely by the local people, particularly poor and politically weak groups (Adams and Hutton 2007; West et al. 2006). Previous studies have found that local people are disempowered

when the control of natural resources is taken over by government or private investors (Borrini-Feyerabend et al. 2004). In most cases, local communities are left without alternatives, which in the long run, results in squatting, encroachment and poaching to keep them alive (Colchester 2002). Furthermore, restricting access to resources such as firewood is reported to be problematic (Coad et al. 2008; Vedeld et al. 2007), as wood provides about 70% of the energy consumed in Africa (Coad et al. 2008).

While many studies have focused on the livelihood impacts of PAs on local communities (e.g Clements et al. 2014; West et al. 2006), some studies have failed to understand communities as heterogeneous entities composed of multiple actors with different and dynamic interests (Agrawal and Gibson 2001). Such heterogeneities imply that different actors may be impacted differently by conservation measures. Gender is a particularly important category to examine because it cuts across all other categories. Dependence on natural resources tends to be gender specific due to existing gender divisions in terms of labour, rights, and responsibilities (Rocheleau et al. 1996). For example, women in rural areas in Tanzania collect firewood, fodder, and wild foods mainly for household use, while men rely on natural resources such as timber, animal protein, and poles, mainly for sale (Asimalowo and Lipsanen 1998). Research in rural Tanzania has found that women in some areas walk up to 10 km a day collecting and carrying firewood with loads of up to 38 kg (Practical Action 2012). Men face additional challenges such as guarding crops against raiding by wildlife (Barua et al. 2012), and the loss of income sources.

There are several studies in various parts of the world that have investigated the impacts of conservation practices on gender roles (e.g. Ogra 2008; Mahat 2006; Clancy et al. 2003; Sarin et al. 1998). In Tanzania, particular studies have focused on gender and natural resources. For instance, Songorwa (1999) investigated gender participation in natural resource management; Makalle (2012) studied gender-specific utilisation and conservation of natural resources; Mhache (2014) investigated gender equitable entitlements of coastal resources; and Kaarhus et al. (2005) discussed women's land rights in Tanzania. Very few studies however, have attempted to document the magnitudes of these impacts on men and women, particularly when they try to exercise their former (before the establishment and expansion of PAs) resource user rights.

This study therefore investigated how the creation and expansion of two PAs in Tanzania have impacted men and women in different ways. In recent years, the Government of Tanzania has appropriated large tracts of land for conservation and vested the authority and control of these areas in the state and private sector. In West Kilimanjaro area, the Kilimanjaro National Park (NP) was expanded in 2005, and the Enduimet Wildlife Management Area (WMA)[1] was established in 2007. These PAs are subject to restrictions on access to natural resources, hence involving considerable risks for women and men who try to access such resources. Besides access restrictions, there have also been increases in conservation costs to local communities. I argue that instead of PAs improving the livelihoods and wellbeing of men and women, they have threatened and exacerbated their situation. Men and women are regarded by PAs staff as being destructive and a threat to conservation practices, rather than as major stakeholders in the conservation process (Mariki 2013).

The reasons for selecting the two protected areas in this study are that they are located in the same ecosystem and they were created or expanded in recent years. The creation of these areas is associated with changes in natural resource control and access rights. Investigating the impacts of such PAs on local men and women can shed light on injustices in the form of restricted access rights, and provide evidence that may lead to their reduction if not their discontinuation.

The following section provides a brief discussion of feminist political ecology, followed by the research methodology adopted for this study. Thereafter, the findings and discussions are presented, followed by conclusions.

The feminist political ecology perspective

Feminist political ecology (FPE) emerged in the 1990s as a subfield of political ecology, building on previous work by feminist scholars and feminist theorists (Elmhirst 2011; Nightingale 2006; Rocheleau et al. 1996). The approach has extended 'the multiple scale analysis of environment and power in political ecology to gendered relations both within and

[1]WMAs are portions of village land set aside for conservation, with the intention of generating revenues from tourism (URT 1998b).

beyond the household, from individual to national scales' (Rocheleau 2008: 722). FPE critically investigates concepts such as community, household, homogenous conditions, and shared interests (Rocheleau 2008). Gender is considered to be a critical factor in 'shaping resource access, and control, interacting with class, caste, race, culture and ethnicity to shape processes of ecological change, the struggle of men and women to sustain ecologically viable livelihoods, and the prospects of any community for sustainable development' (Rocheleau et al. 1996: 4-5). In particular, access to and the control of natural resources are structured by power relations and authority that are embedded in formal (e.g. the state, and global rules and regulations) and informal (e.g. social norms) institutions at local, national and international levels (Ahmed 2001). Access to natural resource can be viewed spatially, across the landscape, or by scale, in relation to hierarchically arranged political economic structures that influence local use (Peet and Watts 1996). In order to understand differential control over resources, power hierarchies, and relationships between men and women, feminist researchers have argued for a thorough examination of intra-household gender dynamics because the household is a complex arena and a very important institution, in which power and resources are bargained and distributed (Ogra 2008).

As can be expected, the main emphasis in FPE is skewed largely towards a focus on women. For example, according to Rocheleau et al. (1996), the term 'gender' seems to be used synonymously with 'women'. Nightingale (2006) warns against the danger in such a 'conceptualization of falling back into essentialist understandings of women and their natural connection to the land' (p.169).

The term 'gender' does not only imply 'sex, a set of the genetic, hereditary, and biological characteristics that structure men and women' (Anoko 2008:11), but rather, the socially constructed relations and differences between men and women that define roles, identities, entitlements, and perceptions. These relations frame the ownership of assets and access to resources, and affect structure and decision making within families, communities, and institutions (Anoko 2008; Espinosa 2010). The situation varies depending on geographical area, context, and time period, and can be negotiated based on an individual's position within hierarchies such as age, class, seniority, or ethnicity, own life cycle and agency (Espinosa 2010).

In the field of biodiversity conservation, considering a gender perspective entails understanding and incorporating the differences and relations between men and women into conservation initiatives (Anoko 2008). This includes consideration of the different roles, opportunities and rights of men and women in terms of access, use, conservation and management of natural resources (Anoko 2008). It also involves understanding the various ways in which conservation problems affect both men and women (Anoko 2008).

The terms 'women' and 'men' do not refer to a single homogenous group, but rather to actual material differences among men and women in relation to nature and the environment (Agarwal 1998). For instance, the position of women or men in a nomadic tribe might be completely different to those in a sedentary tribe. It is crucial to examine factors such as class, ethnicity, age, and socio-cultural affiliation when studying differences between men and women in relation to the impacts of conservation.

Feminist political ecology is useful in this study to illuminate gendered relations both within and beyond the household, as well as the impacts of PAs on gender roles, particularly in everyday life.

Study area

This study was conducted in three villages bordering the Kilimanjaro NP (in the Siha Magharibi Division) – Engare Nairobi, Matadi and Namwai; and three villages bordering the Enduimet WMA (in the Enduimet Division) – Tingatinga, Olmolog and Sinya. These villages are located in the West Kilimanjaro basin, in the Siha and Longido districts of the Kilimanjaro and Arusha regions respectively. The altitude of the area is 1,230 to 1,600m above sea level. The area experiences bi-modal rainfall. The long rains last from March to May, while short rains fall from November to December. In 2009, the population of the Siha and Longido districts was 121,000 and 96,244 respectively, while that of the three study villages of the Kilimanjaro NP was 23,411 and that of the Enduimet WMA was 12,922.

Kilimanjaro National Park

The Kilimanjaro NP was established in 1973 with an area of 753.81km^2. The park is surrounded by the Kilimanjaro Catchment Forest Reserve that was established in 1940

covering an area of 1,078km^2, with a boundary length of 238km, encompassing three districts (Hai, Moshi Rural, and Rombo) in the Kilimanjaro region. There is a Half Mile Forest Strip (HMFS) with an area of 87.69 km^2 and a width of 0.8km, around most of the forest reserve that was approved in 1941 by the British colonial government as a buffer zone between the forest reserve and the villages on the lower slopes of the mountain. This buffer zone provides local people with wood and non-wood forest products (Kivumbi and Newmark 1991)[2]. Between the forest reserve and the villages in northwest Kilimanjaro, there are patches of forest plantations (60.19km^2) established in 1954 by the British colonial government and expanded after independence in 1961 for the production of timber and poles (TASONABI 2001). The forest reserve borders 90 villages, with 70 villages being adjacent to the HMFS.

Before 1998, forests in Tanzania were managed centrally by the Forest and Beekeeping Division (FBD) under the Ministry of Natural Resources and Tourism. Their management was ineffective, thus leading to continued deforestation. In response to the situation, a new forest policy was released in 1998. It promotes, among other things, the involvement of local people in the management of and benefits arising from forest products (URT 1998a). Based on this experience of involving local people, Joint Forest Management (JFM) was introduced to the Kilimanjaro Catchment Forest Reserve, to allow access to forest resources. In 2001, the United Nations Development Program/Global Environmental Facility Small Grants Program conducted an aerial survey that revealed major threats to Mt. Kilimanjaro (Lambrechts et al. 2002: 5). The survey report initiated a process to include the forest reserve in the Kilimanjaro NP (Agrawal et al. 2003; UNESCO 2011). Thus, in 2005, the forest reserve (formerly managed by the FBD) was officially gazetted as part of the Kilimanjaro NP (GMP 2006).

The three selected villages in the Kilimanjaro NP are located close to one of the routes leading to Mt. Kilimanjaro, called Londros. They are occupied by the Chagga, Safa and Pare tribes, and other small ethnic groups. Most villagers are small-scale farmers, small-scale livestock keepers, small-scale business people, casual labourers, and tourists' porters. Some people practice the *taungya* system[3] in the forest plantation, and some are labourers in the

[2]The north western side of the forest reserve, including the study villages, does not have a HMFS.

[3]*Taungya* is an agroforestry system in which short-term food crops are grown in a forestin the early years of tree growth (Mongo 2007).

forest plantation and/or large-scale farmers. The villages border the Endarakwai Ranch, the National Ranching Company, the Kilimanjaro NP, the West Kilimanjaro Forest Plantation, and agricultural plantations. In the private Endarakwai Ranch and the Kilimanjaro NP, people are prohibited from harvesting natural resources such as fodder, firewood, and plants for traditional medicine.

The division of labour in these villages is strongly gender based. Women are responsible for all domestic tasks such as caring for children, collecting fodder and firewood, fetching water, preparing meals, and farming. Young girls assist their mothers with household chores and farm tasks. Men concentrate mainly on income related activities such as casual labour, employment, farming, the timber/logs business, and assisting tourists as porters. Due to unequal power relations between men and women, women are forced to do activities that do not involve cash benefits, such as community work, and household chores.

Moreover, women's participation in decision-making and village leadership is limited to village government membership and not top leadership. The village chairpersons and executive officers in the villages studied are all men. In the village government there are 10 female members out of 25 in Engare Nairobi, 7 out of 25 in Namwai and 12 out of 25 in Matadi. However, some women stated that although they are village government members, their views are often not taken seriously and the sole decision makers are men. Most household heads are men[4] and very few women are public employees.

(Figure 1 about here)

Figure 1: A map locating the study villages in West Kilimanjaro, Tanzania

Enduimet Wildlife Management Area

The Enduimet WMA is a community-based conservation area that covers 742,275km^2. It was established following a wildlife survey report in 1997 that revealed a decline in the wildlife population due to bush meat 'poaching' (Nelson 2007). A Community-based Organisation (CBO) was established in 2004 to manage the area, with 27 members (9 women and 18 men).

[4]In this study a 'household head' refers to a person who controls the maintenance of the household and exercises the authority to run the household.

The Enduimet WMA is divided into three management zones by the Monduli District Authority in order to regulate land use. These zones are the Olkunonoi-Kitendeni Zone (a wildlife corridor), the Ronjoo Zone (an area for economic and tourism activities covering 80% of the WMA), and the Embarnati Zone (settlement area) (RMZP 2005).

The Enduimet WMA acts as the migratory route to various PAs such as the Kilimanjaro, Arusha, and Amboseli national parks. Due to the movement of wildlife in the region, cases of wildlife damage are common, such as crop raiding, killing of livestock, and threats to human life in villages located in close proximity to these PAs.

The three selected villages in the Enduimet WMA are occupied mainly by the Ilkisongo Maasai who are pastoralists and agro-pastoralists. The Maasai are 'well known for their strong socio-cultural practices and norms that govern all dimensions of their community' (Ngoitiko 2008:3). They are very patriarchal, with women generally being regarded as inferior, without 'property ownership rights, access to social services, and the power to make decisions on their own lives' (Ngoitiko 2008: 2). Men own the livestock and can make decisions about selling them and spending the money without the involvement or consent of their wives (Interview no. 19, Sept. 2009).

The division of labour in these villages is also gender based. Men are responsible mainly for livestock grazing and protection. Women are responsible for all domestic tasks, including building *bomas*(huts), milking cows, collecting water and firewood for domestic use, cooking, looking after children, growing crops in small fields for basic food supply, partly taking care of small livestock, and preparing young girls for marriage (Kipuri and Ridgewell 2008). Some women also make bead jewellery which they sell to tourists, markets or wholesalers. Very few women engage in small-scale business, politics, or public employment.

Employment and leadership are considered to be activities mainly for men. The Maasai elders are highly respected, and are considered to be decision makers. In all the villages studied, the chairpersons and village executive officers are men. In the village of Sinya, for example, only six members out of 26 in the village government are women. Men generally do not associate

with women, but uncircumcised boys may mingle with women. Most men who own many cows practice polygamy because they are capable of paying a 'bride price' of up to 40 cattle.

In most Maasai communities the female literacy rate is lower compared to their male counterparts. This is because many girls are forced into early marriages, have heavy workloads, and lack support for education. Many young women do not generally attend meetings. Due to strong cultural constraints, very few women, mostly the 'modern' and non-Maasai women, are confident enough to speak during group meetings in the presence of men.

Methodology

Fieldwork was conducted in different periods between 2009 and 2014. Interviewees were chosen purposively based on gender, living proximity to the PAs, and dependence on PAs. Data were collected on the gender-based division of labour, power relations, access to resources at the household level, livelihood activities, access to natural resources, costs of conservation, benefits received from the PAs, and livelihood alternatives. Interviews were conducted in Kiswahili, a language in which most people in the study area are fluent. The interviews involved 41men and 50 women. The sample size was limited when further data no longer added new insights in answering the research questions. The interview sessions lasted between one and two hours. Participants were encouraged to express themselves freely, and they were guaranteed anonymity and confidentiality. Although I used a Maasai man as a research assistant to assist me when interviewing Maasai men, very few Maasai men felt free to discuss gender matters.

Six focus group discussions (three from each PA) were conducted, generally with 6 to 10 people, in order to gather various viewpoints on how men and women are impacted by PAs. This method was mainly a triangulation tool used to determine the representativeness of the answers obtained during the interviews. At first, the focus groups included both men and women. However, in these groups, few women felt free to express their views in the presence of men. Thus, in order to provide an opportunity where both men and women could express themselves freely, I conducted groups that involved men alone, women alone, and both men and women. Separating men and women enabled me to understand, for instance, how traditional power relations have prevented women from airing their concerns; how leadership

dominated by men has curtailed women's development such as training and employment; and why women have limited power over household resources. Nevertheless, some women were still reluctant to express their concerns in groups where powerful women such as political leaders were present. In these cases, I followed up with key informants or/and other group discussions.

I attended a women's meeting in the village of Tingatinga where I learned and observed various issues surrounding women and their environment. A few women from wealthy families dominated the meeting. I also attended a village assembly in Engare Nairobi, where I gained insights on relationships between men and women, and conservation issues. At this meeting, some women contributed, although most of the discussions were dominated by men. I further engaged in participant observation and informal interviews in order to learn about local people's everyday activities in relation to the PAs.

Finally, I reviewed relevant documents and several other studies that have been conducted in the area. I used a field notebook to record information, and where permission was granted, I used a tape recorder. After data collection, all recorded data were transcribed, later organised into categories, and grouped into themes. The identified core themes were linked to the aims of the study, and these served as the basis for my findings and discussion, presented below. Statements supported by appropriate quotations from the interviews are provided where necessary, to elucidate the particular theme.

Impacts of the expansion of protected areas on gender

The analysis of field data revealed five main themes: impacts on access to natural resources, impacts associated with illegal entry and/or withdrawal of natural resources, impacts on human-wildlife conflicts and living costs, impacts on relationship between communities and protected areas' staff, and livelihood alternatives. A description and discussion of each theme is presented in the following sections and the summary of the impacts is presented in Table 1.

Table 1 about here

Table 1: Overall gender impacts associated with the expansion of the Kilimanjaro NP and the creation of the Enduimet WMA

Impacts on access to natural resources

Following the inclusion of the forest reserve in the Kilimanjaro NP, the reserve became a 'no use', 'no entry' zone. Access to, and the withdrawal of natural resources was prohibited, as one man explained:

> When we were under Forestry and Beekeeping Department (FBD) we had a very good system. If a villager wanted firewood for cooking, we paid US$3 for a tractor full of firewood. We were also allowed to cut grass, collect firewood, and some other forest products twice a week. All are now restricted. (Interview no. 1, Nov. 2009)

The change in user rights was made without the full involvement and awareness of all community members. It was a top-down exercise, with no space for representation of the ideas and interests of the communities. The park staff did conduct random household surveys, in which they talked to household heads who were mainly men (cf. NBST 2002).Unclear user rights led some women to continue with their former routine of withdrawing resources from the forest, as they had done under the previous FBD regime (Interview no.4, Nov. 2009). Several studies have revealed that almost all decisions concerning the management of wildlife resources in Tanzania are made by the central government, without consultation with the affected local communities (e.g. Mariki 2013; Nelson 2007; Neumann 2004).

The creation of the Enduimet WMA has restricted men and women in terms of the amount and type of subsistence natural resources they may collect, and the numbers of livestock that may graze in the area. For example, grazing high numbers of livestock (conducted mainly by men[5]) is restricted in the WMA. Charcoal burning, the collection of firewood for sale, farming, tree cutting, and sand or gravel extraction are all prohibited to both men and women. Only collection of dry twigs and branches (done mainly by women) for firewood is allowed for household purposes.

Although the land devoted to the WMA belongs to villagers, men and women do not have any power to negotiate on resource use in the WMA. This indicates that the government has stretched its powers and authority to control what are claimed by government to be 'village

[5] The Maasai keep large numbers of livestock; thus they practise open grazing.

resources'. The women interviewed claimed to have become victims when restrictions were imposed because they lack alternative income sources (Interviews no.38, 2009; 43, 2012).

Men and women are affected differently in terms of access to natural resources, according to their economic situation. For instance, in Kilimanjaro NP, the well-off women are less affected by resource restrictions because they can afford to buy fodder, firewood or rejected timber from industries, which is not the case for the poor counterparts. The poor men and women expose themselves to more risks as they enter the forest illegally to collect fodder and firewood for sale or for household use (Interview no. 18, 2009). West Kilimanjaro has several sawmills (e.g. Tanscan Timber Co., Fadhila Sawmill, Vijana Sawmill) due to the presence of the West Kilimanjaro Forest Plantation. In the sawmills, timber splitting is done twice a year. The owners sell the rejected timber to local people for activities such as cooking, as stated by one well-off woman: "I don't go to the forest because I don't want to fight with park rangers. I buy the rejected timber for cooking from that sawmill!" (Interview no. 17, Nov. 2009). However, because timber production in the plantation is low (Interview with plantation management, 2012), rejected timber is very expensive and affordable by few people. The villagers claim that the rejected timber is not readily available because business people purchase it and sell it in nearby towns. One full truck of rejected timber was sold for about US$ 200 (Interview with plantation management, 2012).

Women in female-headed households are affected more by resource restrictions than women in male-headed households. This is because many female-headed households lack sufficient labour power, relatives willing to help, and some are old and sick and thus have less energy. As one old widow expressed it: 'I cannot walk long distances, I might have food but lack firewood to cook it…' (Interview no. 43, 2012). Another woman stated that: I have a relative willing to help but the help is occasional... (Interview no. 44, 2012).Very few such women can afford to buy fodder and firewood, and thus many walk longer distances in search of these resources. Consequently, this situation increases their workload, and limits their time for household chores, participation in income generating activities, and educational or training opportunities (cf. Cecelski 1995; Clancy et al. 2003).

Some families in the vicinity of the Kilimanjaro NP have their own plots that provide fuel wood and fodder. However, women are not allowed to harvest any tree without their husband's permission. They may only access those branches that are unfit for sale, after the harvest.

Impacts associated with illegal entry and/or withdrawal of natural resources

Firewood is the main source of energy in the villages studied (cf. Monela 1989). Mongo (2007) found that about 92% of households in three districts (Moshi Rural, Hai and Rombo) adjacent to the Kilimanjaro NP depend on firewood as their main source of energy. The buffer zone (half-mile forest strip) provides 64% of firewood; while own plots, the buffer zone, and the forest reserve provide about 61% of fodder (Mongo 2007). These findings show that people from the three districts enter the forest reserve to supplement their collection of forest products, despite having the buffer zone. The consequence of a lack of a buffer zone in West Kilimanjaro is high and exposes men and women to more risks when compared to local people in other parts bordering the Kilimanjaro NP. Possible explanations for the lack of a buffer zone in West Kilimanjaro might be the presence of agricultural plantations bordering the natural forest dating from the 1950s. The villages that border the plantations were established in the 2000s. During inclusion of the forest reserve into the Kilimanjaro NP, the park promised to demarcate a buffer zone for local people, but the promise seems improbable.

The findings of this study show that, if they access forest products from the Kilimanjaro NP, men and women run the risk of severe punishment from park rangers. Women's gender roles bring them into contact with the PAs often and thus they are at a high risk of violent action from park rangers. Women in the Namwai village for instance, informed me that there is no dead wood in their village; they sometimes have to walk deep into the forest and are afraid of being raped or tortured by the park rangers (Interview no.12, Nov. 2009). Some women claimed to be harassed, beaten, raped, had their tools confiscated by park rangers, and some suffered a miscarriage, as one stated: The problems we are facing are rape and beatings when we go to the forest to collect firewood and fodder. Three women went to the forest and they were raped... (Interview no.2, Nov. 2009)

These claims are not reported to the village government because victims know that entering the Kilimanjaro NP is illegal. The village chairperson asserted that: "I heard those claims but no one so far has reported to me because they are afraid. Nothing we can do, there is so much harm …" (Interview no.3, Nov. 2009). However, the Kilimanjaro NP Protection Warden denied such claims: "…there is no such a thing, it has never happened!" (Interview no.6, Dec. 2009).

It is not only women who suffer, but men are also sometimes severely beaten by park rangers. No man without a permit found in the forest by park rangers would leave unbeaten (Interview no. 15, Nov. 2009). Even if a victim surrenders, it was reported that park rangers keep on beating him, as one man stated:

> About a month ago (in 2009) a man was caught in Kilimanjaro NP trapping an animal…. They beat him until he became unconscious. They used knives to cut his feet. It was a very brutish action... When they beat you it is not a joke! (Interview no. 9, Nov. 2009)

After such beatings, the victim is taken to court; and depending on the magnitude of the offence, he can be imprisoned or fined.

Consequently, men have developed a fear of going into the forest because they are not sure whether they will come back alive or not, as one man expressed:

> Men were afraid of grazing livestock in the forest during the drought period because some people were found dead. There was not enough evidence of who killed them. This year [2009] one young man was killed and the body stayed two weeks in the forest. We went and collected the bones. The park rangers took the bones, and they have never returned them. They said they were going to check them in the laboratory. Then another one was killed, but there was no direct evidence. It is terrifying! (Interview no. 13, Dec. 2009)

The above findings indicate that park rangers are involved in unethical and improper implementation of protection activities, and they even violate human rights. Similar excessive use of force against local people has been reported by Pettersen (2010) who recorded that park rangers shot and killed a person in the Kilimanjaro NP. Elsewhere in Tanzania, several

allegations of harassment of local people in the process of the expansion and establishment of PAs have been made (e.g. Benjaminsen and Bryceson 2012; Adams and Hutton 2007; Brockington and Igoe 2006; Neumann 2004). Similar findings were reported in India, in Uttarakhand (Ogra 2008) and Gujarat (Sarin et al. 1998), and in Nepal (Mahat 2006).

Men are often killed because they fight back in the event of torture. Instead of reasonable force, park rangers respond with excessive force. In addition, there is evidence of the practice of the inherited protectionism philosophy of 'shoot and kill', where traditional hunters pay with their lives. Veit and Benson (2004) exposed a case in the Serengeti NP in Tanzania, where park rangers found 19 traditional Kurya hunters in the park; ten escaped, one was wounded, and eight were executed (See also Neumann 2004).

In the Enduimet WMA, notably in the villages of Tingatinga and Ngereyani, both men and women go into the bush to burn charcoal. When game scouts find them, their kilns are destroyed, their tools are confiscated, and they are later punished by the village government according to bylaws (Interview no. 23, Sept. 2009). Several studies in Africa (e.g. Amanor et al. 2005) reveal that it is mostly men who conduct charcoal burning. This study found that both men and women participate in the practice, with men's kilns being bigger (50-60 charcoal sacks) than those of women. Men who participate in charcoal burning are mostly outsiders with only a few being from the villages. Women burn charcoal as an economic alternative to supporting their families, mainly after severe droughts or crop raiding by wildlife (Interview no. 23, Sept. 2009). Charcoal is sold mainly to neighbouring centres such as Namanga, Oldoinyosambu, Sanyajuu and Bomang'ombe. Charcoal burning is claimed to be labour intensive and time consuming, yet it offers very low returns. This is because it holds risks, and sometimes men and women are injured in the process of fleeing from game scouts. Charcoal burners in the area are considered to be a nuisance and enemies of the environment. In the interviews I conducted, women avowed to know the effects of burning charcoal on the environment, but several of them said that they have to continue because viable alternatives are lacking (Interviews no.21&23, Sept. 2009).

The Enduimet WMA zoning system (RMZP 2005) restricts the numbers of livestock allowed to graze in the area and livestock entry into tourist investors' blocks. Such restrictions have

caused local people to think they made a mistake in accepting the WMA concept, and men are querying the reason for imposing these restrictions (Interview no. 20, Sept. 2009). However, according to the data gathered from interviews, there were no reported cases of men being caught while grazing livestock illegally in the WMA.

Impacts on human-wildlife conflicts and living costs

The creation and expansion of PAs have created a conducive environment for wildlife to thrive. In both PAs in this study, wildlife movements have increased, thus exacerbating problems for local people, as one woman expressed: "Wild animals destroy our crops so much. If you dare to say or complain they tell you, you are living in wildlife corridor. ...We are not allowed to kill them or beat them" (Interview no. 18, March 2010).The wildlife authorities do not allow people to kill crop raiding animals or depredating animals, as one woman lamented:"…. They have stopped us from killing the wild animals when they eat our crops or kill our livestock, how does the CBO expect us to survive?" (Interview no.21, Sept. 2009). Lerkelund's (2011) study in the Kilimanjaro NP yielded similar findings, namely that park rangers forbade local people to chase wildlife away from their farms because the animals would get high blood pressure. This attitude reflects a conservation bias in which biodiversity conservation is afforded higher priority than the needs of the local people.

Men and women share responsibility for guarding their farms during the night from crop raiding wildlife, although most of the responsibility lies with men. Women interviewed reported that crop raiding affects family wellbeing and it affects them more than men as one stated: "...at home when a child is hungry it cries to the mother for food, not to the father" (Interview no. 29, Sept. 2009). The effects of crop raiding differ from one family to another. This is because some families have farming plots in the forest plantation that are rarely affected by crop raiding animals, and some families have money to purchase food.

As wild animals move between the PAs, they not only raid crops, but also kill people and livestock. There have been several reports of people killed by wildlife, mainly men and mostly by elephants in the evening or at night. For instance, from January through August 2009, in the Enduimet WMA, three men were attacked by elephants, and two by buffaloes.

This reduces freedom of movement when men may need to stay outside later, for various reasons such as guarding crops and livestock grazing (Focus group, Nov. 2009).

The depredation of livestock in the area reduces the economic status of men. For instance, from January to August 2009, and from July to October 2010, 298 livestock were killed in the Enduimet WMA, and between March and August 2011 about 106 cattle in the village of Olmolog were killed by hyenas (ranking the highest), leopards, and lions. The increase in wildlife numbers has caused competition with livestock and people for water; this affects men because of grazing their livestock, and women fetching water for domestic use. Wildlife species like elephants have increased the workload of women because when they destroy water pipes, women have to walk longer distances to fetch water.

In terms of increased living costs, the price of firewood has increased tremendously because the sellers (poor men and women) collect firewood in harsh conditions (Interview no.11, Nov. 2009). The lack of availability of these products has increased the time spent and labour required of individuals seeking such resources. Women in the village of Engare Nairobi claimed to use up to five hours per day searching for firewood and fodder which affects their back and chest (Interview no.7, Dec. 2009). Similar findings have been reported in Nepal where women walk over 20 km per journey searching for firewood (Mahat 2006).

The Wildlife Act of 2009 provides for consolation payments in case of crop raiding, death, and depredation of livestock (URT 2009). However, until 2014, no consolation amounts had been paid to local people in West Kilimanjaro, nor had any mechanisms or policies been put in place to mitigate negative impacts. Local people wonder why they are not being compensated for conservation costs, as one woman questioned: “Do elephants have owners? Why we are not compensated when wild animals kill people and livestock, eat and destroy our crops? The problems remain to our children and us...” (Interview no. 28, Sept 2009). The government officials in the region and district offices claimed that the consolation payment process needs to pass through several levels of bureaucracy, which delays the outcome.

Impacts on relationship between communities and staff in protected areas

The inability to access natural resources, harassments and punishments, and the lack of positive interaction between PA staff and communities, has led to hatred and enmity between them. Both men and women interviewed perceived PA staff as their enemies, as one man stated: "...Kilimanjaro NP work like military army...we see them as our enemies…there is nothing good coming from them. They are only increasing our problems..."(Interview no. 8, Aug. 2011).

The park rangers ignore village leadership and handle matters themselves when they catch someone in the forest. Female victims are harassed, and males are taken directly to the district court after being beaten. The village government claimed that they obtain information on arrested individuals only later, from the affected family (Interview no.14, Aug. 2011). Although the park has promised to involve local people in park management (GMP 2006: 125), this is not happening in practice.

Due to enmity and resentment, men and women oppose conservation goals by increasing their illegal activities, and sometimes even collaborating with poachers (Interview no.14, Aug.2011). For instance, in November 2014, Maasai pastoralists burnt 16 tourist tents to ashes, and 9 vehicles in the Endarakwai wildlife ranch due to conservation related costs (Interview no.1&2, Nov.2014). In 2009, villagers in Engare Nairobi protested against conservation initiatives by killing six elephants by forcing them over a cliff (Mariki et al. 2015). Similar cases have been reported, for example, in Indonesia (Li 2007), Guatemala (Meyerson 1998), and Kenya (Western1994).

In the Enduimet WMA, both men and women claimed to have been forced by the government and the African Wildlife Foundation to consent to the establishment of the WMA. They see the WMA as a form of exploitation. Both men and women expressed their hatred on game scouts as a result of the punishments they endure when they are caught in the WMA. They see the WMA as something that belongs completely to the government, as one man stated: "the government claimed to give us authority over WMA but what is happening is the government managing the WMA. We are complaining − we don't know where to go" (Focus group, Sept. 2009).

Who is more impacted by protected areas?

As described above, both men and women suffer the consequences of restrictions on access to natural resources. However, women are more affected, due to inequality in the division of labour and resources at the household level (cf. Ogra 2008; Sarin et al. 1998). Several interviews revealed that most men do not bother about issues pertaining to household energy requirements as much as women do: "…men do not think about challenges we encounter to get firewood... When they arrive home they just need cooked food, and they might be angry if you delay serving food" (Interview no. 52, Aug. 2011). Established traditions, especially in the Maasai community, do not allow men to assist women in activities such as collecting firewood, fetching water, or preparing meals.

Firewood collection is not only labour intensive, but it puts women at risk of violent acts, sexual assault, backache, exhaustion, falls and mental stress. Moreover, the activity is time consuming which restricts women's participation in education, development activities, decision-making activities, and having the opportunity to rest. In some instances, the burden placed on girls keeps them out of school, hampering their education, thus exacerbating gender inequalities. On the other hand, costs incurred by men such as fines, imprisonment, beatings or death, affect the welfare of the whole family. The family is also affected when there are delays in the provision of food, or meals are skipped as a result of time spent by the women searching for firewood.

The increase in wildlife numbers due to successful conservation measures means that wild animals tend to move outside the PAs. As a result, they kill people (mostly men), and livestock which affects the economic status of men. Wild animals also raid crops, which affects both men and women. The destruction of water infrastructure affects both men and women, but again, women suffer significantly since the collection of water for all domestic activities depends on them.

Well-off men and women suffer less compared to their poorer counterparts. They are capable of buying fodder and firewood, which is not an option for the poor. The poor men and women are forced to spend more time and labour in collecting natural resources, which affects their health and restricts their time available for participation in economic activities or

training/educational opportunities (cf. Cecelski 1995; Clancy et al. 2003). Households with farming plots in the forest plantation have access to firewood during pruning and harvesting periods. Also, families with bigger farms can plant trees, thus increasing their possibilities for access to firewood.

There are various differences between the conditions and restrictions in the two PAs. In the Enduimet WMA, about 26 Maasai men are employed in tourist camps, and 45 as game scouts. Some women sell handcrafts. In addition, women are allowed to collect firewood for household use. For the period of four years (2008 to 2011), each village received a share of tourism revenue for community development projects of about US$9,851. In the Kilimanjaro NP, the park has not employed any villager in the three selected villages. The park's outreach programme supported only the Matadi Secondary School in 2002/03 to construct a water intake and storage tank worth US$13,571. However, natural resource access in the park for livelihood purposes is completely prohibited.

Restrictions: Are there alternatives?

In the case of both PAs investigated in this study, resource extraction continues illegally, despite its many dangers, as one interviewee asserted: " is it possible for a poor person to live next to the forest without a buffer zone and watch the forest without resource extraction? …Obviously resource extraction will occur illegally ..." (Interview no. 9, 2011). Another stated without hesitation: "We still collect firewood, fodder and traditional medicie from the forest clandestinely … because there is no other solution" (Interview no. 19, Dec. 2009). The charcoal burning continues to be conducted illegally in the Enduimet WMA. Also, 'illegal hunting' is still practised in some villages, mostly by non-Maasai men, as a source of finance and protein (Interview no. 50, Nov. 2009).

Firewood is provided freely by the Kilimanjaro forest plantation during the pruning and harvesting season, but it benefits only those people with plots in the forest plantation, and then only during the short periods when pruning or harvesting is conducted. Some people who have an income manage to buy fodder and firewood. Others supplement firewood with maize husks, sawdust and kerosene for the provision of household energy.

Lack of subsistence alternatives, has led many families to continue practising farming regardless of crop raiding animals that pose a significant constraint to farming attempts. In order to protect crops, people still guard their crops at night and sometimes kill problem animals (Interview no. 20, Nov. 2009). Furthermore, the increase in costs as a result of conservation, and lack of livelihood and subsistence alternatives, has sometimes led local people to resist conservation initiatives, using overt or covert methods (See Mariki et al. 2015).

Conclusions

This article has used insights from feminist political ecology to examine gender impacts associated with conservation through land appropriations. The findings have revealed how changes in resource access and control, as a result of land appropriation by powerful actors (the State and conservation agencies), have impacted men and women in rural Tanzania. The approach has been useful in illuminating the injustices and struggles of both men and women in the process of trying to sustain their everyday life in the midst of changes in resource access and control (Rocheleau et al. 1996). Further, it has shed light on how access to and the control of resources are affected by the social construction of gender, as well as power relations and authority that are embedded in formal and informal institutions(cf. Rantala et al. 2013). The discussion of the micro-politics of everyday natural resources access and control has offered a hint of understanding into the broader macro-political forces at work in natural resources conservation. This investigation of everyday gender experiences of conservation in west Kilimanjaro shows the mismatch between the rhetoric and practice of conservation− and the challenges in combining conservation and development agendas.

The main impacts identified in this study include those associated with natural resource restrictions, illegal entry into PAs, human-wildlife conflicts, increases in living costs, and poor relationships between PA staff, and men and women. These findings dovetail with the growing body of literature on the gendered impacts of conservation initiatives (e.g. Sarin et al. 1998; Coad et al. 2008; Ogra 2008).

There are variations between the two PAs studied. In the Enduimet WMA, men and women have access to natural resources for household use, and derive some direct and indirect

benefits from tourism activities, while in the Kilimanjaro NP, resource access is denied and local tourism benefits are minimal. The PAs impact both men and women, but the most significant impact is felt by women due to inequality in the gendered division of labour and resources at the household level. Further, poor men and women are stricken more severely since they lack livelihood and subsistence alternatives. In addition, women in female-headed households are affected more than their counterparts in male-headed households.

This study found that the PAs' attempt at benefit sharing as compensation for resource restrictions does not meet the felt needs of men and women. The PAs function in such a way that they have aggravated people's workloads and risks, instead of addressing community interests, paying attention to relevant livelihood needs, or improving wellbeing.

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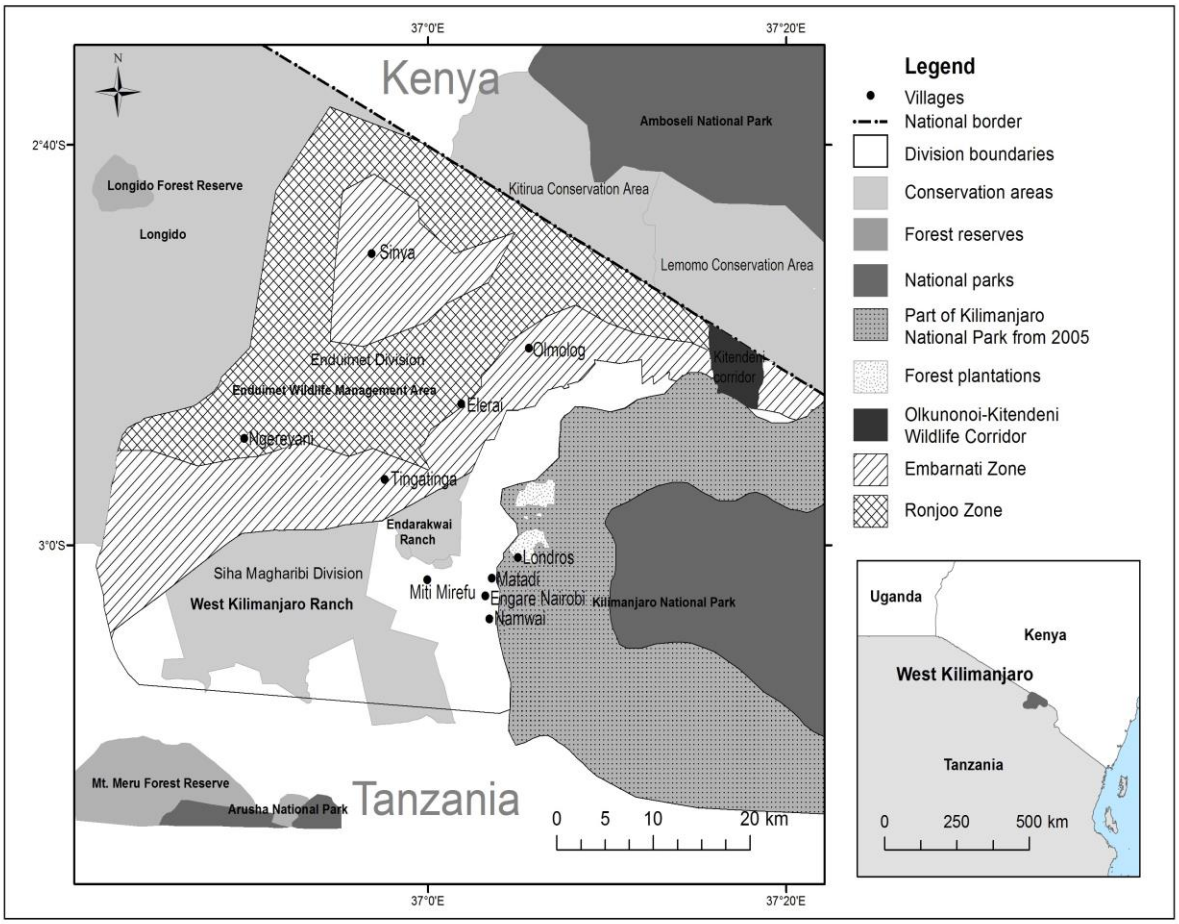

Figure 1: A map locating the study villages in West Kilimanjaro, Tanzania

Table 1: Overall gender impacts associated with the expansion of the Kilimanjaro NP and the creation of the Enduimet WMA

	Women	Men
Restricted access to natural resources	Firewood (increased time, labour, health effects− miscarriage, chest, back pains, falls); Fodder (increased time, labour, health effects− miscarriage, chest, back pains, falls); Loss of livelihoods (selling firewood, fodder, charcoal); Physical impacts (harassment, tools confiscated, rape, beatings); Psychological effects (fear, stress); Increased cost of living (buying fodder, firewood).	Loss of source of income (selling fodder, firewood, charcoal, honey, wildlife meat); Loss of source of protein (traditional hunting); Physical impacts (beatings, death, imprisonment); Psychological effects (fear, stress); Increased cost of living (fines, buying fodder, firewood).
Human-wildlife conflicts	Crop raiding (food insecurity, economic loss, increased agricultural labour); Livestock killings, injuries Destruction of water infrastructure (increased labour and time to search for water); Psychological impacts (fear); Limited freedom of movement at night; Sleepless nights (guarding crops); Fencing (increased time, labour, resources); Increased living costs (buying food, buying materials for mitigation measures, paying for guarding crops when time is not available).	Crop raiding (economic loss, increased agricultural labour); Human injuries, death; Livestock killings, injuries (income loss); Sleepless nights (guarding crops); Psychological impacts (fear); Limited freedom to stay outside at night; Destruction of water infrastructure; Increased living costs (buying food, buying materials for mitigation measures, paying for guarding crops when time is not available).
Relationships with PA staff	Enmity	Enmity

Source: Fieldwork data

PAPER II

Ecotourism in Enduimet: Examining transparency and local benefits in a Wildlife Management Area in Tanzania

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Introduction

The Tanzanian government introduced the notion of Wildlife Management Areas (WMAs) in the late 1990s. The WMAs were presented as means to obtain a combination of wildlife conservation and rural development. On the one hand, the WMAs were seen to improve conservation by introducing land use restrictions on village land. On the other hand, this new type of environmental protection were intended to create economic benefits from which a substantial amount would be allocated to local communities (URT 1998). Management of WMAs is placed at the local level, as co-operation between several villages. Together with sport hunting, safari tourism is presented as the main source of revenues for WMAs.

This chapter provides a case study of Enduimet Wildlife Management Area. It was formally established in 2007, and involves nine villages west of the mountain Kilimanjaro, in the Longido District in Arusha Region (Figure 1). We mainly focus on safari tourism in Enduimet and in particular on the system of collection and distribution of tourism revenues. Thus, we provide a comparison of how revenues ideally should flow through the system, and what happens in practice. This revenue flow starts when tourists make their payments to safari companies. It continues in terms of fees from the companies to a state office, moves on to various public entities, before some of the revenues finally goes to the involved villages (see Figure 2).

Furthermore, we discuss the amount of benefits that reaches the local communities in the light of claims about the win-win outcomes of WMAs presented by conservation organizations, some donors and the government. We conclude that the benefits received in the villages are modest. This is particular so when taking into account the uncompensated costs that some villagers have to bear in terms of increased crop damage, livestock loss, and loss of human lives caused by increasing wildlife populations. Thus, our study questions the idea that Enduimet WMA secures a sustainable source of income for local communities from safari tourism.

We also focus on transparency. Mismanagement and corruption represent threats to the revenue shares received by local communities in WMAs as well as in many other cases of conservation-based tourism. In recent years, several studies have reported extensive corruption and misuse of revenues in the wildlife sector in Tanzania (see e.g. Benjaminsen et al. 2013; Nelson 2010).

Therefore, in order to secure benefits for local communities, revenue flows ought to be transparent. However, as we will show, our examination of the revenue sharing system in Enduiment WMA exposes a lack of transparency, which involves the whole wildlife sector in Tanzania.

In the following, we will first situate the case study in relation to the notion of 'ecotourism' and the recent literature on conservation as 'accumulation by dispossession'. Thereafter, we briefly go through the history of WMAs in Tanzania as well as the particular history of Enduimet WMA, before we present the methods applied in the study. In the main section presenting the results of the study, we first provide an overview of the revenue flow and identify where in the system there is lack of transparency, before we go into details about the various parts in the revenue flow. Finally, we compare costs and benefits for local communities within Enduimet WMA.

Ecotourism and conservation as accumulation by dispossession

'Ecotourism' is defined in various ways in the literature. It has, for instance, been framed broadly as 'tourism that involves traveling to relatively undisturbed or uncontaminated areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas' (Ceballos-Lascurain, 1991:25). Following this definition, ecotourism has been presented as the fastest growing economic sector in the world, growing three times faster than the general tourism industry and representing 6% of the world gross domestic product and 11.4% of all spending (Honey 2008).

However, ecotourism is usually defined more narrowly. The International Ecotourism Society restricts the term ecotourism as 'responsible travel to natural areas that conserves the environment and improves the well-being of local people' (TIES 1990). Similarly, Boo (1992) defines it as nature tourism that promotes conservation and sustainable development (see also Ziffer 1989:6). Thus, ecotourism is considered to be a tool for biodiversity conservation as well as for economic development. It is often argued that ecotourism has the ability to generate local economic benefits, while also maintaining ecological integrity through low-impact, non-consumptive use of resources (Stem et al. 2003).

Nevertheless, a number of case studies point at a variety of reasons that presumed ecotourism sites often fall short of these double objectives of biodiversity conservation and local economic development (Duffy 2002; Rutten 2002). Ecotourism is not an apolitical activity, but involves political choices by interest groups who cater for tourist services (businesses, governments and NGOs) (Duffy 2002). Many argue that nature-based tourism is often neither ecologically nor socially sustainable, yet it is regarded as a strategy for biodiversity conservation and economic development (West et al. 2006; West and Carrier 2004).

When we in this chapter apply the term ecotourism in Enduimet WMA, we do this based on statements that Enduimet and WMAs in general represent cases where conservation and local economic benefits from tourism are to be combined. For instance, Tanzania Natural Resource Forum presents ecotourism in WMAs as 'a natural partner for communities… that brings new income (employment) and other benefits to communities…' (TNRF 2011:41). Thus, when we discuss ecotourism in Enduimet WMA, it is not as an endorsement of the community benefits associated with safari tourism in Enduimet. Our use of the notion 'ecotourism' rather reflects an often-stated aim associated with substantial parts of the safari business in Tanzania.

The idea of 'ecotourism' is closely related to a win-win discourse on protected areas that consists of three main elements. First, contributors to the discourse see it as important that people in and around conservation areas participate in the management of these areas. Second, local people are argued to benefit economically from conservation. Third, the ultimate aims of the discourse producers are to conserve areas and biodiversity, and local participation as well as community benefits are seen to serve as means to achieve these aims (Benjaminsen and Svarstad 2010; Tumusiime and Svarstad 2011).

In sharp contrast to this win-win discourse, current critics of conservation practice see this practice as a form of 'accumulation by dispossession' following Harvey (2003). Recently, several conservation initiatives have been studied using this framework (Büscher 2009; Li 2010; Corson 2011; Kelly 2011; Benjaminsen and Bryceson 2012). Through the combination of conservation and tourism, non-capitalist spaces and resources are opened up for the accumulation of capital by some powerful actors. Local people may be seen to be in the way of such investments. Thus, sometimes people are expelled from the areas, other times they may continue to live there, but get their livelihoods severely restricted. Hence, the win-win discourse may constitute a tool for the extraction of revenues from these spaces, while local resource users lose control over spaces and natural resources. The presentation in this chapter of the flow of revenues from safari tourism in Enduimet WMA shows that this cannot be seen as a case of ecotourism in the sense of a win-win between conservation and local economic benefits. Instead we found it to be a case in line with the notion of accumulation by dispossession. As shown by Benjaminsen and Bryceson (2012), the process of accumulation by dispossession in wildlife management in Tanzania may be slow and incremental, for example as in Enduimet WMA, but it is also occasionally violent, as in Loliondo (Gardner 2012) and in Makao WMA (Nkwame 2011).

The history of Wildlife Management Areas in Tanzania and of Enduimet WMA

In 1998, the Tanzanian government launched a new Wildlife Policy, which focused on the rights of rural communities to benefit from wildlife conservation, and the role that wildlife management could play for rural development. Three years earlier, the Wildlife Sector Review Task Force had concluded that '…local communities who live amongst the wildlife should derive direct benefit from it' (WSRTF 1995). It called for devolving wildlife user rights and management responsibilities to communities and suggested the creation of Wildlife Management Areas (WMAs) as a means of pursuing conservation and rural development goals. The policy of 1998 stressed that conservation outside protected areas must generate benefits at the community level. To create local conservation incentives, it called for 'conferring user rights of wildlife to the landholders to allow rural communities and private land holders to manage wildlife … with the aim of ensuring that wildlife can compete with other forms of land use' (URT 1998:13-14). The policy also stressed that through WMAs 'local people will have full mandate of managing and benefiting from their conservation efforts' (URT 1998:29). In late 2002, the government released the Wildlife Conservation (Wildlife Management Areas) Regulations and, in January 2003, it formally launched the WMA process.

Hence, WMAs were the main tool proposed to implement the new approach to provide a win-win between wildlife conservation and community benefits. These areas were proposed as community-run conservation areas, where several villages would come together and set aside land for wildlife conservation. In return, the villages would receive a certain proportion of the tourism revenues from these areas. In early 2012, there were 22 WMAs in Tanzania in various stages towards formal establishment. The number of villages in each WMA varies from 2 to 30.

The main aims of WMAs were to conserve wildlife corridors, migration routes, dispersal areas, and buffer zones, and to ensure that local communities obtain substantial tangible benefits from wildlife conservation (URT 1998). There are, however, also certain restrictions put on local resource use in WMAs through the establishment of land use zones where agriculture and sometimes grazing are prohibited. Safari tourism and sport hunting are frequently presented as forms of 'ecotourism' (see e.g. Rees 2007; Hillstrom and Hillstrom 2003; Novelli et al. 2006), which represent the main sources of revenue in the WMAs.

In the 1990s, Tanzania's tourism industry grew by over 10% per year for almost a decade (World Bank/MIGA 2002). The industry contributed 12% of Gross Domestic Product (GDP) in 2001, which increased to 16% in 2004 and

17.2% in 2007 (Lyimo 2009; Michael 2009). The number of international tourists increased from 300,000 in 1995 to 770,000 in 2008 (Tarimo 2009).

Enduimet WMA lies on the western side of Mount Kilimanjaro in Longido District on the border to Kenya. The WMA covers an area of 742 km^2 combining land from eight villages in two wards: Sinya, Tingatinga and Ngereyani in Tingatinga Ward, and Elerai, Olmolog, Lerang'wa, Kitendeni and Irkaswa in Olmolog Ward. In addition, Kamwanga village in Olmolog Ward is also part of the WMA, despite not having suitable land to set aside for wildlife conservation and tourism. By adding the village populations for 2010 of the nine member villages of Enduimet WMA, we found that the total population in 2009 constituted around 45,000 people.

Enduimet has been presented as constituting an important transnational migratory route and dispersal areas for several wildlife populations including elephants (Muruthi and Frohardt 2006; Madulu et al. 2007; Honey 2008; Kikoti 2009; Trench et al. 2009). A wildlife survey conducted by elephant researchers from the African Wildlife Foundation (AWF) and national and district wildlife authorities concluded that there is a decline in wildlife populations due to bush meat poaching (Madulu et al. 2007; Nelson 2007). Based on these conclusions, the Wildlife Division proposed to establish a WMA in the area. The AWF was approved by the Minister of Natural Resources and Tourism to be the facilitator of the process. In 2004, the Enduimet Community-Based Organisation (CBO) was established to manage the area, and in 2007 this organisation was officially declared as an Authorized Association (AA) by the Minister, and granted user rights in the WMA based on a Resource Management Zone Plan. At that time the WMA consisted of only eight villages, but in 2010 Sinya village also joined after initially refusing to do so due to a range of concerns (see Benjaminsen and Svarstad 2010). The Enduimet CBO is made up of three representatives from each village, two men and one woman, chosen by the village assemblies. Thus, with the nine villages, there are 27 CBO members. They choose their chairman, secretary and treasurer and form various committees.

An interesting aspect with the establishment of the Enduimet WMA is that according to national policy documents, WMAs are supposed to be 'community-based' and meet community needs. Nevertheless, the process of establishing Enduimet WMA did not come from the villages, but it was initiated and carried out by external actors constituted by the state government and the AWF. The AWF is a US based NGO with its main office in Washington DC.

[Figure 1 in about here]

Figure 1: Enduimet Wildlife Management Area

Methodology

In order to describe and analyse the revenue flows, we carried out 71 informant interviews with various actors along the revenue chain. All these interviews were qualitative, semi-structured and prepared specifically for each interviewee. Thus, we met with people within all safari companies that at the moment operate in Enduimet. Furthermore, we talked with state officials at village, district, regional and central government levels. In addition, we interviewed leaders of the Enduimet Community-Based Organisation, many villagers as well as NGOs involved in Enduimet WMA. Besides, we collected and examined relevant legal, policy and project documents. On this basis, we identified how revenues are supposed to flow through the system and the various percentages that are to be distributed to different beneficiaries, and we identified where there is economic information available and what information that is not available in the system. Thus, we have ended up with a flow chart (Figure 2) and a description of available data of how revenues move through the system.

Fieldwork was conducted in different seasons and periods of time during 2008-2012. The languages used in the interviews were either Swahili or English. We asked for and were, with few exceptions, allowed to use a tape recorder as a means to obtain precise information.

Revenue flows and transparency

In the following we present the findings of how revenues are collected and move through the system down to the nine villages in Enduimet WMA. We start with a description of the main elements of the system and our assessment of its efficiency and transparency, as illustrated in Figure 2. If tourism in Enduimet is to be seen as a win-win between conservation and local economic benefits, the benefit sharing system must ensure an effective and transparent way to channel money from tourism to the villages. Furthermore, the amount of money received by the villages should be higher than the costs associated with increased wildlife populations, as well as compared to the administrative costs of managing the WMA.

However, based on an examination of revenue flows, we conclude that the system is not transparent. The lack of access to relevant information makes it difficult to assess the revenue flows in detail. The issue of transparency became clear from the considerable work we have had to carry out in order to identify the revenue flows. We also found that how the system in general works is not known to the various actors who take part in the chains of transactions.

[Figure 2 in about here]

Figure 2: Flow chart of revenues from tourism in Enduimet Wildlife Management Area.

Starting on top of Figure 2, part of the payments from tourists to private travel and accommodation companies include fees to the office of the Wildlife Division (WD) in Arusha. The WD is one of the divisions under the Ministry of Natural Resources and Tourism, and it is led by the Director of Wildlife. The WD headquarters is located in Dar es Salaam. We have not been able to obtain data on what safari companies earn, only what they pay in fees to the WD.

The total list of safari tourist companies was not immediately available, so we had to spend time to establish this list including contact information for the companies. While these companies were generally willing to provide us with information, we were not able to obtain specific data from all of them about the number of bed nights, game drives, camping and vehicle entries. The companies are required to transfer fees to the WD every other week.

In our case study, the main focus is on safari tourism. The revenue from hunting companies received by the Enduimet CBO from the WD office is very small. This revenue is mixed with safari tourism revenues before distribution to villages. We tried to obtain information on fees paid to the WD by the two hunting companies that operate in Enduimet, but the WD office in Arusha did not wish to provide any such information. One of these companies, Old Nyika Safaris, was willing to share some financial information with us, while Northern Hunting Enterprises declined to disclose any such information. At the Wildlife Division office in Dar es Salaam, we also experienced a certain unwillingness to share information about financial flows passing through its office.

Within the Enduimet CBO on the other hand, there seemed to be full openness about money flows. According to the Wildlife Utilization Regulations of 2008, CBOs in WMAs are to receive 65% of revenues collected by the Wildlife Division, and half of this is to go to the villages of the WMA. However, due to lack of transparency in the chain of transactions, it is impossible for the CBOs and the villages in the WMA to know whether they actually receive what they are entitled to according to the regulations.

Tourist companies and their local contributions

In this section we introduce and discuss the activities of the safari companies that operate in Enduimet WMA. We show what types of fees they pay after the establishment of the WMA, as well as what some of the companies used to pay directly to some of the villages. Furthermore, we also show that some of these

companies are involved in voluntary support of projects in local communities. Since there is a lack of transparency about various aspects, we are not able to provide a full picture here of the revenue flows.

Enduimet WMA is situated in Tanzania's northern tourist circuit. Although many tourists fly in to Kilimanjaro International Airport, which is not far away, most of them head for some of the most famous sites, such as Serengeti National Park, Ngorongoro Conservation Area or go hiking on Mount Kilimanjaro. The manager of one company operating in Enduimet told us that their visitors tend to be experienced travellers who are out for experiences outside the most common destinations. Another operator said that many of their clients were elderly Americans.

As mentioned above, tourist revenues in Enduimet WMA come from safari tourism on the one hand, and hunting tourism on the other. In 2011, Old Nyika Safaris was the only hunting company that operated in Enduimet WMA, and only in the southern part of the area. Northern Hunting Enterprises used to hunt in the area until 2010. From 2007 to August 2011, the Enduimet CBO had received only 17,273 USD (22,944,000TSH) from hunting tourism. Out of this 8,106 USD came from Old Nyika Safaris, while for the remaining, the source was not indicated. In this chapter we concentrate on analysing safari tourism, although, as shown in Figure 2, the revenue flows are to some extent handled together. Safari tourism is an activity that in itself often is seen as relatively harmless to the environment, so that if the activity also provides benefits and economic development for local communities, it can be seen to be in line with the restricted notion of ecotourism.

There are only two tourist lodges in Enduimet WMA today. One of them is located in Elerai village. The lodge is called both Kambi ya Tembo (meaning 'Elephant Camp') and Elerai Tented Lodge. This lodge is owned by the company Tanganyika Wilderness Camps and Lodges. Many visitors here have made their travel arrangements through Kibo Guide Tanzania Ltd. Both these companies are owned by the same three individuals; Willbard Chambulo who is of German-Maasai origin and who holds 60% of the shares, and two Spaniards, Julio Teigell and Nuria Panizo, who hold 20% of the shares each.

Kambi ya Tembo was first established in Sinya village in 2001.Tourist companies had started to visit this village for camping, nature walks and game viewing in 2000. These companies used to pay the village about 10 to 20 USD per person per night. One of the companies, Kibo Guide Tanzania Ltd, entered into a formal contract with the village to establish a tourist camp. From this agreement, Sinya received more than 30 million TSH (approximately 30,000

USD[1]) annually between 2001 and 2004 (Honey 2008; Trench et al. 2009; Sulle et al. 2011). This money together with tourist donations supported social services such as construction of new classrooms and dormitories, but some funds are also claimed by representatives from the government, NGOs and safari companies as well as by some villages to have been mismanaged by the village leadership.

However, between 2001 and 2005 a conflict emerged involving Northern Hunting Enterprises and Kambi ya Tembo. Northern Hunting Enterprises is a hunting company owned by the Tanzanian-Asian entrepreneur, Mohsin Abdallah, commonly known as Sheni. Abdallah is known to have close allies in government and the ruling political party Chama Cha Mapinduzi (CCM). He also sits on the Board of Directors of Tanzania National Parks.

Some villagers worked together with Kambi ya Tembo to block Northern Hunting Enterprises from the northern part of the village land, because they claimed the company was not beneficial to them. Thus they drafted several letters to higher wildlife authorities (Honey 2008). But Northern Hunting Enterprises had a legal permit to hunt in the whole area. Furthermore, according to tourist hunting regulations of 2000, tourism activities in a hunting block is not allowed without permission from the Director of Wildlife (URT 2000). On the other hand, the village had a land title deed according to the Village Land Act No.5 of 1999. The case was tried in court. Kambi ya Tembo was accused of carrying out tourism business illegally in the hunting block, and Northern Hunting Enterprises won. In 2005 Kambi ya Tembo therefore had to leave Sinya and moved to the neighbouring village of Elerai. From 2005 to 2008 Kambi ya Tembo paid Elerai village for staying in their village and Sinya village for game drives on their land (see Table 1).

Table 1 Direct village income from Kambi ya Tembo and Hoopoe Safaris (2005-2009)

	Kambi ya Tembo [USD]		**Hoopoe Safaris (Sulle et al. 2011) [USD]**
Year	**Elerai**	**Sinya**	**Olmolog**
2005	16,540	13,087	8,610
2006	17,480	8,602	8,130
2007	27,528	30,350	8,130
2008	23,017	22,234	8,439
2009	16,745	-	7,692

Source: Tanganyika Wilderness Camps and Sulle et al. 2011

[1] 1 USD was equivalent to 1,000 TSH at the time.

At the end of 2009, the direct payments to the two villages were stopped as Kambi ya Tembo instead was required to pay directly to the Wildlife Division according to the Non-consumptive Tourism Regulations of 2007. By December 2011, Kambi ya Tembo had 14 luxury tents that could accommodate 28 tourists. The camp paid the Wildlife Division office in Arusha 15 USD per bed-night per day, 20 USD per tourist as conservation fee, and 15 USD as concession fee. The prices paid by tourists range between 250 and 350 USD per day depending on the travel agent that booked the safari. The number of tourists varies from 700 to 1,000 per year. In 2010 and 2011, Kambi ya Tembo paid the Wildlife Division office in Arusha 76,375 USD and more than 66,185[2] USD, respectively (see Table 2). Before this centralization of the collection of fees from tourists, Kambi ya Tembo used to pay Sinya and Elerai villages together up to 57,878 USD in one year (see Table 1).

In addition, Kambi ya Tembo has assisted Sinya village to build two classrooms, a village office, a primary school dormitory and a dining hall; and Elerai village to build a nursery school, two classrooms, a primary school dining hall, a kitchen, and a dispensary. Also the company has assisted the villages in providing transport in emergency cases such as when villagers fall sick, or when pregnant women need to go to the hospital to deliver. The camp has 24 workers of whom 70% are Maasai.

Shu'mata Camp is located on the village land of Sinya, and started operating in 2010. The camp is owned by a couple, Marlies (German-Namibian) and Jörg Gabriel (German), who also run the Hatari Lodge (opened 2004) just outside the nearby Arusha National Park. Prior to Shu'mata Camp, Hatari Lodge had brought visitors to Sinya (and some other parts of Enduimet) for game drives. Due to the wildlife potential in Sinya, Marlies and Jörg Gabriel decided to build the Shu'mata Camp through contractual agreement with the village[3]. On their webpage, they describe a trip for the guests to Shu'mata Camp as 'an exclusive bush experience' and 'an add-on to their stay at the Hatari Lodge' (www.hatarilodge.com). Shu'mata Camp had in 2011 five luxury tents, which was an increase from four tents in 2010. In 2010 and 2011 they had an estimated 600 and 700 to 800 bed-nights, respectively. The cost for one night is more than 600 USD (including meals, drinks, game drives, transport etc). The camp had in 2011 16 staff, of whom 10 were from Sinya village. The wage levels per person range between 70 and 100 USD per month (Interview with member of Enduimet CBO,June 2012).

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[2] The June-August fees were not available.

[3] At that time Sinya village had refused to be part of WMA. The Sinya village joined WMA in 2010. After this, Shu'mata Camp was required to have a contract with the WMA and not the individual village.

According to information from Shu'mata, this camp paid 15,555 USD in 2010 and 19,660 USD in 2011 to the Arusha office of the Wildlife Division (see table 2). Before the company started paying the WD, it had given Sinya village about 1,000 USD to repair a village water pump machine, and the village had also received diesel several times for a water pump (Interview Sinya Village Executive Officer, October 2009). Other direct income to the village includes visits to Maasai bomas where tourists spend about 25-30 USD including buying some handicrafts. In addition there are in-kind benefits from donations from tourists such as provision of solar lamps to households, donations to the school, to the clinic, and to a water project with the help from a company in Germany.

Table2 Payments from Shu'mata Camp and Kambi ya Tembo to the Wildlife Division in 2010 and 2011

	2010 USD)	**2011 (USD)**
Shu'mata Camp	15,555	19,660
Kambi ya Tembo	76,375	66,185*
Total	91,930	91,635
65% of Total	**59,755**	**59,563**

Sources: Interviews at Shu'mata in May 2012 and Tanganyika Wilderness Camps office in April 2012.
*Income for ten months only.

There are also some other safari companies that so far had occasional activities such as game drives, mobile tents, and horseback riding that bring tourists to Enduimet WMA and pay fees for this to the office of the Wildlife Division in Arusha. These companies include Kilele Savannah, Safari Express, Tierhilfe Ltd, Tanzania Travel Company, Access Tanzania, Exuetria Safari, Makoa Farm Horseback Riding Safaris and Endarakwai Ranch Camp. In 2009 and 2010, Makoa Farm Horseback Riding Safaris paid the Wildlife Division, but Enduimet Community-Based Organisation did not receive its share from the Wildlife Division (interview with Enduimet CBO representative in June 2012). After Enduimet CBO complained to the WD, it received 7,500 USD in 2011 and 3,000 USD in 2012 (Enduimet CBO Administrator, October 2012). The specification of revenue collected from other less frequent companies was not given to us by the WD office in Arusha, and in the WMA's financial documents the companies are grouped together as 'photographic tourism' and the names of the companies are not known by representatives of Enduimet CBO. According to financial documents of Enduimet WMA from 2011, Enduimet CBO received two transfers of 13,180 and 2,540 USD for 'photographic tourism' from January to August 2011.

Another source of income for Enduimet WMA is the Olpopongi Maasai Cultural Village. This is a visitor centre with a Maasai boma, museum and overnight facilities. It is located in Tingatinga village, but outside the WMA. It is owned by a German named Tom Kunkler. His professional focus is marketing, advertising, and product sourcing. He runs several projects in the Kilimanjaro region. In 1997, Tingatinga villagers were looking for an investor for their village. Tom Kunkler was invited through a villager who knew him. Negotiations were made between the village government and Mr Kunkler. Land was provided by the village government, and the construction started in 2009. In 2011 the cultural village started to operate and by August 2011 the village had received cash benefits of one million TSH (667 USD[4]) in addition to in-kind benefits from tourist donations such as school books, sport equipment, medicines and equipment for the village dispensary. Other villages and the leadership of Enduimet WMA started complaining that it was not fair that Tingatinga received all the benefits from this cultural village. For instance, it was argued that Sinya, a village contributing all of its best land to the WMA, ought to benefit from the revenues from Olpopongi. The Arusha office of the WD then sent its staff to Tingatinga and demanded payments to be channelled through its office and not through the village. The reasons given were to protect the WMA concept, to hinder other villages with tourism potential to imitate and do the same, and to stop conflicts within the WMA (Enduimet CBO chairman, August 2011; Tingatinga village chairman August 2011). By September 2012, the CBO administration was not sure which company name the Olpopongi Maasai Cultural Village was using to pay the WD. Previously, the administration of Enduimet CBO had contacted the WD office about the same matter with no success (Enduimet CBO Administrator, October 2012).

During 2002-2009 the Hoopoe Safaris Company had a small tented camp in Olmolog village that they called Hemingway's Camp. They also made plans to build a five star hotel in Olmolog. A contract was made for this with the same village in 2004, and the African Wildlife Foundation participated in negotiating this contract with Olmolog. There were also discussions with the WMA in 2008-9, but the company withdrew and the plans were dropped in the second half of 2009. The investors withdrew because they experienced the process as 'too cumbersome, fraught with tensions between village interests and the overall WMA interests', and because there were added costs imposed by the revenue-sharing arrangements and fee schedule produced by the Wildlife Division (Sulle et al. 2011:13). We also learned from interviews that the financial crisis might

[4] 1 USD was equivalent to 1,500 TSH.

have had an impact as well as considerable delays by the National Environment Management Council in carrying out the environmental impact assessment.

Hoopoe Safaris owns and runs Kirururmu Tented Lodge located near Lake Manyara, and the company also has seasonal mobile tented camps in Serengeti and Tarangire National Parks and in the Ngorongoro Conservation Area. On its website (http://www.hoopoe.com/aboutus.htm), Hoopoe states that it is 'proud to be the preeminent luxury camping outfitter in East Africa'. As the first African tour operator, Hoopoe Safaris won an award in 2004 called 'The Condé Nast Traveller Ecotourism Award'. It presents itself as 'dedicated to the protection of the environment by supporting effective community partnerships and sustainable tourism projects'. Hoopoe Safaris was founded in 1988 and is headed by Kenyan born Peter Lindstrom and the Tanzanian Maasai and previous senior ranger of Tanzania National Parks, Steven Laiser (Hoopoe Safaris, n.d.).

From the contract with Hoopoe Safaris, Olmolog village earned about 10 million TSH (~8,800 USD[5]) annually (Sulle et al. 2011) to be shared among 676 households (4,522 people) in 2009. That would be some 13 USD per household or about 2 USD per person. Besides, the company employed local Maasai, assisted the village in social services such as construction of two classrooms and two teacher houses. It also paid school fees to some students in the village, and continued with this also after stopping working in Olmolog. The company did not disclose their revenues earned.

Gane & Marshall is a wildlife travel company with its head office in the UK that provides tailor-made holidays to several places in Tanzania as well as at wildlife destinations around the world. The company also has had some activities in the Enduimet area, but has backed out after the WMA was established. They put up a mobile tented camp in Tingatinga village, but is believed to consider the fees too high after the establishment of the WMA (CBO chairman interview, September 2009).

Hence, these are some examples of how the introduction of WMAs and the centralization of the collection of fees from safari companies have put off some companies resulting in reduced tourism activities in some areas. The photo safari companies currently operating in Enduimet seem all to present themselves as conducting ecotourism in terms of being concerned about the environment as well as community development. They also state that the fees to be paid are very high compared to the revenues. They feel that the funds reaching the villages through the current centralized and non-transparent system are insufficient. The

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[5] 1 USD was equivalent to TSH 1,100 (2005); 1,200 (2006-2007); 1,170 (2008); 1,300 (2009); 1,400 (2010).

companies pay their fees to the WD office in Arusha. There are several fees the companies ought to pay after every two weeks as indicated in Table 3.

Furthermore, the payment of fees to the Wildlife Division in Arusha and the transfer of part of these funds back to Enduimet and further to each village appear as an inefficient arrangement. Several of our interviewees in villages as well as in the tourist companies have expressed views that confirmed an impression of inefficiency and high transaction costs. This arrangement also reduces the level of local benefits from tourism.

As mentioned, some tourist companies argue that the fees they have to pay have reached a level that causes them to reduce their activities in the area. From one of the companies, for instance, we were told that due to high fees, their earnings in the area were only enough to pay the bills. Thus, they argued that they did not make any profits. When the companies had individual deals with villages before the establishment of the WMA, they used to pay 10 USD per tourist for game drives and 10 USD per tourist per bed-night. Under the fee structure of Enduimet WMA, the companies pay up to 50 USD per tourist as conservation fee, concession fee and bed-night fee, in addition to 5,000 USD that the Enduimet CBO charges as a security bond[6]. Another company told us that they thought the fees were too high for investors in WMAs that are just starting up their businesses. We also learned that some see these fees as fitting better the levels of income in the most visited areas such as Serengeti National Park. The relatively high level of fees may thereby reduce the potential for a sustainable tourist industry including tangible local benefits in an area such as Enduimet.

The companies have to pay concession fees annually directly to Enduimet CBO. By March 2012 the Enduimet CBO had not as yet received any concession fees from the companies. From January 2012, the contracts between Enduimet CBO and investors were made official by the Ministry, and companies were required to sign and start paying to the Enduimet CBO. On May 8, 2012, a ceremony for the signing of contracts between investors (Kambi ya Tembo and Shu'mata Camp) and Enduimet CBO was organized by the WD. Representing Shu'mata Camp, Jörg Gabriel, however, declined to sign, due to what he perceived as a confusing process with lack of information ahead of the ceremony and a contract with several unclear points that had not been negotiated in advance and was presented only in English version. One key issue for Shu'mata Camp is security of the investments, which the owners did not feel that they had with the standard contract from the WD that was presented to them. Since Sinya owns the

[6] This is the security of the community-based organization in case the investor terminates the contract before its full term or damages the environment.

land, Shu'mata Camp also wanted to have a land lease with Sinya village and not with the community-based organisation on behalf of nine villages.

The Wildlife Division in Arusha

The Arusha office of the WD handles affairs dealing with hunting, photographic tourism, and CITES (Convention on International Trade in Endangered Wild Fauna and Flora) in northern Tanzania. The Non-consumptive Tourism Regulations of 2007 regulate non-consumptive tourism outside national parks and game reserves. According to these regulations, tour operators should pay their fees directly to the WD office instead of to village councils. The justification presented by the government for these new regulations was to protect local people from being treated poorly and unfairly by tour operators, and to make sure all villagers benefit and not only an elite. But clearly, the new arrangement also works as a mechanism for the government to have a share of the revenue. The fees specified by the new regulations for non-consumptive tourism in WMAs are as indicated in Table 3.

Table 3 Non-consumptive wildlife utilization fees in Wildlife Management Area

	Adult >18 years (USD)	5-17 years (USD)
Game viewing per day	20	10
Camping (established camp)	30	15
Fly camp	20	10
Night game drive	100	50
Vehicle entry fee per day (in USD)	5-30 (depend on tare weight)	
Professional filming/ cinematography (in USD)	100-200 (depend on number of days)	
Walking safari	50-100 (depend on number of people)	

Source: United Republic of Tanzania 2007

As shown in Figure 2, Enduimet CBO is supposed to get 65% of the total income paid by safari companies to the WD, while 20% remains with the WD and 15% goes to Longido District Council. The WD in Arusha did not want to disclose to us how much they have received from the tourist companies in Enduimet. Instead, they only provided data on how much they have transferred to Enduimet CBO from photographic tourism. Safari companies started paying the WD office in Arusha from the second half of 2009 in response to the Non-Consumptive Tourism Regulations of 2007. In 2010, the yearly payment from the WD office in Arusha to Enduimet CBO was to the amount of 45,941 USD (Table 4). Based on what Kambi ya Tembo and Shu'mata Camp paid to WD office in Arusha in 2010 (76,375 and 15,555 USD respectively, see Table 2), the

65% that Enduimet CBO was entitled to that year amounts to at least 59,753 USD. As shown above, Makoa Farm Horseback Riding Safaris also paid the WD in the same year, without the WD channelling any money to the WMA. Hence, based on this simple calculation from one selected year, we see that the WD office transferred substantially less than the amount Enduimet CBO is entitled to receive.

Table 4 Income to Enduimet WMA from photographic safaris

2009		**2010**	
Month	**Amount (USD)**	**Month**	**Amount (USD)**
Jul –Aug.	15,210	Jan-Febr	2,486
Sept.-Oct.	1,573	Mar.-Apr.	1,086
Nov.-Dec.	17,852	May-June	374
		Jul.-Aug.	24,307
		Sept-Oct	3,967
		Nov-Dec	13,722
Total	**34,635**		**45,941**

Source: Wildlife Division in Arusha, August 2011

The Wildlife Division's main office in Dar es Salaam

WD is one of the divisions under the Ministry of Natural Resources and Tourism led by the Director of Wildlife. It is the main office that deals with wildlife outside national parks and in Ngorongoro Conservation Area. The division is stated to be 'the leading light in the management of Tanzania's wildlife resources and their associated habitats for their sustained and equitable use for the benefit, welfare and enjoyment of the generations of citizens of Tanzania and the world heritage at large' (AWD, 2012). According to the WMA Regulations of 2005, the Director of Wildlife will facilitate the initiation process for the designation of WMAs, facilitate the gazettement of WMAs, oversee the performance of Authorized Associations (e.g. Community-Based Organisations), set and allocate animal quotas, approve prospective investors, designate tourist hunting blocks, issue hunting permits, provide support in the protection and utilization of natural resources, facilitate development activities, and determine the continuation of WMAs. In addition, the Director of Wildlife issues circulars indicating the benefit sharing arrangements in WMAs. This office and the one in Arusha are the only offices for the collection of revenues from wildlife tourism outside the national parks and Ngorongoro Conservation Area. The Arusha office collects tourism revenues for the northern part of the country, while the headquarters in Dar es Salaam collects revenues for the southern part of the country. The office is

the overseer of the conservation of all wildlife in the country other than national parks and Ngorongoro Conservation Area. The main sources of funding are from the Central Treasury, Tanzania Wildlife Protection Fund (TWPF) and donor support. The funds are used for the management and protection of wildlife, salaries, transport and equipment (Mabugu and Mugoya 2001).

The Ministry of Finance

The Central Treasury receives 25% of sport hunting revenues from Wildlife Management Areas. It also receives its share from other protected areas (game reserves, game controlled areas) where hunting is conducted. This share is transferred to the treasury by the WD through the Ministry of Natural Resources and Tourism. According to the WMA Guidelines of 2003, the Director of Wildlife should consult the Treasury and get any benefit sharing arrangements approved first before issuing circulars for benefit sharing in WMAs.

The Tanzania Wildlife Protection Fund

This fund was established by Act of Parliament No. 21 of 1978. It receives 20% of safari tourism revenues and 25% of sport hunting revenues from WMAs. The fund is managed by a Board of Trustees comprised of the heads of various agencies and other persons (Mabugu and Mugoya 2001). The director of the fund declined to share any information with us about revenue flows passing through this office.

The District Council of Longido

The Longido District Council's role is to provide technical advice to Enduimet CBO. The Council receives 15% of safari tourism income and 15% of sport hunting revenues. When villages had individual deals with safari companies, the District Council used to get the following revenue from these companies (Table 5).

Table 5 Photographic revenue distributed to the Longido District Council and villages from July 2008 to March 2009

From Lodge/Camp	Year	Month	Income (USD)	
			District	Village
Hoopoe Adventure Tours Ltd (Hemingway Camp) in Olmolog village	2008	July-Dec	668	1,336
Elerai Tented Lodge/Kambi ya Tembo	2008	Aug-Dec	6,774	13,548
in Sinya village	2009	Jan	1,129	2,258
Makoa Farm in Tingatinga village	2009	March	80	160

Source: Longido District 2009

The management of revenues in Enduimet Wildlife Management Area

The WMA Guidelines of 2003 state that: 'the primary beneficiary of WMAs shall be the villager in the village(s) forming the Authorised Association (AA)' (URT 2003: 32). The benefit sharing arrangements in a WMA include both financial resources, as well as employment opportunities. The WMA Regulations state that: 'benefit sharing shall comply with circulars issued by the Government from time to time' (URT 2002: 32, URT 2005: 32). According to the regulations, the shares received by WMAs should be 65% of what has been paid to the Wildlife Division of fees for safari tourism and 35% of what has been paid for sport hunting. Photographic and hunting revenues from Enduimet are collected by the WD in Arusha before funds are channelled back to Enduimet WMA.

This revenue sharing set-up clearly lacks transparency. The CBO office in Enduimet is not able to access information about how much is paid by safari companies to the WD. Hence, they are not in a position to know whether Enduimet CBO actually gets what it is entitled to. In an interview with us, a WD official in Arusha responded to this issue by saying that 'the CBO can check the data by using game scouts to inspect the tourist vehicles' and that 'they can benefit if they control the tourist statistics' (WD representative, September 2009). On hunting companies, the WD representative stated that 'after we have received the information from hunting companies on type and number of animals hunted, and rates, we analyse how much should be allocated to the Central Treasury, the Tanzania Wildlife Protection Fund, the CBO, and the District Council.' Because analysis and revenue distribution to various actors are done by separate individuals at different ranks, the official stated that 'I cannot give you the information of our analysis because what actually goes to villages sometimes does not match our analysis' (WD representative, August 2011).

Table 6 Enduimet WMA income (photographic and hunting revenues) per year from 2007 to 2011[7]

Date	Amount (USD)
2007	11,729*
2008	19,539
2009	35,522
2010	55,721
2011	104,960

(Source: Field data)
*The income supported game scouts salaries for six months, meetings and office equipment.

In 2011, it seems the income almost doubled compared to 2010. According to information from the administrator of Enduimet CBO, the reasons were that the less frequent companies paid almost half of the total revenue. For instance as it was stated earlier, the CBO received about 7,500 USD from Makoa Farm Horseback Riding Safaris through the WD. From the income the WMA received, the distribution at CBO level is supposed to be as follows: 15% is reinvested in conservation, 50% is divided between the member villages, 25% go to the management of the CBO and 10% is allocated where the CBO deems it needed (URT 2005: 32). The 10% of the Enduimet CBO share is allocated to support secondary school student fees of the children whose parents cannot manage to pay. The fund allocation seems to be done in a fair way with equal chances for all member villages.

The revenues provided for each village

The Enduimet WMA member villages are each supposed to get 3.6% of the income from photographic tourism fees (i.e., 32.5% totally shared by nine villages) and 1.94% (17.5% for nine villages) of sport hunting fees. As shown in Table 7, by August 2011, villages had received five payments. According to the information from the villages and Enduimet CBO, it seems that the villages had received the amounts they are entitled to from Enduimet CBO, except in 2007 when the income to the CBO was used to cover game scout salaries, meetings and office equipment.

Income received by some villages in Enduimet does not correspond to their tourism potential, amount of land contributed and conservation costs. Under the current benefit sharing arrangement some villages have increased their income, while other villages that previously had private deals with safari companies have

[7] For the whole year of 2010 until August 2011, the records of Enduimet CBO show that it received about 7,920 USD (12 million TSH) from Old Nyika Safaris hunting company.

lost out. Sinya village for example, through an individual tourism venture with Kambi ya Tembo, used to earn more than 30,000 USD per year. But currently the village receives about 1/12 of what they used to earn.

Table 7 Income distribution by Enduimet CBO to villages from 2008-August 2011

Date	No. of villages	Income per village in USD
2008	8	1,966
2009/2010	8	2,998
2010	9	1,320
24/1/2011	9	2,025
1/8/2011	9	1,542

Source: Field data,
Note: on average a village has some 700 households.

Revenue received by the villages has been used mainly to support social services such as school infrastructure, paying school staff, and water provision. For instance, Sinya village received 2,000,000 TSH (1,320 USD) for the first time under the WMA in 2010. It allocated 500,000 TSH (330 USD) to Enduimet CBO education fund (10 pupils from Sinya village are supported by this fund)[8], and provided funds for renovation of two class rooms, payments to a watchman and a matron in the primary school, and payment to a nursery school teacher.

What are the local costs of the Wildlife Management Area?

The costs borne by communities in WMAs include opportunity costs, which are equal to the value of alternative use such as cultivation. Other costs are associated with restrictions on the kind and amount of resources that may be withdrawn from the area after creation of the Enduimet WMA. The protection of the area has caused wildlife numbers to grow leading to increased incidences of crop raiding, destruction of water taps and cattle troughs, livestock losses, losses of human lives as well as injuries and threats to human lives (see also Trench et al. 2009, Minwary 2009). On crop raiding one woman complained: ‘When we plant, our crops are eaten by wildlife. They (the CBO) stop us from killing the wild animals when they eat our crops, or kill our livestock. They have stopped us

[8] The 500,000 TSH (330 USD) from each village, together with the 10% (of 65% safari tourism and 35% sport hunting) of the Enduimet CBO share, forms the Enduimet CBO education fund. Each village and the CBO contribute this amount whenever they receive their share.

from charcoal burning in the WMA area. How does the CBO expect us to survive?'[9] (Interview no.21, September 2009).

Destruction of water facilities result in people running out of water for many days as it is a long process to repair water pipelines. Sometimes people are also attacked by thirsty and hungry elephants. The presence of wildlife in the area has created fear that has restricted people's freedom of movement at night as one man stated: 'People have reduced the time to be out of their houses during the evening and night. They used to be outside their homes up to 10 PM. But now, when it is 6 PM people are indoors' (Focus group, September 2009). Other indirect costs include guarding the crops at night, and sometimes people being injured by wildlife. For instance between July 2010 and June 2011 one woman was killed by an elephant and one injured by a lion in Lerangwa village, and from January through August 2009, in the Enduimet WMA, three men were attacked by elephants, and two by buffaloes. In addition, from January to August 2009 and July to October 2010 there were 298 livestock killed by predators (especially hyenas, but also leopards and lions) in Enduimet WMA (AWF 2010), and from March to August 2011 about 106 livestock were killed in Olmolog village alone (AWF 2011)[10]. In the same period more than 365 livestock were killed and more than 228 hectares of maize, beans, tomatoes and banana farms were damaged by wildlife (mainly elephants and elands) in Enduimet WMA (AWF 2011).

Concerning the reaction of the government when wildlife kills people, in bitterness one woman stated that: 'When elephants kill people in our village, the game scouts and district personnel can delay for three days. But when elephants are killed you will realize there is a government in Tanzania' (Interview no.17, September 2009). Mitigation costs such as buying torch batteries, growing and/or buying chillies or other materials to keep away wildlife from farms and guarding the crops in the night cost villagers both in terms of money and time.[11]

Regarding 'compensation', the new Wildlife Act of 2009 states that: The minister shall make regulations prescribing the payment of 'consolation' money to any person for injury sustained, death or destruction of his crops caused by dangerous animals, provided that in relation to destruction of crops, no payment shall be made in excess of five acres (URT 2009:52).With regard to this, the villagers claimed that they have never been consoled for any conservation costs they have incurred.

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[9] In 2009 in Enduimet division, more than 2,100 acres were destroyed by wildlife (for farmers who reported). In one acre a farmer can harvest three bags of maize each bag can be sold 30 USD. In the village one sack of charcoal is sold 7-10 USD.

[10] These livestock losses represent huge economic losses as the price of one cow is 130-200 USD, a goat 13-30 USD, and a sheep 13-20 USD.

[11] It was reported that elephants have already learned about chillies, they tend to pass under the poles, or use another route

Conclusions

In this chapter, we have presented a case study of benefit sharing from safari tourism in Enduimet WMA. We have described the system of collection and distribution of tourism revenues from this Wildlife Management Area. The government, leading conservation NGOs, some donors and parts of the tourist industry present wildlife management and safari tourism in WMAs in Tanzania as a win-win where local people participate in conservation and accrue benefits from their conservation efforts, implying both environmental conservation and local development. This is in line with a definition of ecotourism as an activity combining the concern for the environment as well as for local communities. However, our research findings show instead that there are limited benefits that reach the villages after passing through a complicated and non-transparent system of benefit sharing. Inappropriate leakages as well as blatant corruption are possible in such a system and have previously been reported in the wildlife sector.

Furthermore, the collection of fees from the safari business has, during the last few years, been taken away from the village level and centralized to be controlled by the Wildlife Division. In addition to providing more opportunities for state officials to appropriate the rent from safari tourism, this new system has also had other consequences. First, it has decreased the income considerably in villages that earlier had direct deals with safari companies, while at the same time spreading the income more thinly to more villages. Second, the fees to be paid by safari companies have increased substantially. This has led investors in a more peripheral area such as Enduimet to close down or scale down their activities. This might in the long run reduce the likelihood of stable and sustainable income from the tourism sector to the villages in Enduimet WMA.

We have identified a lack of transparency within some tourist companies as well as in the Wildlife Division. Information provided by some tourist companies lacks for instance details about number of bed-nights and game drives. In addition, one of two hunting companies in Enduimet refused to share information with us.

The WD also declined to provide information about how much it has received from different safari companies and how much it has distributed to the Tanzania Wildlife Protection Fund, the District Council and the Central Treasury. This lack of transparency makes it possible that revenues disappear on the way through the system. From the figures provided for Enduimet CBO in 2010, the CBO received considerably less than what it was entitled to. In addition, the system is not efficient, since the money flow involves several agencies in a

centralized chain of transactions including large transaction costs with a substantial share of benefits going to pay for administration in various ways.

It is also clear that the current costs of wildlife conservation for the communities are higher than the revenues that these communities receive. Furthermore, there are few people who are employed in tourism in Enduimet, and it is most likely that these are not the same people as those affected by crop damages or livestock depredation. The villages with the highest costs from wildlife conservation (crop damages, livestock killings, and attacks on people) are not provided with larger shares of income from the WMAs.

In practise, the case of Enduimet WMA indicates that WMAs have become a tool for wildlife conservation, and at the same time they have facilitated the WD to accrue more funds from wildlife outside national parks, Ngorongoro Conservation Area and game reserves. This is a form of accumulation by various actors that implies the extraction of revenues by changing community rights over land and resources, and thereby affecting the livelihoods of communities in negative ways. Our study of Enduimet WMA shows that the initial concept of rural benefits and development that was central to WMA initiatives are largely absent in this case. Concomitantly, we have to conclude that tourism in Enduimet WMA cannot be characterised as benefiting local communities. Instead, we have found that the WMA implies more hardship for local people and can be seen as a case of accumulation by dispossession.

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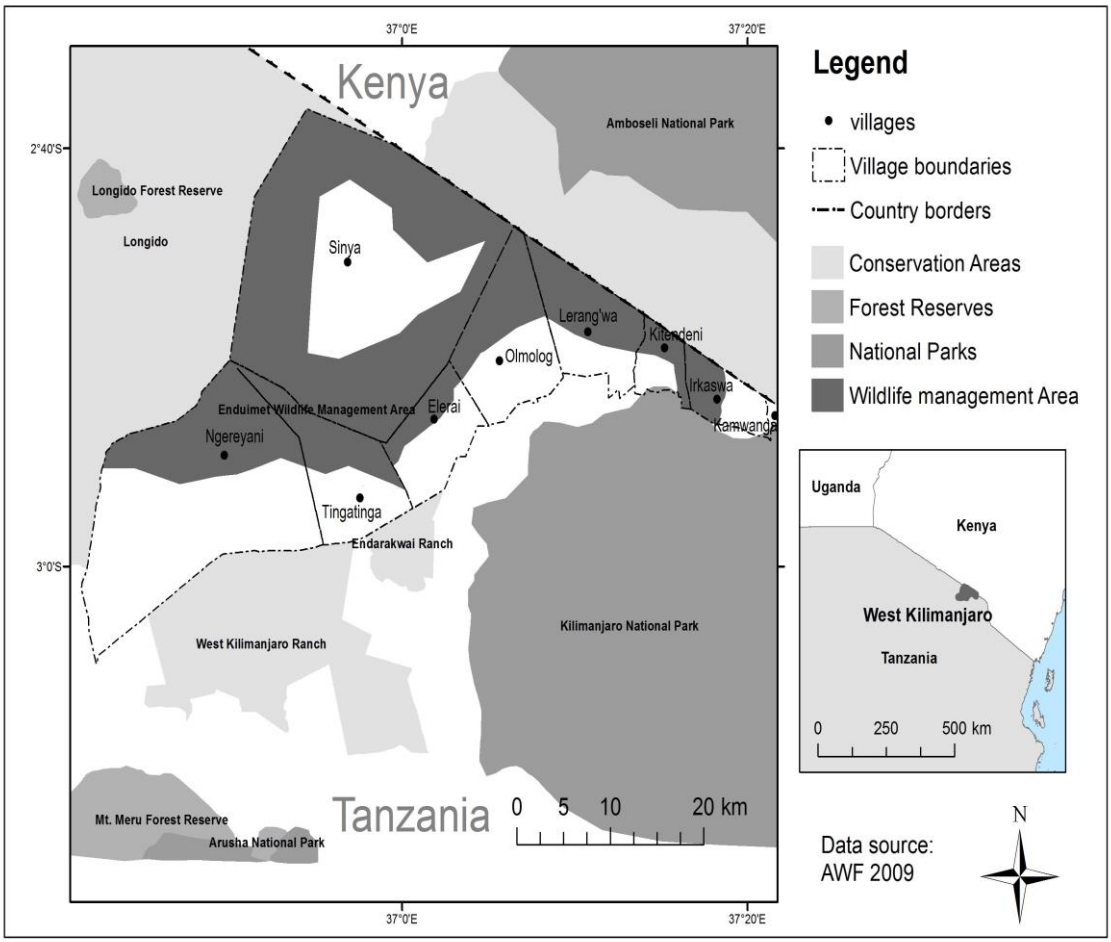
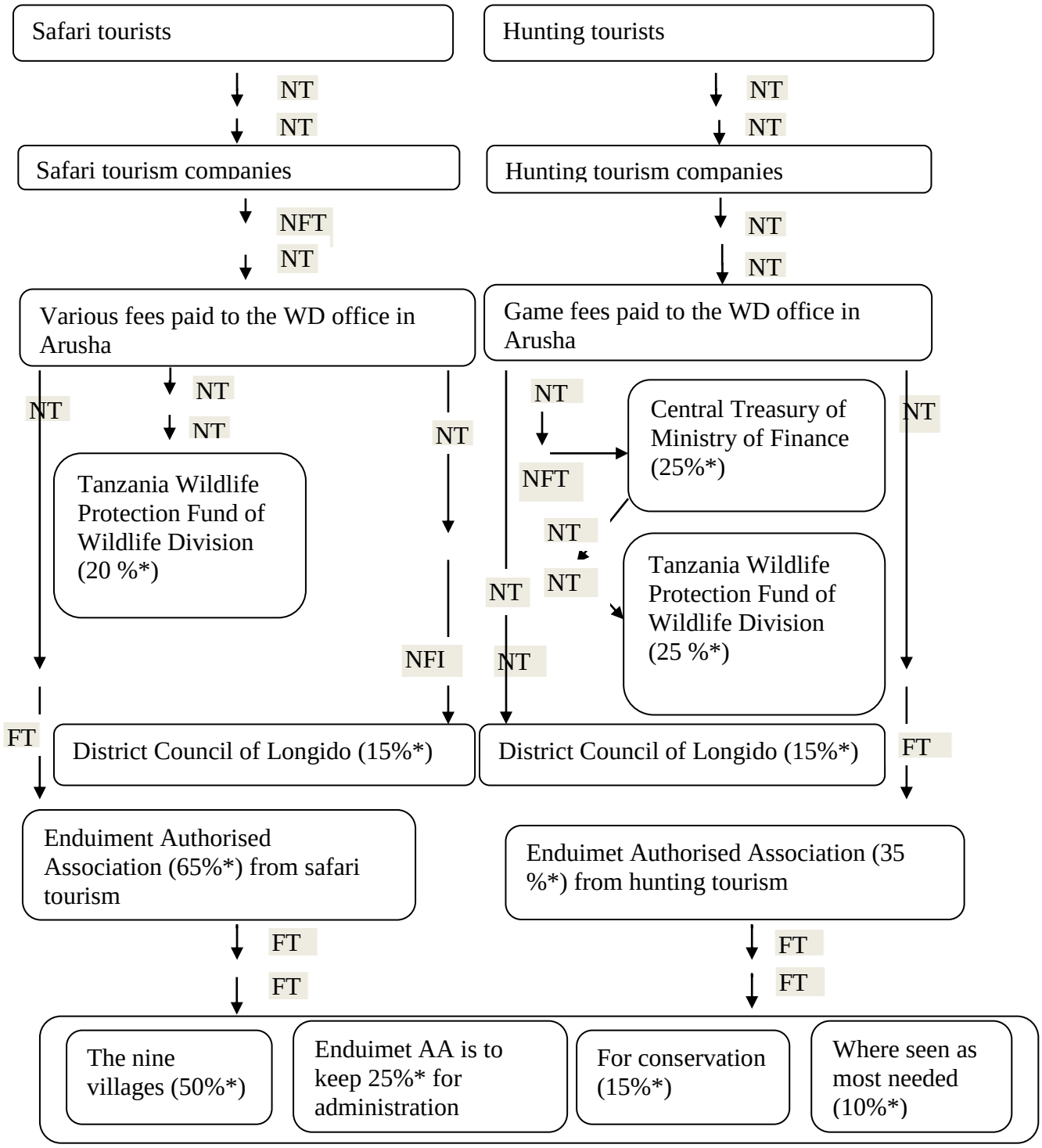


Figure 1 Enduimet Wildlife Management Area



* Percentage required by Non-consumptive Wildlife Utilization Regulations (URT 2008), WMA Regulations 2002 (revised 2005).
NT = Not Transparency
NFT = Not Full Transparency, although some information
FT = Full Transparency

Figure 2 Flow chart of revenues from tourism in Enduimet Wildlife Management Area, with identifications of elements with lack of transparency

PAPER III

onservation With a Human Face? Comparing Local Participation and Benefit Sharing From a Natior Park and a State Forest Plantation in Tanzania

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Conservation With a Human Face? Comparing Local Participation and Benefit Sharing From a National Park and a State Forest Plantation in Tanzania

Sayuni B. Mariki[1]

Abstract

Participatory approaches to natural resources management have evolved as a way to secure local people's support for environmental conservation. This study compares participatory approaches used by a national park and a state forest plantation in Tanzania. It shows how in similar settings, various parts of the State pursue various policies that affect communities in different ways. The extent of participation and amount of benefits accrued are found to have a paramount role in determining local people's attitude to conservation. Local communities do not generally regard the national park as being beneficial, while the forest plantation is regarded as an important means for their survival. The failure of the park to allow meaningful local participation and equitable sharing of the park's benefits with affected local people, is leading to hatred, resentment, and illegal harvest of natural resources from the park.

Keywords

benefit sharing, conservation, local communities, participation, Tanzania

Introduction

During the last three decades, natural resource management policies have changed dramatically from a pure "preservationist model" or a "fences and fines" approach, to more decentralized approaches (Gibson & Marks, 1995; Hulme & Murphree, 2001; Songorwa, 1999). Participation and benefit sharing has been a popular strategy designed to offset conservation costs and motivate local people to support conservation (Archabald & Naughton-Treves, 2001; Scherl et al., 2004) by aligning their behavior with conservation goals (Borrini-Feyerabend, Banuri, Farvar, Miller, & Philips, 2002; Gibson & Marks, 1995; Hulme & Murphree, 2001; Scherl et al., 2004). Many national governments, development partners, and conservation multinationals argue for participatory approaches (Inamdar, De Jode, Lindsay, & Cobb, 1996) as they engender win−win outcomes through environmental management and economic development (Benjaminsen & Svarstad, 2010).

Participatory approaches have been implemented for about three decades, however they seem to have yielded mixed results (Barrett, Lee, & McPeak, 2005; Gibson & Marks, 1995, Newmark & Hough, 2000; Wang, Lassoie, & Curtis, 2006). The extent to which these approaches secure local people's support for conservation may depend on the degree of involvement and the scale of benefits accrued (Child, 2003). In addition, success will depend on the protected area goals, objectives, methods, and mission (Mannigel, 2008), and the ability of protected area "managers to reconcile biodiversity conservation goals with social and economic issues" (Andrade & Rhodes, 2012, p. 1).

In Tanzania, the Ministry of Natural Resources and Tourism (MNRT) adopted locally based and decentralized approaches to natural resources management from the late 1980s, following the economic crisis of the late 1970s to the early 1980s and the resulting declining capacity of government agencies (Nelson & Blomley, 2010). The intention was to involve local people in the management of natural resources and for them to influence management decisions while benefiting directly from conservation. The two sectors, forests and wildlife, underwent policy reform processes in the 1990s. They used various techniques and approaches with the intention of creating good relationships through influencing local people's attitudes and perceptions, to engender support for biodiversity conservation (Hulme & Murphree, 2001; Newmark & Hough, 2000). Individual

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studies from these sectors reveal that success so far has been limited (e.g., Benjaminsen & Bryceson, 2012; Brockington, 2007; Holmes, 2003; Kideghesho, 2006; Vihemäki, 2005). There are few studies that have closely compared the performance of these sectors in meeting participatory objectives (e.g., Nelson & Blomley, 2007, 2010), although these studies focus more on community-based forestry and community-based wildlife management. Studies that compare both sectors by focusing on national parks and forest plantations, especially when they affect the same people, are lacking in the academic literature.

This article investigates how participatory approaches used by the Kilimanjaro National Park (KNP) and the West Kilimanjaro Forest Plantation (WKFP) influence local communities' reactions toward the study areas. KNP is managed by the Tanzania National Park Authority (TANAPA), while WKFP (60.19 km^2) is managed by the Tanzania Forest Services Agency (TFSA)—formerly the Forest and Beekeeping Division (FBD). The national park was significantly expanded in 2005 after the inclusion of a forest reserve (1,078 km^2) that had been managed by the FBD through Joint Forest Management (JFM). The inclusion of the forest reserve was associated with changes in institutions, the legal framework, distribution of powers, authority, resources, and changes in natural resource management agents. This transition reflected substantial changes in the relationships between people and the State, and between people and the park, in terms of natural resource access and rights.

The reason for selecting these two areas is that they have more or less the same location and therefore concern some of the same local people. Both areas experienced the paradigm shift from fortress conservation to community conservation (Hulme & Murphree, 2001). According to the International Union for Conservation of Nature (IUCN) classification, KNP is classified in category II (an area managed mainly for ecosystem protection and recreation) and WKFP is not included in the IUCN category system. According to Dudley (2008), forests that are commercial, that is timber plantation of exotic species and as such, do not constitute a forest protected area. Exploring the performance of these two areas in terms of participatory approaches can shed light on how they can improve the relationship with adjacent local communities.

The park and forest plantation involve and benefit local people in very different ways. At KNP the withdrawal of natural resources is prohibited, however the park benefits local people through community development projects. For example, park management involves local people in extinguishing a fire during any incident of fire outbreak in the park. At WKFP the management allows local people to; collect some forest products, participate in the logging business (for registered customers), provide casual labor for various activities in the plantation, and engage in farming activities through the *taungya*[1] system (commonly known as the *shamba* system in East Africa). As with KNP they are also involved in helping during fire incidents in the forest plantation. This article argues that the level of participation and benefits applicable to the livelihoods of local people affect the way local communities react toward the national park and the forest plantation.

The next section discusses the concept of "participation," followed by a description of the study area, the methods of data collection and the data analysis. Then the findings are presented before moving on to the discussions and conclusions.

What Is "Participation"?

The term *participation* is well debated and discussed in development and conservation literature (e.g., Agarwal, 2001; Cleaver, 2001; Hickey & Mohan, 2004; Mohan & Stokke, 2000). The term has been used in many contexts and is understood in a variety of ways (e.g., Reed, 2008; Rowe, Marsh, & Frewer, 2004; Wilcox, 2003). In this study the term *participation* is defined following Hoben, Peters, and Rocheleau (1998) definition as a process through which different stakeholders influence, share, and keep control over development initiatives and over decisions and resources that affect them.

Local people's participation in development and conservation has enjoyed general acceptance among various actors in recent decades. Nevertheless, despite its acceptability, participation in development continues to attract criticism (e.g., Cooke & Kothari, 2001; Diamond, Nkrumah, & Isaac, 2004; Hickey & Mohan, 2004). For example, some scholars who support the concept (e.g., Diamond et al., 2004; Mannigel, 2008; Ribot, Chhatre, & Lankina, 2008) argue that participation can be used as a *means* (method) to promote more efficient (effective, cheap) management or as an *end* to enhance equity and empowerment. Cooke and Kothari (2001), however, argue that not only is participation unable to facilitate meaningful social change it largely maintains existing power relations through masking this power behind the rhetoric and techniques of participation. Mohan and Stokke (2000) further argue that participatory approaches tend to neglect local power relations and inequalities (as they consider local communities as homogeneous entities), and underplay the role of broader political and economic forces.

There are several degrees of participation ranging along a continuum from nominal, passive, informing, giving options, active functional, interactive, and taking responsibility (Borrini-Feyerabend, 1996; Diamond et al., 2004; Mannigel, 2008; Pimbert & Pretty, 1997). When put into consideration the logic of "acting together" or "taking part," the extremes "nominal," "passive," and "taking over management responsibility" are not considered particularly participatory. This is because at those levels, local people and institutions are only distantly involved in management and decision-making activities (Mannigel, 2008, p. 500). The same author argues that, in rural development and in nature conservation studies,

the activities on these three levels are commonly referred to as participatory.

In terms of natural resources management, participatory approaches assume that, if local communities participate in the management of natural resources and/or benefit they will be more likely to support conservation (McNeely, 1995; Wells & Brandon, 1992). However, several studies have criticized participatory approaches in natural resources management for failing to achieve their goals in terms of devolving decision-making powers to and/or benefiting local people while promoting conservation (e.g., Barrett, Brandon, Gibson, & Gjertsen, 2001; Nelson, 2010; Newmark & Hough, 2000; Sachedina, 2008; Songorwa, 1999).

The extent to which people participate in natural resources management depends on the approach used by conservation institutions, which largely is determined by the extent of power sharing, in this case, between the State and community (E. Barrow & Murphree, 2001; Pimbert & Pretty, 1997). Weber (1919) defines a State as the "human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory." The same author notes that the State may ascribe to other institutions or to individuals the right to use physical force only to the extent to which it permits such use. For example, power can be ascribed to natural resources institutions to regulate access and control of resources, or provide rules defining the distribution of benefits. Thus, the State controls the activities of institutions and their members through legislation, policies, regulations, and strategies that encompass binding rules (Chazan, 1994).

With regard to State and local participation in natural resources management in Tanzania, the government[2] through its parliament makes official decisions concerning natural resources management policies, and Acts that legalize the management of natural resources, and participation of different stakeholders. Different institutions under the MNRT manage all renewable natural resources. For instance, wildlife resources fall under three conservation institutions: TANAPA that manages national parks and has its own ordinance and policy; Ngorongoro Conservation Area Authority that manages Ngorongoro Conservation Area (NCA) and has its own guideline; and Wildlife Division that manages wildlife outside national parks and NCA and has its own policy and guidelines. All responsible institutions for wildlife management use the Wildlife Act of 2009. However, the TFSA manages the forest sector and has its own Act and policy. All these legal documents have aspects of how local people should participate and benefit from natural resources.

The common participatory approaches used by these institutions include protected area outreach program practiced by TANAPA, community-based natural resources management practiced by Wildlife Division and TFSA, and co-management regimes practiced by TFSA. Tumusiime and Vedeld (2012) argue that success of these participatory initiatives may depend on the extent of involvement, amount of benefits accrued, and distribution. Studies elsewhere reveal that benefit sharing initiatives face a number of challenges such as corruption, lack of transparency (Cooksey, 2011; Jansen, 2009; Nelson, 2010, 2012; Sachedina, 2008) rarely generate significant benefits or deliver sustainable alternative local livelihoods (Cernea & Schmidt-Soltau, 2006; Hackel, 1999). Additionally they are not always equitably shared within communities (West, Igoe, & Brockington, 2006; Kiss, 2004) as illustrated in Uganda (Tumusiime & Vedeld, 2012), Tanzania (Kideghesho, 2006), Kenya (Norton-Griffiths & Said, 2010), and Madagascar (Ferraro, 2002).

This article considers these issues in theory and in practice by exploring the case of KNP and WKFP.

Method

The Study Area

KNP is one of 15 parks in Tanzania managed by the TANAPA. The park was formerly known as Mount Kilimanjaro Forest and was protected by the German Colonial Government under the Forest Conservation Ordinance of 1904 (Kivumbi & Newmark, 1991). In 1940, it was gazetted as a forest reserve by the British Colonial Government under the Forest Ordinance of 1921 for water catchment and forest products. In 1941, the colonial government approved a half-mile forest strip (HMFS) of 0.8 km wide (area of 87.69 km^2), as a buffer zone between the forest reserve and the more densely populated villages along the southern lower slopes of the mountain. The motive was to provide local people with firewood, fodder, building poles, wood and non-wood products. This strip was managed by the local *Chagga* Council (Kivumbi & Newmark, 1991).

In 1973, the mountain above the tree line ~2700 m was reclassified as a national park, covering an area of 753.81 km^2. The remaining part of the forest reserve (1,078 km^2) continued to be managed by the FBD without local participation. However their management was ineffective and led to continual deforestation. In response to this problem and following the decentralization policies in the 1990s, the New Forest Policy was formulated in 1998, which among other issues emphasized participatory management and decentralization (United Republic of Tanzania [URT], 1998). Thus, FBD established Community-based Forest Management in which communities are managers and owners of forests, and JFM in which local communities co-manage forest reserves with central and local government authorities (URT, 1998).

Subsequently, JFM was adopted in the Kilimanjaro Forest Reserve with local people participating in management and benefiting from the reserve (Tanzania Specialist Organization on Community Natural Resources and Biodiversity Conservation [TASONABI], 2001). However, in September 2005, the forest reserve and some parts of the HMFS were annexed to the park after the survey report that revealed

major threats to Mount Kilimanjaro in the form of logging, fires, charcoal burning, *shamba* (farm) practices, livestock grazing, forest villages (squatters), and landslides (Lambrechts, Woodley, Hemp, Hemp, & Nnyiti, 2002, p. 5).

Currently, the park covers an area of 1831.81 km^2 (Kilimanjaro National Park Authority [KINAPA], 2006). The main activities allowed in the park are non-consumptive tourism, education, and research. Mount Kilimanjaro (5,963 m altitude) is one of the major attractions in the park. The park borders 90 villages, all of which are included in the park's outreach program. The TANAPA outreach program also known as Community Conservation Services (CCS) was initiated in 1988 with the help from the African Wildlife Foundation. The aim was to build good relationships between parks and the local communities surrounding them. The CCS program is based on the motto "good neighborliness" (Goldstein, 2005; TANAPA, 1994). The 1994 National Parks Policy stresses that "the outreach program will be accompanied by mechanisms to ensure that the benefits of conservation are shared with local communities in appropriate ways" (TANAPA, 1994). The CCS was adopted in KNP in 1994 (KINAPA, 1995).

To the north and north-west of Kilimanjaro, beneath the natural forest and village land, there were forest plantations established in 1926 and 1954 respectively, during the colonial period (for timber and poles production) and expanded after independence in 1961. The total area of plantations to the north-west of Kilimanjaro (WKFP) is 60.19 km^2 (Ngaga, 2011). Of the 60.19 km^2, only 44.58 km^2 is covered with trees (TASONABI, 2001). The remaining area consists of catchment forest areas, steep slopes, valley bottoms, hills and water sources (WKFP, 2008). WKFP was established through the *taungya* system to licensed cultivators. It is owned by the Government of Tanzania and managed by the TFSA.

To incorporate the participatory aspects in WKFP after the Forest Policy of 1998, the plantation management in collaboration with FBD explored JFM opportunities (TASONABI, 2001). However, interviews with forest plantation management revealed that the mode of operation of the plantation did not support JFM. In addressing the participatory issues, the management objectives of the plantation were modified to include: the production of non-wood products, which are harvested by local communities; local participation in management; and benefiting from the plantation (TASONABI, 2001).

Mount Kilimanjaro is characterized by a bimodal rainfall pattern, with long rains from March to May, and short rains from October to December. The rainfall varies with altitude and ranges from 2,300 mm at lower altitudes (the forest belt) to less than 200 mm at the summit (The United Nations Environment Programme-World Conservation Monitoring Centre [UNEP-WCMC], 2009).

The Chagga are the largest ethnic group on the southern and eastern slopes of Mount Kilimanjaro. Ethnic groups, such as the Maasai, the Safa, the Pare, and other small groups are found on the western and northern parts of the mountain. The slopes of Mount Kilimanjaro are now occupied by more than one million people (Hemp, 2006). The annual population growth rate for the Kilimanjaro region was 2.9% during the1988-2002 inter-censal period (Population Planning Unit, 2005). Due to the high population density and land scarcity along the mountain slopes, zero-grazing is practiced by many people, which means that the forest is the main source of fodder for domestic animals.

This study was conducted in three villages, namely, Namwai, Engare Nairobi, and Matadi. They are located on the western side of Mount Kilimanjaro in the Siha Division. These villages (former squatters) were officially registered by the government in the 2000s. All the villages are adjacent to KNP and close to WKFP. They are included in the park's neighborliness list. Some members of these villages were evicted from the natural forest in 2006 and from the forest plantation in 2007. The population of the three villages was 23,411 in 2009. The main economic activities are small-scale farming, small-scale livestock keeping, small-scale business, timber/log business, casual labor in plantations, formal employment, and a few villagers assisting tourists as porters. Many villagers practice the *taungya* system in the forest plantation (Figure 1).

Data Collection and Analysis

Empirical data was collected during different periods between 2009 and 2012 (8 months of field work in total). Initially, the study sought to investigate the KNP outreach program and therefore first interviewees were purposefully selected such as village government leaders, villagers (males and females aged 18 years old and above), the park's outreach warden, the park's protection warden, and tourist porters. The local people who were interviewed reported a negative relationship with the park and indicated the forest plantation as a good neighbor. This observation prompted to study theparticipatory approaches and benefit sharing schemes used by the KNP and WKFP. In the follow-up fieldwork villagers, village government leaders, the forest plantation manager, forest plantation staff, former forest reserve staff, and former village natural resources committee members were purposefully selected and interviewed. The interviews were qualitative, semi-structured, prepared specifically for the interviewees, and conducted in Swahili, i.e. a language understood by most of the people in the study area.

A total number of 68 people (37 men and 31 women) were interviewed in this study. The interview sessions lasted between 1 and 2 hr each. Saturation point was reached when consequent interviews revealed no new information regarding the study topic. Interviews were supplemented with informal discussions with different people, participant observation, and focus group discussions with 6 to 10 people in each study village. In addition, the researcher attended the

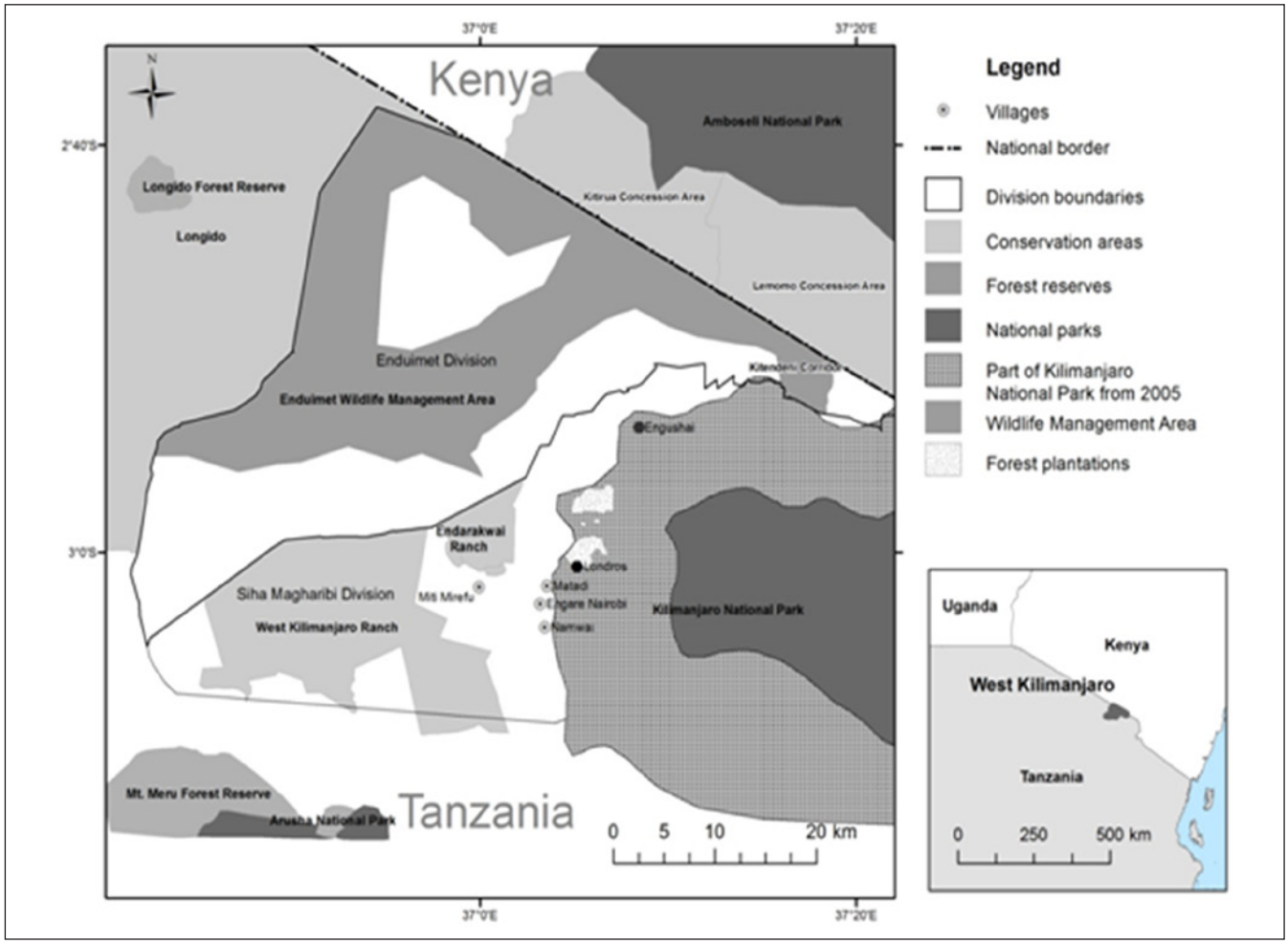

Figure 1. Overview map showing study villages, Kilimanjaro National Park, and the West Kilimanjaro Forest Plantation.

village assembly at Engare Nairobi village, and reviewed relevant literature and several studies conducted in the area. On this basis a lot was learned on how local communities are involved and benefit from each area.

Each interview began by informing the interviewees about the research project and seeking their consent to participate in the study. The participants were encouraged to express themselves freely, and were guaranteed anonymity and confidentiality. A notebook was used to record information from the interviewees, and when permission was granted a tape recorder was used to record data, which was later transcribed. The collected data was analyzed by identifying themes and patterns, organizing them into coherent categories, and linking them to the aims of the study. In addition, statements were written that could be supported by appropriate illustrative quotes from the interviews to explain each theme.

Results

The analysis of field data revealed five main themes: the process of expansion of KNP, access to natural resources after inclusion of the forest reserve in the park, local people participation in managing the KNP and WKFP, benefit sharing schemes, and the relationship between local communities, KNP and WKFP. A description and discussion of each theme is in the following sections and a comparison summary of the KNP and WKFP is presented in Table 1.

The Process of Expansion of the KNP

As elaborated in the "Method" section, the Kilimanjaro Forest Reserve and some parts of the HMFS were annexed to KNP in 2005 after Lambrechts et al. (2002) revealed major threats to Mount Kilimanjaro. However, the analysis of field data reveals that KNP did not fully involve local people during the inclusion of the forest reserve into the park. As one interviewee stated, "the park officials did not conduct any meeting with us; they passed in some households and took some individuals' opinions and then considered these as the opinions of all villagers; something which is false" (Interview no. 7, 2011). The process was not clear about changes in user rights, restrictions on entry to the forest, and access to forest resources.

Table 1. Summary of the park and the forest plantation's participatory approaches.

	KNP	WKFP
Administration	• TANAPA	• TFSA (formerly managed by FBD)
Participatory approach	• Outreach program–sharing up to 7.5% of park's operational budget	• Participate in various activities in the plantation—Casual labor, farming opportunities, provision of logs for community projects, purchase logs (registered customers), in-kind benefits.
Criteria and procedures	• Cumbersome and complex, bureaucratic, top-down, sometimes politically influenced	• Easy to follow, but sometimes affected by favoritism
Benefits	• Only one of the study villages supported in 2002/2003	• Access to forest products • Payment from casual labor, farming opportunities (for food and cash); logging business, logs provision for development projects.
Participation in management	• Fire extinguishing	• Fire extinguishing, • Planting trees, tending trees, various activities through casual labor
Costs of conservation	• Crop raiding; no access to natural resources; punishment, harassment, death, rape, fines or court cases	• Crop raiding
Shortcomings	• No communication; no decision-making power; top-down approach; no buffer zone; Minimal/no benefits,	• No decision making; top-down approach; favoritism
Relationship	• Negative relationship—Hatred, resentment, illegal access of resources, referred to as an "enemy"	• Positive relationship—Referred to as a "savior"
Local people's desirable condition	• To have share of park revenues • To have some extent of decision making over forest conservation • Payment in case of fire if cannot harvest resources, and have buffer zone	• Be assisted to form groups and participate in benefit deals (logs) • Benefit through income from sold trees • Join hands in plantation management

Note. KNP = Kilimanjaro National Park; WKFP = West Kilimanjaro Forest Plantation; TANAPA = Tanzania National Park Authority; TFSA = Tanzania Forest Services Agency; FBD = Forest and Beekeeping Division.

The park demarcated the area without the local people's involvement, and unfortunately included portions of people's farmland into the park boundaries. This intensified the conflict, which was later resolved by positioning some beacons in cooperation with villagers and district officials (Interview no. 7, 2011). The park did not consider the provision of a buffer zone where communities could harvest forest products (Interview no. 9, 2011). Furthermore, the park management dissolved the village natural resources committee and decided to handle all matters of park management without the participation of local people (Interview no. 8, 2009). Whilst the process of expansion of the KNP annexed only the Kilimanjaro Forest Reserve, the WKFP continued to be managed by FBD under the same objectives as before (Interview, Natural Resource Officer, 2012).

Access to Natural Resources After Inclusion of the Forest Reserve in the Park

After the forest reserve was annexed to KNP, entry or harvesting any natural products from the park without permission is considered to be illegal. The park is patrolled by park rangers. Some women who entered the park illegally reported being raped, sexually harassed, or had their property confiscated. Likewise, men reported instances of being arrested, beaten, and prosecuted (Interview no. 12, 2011). Furthermore, restrictions have even been imposed on searching for lost children or livestock in the forest. The park staff demands that villagers must wait for them to come before entering the forest, and in most cases, their response is not timely (Interview no. 19, 2009). The lack of cooperation in handling illegal activities in the park seemed to tarnish the image of the villages and negatively affect their fund application for development projects as the park management demands that villages should abstain from illegal activities. Villagers describe this system as "arrest and send" (*kamata peleka*; Interview nos. 20 & 21, 2009). Those who were caught in the forest were mainly: collectors of firewood, fodder, poles, and plants for traditional medicine; traditional hunters; farmers (cannabis); and timber splitters (Interview no. 22, 2009). However, the Park Rangers seemed to respect permits stamped by village governments and issued to plumbers working on irrigation canals (Interview no. 26, 2009).

Based on restrictions imposed by the park, villagers reported that WKFP is the main hope for their livelihoods. One interviewee stated, ". . . without this forest plantation, people could not live here, they would have vacated. . ." (Interview no. 2, 2009). Villages and nearby towns depend on the plantation for their firewood needs. The local people are allowed to collect firewood during thinning and harvesting periods. Fodder harvesting is also allowed, if it does not take place at water sources. Moreover, people purchase construction poles, participate in the logging business (for registered customers), and are involved in farming opportunities in the plantation, and seasonal employment.

The Involvement of Local People in Managing the Park and the Plantation

At KNP local people are involved in park management through fire extinguishing exercises. However, they are not allowed to enter the park before the park rangers arrive. It is worth noting that fire extinguishing is on a voluntary basis; thus, no payment or incentive is given other than food. The villagers claimed that in such exercises they work as a team with park officials and, thereafter, the relationship ends (Interview no. 2, 2009; Interview no. 1, 2011). As the park rangers are paid for fire extinguishing duty the local people feel that they should also be paid, since they do not have any share in the forest (Interview no. 4, 2009). To emphasize the situation, the villagers claimed that the park recognizes them only in the event of catastrophes (Interview no. 4, 2009). Such a relationship has caused many people to turn away from cooperating with the park because they do not regard themselves as stakeholders in the management of the forest. The local people compare the current management of the forest reserve with the former management under the FBD, as one village leader asserted,

> In those days, many people turned up to extinguish fire because they knew the reserve belonged to them, . . . but now we have to convince and force them because they are not paid and do not benefit from the park. (Interview no. 5, 2011)

At WKFP the situation is different. The plantation management has created awareness in the surrounding villages about conservation, fire control, and prevention measures. In cases of fire outbreaks the communities react quickly to extinguish the fire and do not demand payment (Interview WKFP, 2012). However, some interviewees revealed that the WKFP structure is rigid and they lack participation in decision making. The following section describes the benefit sharing schemes used by KNP and WKFP.

Benefit Sharing Schemes

Criteria and procedures. The benefit sharing scheme of the CCS involves support for community-initiated projects (SCIP), conservation education, and income generating projects. SCIP was initiated in 1992 to support social projects of villages bordering or close to national parks (Goldstein, 2005).

To obtain support from the park, KNP's neighboring villages have to comply with a set of criteria. These criteria include: the village should be free from poaching; it should not have previously been supported by the park; conservation education has been provided; the village is in close proximity to the park; and the project should be of importance to the community (Nyeme & Nilsen, 2010). However, the interviews revealed that most of the studied villages lack awareness about the criteria used for selecting projects for support. The main criterion known by villagers was "proximity to the park," which they defined as having a "patch of natural forest" bordering the park. There was generally a lack of awareness on park matters because the park has not conducted any meeting in the study villages.

Apart from the criteria, there are established procedures to follow that include holding a village assembly to select a project, submitting minutes of the meeting, and presenting an application letter outlining the reason for the request, the amount requested, project description, drawings and cost estimates, while being able to meet about 30% of the project costs (Nyeme & Nilsen, 2010). The district authorities must be involved in these procedures, and the SCIP committee should approve the project before it is forwarded to national parks headquarters to be considered for funding. Before project implementation a memorandum of understanding has to be signed between the community, the park and district authorities (Nyeme & Nilsen, 2010). The interviews revealed that some of these procedures are known by village government, however they are rarely followed because they are bureaucratic and top-down. In most cases district level officials initiate the procedures rather than the communities in need. For instance, applications for construction of water intake and a water storage tank in Matadi village, as well as a secondary school library in Namwai village, were initially negotiated between the District Commissioner and KNP before the villages were involved. Other procedures were not followed (Interview nos. 27, 28, & 50, 2009). Moreover KNP has only one Park Outreach Warden who has a large workload in visiting 90 villages and consequently has insufficient time to assist villagers with any SCIP applications.

At WKFP the criteria for benefiting includes closeness to the plantation, and the criteria for the allocation of *taungya* plots include: health-related aspects (e.g. long periods of sickness, HIV/AIDS affected persons), age-related factors (e.g. elderly people), orphans, widows, poor people, plantation staff, and casual laborers who work in the plantation.[3] The local people in need of plots register their names with the respective hamlet leaders. In some instances HIV/AIDs affected persons, disabled and widows go directly to the plantation management to seek further attention. No fee is required to acquire a plot (cf. Dean, 2011).

As in the case of KNP, at WKFP the process also has some weaknesses. The interview responses revealed some aspects of favoritism in the process of plot allocation. First, the village leadership registered the names of villagers according to the set criteria, however the plots were allocated to other persons. Even though plantation management sometimes cross checked the process the problem remained in some villages, as one widow lamented:

> I have been to plantation headquarters and in our village government office for more than 4 times applying for a plot. I was given a promise but during the plot allocation exercise, my name was not in the list . . . I am tired; I have lost hope. (Interview no. 42, 2012)

Second, some villagers reported that the management in the forest plantation favors relatives, friends, or influential people in the community during the allocation of plots; and some staff engage in corruption by allocating plots to themselves where they later sell the user rights,rent out, or give to relatives or friends.

Benefit sharing. KNP does not share monetary benefits with local communities. Instead it benefits local communities through SCIP. During implementation of these projects the park contributes up to 70% of the project costs and the community contributes the remaining 30%. Although KNP is not the most visited national park in Tanzania, it ranks number one in terms of generating revenue. It generates about 38% of the total revenue of Tanzania National Parks, followed by the Serengeti National Park (33%; Kessy, n.d.).This is because tourists stay in the park longer (while climbing Mount Kilimanjaro) than those visiting the other national parks in the northern tourist circuit. Tourists spend money on accommodation, transport, food, and souvenirs. The information from the Tourism Department shows that from 2002 to 2008 KNP generated about 102.1M US$ (about 17M US$ per year).

The revenues collected from KNP and other parks go to the National Park's headquarters where the “park’s operational budget” is allocated. Only 7.5% of the budget goes to communities for SCIP. From its inception in 1994 to 2011 (17 years) the KNP’s CCS Department has spent only about 1.6M US$ to support 39 out of 90 villages neighboring the park. The types of social projects supported include: construction of public schools and purchase of furniture; construction of cattle troughs, cattle dips, water tanks, bridges, dispensaries and staff houses; making energy saving stoves; establishing tree nurseries; beekeeping projects and women’s sewing projects. The information from National Parks headquarters shows that in 2007 they earned 56.3M US$, of which only about 1M US$ (1.8%) was allocated to 15 national parks for outreach program activities (TANAPA, 2007, cited in Tanzania Natural Resource Forum, 2008).

In the study villages only Matadi village was supported in 2002/2003 to construct a water intake and storage tank worth approximately 13,571 US$. In 2008 the village applied for support to complete a student hostel project, however it was not considered by the CCS Department (Interview no. 34, 2009). According to the CCS Warden, the department does not prioritize projects that had already started claiming that 'they do not know their quality'. The village leadership reported that the outreach department did not take any initiative to evaluate whether the building project was worthy of support. Similarly, Namwai village applied for support to construct a secondary school library. However, the application was unsuccessful as the park claimed that it faced financial constraints (Interview CCS Warden, 2011). From the time of application in 2009 to August 2011, the communities had not been informed about the park’s decision on their applications. This was a second attempt for Namwai village who had applied in 2005/2006 for support to construct a dispensary also without success (Interview no. 28, 2009). Some interviewees stated that they have lost hope in requesting help from the park.

The analysis of revenue sharing data from the CCS Department from 1994 to 2011 shows that Moshi Rural District had received the most funds (556,940 US$), followed closely by Moshi Urban District (455,453 US$). Although Moshi Urban District does not border the park or directly bear the costs of conservation, it had received more funds than other districts that do directly bear the costs of conservation. A good example is Rombo District who had received about half (272,727 US$) of what Moshi Urban District had received. In 2008/2009, Moshi Urban District received more than half (169,080 US$) of the total SCIP funds (321,781 US$) allocated for that year. Most of these funds (148,200 US$) supported a private catholic secondary school.

Nyeme and Nilsen (2010) point out another example in which 72% of SCIP funds in 2007/2008 were given to Mwanga District that does not border the park. This was made possible through the then MNRT Minister, who was also a Member of Parliament for that district (Nyeme & Nilsen, 2010). Not only does the deviation of revenues to other areas adversely affect the benefits for park neighbors, the revenue from the higher earning parks, such as KNP, supports lower earning parks. Furthermore, mishandling and mismanagement of revenues received by the National Park's headquarters also adversely affects benefit sharing schemes. For example, in 2009 the Opposition in Parliament sought a detailed explanation on the reported misuse of about 5.6M US$ by National Park's headquarters (Juma, 2009). In addition, after their 3-year term, the 12 Board of Trustee Directors each received a lump sum of money (Anonymous, 2006). Recent criticism of the National Parks headquarters has led the former Director General to resign.

At WKFP local communities benefit from the forest plantation through forest products such as logs (for registered

customers), fodder, firewood, construction poles (during thinning), farming opportunities, and casual labor. Logs are sold to registered customers from the Kilimanjaro region, the Arusha region, and some as far away as Kenya. From 2010 to 2012 the number of customers ranged from 35 to 37 (11 customers in 2012 were from the study villages). The public institutions and the plantation's neighbors purchase logs mainly for construction purposes. For instance, in 2012/2013, 1,000 m^3 of logs were sold to the plantation's neighbors. From 2008/2009 to 2012/2013, the logs and poles products ranged between 14,000 and 21,000 m^3.

The fee for softwood logs ranges from 1.7 to 32 US$/$m^3$ depending on diameter, length and species type. Softwood poles are sold at between 0.13 and 0.64 US$ depending on the diameter and length. This revenue belongs to the government. Customers are also charged 7 US$/$m^3$ for softwood logs for silvicultural activities and road maintenance in the plantation. This revenue is deposited into the Logging Miscellaneous Account, managed by the forest plantation.

The forest plantation does not sell logs to community groups because second and third pruning and tree felling activities are conducted by the customers themselves. Often, community groups deny responsibility when these activities are conducted improperly. Villages in need of logs for social development activities obtain them from the forest plantation after seeking permission from TFSA. For individual construction purposes the villagers are expected to purchase timber from sawmills (Interview WKFP, 2012).

Villagers benefit through casual labor by participating in various activities that take place in the plantation. For example, during the tree planting season people from the surrounding villages, and from further afield, are involved. They are usually paid 2.5 US$/day and the exercise can take up to a month. The villagers also participate in security activities. There are 19 men and 1 woman from the neighboring villages of Matadi, Engare Nairobi, and Namwai who have been used as security guards in the plantation. Casual labor is also needed to water the seedlings planted in the nurseries. For this exercise the plantation management considers neighboring villages because people are needed to work on a daily basis and whenever such labor is required. The local people, mainly men, are also involved in the construction and maintenance of plantation roads. In the years 2009/2010, 2010/2011, and 2011/2012, the forest plantation management paid 78,321, 73,030, and 77,919 US$ respectively to casual laborers for various activities in the forest plantation. Other benefits associated with the forest plantation include offering transport during sickness and burial ceremony when the need arises.

The forest plantation also provides farming plots to local people. The availability of plots depends on the extent of land available after tree harvesting. Plots vary in size from 30 × 30 m, 30 × 40 m, 40 × 40 m, and 50 × 50 m. Those who cannot cultivate their plots and those in need of immediate money sell their plots to rich farmers, while some agree with others to cultivate the plots on their behalf sharing what is harvested between them. However, such arrangements are usually outside of plantation management control.

Small-scale farmers own one to two plots, while large-scale farmers may own up to 20 plots. Small-scale farmers and persons who do not have plots are sometimes hired by large-scale farmers. The small-scale farmers manage to attend their own plots by setting aside time before or after working as casual laborers for the large-scale farmers. Farming is ongoing throughout the year with the main crops being potatoes, carrots and garden peas and the output from one plot varies from 5 to 20 sacks. Tree species determine the length of time a farmer can use the plot. For instance, in plots growing eucalyptus species a farmer could cultivate crops for 2 to 3 years. In plots with pines and cyprus species a farmer could cultivate for up to 4 years, while in less fertile areas the time could be extended up to 5 years.

Overall, the *taungya* system has benefited many people by providing food, cash and employment opportunities. As one man stated,". . . through the *taungya* system many people have become rich . . . large-scale farmers earn about 28,000 US$ per one farming season"[4] (Interview no. 15, October 2011). However, the local people do not have any security in terms of the land. In case of destruction of tree species, the right to use the land could be terminated and there is no assurance of plot allocation in the future after the first allocation expires (cf. Dean, 2011). Besides, most persons interviewed expressed fear and insecurity about their livelihoods in the future. They are concerned that if plantation management should change or the plantation is privatized (accompanied by different policies) they may no longer have permission to use the land.

The Relationship Between Local Communities, the Park, and the Forest Plantation

It is beyond doubt that local people depend on KNP for their livelihood needs, as one interviewee stated, "We want to get our immediate needs like firewood and fodder first before development projects . . ." (Interview no. 31, 2011). The lack of alternatives for their livelihoods results in illegal withdrawal of natural resources from the forest, as one interviewee remarked:

> . . . is it possible for a poor person to live next to the forest without a buffer zone and watch the forest without extraction of any resource? . . . it is obvious that extraction will occur illegally . . . (Interview no. 9, 2011)

Resentment and hatred toward the park have led people to enter the forest and withdraw natural resources, including green wood, as one interviewee stated,

> They have taken the forest, no entry, no access to forest resources, and there is no buffer zone . . . it is a big problem . . .

> the park has a difficult task to control us from withdrawing the forest products, and we have a job of watching them—when they leave we must harvest the resources . . . since we are not free to access the resources, we do things we were not doing when the forest was under FBD. (Interview no. 24, 2009)

The village government leader asserted,

> . . . We cannot convince villagers to stop illegal activities. We have to keep quiet because it is not our property. If villagers benefit from it, they become guards, but now the park restricts us from entering the forest . . . If someone enters with a saw, will you arrest such a person? The forest is the way it is today because we took good care of it. (Interview no. 18, 2011)

The costs of conservation, such as crop raiding and lack of compensation, also contribute to resentment toward the park, as one interviewee stated, "Wild animals destroy our crops so much. If you dare to say or complain they tell you, you are living in a wildlife corridor. We are not allowed to kill them or beat them" (Interview no. 18, 2010).

Furthermore, there is a lack of communication between the park and the people as one interviewee stated, "KNP works like military army ". . . there is no communication. We don't know what is going on inside . . . " (Interview no. 45, 2011). These voices imply that the relationship between the park management and the local people is poor.

Management at WKFP reported that the relationship with local communities is good. Confirming this, many people interviewed stated that the forest plantation is a "savior" and a "true neighbor" who cares for their livelihood needs and the less privileged in the community. However, some interviewees reported instances of favoritism from community and plantation management during the allocation of farming plots.

Comparison of the Park's and the Forest Plantation's Participatory Approaches

The results presented above illustrate the process of the expansion of KNP and its impacts on local people, and different strategies used by KNP and WKFP to involve and benefit local people. However, the performance of the two areas is different despite the fact that they fall under the same ministry. In the following section, I elaborate on the underlying factors contributing to the differences.

Legal Framework

The performance of KNP and WKFP is partly affected by sectoral policies and legislation. The legal documents specify the manner in which local participation and benefit sharing should occur in terms of natural resources management. However, this study found that the local participation and benefit sharing strategy used by KNP is more rhetoric than reality. In practice, the park operates closely under the "fences and fines" strategy. The park's approach does not consider the needs of local people and, to a large extent, is a trade-off where tourism and conservation goals are met at the expense of local persons livelihood needs. At WKFP the performance of the plantation clearly reflects a win–win situation where plantation goals, government benefits and local persons needs are met.

As previously stated, KNP is classified in category II by IUCN while WKFP does not fall under any IUCN category. While this may partly explain the difference in the extent of natural resource access by local people in each area, much is left to consider in terms of benefit sharing, participation in decision making, and management of the two areas. Therefore, these aspects are elaborated further below.

Benefit Sharing

Given the KNP's high income levels one would expect more benefit sharing and well established relationships with local people. However, this study finds that several factors have shaped the benefit sharing scheme. Firstly, National Park's headquarters applies a set of criteria and procedures for SCIP application, which are bureaucratic, complex, and lacking transparency (cf. E. G. C. Barrow, Gichohi, & Infield, 2000). It is difficult for local communities to follow the required procedures and in most cases education or assistance is required, particularly for illiterate groups.

Secondly, the bulk of collected revenues from all national parks in Tanzania is remitted to National Park's headquarters. Headquarters channel the operational budget to national parks and only up to 7.5% of its operational budget is set aside for outreach programs to surrounding villages that bear the cost of conservation (see Goldstein, 2005). This system is different from other countries like Uganda and Kenya where revenue for local people is derived directly from tourists' entry fees (e.g. Tumusiime & Vedeld, 2012).

Thirdly, external political influence affects benefit sharing with funds being diverted to areas not directly affected by the park. Moreover, SCIP applications are sometimes influenced by district level leaders for political gain and credit (Borgerhoff Mulder, Caro, & Msago, 2007).

Fourthly, the mismanagement and misuse of funds by National Park's headquarter officials adversely affects the benefits for local people and the amount of revenue left for park outreach programs. Inappropriate leakages and corruption in the wildlife sector have previously been reported (e.g., Benjaminsen & Bryceson, 2012; Benjaminsen & Svarstad, 2010; Cooksey, 2011; Jansen, 2009; Nelson, 2009, 2010, 2012; Sachedina, 2008).

Contrary to the KNP benefit sharing scheme, WKFP has had a more positive impact on neighboring villages. Local communities benefit through; the logs business (for registered customers), collection of forest products, engaging in

income-producing casual labor activities, and the *taungya* system. The demand for (fertile) agricultural land has been met, to some extent, through the plantation's *taungya* system. The application criteria for *taungya* plots are much simpler than the KNP's criteria and guidelines for SCIP application. Since the inclusion of the forest into KNP, the need for forest products has been partly met by the forest plantation. However, the only type of employment offered is casual labor and casual laborers are paid very little. Communities have opted to accept low pay because they lack alternatives and working for the plantation increases their chance of obtaining farming plots. Unfortunately, the allocation of plots has been adversely affected by favoritism. Similar cases of favoritism in *taungya* system have also been reported in Ghana (Agyeman et al., 2003).

Participation in the Management of the Park and the Forest Plantation

KNP focuses strictly on its structure and has no consideration to local persons contributions toward conservation. There is no local community member that plays an active role in park administration or temporary employment. The park considers local people only when there is a fire outbreak; thus, local people claim that they are used as "tools." As a result few turn up to help with fire incidents while others demand payment. KNP's exclusion of local people from park management contributes to the negative relationship that exists between the park and the people. Paraskevopoulos, Korfiatis, and Pantis (2003) found that social exclusion negatively affects conservation attitudes. WKFP does involve local people in plantation management through different activities, and has created positive interaction with surrounding communities. In this case local people participate willingly to help with fire incidents. However, in both areas participation is used as a *means* to improve efficiency in production and/or conservation. Both areas operate on the lowest level of the "participation ladder," although the participation level of WKFP seems to be higher than that of KNP. Many of KNP failures/shortcomings coincide with other protective management studies elsewhere where focus is on structural barriers toward successful public participation (e.g., Lachapelle, McCool, & Patterson, 2003; Wilson, 2003).

Participation in Decision Making

KNP and WKFP share a centralized structure in terms of decision making on matters pertaining to the management of natural resources and benefit sharing. It is difficult for communities to influence or challenge the operation of the central structure. The park management system does not allow space for local people's opinions because of its top-down and paramilitary nature. This was revealed during the inclusion of the forest reserve into the park, as there was no awareness raising or sensitization about changes of user rights and hence the process took people by surprise (see Lerkelund, 2011). In addition, only district leaders who make decisions have been involved in choosing development projects for support (cf. Borgerhoff Mulder et al., 2007; Durrant, 2004). There has not been any opportunity for villagers to contribute to the park's planning and decision-making processes nor has there been dialogue with park staff to express their problems and seek solutions (cf. Anthony, 2007; E. G. C. Barrow et al., 2000). Moreover, most of the revenue collected has been retained by the National Park's headquarters and local people have no power or influence over its allocation.

In the case of WKFP, local persons have no power or share in the revenue collected from logs and poles sold, apart from payments received for casual labor (cf. Agyeman et al., 2003; Amoah, 2009). Additionally, they have no influence over the amount paid for casual labor, nor do they receive any incentive for tending trees. The income from logs sold is remitted to the central government. Although local people in the forest plantation are viewed as beneficiaries, they are not involved in decision making over forest use (cf. Alden Wily, 2002). Gillingham and Lee (1999) point out that the lack of participation in decision making shapes local persons perceptions of protected areas and affects their relationships with government conservation institutions and other stakeholders. Andrade and Rhodes (2012) found that local community participation in the protected area decision-making process is significantly related to the level of compliance with protected area polices. Silori's (2006) study in India found that lack of involvement of the local people in the decision-making processes and in forest management groups were major causes of negative attitudes toward protected areas.

Communication and Awareness

There is generally a lack of communication between KNP and villagers. There has not been any awareness raising activities to increase public awareness and participation in conservation efforts. Local persons mainly experience the negative side of the relationship with the park through fines, imprisonment, and restrictions (cf. Durrant, 2004). This lack of communication and conservation awareness about the park's objectives and mission may contribute to the negative relationship between the park and local persons. Holmes's (2003) study in western Tanzania found that the number of visits of national parks personnel to the village was associated with positive attitudes. Fiallo and Jacobson's (1995) study in Ecuador found that low level of awareness regarding conservation issues was associated with negative attitudes toward protected areas. Nevertheless, Heinen and Shrivastava (2009) found that higher level of awareness on regulations was associated with negative attitudes toward conservation. Contrary to KNP, the WKFP plantation staff visit villages and raise awareness about environmental issues and fire control measures.

Relationship

Some studies argue that the fear of law enforcement officials reduces anti-conservation behavior (e.g., Aipanjiguly & Jacobson, 2002). However, this study found that people are engaged in illegal withdrawal of resources from the park regardless of patrols by park rangers for the following reasons: lack of, or very few benefits; denial of access to natural resources; lack of buffer zones to harvest natural resources; ill-treatment when found in the park; and lack of compensation for crop raiding. In addition, villagers referred to the park staff as "enemies" who do not care about their livelihoods (cf. Anthony, 2007). Given the fact that land is a scarce resource in villages surrounding the park (see Hemp, 2006), dependence on the park's natural resources for livelihood needs is unavoidable. Silori's (2006) study in India found that restricted access to forest resources for local persons livelihood needs resulted in negative attitudes among them toward the biosphere reserve. Similarly, Arjunan, Holmes, Puyravaud, and Davidar (2006) found that exclusion of people from a forest to protect biodiversity often antagonizes local communities.

While local communities bear the costs of conservation they do not receive any tangible benefits to offset these costs (cf. Kideghesho, 2006). In addition, the target of benefits from the park is not immediate nor does it address felt needs. The scheme tends to focus on infrastructure, which remains the only testimony of support provided (Redford & Fearn, 2007). Similar findings have been reported by Holmes (2003) in western Tanzania, revealing that individuals who perceived active extension services from national parks held more positive attitudes toward the park than those who did not.

At WKFP benefits obtained by the local people seem to affect the relationship positively. This is revealed through local persons responses in cases of fire outbreaks, during tree planting activities and their corresponding attitude toward plantation staff. In cases of fire outbreaks, their responses are quick and they do not demand payment. The community regards the forest plantation as a "savior" as far as their livelihoods are concerned. This is because the plantation is the main alternative for their livelihoods since the inclusion of the forest reserve into the park.

Why Do the Park and the Forest Plantation Perform Differently?

The findings and explanation given above show that KNP offers limited opportunities for local people to participate and benefit from natural resources, compared with WKFP. The difference observed is related to the legal framework reforms that took place in the 1990s following the country's economic crisis in the 1980s and the loss of resources and declining capacity of the central government. Institutional changes in both sectors (forestry and wildlife) have continued since the 1990s, however they have not necessarily been in ways proposed or intended by local proponents of reforms and/or donors (Nelson & Blomley, 2010). The reforms have faced resistance due to the interests and incentives that political elites, central agencies, and private commercial interests pose for expanding and/or maintaining control over land and natural resources (Nelson & Agrawal, 2008). Consequently, reforms were not carried out as intended because competing state and private commercial interests considered the resources "too valuable to allow ordinary citizens to own" (Alden Wily, 2008, p. 4).

According to Nelson and Blomley (2010), the economic crisis of the1980s prompted policy makers to implement wide-ranging policy changes that were more community-based and decentralized. The process of policy formulation was dominated by international donors, NGOs, technical advisors, and government officials within the MNRT. The same authors argue that, in the forestry sector, donors managed to leverage the process due to FBD's lack of alternative sources of political power and financial capital. Nevertheless, in the wildlife sector, donors had very little influence due to the ability of policy makers to acquire rents from tourism that provided them with financial assets that enabled them to deflect reform pressure from donors (Nelson & Blomley, 2010). Consequently, donors failed to bring about the reforms necessary for positive and direct impacts on rural livelihoods (Nelson & Blomley, 2010).

Although the two sectors are under the same ministry, the existing legal framework causes them to work in different directions indicating that the outputs might be different in terms of participation levels and benefits channeled to local communities. Blomley and Iddi (2009) conclude that the "legal uncertainty caused by the parallel and disconnected development of wildlife and forest policies and laws results in inefficiencies and wasted opportunities for poverty reduction and sustainable land [natural resources] management" (p. 18).

Conclusions and Recommendations

This article has presented findings on participatory approaches used by a national park and a forest plantation in Tanzania. How the park and plantation work and how they affect the relationship with local people and the resulting attitudes toward the study areas has been presented. Conservationists, government officials, and development partners have presented the notion of participatory approaches as a "win−win" strategy where conservation and local benefits can be combined. Many conservation institutions have used this strategy to win local people's support for conservation. However, this study shows that although some aspects of participatory approaches seem to be typical in KNP, it is evident that the park operates closely under the "fences and fines" strategy. This is contrary to the other case of WKFP where local people are involved and benefit through various activities in the forest plantation. In both cases, we have seen

that the extent of local participation and the amount of benefits accrued seem to determine the communities' relationship with the study areas.

Many factors affect the level of participation and extent of benefits for local people, which can be summarized as follows. At KNP the factors include bureaucratic procedures for SCIP applications; lack of, or few benefits; lack of transparency; deviation of funds; lack of decision making; minimal/passive participation; and lack of communication and awareness. At WKFP, the factors include lack of decision making, too little payment for casual labor, corruption in allocating *taungya* plots, and lack of revenue sharing from logs sold. This article highlights that the differences observed between the park and forest plantation are related to sectoral legal reforms that occurred in the 1990s following the economic crisis of the 1980s.

Some issues were raised in the interviews (Table 1) that the management of the KNP and WKFP can consider to enhance positive relationships and thus reduce the costs of conservation. In the case of KNP local people desire regular positive communication with park staff, tangible benefits from the park's tourism revenues, and some degree of decision making over park conservation issues. They also seek payment in case of fire, if they cannot harvest natural resources, and a buffer zone in which they can collect natural resources. At WKFP local people desire the plantation management to allow community groups to participate in logging business deals, to benefit in the form of income from logs and poles sold, and join hands in the plantation management.

The findings of this article show the failure of the park's participatory approach to create good relationship with adjacent communities through local participation in management and benefit sharing, and the plantations' efforts to build good relationship with adjacent local people. The findings also indicate that the extent of benefits received and the degree of participation used are associated with the negative/positive attitudes toward the study areas. This article concludes that for local people to support conservation efforts and resist illegal activities, the park should allow meaningful local participation in park management and equitable sharing in the park's benefits.

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Notes

1. An agroforestry system in which short-term food crops are grown in the early years of timber plantations to satisfy the farmer's quest for arable land, control weeds, reduce establishment costs, generate early income, and stimulate the development of woody perennial species (Agyeman et al., 2003).
2. Is a group of people presently elected and appointed to run, manage, and execute the State's programs and policies, and their specific agencies and powers.
3. Is a motivation strategy, as large-scale farmers pay 11 to 17 US$/day, while the plantation only pays 2.5 US$/day during tree planting exercises (1 US$ = 1,500 TZS, June 2011).
4. 20 plots × 20 sacks/plot = 400sacks. A sack contains 100 to 120 kg, sold for about 0.7 US$/kg.

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PAPER IV

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Elephants over the Cliff: Explaining Wildlife Killings in Tanzania

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ABSTRACT

Many incidents of elephant killings have recently taken place in Tanzania as well as in other African countries. Such events are usually presented as results of the rising global demand for ivory. As we show in this case study, however, not all violence against elephants is driven by the ivory trade. This article presents an event that occurred in West Kilimanjaro in 2009 when numerous villagers chased a herd of elephants over a cliff, killing six of them. Using a 'web of relations' approach, we seek to uncover the underlying as well as the immediate factors that led to this incident. A severe drought sparked off the event as elephants increasingly raided crops and destroyed water pipes. There are growing elephant and human populations in the area, which must be understood in the context of land use changes. Large areas have in various ways been turned into different types of protected areas during the last few decades as results of efforts by conservation NGOs and governmental agencies. In between these areas, people try to sustain a living on the remaining land, while encountering increased problems with wildlife. Conservation in the study area takes place without local communities having any real influence on decision-making. This leads to a feeling of being marginalized and disempowered, which again causes resistance to conservation, as in this case.

Introduction

After two decades of increasing elephant populations in Tanzania, a decline has recently been recorded in some areas (Niskanen, 2010; TAWIRI, 2010; Douglas-Hamilton and Poole, 2010). This decline is due to a resurgence of elephant killings mainly associated with the growing illegal trade in ivory to supply the demand for artefacts and alternative medicines in China and other East Asian countries (Milliken and Sangalakula, 2009; Martin and Vigne, 2011; CAI, 2012).

Some of the violence against elephants is, however, not driven by the ivory trade. In this article, we use a 'web of relations' approach to analyse an incident that took place an evening in May 2009 on the western side of Mount Kilimanjaro in Tanzania. In this particular incident, a large crowd of villagers surrounded a herd of elephants and chased them, with the aid of torches, motorcycles, fire, and noise, towards a cliff, killing six of them. This event happened near the centre of Engare Nairobi village (Fig. 1). During fieldwork in 2009–2011, we also learned about several other incidents in which elephants had been speared or found dead without indications of ivory poaching.

While we recognize that poaching for ivory constitutes a significant driver for the on-going elephant killings in Africa, we ask whether there are more of these cases that might be mistaken as ivory poaching, and which in reality are caused by a resistance to conservation practice. One key distinction between elephant killings for ivory or for resistance would, in addition to what people state in interviews, be whether the tusks are removed immediately or not. In poaching, the tusks will be quickly removed after the killing in order not to attract attention. In Engare Nairobi, numerous villagers were being photographed with the carcasses the day after the killings (we are in possession of some of these photographs), while the tusks were not removed. In addition, what separates poaching from resistance might also be what Scott (1992) calls 'hidden transcripts', which refer to the narratives that subaltern groups use to interpret their own experience of domination or oppression. Furthermore, frustration among people about the ways conservation takes place may also constitute an important cause behind poaching, since poachers often seem to be able to carry out their activities with the collusion of local people.

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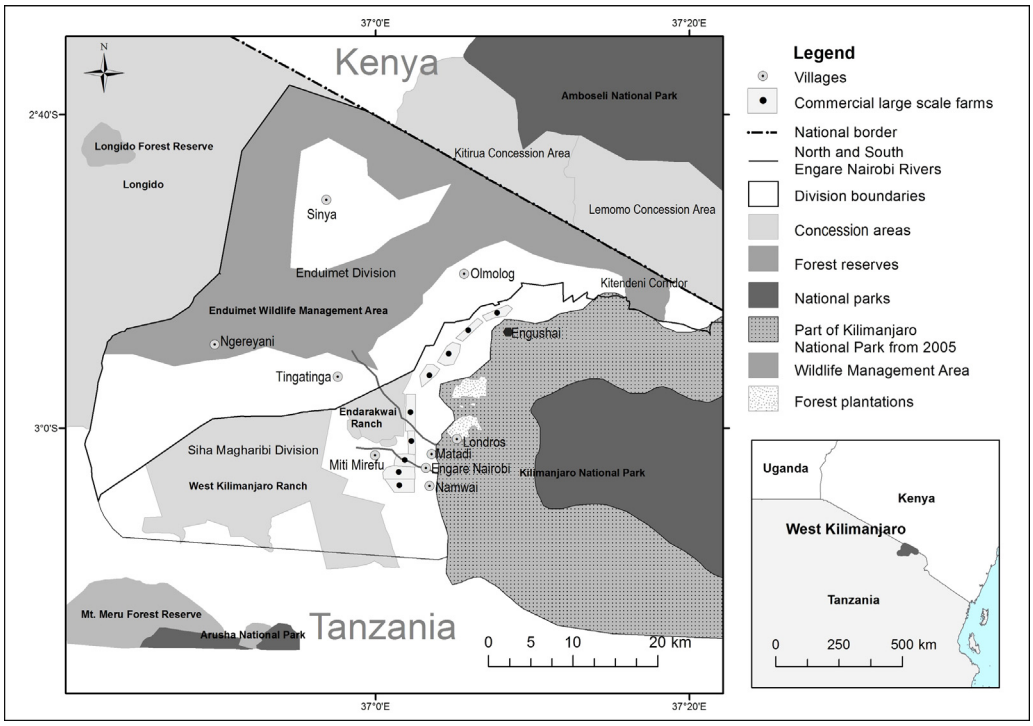

Fig. 1. Map locating Engare Nairobi and neighbouring villages, the two divisions of Siha Magharibi and Enduimet, and conservation areas and ranches.

Case studies of human–elephant conflicts in Africa often conclude that increases in human and/or elephant populations are the main causes of these conflicts as elephants and people overlap in their use of habitats and come into conflicts (e.g. Thouless, 1994; Hoare, 1999; Hoare and du Toit, 1999; Naughton-Treves et al., 1999; Walpole et al., 2003; Weladji and Tchamba, 2003; Osborn and Hill, 2005; Sitati et al., 2005; Graham, 2006; Walpole and Linkie, 2007; Sitati and Tchamba, 2008; Warner, 2008; Karimi, 2009; Kikoti et al., 2010; Mackenzie and Ahabyona, 2012). Some studies also point to land-use changes as a driver of such conflicts (e.g. Campbell et al., 2002; Noe, 2003; Benjaminsen and Svarstad, 2010). These land-use changes result both from population dynamics and from the impact of policies and governance. Other studies also focus on drought leading to increased resource scarcity as a factor sparking off conflicts (e.g. Dapash, 2002; Zubair et al., 2005; Graham, 2006; Lee and Graham, 2006; Warner, 2008; Lamarque et al., 2009).

Elephants require large tracts of land and consume large volumes of forage (Kangwana, 1996; Kikoti, 2009). They may spend 70–90% of their time foraging and can eat 100–300 kg of vegetation in a single day (Osborn, 2004). Thus, in their search for pastures and water, they engage in extensive seasonal migrations often including moving through farmland (Kangwana, 1996; Kikoti, 2009). Human–elephant conflicts can be defined as interactions between humans and elephants where direct and indirect negative consequences, whether perceived or real, exist for one or both parties (Decker et al., 2002; Zhang and Wang, 2003).

This article contributes to the understanding of these conflicts with a detailed investigation of a case of elephant killings providing an insight into the interaction of a broad set of explanatory factors. First, increases in both human and elephant populations in West Kilimanjaro are essential components in the land-use dynamics resulting in the conflicts. Second, large areas have, in various ways, been protected during the last few decades as a result of the agency of actors external to the local communities. These actors include the Wildlife Division and the Tanzania National Parks (TANAPA) under the Ministry of Natural Resources and Tourism, wildlife-based tourism investors, and international conservation organisations. Small-scale farmers and pastoralists try to sustain a living on the land remaining in between the protected areas, while encountering growing problems with wildlife. This has left people with an increased feeling of being marginalized and disempowered and with limited possibilities to influence the situation through democratic means. Thus, we argue that this case may be interpreted as an act of resistance by people who feel disempowered and who have limited access to representational channels to voice their concerns. This situation is not unique in Eastern and Southern Africa where powerful actors have worked for the establishment of protected areas and generally facilitated conditions to increase wildlife. Thus, we suggest that an unknown number of the other elephant killings in Africa that are referred to as ivory poaching may also result from a resistance to conservation. In addition, it is also likely that resistance to conservation play a role recruiting local community members into networks of ivory poaching.

In the following, we first review literature on resistance to conservation before we present the study area and the 'web of relations' approach used as part of our methodology. Thereafter, we analyze each of the possible factors, and establish the ways in which multiple involved factors combine to explain why the elephant killings took place in this case. Finally, we discuss the role played by elephant killings in addressing human–elephant conflicts in the study area.

Resistance to conservation

There is a rich scholarly literature on different forms of resistance to what is perceived as illegitimate or non-democratic governance (e.g. Scott, 1985; Fegan, 1986; Ortner, 1995; O'Brien, 1996; Gupta, 2001; Watts, 2001). People who are dispossessed and marginalized by conservation projects also tend to resist governance in various ways (Holmes, 2007). Cavanagh and Benjaminsen (2015) identify four different forms of such resistance; nonviolent, militant, discursive, and formal-legal. Illegal wildlife killings

represent the militant form when they result from resistance, which also this case study is an example of. Other examples of such resistance to conservation have been given by for instance Neumann (1992, 1998), Western (1994), Weladji and Tchamba (2003) and Norgrove and Hulme (2006).

Some of these forms of resistance may sometimes represent what Scott (1985) calls 'everyday resistance' where relatively powerless peasants seek to avoid oppressive regulations by using techniques such as 'foot dragging, dissimulation, desertion, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so on' (Scott, 1985, xvi). These 'weapons of the weak' (Scott, 1985) normally need little planning or coordination. People make use of implicit understandings and informal social networks and avoid any direct confrontation with elites or government authorities. Scott (1986) also notes that everyday forms of resistance are almost invisible, but such resistance has still been far more prevalent in history than overt rebellions.

Thus, local people use various overt and covert 'resistance methods to challenge the hegemony of conservation imposed by protected areas authorities' (Norgrove and Hulme, 2006, p. 1100). In addition to poaching and the killing of wildlife, these methods may include destroying government property, illegal extraction of resources, spreading false information (Shafer, 1999), destroying resources (Harkness, 2000), threatened or actual violence against conservation staff (Neumann, 1998; Benjaminsen, 2000; Brockington, 2004; Norgrove and Hulme, 2006; Robbins et al., 2006), illegally using protected area land (Li, 2007; Cavanagh and Benjaminsen, 2015), destroying protected area infrastructure (Meyerson, 1998) and collaboration with poachers (Western, 1994). As we will demonstrate, the case discussed here may be seen as both an example of overt and covert resistance. The violence against the elephants was direct and explicit with people posing for their photos to be taken on top of the carcasses. At the same time, since this was a serious criminal offence, it was later during fieldwork difficult to get people to admit to their direct involvement in the event.

Acts of resistance to conservation are usually carried out by marginalized people who suffer the costs of conservation and who do not have the ability to circumvent the system through bribing officials or accessing political power (Holmes, 2007). In China, a case was described in which farmers destroyed their collective forest by cutting down trees that they had previously managed after the government incorporated the forest into a state nature reserve (Harkness, 2000). Likewise, Li (2007) describes how displaced villagers in Indonesia resisted conservation by illegally settling down and cultivating land for their subsistence in a protected area. A similar case is reported by Western (1994) in Amboseli in Kenya, where the exclusion of Maasai from the national park in the late 1970s led them to protest in the form of continued grazing, increased collaboration with poachers, and the killing of wildlife. In a similar vein, Neumann (1992) tells about a case in Eastern Serengeti in Tanzania where Maasai violently protested against the proposed park boundaries (through arson, the spearing of rhinos and threats to government officials). In Guatemala, Meyerson (1998) also describes an incident where local people took thirteen scientists hostage and set a biological research station on the San Pedro River on fire after restrictions of squatters' settlements in the Laguna del Tigre National Park were imposed.

Resistance to conservation in its various forms may also be seen as a response to what Nixon (2011) calls 'slow violence', which stands in contrast to spectacular and instantaneous violence. Slow violence is gradual and incremental and leads to a 'delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all' (Nixon, 2011: 2). Dispossession caused by the establishment of areas for environmental protection is one of the examples of slow violence mentioned by Nixon.

Study area

Engare Nairobi is situated in the Siha Magharibi Division of the Siha District in the Kilimanjaro Region, adjacent to the Enduimet Division of the Longido District in the Arusha Region (see Fig. 1). These two divisions form part of the West Kilimanjaro basin. The population consists of pastoral and agro-pastoral Maasai and small-scale farmers who are of Wachagga, Wameru, Waarusha, Wasafa, and other ethnicities. In the 1950s, British settlers established plantations in the area.

The village of Engare Nairobi was only officially registered in 2007. By 2009, it had a population of approximately 9000. Between Kilimanjaro National Park and Engare Nairobi and other villages, there is a forest plantation run by the Tanzania Forest Services Agency. A large part of the population in Engare Nairobi consists of people who were evicted from this forest plantation in 2007. Due to the rapid growth of Engare Nairobi, village leaders told us that they have requested the government to increase the village area by adding land from a nearby plantation owned by the National Agricultural and Food Corporation, but no action has been taken so far.

The study area lies between 1230 m and 1600 m above sea level. Most of the land consists of semi-arid savannah interspersed with woodlands. There is a diversity of land uses, ranging from dry-land pastures on the plains in the rain shadow of the mountain, to small and large-scale agriculture on the lower mountain slopes. Kilimanjaro National Park is located high up on the slope. Rainfall is unpredictable, especially on the dry plains, with an annual average around 340 mm (Moss, 2001). In the agricultural areas on the lower parts of the mountain slope, the average rainfall is 890 mm (Rey and Das, 1996).

Research approach and methods

In order to better understand resistance to conservation and its causes within a broader context, we decided to take a 'chains of explanation' approach as a methodological starting point. Blaikie and Brookfield (1987) proposed this as a methodology for examining causes of environmental change:

> '(This approach) starts with the land managers and their direct relations with the land (crop rotation, fuel wood use, stocking densities, capital investment and so on). The next link concerns their relations with each other, other land users, and groups in the wider society who affect them in any way, which in turn determines land management. The state and the world economy constitute the last links in the chain.' (Blaikie and Brookfield, 1987, p. 27)

As a further elaboration of this approach, Robbins (2004), in his textbook on political ecology, has suggested to move from 'chains' to 'networks', arguing that the chains of explanation approach may be conceived as a rigid 'hierarchy of power' that tends to neglect the interactions between actors at various scales (pp. 210 and 212). In a similar vein Rocheleau (2008: 724) proposes 'webs of relation' by arguing that

> '(t)he centre of gravity is moving from linear or simple vertical hierarchies (chains of explanation) to complex assemblages, webs of relation and "rooted networks", with hierarchies embedded and entangled in horizontal as well as vertical linkages.'

Thus, political ecologists have tried to move away from focusing on chains to a focus on networks and webs that provide a better framework for explaining more complex interrelationships than one-way influences from higher to lower geographical levels.

These 'chains' and 'webs' of analysis within political ecology have similarities with and seem to be inspired by the 'progressive contextualization' approach in cultural ecology proposed by Vayda (1983). This approach holds that human–environment interactions may be explained by 'placing them within progressively wider and or denser contexts' (Vayda, 1983: 265), and one can start

> 'with the actions or interactions of individual living things and can proceed to put these into contexts that make actions or interactions intelligible by showing their place within complexes of causes and effects' (Vayda, 1983: 270).

Progressive contextualization has been further developed into 'event ecology' (Vayda and Walters, 1999). This is a causal historical approach that explains environmental events or changes. Vayda and Walters (1999: 169) argue that event ecology has to be carried out by following two basic steps:

> '. . . begin research with focus on the environmental event that one wants to explain and then work backward in time and outward in space so as to construct chains of causes and effects leading to those events and changes'.

Vayda and Walters (1999) criticize political ecology for assuming that political factors always explain environmental change and, hence, for being blind to how other (non-political) factors affect environments. Political ecologists, on the other hand, argue that progressive contextualization is inclined to result in 'apolitical' explanations that do not deal adequately with power and politics (Robbins, 2004; Penna-Firme, 2013).

The task we set out for ourselves was to explain why villagers killed the elephants. Thus, what were the factors that led villagers to take such radical action? In order to answer this question, we decided to start out by including a broad set of possible causes comprising both natural and social factors, while still keeping power as a central concern and object of analysis. Hence, this is also a contribution to demonstrate the application of a 'web of relations' approach to explain environmental events. After the presentation of the methods used, we describe the various elements in what we found to constitute the web of relations in this case (see Fig. 2).

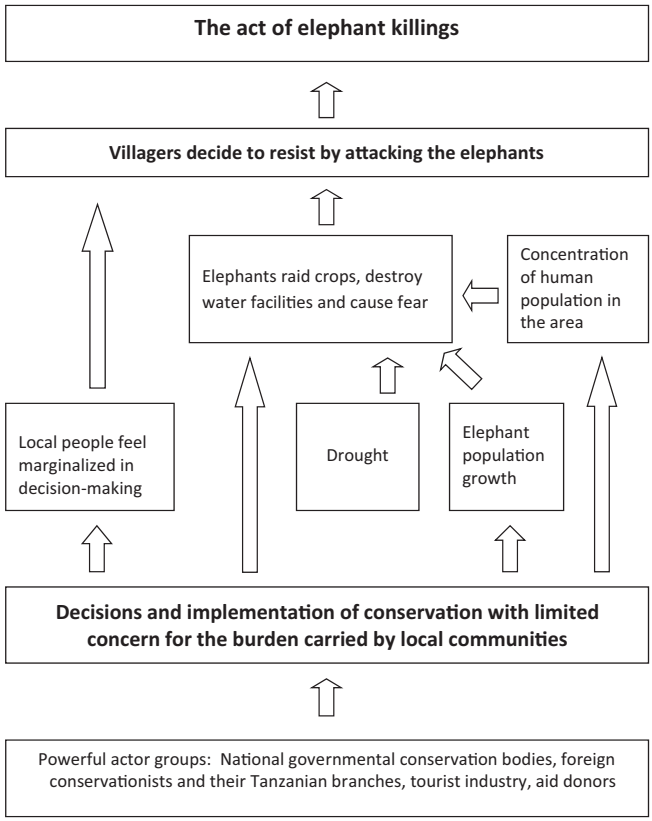

Fig. 2. A web of relations.

Fieldwork was conducted during September to December 2009, in March 2010, and in August and December 2011. The interviews were carried out in different periods in order to explore new aspects that came up during data analysis and to learn about the impact of elephant killings. Snowball sampling was used to choose interviewees. The first individuals however, were purposively selected and asked for further referrals in order to identify other people who were considered as relevant for the study. The criterion we used was whether people had information about the incident of elephant killings and human–elephant/wildlife conflicts in general. Data were collected on factors that led to the elephant killings, general issues surrounding human–elephant/wildlife conflicts, and the impacts of the elephant killings incident, protected areas, wildlife and human populations and actors behind conservation in West Kilimanjaro. We started the interviews by informing the participants about the research and acquiring their prior informed consent. We used an interview guide with the issues we wanted to focus upon. In the first interviews, we sensed that people did not feel free to express themselves, because they were not sure about our intentions. Thus, we explicitly guaranteed anonymity for all interviewees and encouraged them to express themselves freely. In addition, the first author stayed in the study area for a certain period during fieldwork in order to win local people's trust and learn about the causes of elephant killings and problems related to wildlife conservation in the area. Nevertheless, most interviewees were hesitant to admit participation in the elephant killings, although in some parts of the interviews they could talk about their resentment towards elephants as well as providing detailed descriptions of what had happened during this particular event.

In total, we conducted qualitative in-depth interviews with 58 villagers individually. Most interviews were conducted in Swahili by the first author and lasted for one to 2 h. The sample size was reached when new data were no longer adding new insights to the research questions. Most interviews were recorded and transcribed. In addition to in-depth interviews with local people, government officials, NGO representatives and tourist companies, we also held four focus group discussions with villagers. Furthermore, we carried out interviews with key informants who were chosen based on their ability to contribute with information and reflections on the research topic. The aim was to seek knowledgeable individuals who could provide insightful information on human–wildlife conflicts in the study area. We also made use of participant observation by living with villagers for some weeks to witness the roles that elephants play in people's everyday lives. Finally, we collected and reviewed relevant documents and other studies.

The data collection and analysis were conducted as parallel processes throughout the research. During data collection, immediately thereafter, and while listening again to the recorded interviews, we noted down further ideas and potential elements of an analysis. In transcribing the interviews, all pauses, repetitions and verbal utterances were written down as detailed as possible to avoid losing valuable information. We also worked through the field notes and transcripts several times and elaborated codes and an index, and we identified aspects on which we needed more

knowledge, and at re-visits to the field, we concentrated on learning more about these aspects.

Potential causes of the elephant killings

Why did the villagers participate in the elephant killings? To answer this question, it is crucial to understand the villagers' own interpretation of the situation. This issue will be addressed later. First, we find it necessary to present all the elements that we think contributed to this event.

Local burden of conservation

During fieldwork, we learned that elephants repeatedly raid crops in the area. All people interviewed reported that crop raiding was a major problem. Statistics that we collected from local government indicate that in 2009 a total of 901 acres were raided in three villages (Engare Nairobi, Namwai and Matadi villages) in Siha Magharibi Division, and 2222 acres in seven villages in Enduimet Division. In some periods, many farmers spent much time guarding their fields. The damage was, however, significant.

Elephants also cause problems at water points, and they sometimes destroy water pipes. Furthermore, many people fear attacks of elephants on people and livestock. As demonstrated in Fig. 2, we found that the cost of conservation born by local farmers constitutes an important part of the background for the actions that villagers took who chased the elephants towards and over the cliff.

The burden on local people's livelihoods found in this area is in consistence with some other studies in this as well as other areas with elephant populations in Africa (e.g. Hoare, 1999; Naughton-Treves et al., 1999; Tchamba, 1996; Parker and Osborn, 2001; Dublin and Hoare, 2004; Osborn and Hill, 2005). Kikoti (2009) describes how elephants would stay in the riparian forests along the Engare Nairobi North River (also called the Simba River) during daytime and raid local field crops at night. Furthermore, Trench et al. (2009) state that some villagers, especially in the nearby Tingatinga village, have given up farming because of elephant-related problems.

Studies from other areas throughout Africa show that elephants can be responsible for large-scale crop raiding and property damage (e.g. Tchamba, 1996; Weladji and Tchamba, 2003). Muruthi (2005) calculated that elephants in the Zambezi area of Zimbabwe are responsible for up to three-quarters of all crop damage caused by wildlife, while Smith and Kasiki (2000) documented that farmers around Tsavo National Park in Kenya, have stopped farming crops preferred by elephants, such as bananas and sugar cane. Gupta's (2013) study in Botswana shows that crop raiding by elephants has caused some farmers to stop farming their large arable land and instead grow vegetables and fruit in tiny backyard gardens. Osborn and Hill (2005) state that in areas in Africa affected by crop damage by elephants, and where people depend on farming, people's livelihoods are threatened and the standard of living is very low.

Drought

A severe drought in northern Tanzania and Kenya was a significant cause of the increased problems that villagers experienced with elephants in the West Kilimanjaro basin in 2009. When protected areas are hit by drought, wildlife, including elephants, tends to migrate to areas with human settlements and plantations in search of water and green vegetation. Water sources, cattle troughs and water taps, as well as crop fields constitute the main incentives for elephants and other wildlife to move into farms (Thouless, 1994; Smith and Kasiki, 2000).

A man in Engare Nairobi described the local situation in 2009 in this way:

> 'Many people had plots along Engare Nairobi South River . . ..Watering the plots was very costly and hard, because there was little flow of water in the river and everyone was fighting for water. . . . Small plots along the river were more precious than many acres somewhere else. People had hoped to harvest some crops, but elephants used to come and destroy 2–3 acres per day.' (Interview no. 40, Nov. 2009)

During fieldwork, we learned that people tried to keep the elephants away by guarding the fields throughout the night and trying to scare them away with fire, noise and torches. We also observed people trying to prevent elephant raids by fencing, building hedges, and burning chili peppers. These methods are also used in other countries with similar elephant problems (Zhang and Wang, 2003; Weladji and Tchamba, 2003; Sitati and Walpole, 2006; Wang et al., 2006; Mackenzie and Ahabyona, 2012). Fencing is reported in some studies (e.g. Weladji and Tchamba, 2003) with limited effect in keeping elephants and other wildlife away. Other studies (Tchamba, 1996; Smith and Kasiki, 2000) show that such mitigation efforts may provide a short-term solution in deterring elephants from farms, but the animals may become habituated to these measures in the long run.

During the drought in 2009, elephants searching for water destroyed various water facilities. We were told that such destruction also happened during the dry seasons in years of normal weather. This damage is expensive and can deprive people of water for days, as it takes significant time to repair pipelines. One morning, we met people from Ngereyani village with donkeys carrying large plastic containers to search for water. In the evening, we learned that they had been approached by elephants that chased the donkeys away. Both people and livestock in West Kilimanjaro have, in fact, been killed and injured by elephants. For instance, Tingatinga villagers claim that more than 75% of wildlife-related human deaths are caused by elephants.

During fieldwork, villagers complained that they incurred substantial costs as result of damage caused by elephants, for which they received no compensation from the government. The Wildlife Act of 2009 states that 'consolation' payment is to be given in cases of injury, death and destruction of crops caused by wild animals (United Republic of Tanzania, 2009: 52). The regional government document such costs, but during fieldwork we did not hear of any such compensation being paid.

The drought was caused by poor rains throughout 2008 and a lack of long rains in April and May 2009 (Rusell, 2009; Western, 2009). According to Moss (2009), Maasai elders in Kenya claimed the drought to be the most severe since 1961. Maasai elders that we interviewed also told us that it was the worst drought for many decades. Many rivers, dams, and swamps dried out and the few remaining water sources became sites of human–wildlife conflicts. News headlines stated that 'Drought puts wildlife in danger in Tanzania' (Ihucha, 2009) and that 'Devastating Drought Worsens Human–Wildlife Conflict' (Maina, 2009). Due to the drought, elephants migrated towards human settlements and farms in search of green grass and water. The presence of water sources such as the Engare Nairobi River, along with cattle troughs, water taps and fields were the main reasons for elephants and other wildlife to move into farms. This contributed to a situation where elephants raided crops and destroyed human water facilities to a greater extent than usual.

Through fieldwork in 2009, we experienced the intensity of the drought, which caused various hardships for people, including the damage caused by elephants. We observed that much wildlife as well as livestock died and food aid became crucial for people. Rainfall data (Fig. 3) also show that the 2009 drought was severe.

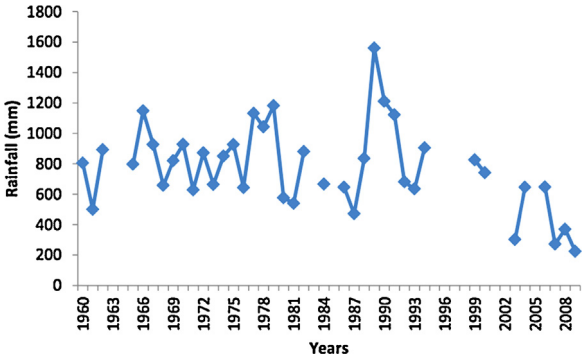

Fig. 3. Rainfall Fluctuations in West Kilimanjaro. *Note:* Years lacking rainfall data for more than five months are not included.
Source: Tanzania Meteorological Agency (2009).

Human population growth

Human–wildlife conflicts are often said to be caused by a growth in human numbers, leading to competition with wildlife for food, water and space (Mwamfupe, 1998; Hoare and du Toit, 1999; Siex and Struhsaker, 1999; Hoare, 1999; Naughton-Treves et al., 1999; Smith and Kasiki, 2000; Osborn and Hill, 2005; Sitati et al., 2005; Karimi, 2009; Butt and Turner, 2012; Reid, 2012). In cases where elephants cause problems for communities, human population growth is repeatedly cited as an explanatory factor.

For instance Karimi (2009) state that: as the 'human population of Africa has grown, the wild areas needed to sustain elephant populations have dwindled, putting the species, and therefore the ecosystem impacted by them at risk' (p.16). Furthermore, in Kenya, Elephant Care International argues that:

> 'The root cause of human–elephant conflict is the exploding human population growth and resultant pressure on elephant habitat. Habitat loss and degradation inevitably lead to conflict. As Kenya's human population soars, elephant populations will continue to be under greater pressure.' (Elephant Care International, undated)

In a similar vein, WWF holds that:

> 'As habitats contract and human populations expand, people and elephants are increasingly coming into contact with each other. Where farms border elephant habitat or cross elephant migration corridors, damage to crops and villages can become commonplace, providing a source of conflict which the elephants invariably lose.' (World Wildlife Fund, undated)

Looking at the population figures for the two divisions studied in West Kilimanjaro, we find that the human population in the area seems to have increased substantially since 2002. In 2002, the Siha Magharibi and Enduimet divisions had 19,807 and 17,020 residents, respectively (National Bureau of Statistics, 2002). In 2009, population figures in these two divisions had increased to 25,623 and 45,763. In addition to natural population increase, the establishment of several new villages in 2007 (such as Miti Mirefu, Engare Nairobi, Matadi and Namwai) may have attracted other people to migrate into the area. At the same time, there might also have been considerable out-migrations of people who have moved to other urban areas or they have moved to cities in line with the general tendencies of urbanization.

Furthermore, we also learned during fieldwork that an estimated 30,000 people who had lived in the forest were in 2006 and 2007 evicted from Engushai and Londros (see Fig. 1) (Ndagulla, 2009; Park Protection Warden interview, 2009). As their living in the forest was seen as illegal, they were not included in the population figures before they were evicted from the forest after the extension of Kilimanjaro National Park in 2005. Most of these people were moved to live in the nearby villages and only then became part of official population numbers. Hence, population figures remain uncertain, but some villages, such as Engare Nairobi, have grown substantially during the last decade, not the least due to evictions caused by the extension of Kilimanjaro National Park.

The elephant population

Many of the interviewees in West Kilimanjaro said that the elephant population had considerably increased during the last few years. People in Engare Nairobi told us that they had never encountered elephants before 2009. One villager said: 'I have stayed here for more than 19 years, but I had never seen any elephants here before this year. When we saw the elephant dung, it was something that surprised us.'(Interview no. 24, Nov. 2009).

Overall figures on the elephant population in Tanzania show that since the ivory ban in 1989, elephant numbers have increased from 55,000 to 136,753 in 2006; with Tanzania's population representing 80% of all East African elephants (Blanc et al., 2007; TAWIRI, 2007). However, from 2006 to 2009 there was a decline to 109,000 in the country's elephant population (United Republic of Tanzania, 2010; TAWIRI, 2010). The reasons are believed to be increased ivory poaching – especially in the Selous-Mikumi ecosystem (CITES, 2010; United Republic of Tanzania, 2010) – due to rising demand for ivory in some Asian countries (BBC, 2012; CAI, 2012); the migration of elephants from Selous into the Niassa Game Reserve in Mozambique, and data processing errors in the 2006 survey (CITES, 2010).

While the elephant population in Selous-Mikumi has decreased in the last few years, the population in West Kilimanjaro seems to have grown from an estimate of 150–400 in 2003 (Blanc et al., 2007) to 600 in 2010 (Kikoti et al., 2010). This increase may partly be a result of conservation measures in West Kilimanjaro supported by the African Wildlife Foundation and the Honey Guide Foundation. An overall growth in numbers of elephants in West Kilimanjaro is consistent with figures from the neighbouring Amboseli National Park of an increase from 967 in 2007 to 1266 in 2010 (KWS/TAWIRI, 2010). The population of elephants in Kenya also increased from 22,036 in 2002 to 23,353 in 2006; while on the whole African continent, elephant numbers have increased from 402,067 in 2002 to 472,269 in 2007 according to Blanc et al. (2007). Furthermore, data from Blanc et al. (2003) and Blanc et al. (2007) indicate an increase of elephants in the Kilimanjaro National Park from 220 in 1990 to 793 in 2007.

As already mentioned, the destruction by elephants of crops and water facilities is a result of human beings and elephants sharing the same space. The population of elephants in West Kilimanjaro seems to have increased substantially in recent years and, in periods of severe drought elephants tend to cause damage to crops and water pipelines.

Land restricted for conservation and wildlife tourism

The land use pattern in and around West Kilimanjaro constitutes a crucial element in the web of relations regarding the elephant killings. As Fig. 1 shows, large parts of West Kilimanjaro today belong to both old and more recently established conservation areas. At the same time, people are left to make their living in areas that are relatively limited and located in between these conservation areas. The elephant population can thrive and grow within the conservation areas in good years, while in times of drought they 'spill over' into farmland. Fig. 1 includes land in West Kilimanjaro that is used for large-scale commercial farming, which also restricts the area available for small-scale farming and grazing.

We present below each of the areas reserved for conservation and tourism, starting with the establishment of national parks.

As shown in Fig. 1, there are three national parks in and close to West Kilimanjaro. Ngurdoto Crater National Park was established in 1960, and it became a predecessor to the present Arusha National Park. After several expansions, Arusha National Park encompasses 552 km^2 from 2006.

The Kilimanjaro National Park was inaugurated in 1973, with an area of 753 km^2, and it was expanded to 1831 km^2 in 2005 by the inclusion of the Kilimanjaro Forest Reserve (TANAPA, 2005). All national parks in Tanzania are administered by the Tanzania National Parks (TANAPA), which is a parastatal organization under the Ministry of Natural Resources and Tourism. Natural resource use by local communities is not allowed in any of the national parks. The mountain top of Kilimanjaro is a famous target for hikers, and this tourism activity generates relatively large revenues. Due to the 2005 expansion, Engare Nairobi is located next to the park, but the hiking tourism activity does not significantly benefit people in West Kilimanjaro.

Across the border in Kenya, the Amboseli National Park was established in 1974, covering an area of 392 km^2. The Kitirua Concession Area lies between the Tanzanian border and the western part of Amboseli, covering 121.4 km^2 and established in 2009 with the help of the Kenya Wildlife Trust. According to Kenya Wildlife Trust (2010), it was established in order to secure a habitat for wildlife and enable Maasai communities to benefit from wildlife tourism. There is a proposal to establish the Lemomo Concession Area east of Kitirua, with a specific focus on the conservation of wildlife (Kikoti, 2009).

The Longido Game Controlled Area covers 1700 km^2 and is managed by the Wildlife Division of the Ministry of Natural Resources and Tourism. It was created in 1946 by the colonial government as an area for sport hunting (United Republic of Tanzania, 1998). The Wildlife Act of 2009 requires people to acquire permits from the Director of Wildlife for their livestock to graze in game controlled areas. The Longido Game Controlled Area covers the entire Longido District and is located almost entirely on village land.

Wildlife management areas (WMAs) are portions of village land set aside for conservation, one of the intentions is to generate revenues from tourism. The Enduimet WMA was gazetted in 2007 and covers 742 km^2. So far, few tourism companies have engaged in the area, and local revenues are small (Mariki et al., in press). This WMA was planned as a means to decrease meat poaching (Poole and Reuling, 1997) and it was seen to be strategically located on the wildlife migratory route between Kenya and Tanzania (Minwary, 2009).

In the 1950s, British settlers established a number of estates in West Kilimanjaro that were set aside for large-scale farming and livestock production. Timber plantations were also established by the Forestry Division by clearing approximately 3775 ha in the Kilimanjaro natural forest (Lamprey et al., 1991). After the Arusha Declaration in 1967 that demanded placing 'the means of production... under the control and ownership of the peasants and workers themselves through their government and cooperatives' (Nyerere, 1967: 2b), the agricultural and livestock estates were nationalized and run by parastatals such as the National Food Cooperation and Tanzania Breweries Limited, that produced wheat and other crops, and raised cattle.

During the 1990s, a wave of privatization impacted on the country, including West Kilimanjaro. A number of large properties have been acquired by investors who have turned them into private conservation and tourism estates. A private investor in wildlife tourism has leased three estates since 1994 (Endarakwai from 1994, Rafiki from 2000, and Noala from 2007), combining them into one property called the Endarakwai Ranch. There is a tourist lodge on the property and the rest of the 44 km^2 area is used for wildlife safaris.

The West Kilimanjaro Ranch covers an area of 303 km^2. It was operated by the National Ranching Company (NARCO) for livestock production until 2007, when AWF entered into a Memorandum of Understanding with the company to establish integrated livestock-wildlife development on the ranch (AWF, 2009). The AWF was, however, unable to lease the ranch in 2011, because of a disagreement with the government. The ranch is currently on the list of NARCO ranches to be privatized.

Furthermore, a wildlife corridor has been established in the area and AWF (through its Kilimanjaro Elephant Research and Conservation Project) has proposed four more corridors (Kikoti, 2009). The wildlife corridor Kitendeni was established in 2001 (and registered in 2002) to connect elephant migrations between the Kilimanjaro and Amboseli National Parks and the proposed Lemomo Concession Area on the Kenyan side of the border (Kikoti, 2009; Kikoti et al., 2010). Actors who supported the establishment of the corridor include TANAPA, the Wildlife Division, Monduli District Council, and AWF (Kikoti et al., 2010). The proposal of new wildlife corridors was argued on the basis of elephant migratory routes and dispersal areas revealed in studies where elephants were collared and tracked (Kikoti, 2009). Some of the areas identified as elephant routes overlap with local settlements. There have been widespread rumours in Engare Nairobi that the government intends to dislocate people to establish a wildlife corridor. In focus group interviews, people voiced fears of being evicted referring to a study carried out by AWF through the Kilimanjaro Elephant Research and Conservation Project to assess the costs of relocating villagers.

Conditions presented thus far constitute drivers in the web of relations that influenced the factors that eventually caused the act of elephant killings. First, the establishment of conservation areas makes West Kilimanjaro an area that elephants are attracted to from nearby protected areas such as Arusha and Amboseli National Parks. Thus, it is likely that the increasing number of elephants in the area in recent years is partly due to these conservation measures. As we have seen above, the presence of more elephants implies that there is likely to be more crop raiding and other problems for people, particularly in periods of severe drought, such as that of 2009. Secondly, when conservation areas are established, the available land and natural resources for small-scale farmers and pastoralists becomes increasingly restricted.

Finally, villagers observe and interpret the changes in their area. During interviews, focus groups and participant observation, we learned that many people are frustrated and angry about the situation. The following is a typical remark: 'We are angry that investors and conservationists are expanding wildlife protected areas in order to enable wildlife to flourish and attract tourists, while we are squeezed. They want wildlife to dominate at the expense of people.'(Interview no. 8, Nov. 2009)

Likewise, another villager established a direct link between conservation and the elephant killings: 'Some of the people who participated in elephant killings had plots along the river, while others did not, but due to the hostility towards conservation, they also followed the elephants and chased them towards the cliff' (Focus Group Interview, Dec. 2009).

Furthermore, many interviewees made connections between the elephant problems and the private leasing of land for conservation and safari tourism:

> 'I can say that the white people like [anon.] are the ones bringing this calamity. Wildlife used to stay in the parks like Ngorongoro and Serengeti. These people have invested nearby our village and attract wild animals that come to our settlements.' (Interview no. 6, Nov. 2009)

Moreover, villagers told us that they feared that land acquisitions for a wildlife corridor through Engare Nairobi would force them away from their present settlements and livelihoods. One

man expressed the following about the situation, which resulted in the elephant killings:

> 'We were scared in 2009 of being dislocated from our village to pave the way for wildlife. We do not get any sleep as we think anytime something might happen. It is hard to do development activities. It is hard to get this fear out of our minds.' (Interview no. 3, Dec. 2009)

Actors behind land appropriations for conservation

Who are the actors that influence conservation in and around West Kilimanjaro? First, the Tanzanian parliament (*Bunge*) makes official decisions on wildlife policies and acts that legalize the establishment of various protected areas. There have been parliamentary elections since independence in 1961. From 1992, Tanzania adopted a multiparty democracy and since 1995, members of Bunge have been elected within a multi-party system. Second, inputs to the policy-makers as well as implementation and management are carried out by the Wildlife Division and TANAPA. These are both under the Ministry of Natural Resources and Tourism. There have been several corruption scandals in the last few years in the natural resources and conservation sector, in which civil servants and top politicians have made decisions and allocated public resources to their private benefits (Sachedina, 2008; Jansen, 2009; Nelson, 2009, 2010; Cooksey, 2011; Mikali, 2011).

In recent years, the Wildlife Division has strengthened its own power in conservation and land management (Benjaminsen et al., 2013) and thereby weakened the power of village and district councils. The Wildlife Act of 2009 gave powers to the Director of Wildlife to issue grazing permits in game controlled areas, such as Longido. It states that 'any person shall not, save with the written permission of the Director previously sought and obtained, graze any livestock in any game controlled area' (United Republic of Tanzania, 2009: 26). Furthermore, the Wildlife Division has increased its powers to control Wildlife Management Areas, while at the same time it claims that these areas are managed by local communities. The 1998 Wildlife Policy allowed the creation of this new category of conservation area (WMAs), stating that local communities will have 'full mandate of managing and benefiting from their conservation efforts' (United Republic of Tanzania, 1998, 31). The WMAs have enabled the Wildlife Division to accrue funds from wildlife outside national parks and game reserves. The state's reconsolidation of its power in wildlife management seems to work as a way for corrupt government officials and the state treasury to capture resources from village land (Benjaminsen and Svarstad, 2010; Benjaminsen and Bryceson, 2012; Benjaminsen et al., 2013).

Furthermore, there are initiatives from the Tanzanian government to create a conducive investment environment (United Republic of Tanzania, 1998). In the wildlife sector, the government encourages the 'establishment of zoos, game sanctuaries, wildlife farms and ranches on private land and devolve(s) responsibility to manage wildlife in those to private sector and individuals' (United Republic of Tanzania 2007: 40). As noted by Igoe and Brockington (2007: 432), this type of 'neoliberalisation of nature' re-regulates nature through commodification and commercialization by partitioning the 'resources and landscapes in ways that control and often exclude local people', while benefiting the national and transnational elites. The Ndarakwai Ranch is an example of this phenomenon. The establishment has contributed to land use changes away from agriculture and livestock to wildlife-based tourism.

However, conservation in Tanzania cannot be seen as a feature that is controlled only by actors in the government. There are also international actors that play essential roles in proposing, facilitating and funding conservation in this as well as in other countries in the global South. AWF belongs to a group of non-governmental organizations from the global North that has a powerful role in enhancing protected areas in the South (Sachedina, 2008; Scholfield and Brockington, 2010). This large non-governmental organisation was established in the USA in 1961 to capacitate Africans to manage wildlife after the colonial wardens had departed (Adams, 2004). In West Kilimanjaro, AWF constitutes the leading conservation NGO. In Africa, AWF along with the World Wide Fund for Nature (WWF) and Conservation International, have identified different parts of the continent in which each works to establish a series of conservation areas. They call these areas ecoregions (WWF), hotspots (Conservation International), and heartlands (AWF). In 1998, AWF began its Heartland Program (Adams, 2004) and West Kilimanjaro is located within the Kilimanjaro Heartland Area (KWS/TAWIRI, 2010). AWF has been central in the process of establishing and facilitating the Enduimet Wildlife Management Area. The organization also made efforts to obtain the West Kilimanjaro Ranch for conservation purposes. Moreover, AWF has invested much effort in elephant research in the area to identify and legitimate conservation measures, such as new wildlife corridors. AWF is also facilitating the Lake Natron Wildlife Management Area in the Longido District.

Conservation organizations depend on their ability to raise funds, and the main sources are usually development aid donors, corporations and individual supporters. Since 1989, AWF in Tanzania has received most of its funds from USAID, but also some from other international donors and individuals (Sachedina, 2008). WWF has been focusing on infrastructure in the Enduimet Wildlife Management Area, also with financial assistance from USAID. The Honey Guide Foundation works with game scouts to protect wildlife in the Enduimet WMA, receiving financial support from partners such as the Big Life Foundation (Big Life Foundation, 2011), The Nature Conservancy (The Nature Conservancy, 2012) and tourist donations (Honey Guide Foundation, 2012).

Hence, these actors (parts of the Tanzanian Government, as well as international conservationists, their donors and some actors in safari tourism), despite having different objectives and strategies, have succeeded in influencing conservation practice in West Kilimanjaro. A less well-reported dimension is that villagers in West Kilimanjaro do not seem to have had much influence in these decisions. We found that many villagers expressed a feeling of powerlessness. They told us that they have tried to complain about the situation, but do not feel that they are heard. One man said: 'The government clearly shows that it values wildlife more than people. Also investors value wildlife more than people.'(Interview no. 27, Nov. 2009).

Another interviewee expressed the following:

> 'In Tanzania, local people are not valued as much as foreign investors. Government officials sometimes tell us not to disturb investors, because they pay a lot of money to the government, while we pay nothing. So, if the investors complain to the government we will be dislocated.'(Interview no.31, Nov. 2009)

Hence, there are powerful actors behind the appropriation of land for conservation both within the Tanzanian state as well as among international conservation organizations. Small-scale farmers and pastoralists, on the other hand, feel increasingly marginalized and disempowered by these actors. As generally pointed out by Scott (1985) and in relation to conservation by Brockington (2004), such marginalization and increasing distance to power may push local actors towards hidden acts of resistance. As also noted by Brockington (2004), conservation may be highly successful despite such local hidden opposition. West Kilimanjaro seems to be another example of this contradiction where stories of successful win–win conservation continue to be told by powerful national and international conservation actors, while local

resistance to this conservation, including the killing of elephants, is largely ignored.

Killing elephants as an act of resistance

In interviews, villagers emphasized their frustration due to the difficult situation with the elephants and concomitantly their lack of influence on the aforementioned land use changes. So, what brought the villagers to see the act of killing elephants as a way of dealing with the situation? In other words, what motivated the elephant killings? On the basis of interviews with villagers in the area, we here discuss three explanatory alternatives.

First, the death of the elephants could have been unintentional by those who participated in the chase. In some interviews, villagers tried to convince us that this was the case. One interviewee said: 'We did not kill the elephants. Farmers were chasing them out of their farms unfortunately they fell into the pit.'(Interview no.51, Nov.2009)

Killing elephants is a serious crime in Tanzania that can lead to long prison sentences. It is therefore likely that the incident may be presented as an accident in order to prevent criminal charges. After the elephants were chased over the cliff, some villagers, however, stabbed a calf to death, which was hardly an accident. Furthermore, a similar elephant killing took place nearby a year later when a herd of elephants raided farmland planted by small-holders. People then used spears and arrows to kill one of the elephants that had lagged behind the herd. Finally, those interviewees who implied that the elephants accidentally ran towards the cliff and fell over described the incident as 'a protest' in other parts of the interviews. Nevertheless, it is likely that the intention to kill the elephants was not present among all of those involved.

Secondly, the killings may be considered as an attempt to reduce the elephant population and thereby be interpreted as a type of informal (and illegal) form of wildlife management. This would be in line with findings from Kenya where Maasai poisoned all lions in Amboseli National Park in 1990, and speared 27 of 40 lions in Nairobi National Park in 2003 (Lamarque et al., 2009: 33). A similar incident in Kenya with elephants has also been reported (Moss, 2008).

However, we did not find support for such an explanation in our study. When interviewees were asked explicitly about elephant killings as a form of wildlife management, we were given answers such as:

> 'No, it would not be possible to reduce the number of elephants that way, given the high number of elephants in the area.' (Interview no. 53, Dec. 2011)

Thirdly, the act of elephant killing could be seen as an act of protest and a message to the government. One interviewee said for instance, 'It was a demonstration, so that the government is to remember the people' (Interview no.54, Dec. 2011). Another said:

> 'We became very furious and said let the government choose either people or elephants. Our village is not a wildlife corridor' (Interview no.13, Nov. 2009).

Likewise, the following view was expressed in a focus group meeting:

> 'We saw that the government, investors, and the African Wildlife Foundation did not listen to our worries and did not understand our pains. We therefore opted for this tactic [the killing of the elephants] to end the annoyance of wildlife. This was a way to send the message to the government that we are tired.' (Focus Group meeting, Dec. 2009)

When people talked about what specifically motivated such a demonstration, we received answers about various aspects, such as the lack of effort by district authorities and others to install wardens to deter crop-raiding elephants, lack of benefits from conservation, lack of compensation for the damage and extra work burden caused by elephants, protests against the intentions of conservationists to impose a new elephant corridor and other conservation areas, and annoyance at the other appropriations and leases of land with restrictions on local use.

Concerning benefits sharing between different villages, an interviewee from Engare Nairobi argued that 'we don't receive any benefit from wildlife, either from the national park or from the investor. The situation is much better for villages under Enduimet Wildlife Management Area because they get some benefits from wildlife, but *we* suffer so much, and *we* get nothing. . .' (Interview no. 48, Dec. 2009). Although Engare Nairobi village is under Kilimanjaro National Park's outreach programme, it has not benefitted from park revenues since 1994 when the programme was initiated (Mariki, 2013). The village suffers costs of conservation from different protected areas in the surroundings. Villages that are part of Enduimet Wildlife Management Area have obtained some benefits from wildlife through tourism revenues and employment in the WMA (Sulle et al., 2011). However, the benefits to the villages are limited (Mariki et al., in press).

Villagers also told us about how they had tried in vain to address the situation through other means. They contacted government officials as well as the media. The government was not, according to several interviewees, taking any action on the elephant situation before the elephant killings took place. One man said: 'When we were reporting crop raiding, injury, and property destruction, no government official showed up. But when the elephants were killed, various government bodies came very fast to Engare Nairobi.'(Interview no. 30, Nov 2009)

In 2006, three years before the event, some villagers had raised money to hire a TV journalist to report on their problems with elephants. One man in Engare Nairobi told us:

> 'We aimed to kill the elephants because they have disturbed us for a long time through crop raiding, lack of sleep and other costs. We have complained to the government many times with no avail. In 2006, we even contributed money and paid a journalist to come and report about it. Instead of informing about what was troubling us, he reported good things about the investor on how he helps the community through his tourism activities. We were so angry. Therefore, the killing of elephants was a way to tell the government that we are tormented!' (Interview no. 38, Nov. 2009)

Tsai (2012, p. 2) argue that such noncompliance behaviours may actually be intended to 'communicate factual information about local conditions and citizen needs to state authorities when they lack easy access to formal channels . . . either because they are of politically marginalized populations or because they live in a non-democratic or transitional system'. Scott (1977) on the other hand stresses that peasants are more likely to rebel against policies that contravene the subsistence ethic of their 'moral economy'. Resistance might happen when people believe that responsible state authorities have failed to incorporate their inputs into decision-making (Tyler, 2006; Levi et al., 2009).

The elephant killings may also be seen as an application of the 'weapons of the weak' (Scott, 1985). The efforts to present the death of the elephants in interviews as an accident, is in line with this theory. The villagers' collective decision of not exposing the names of people responsible for elephant killings or claiming responsibility can also be in line with this theory. Scott (1989, p. 56) argues that 'when the act of everyday resistance is meant to be noticed – meant to send a signal – as in the case of arson or sabotage, then the resisters take special care to conceal themselves, often behind a facade of public conformity'. In the study

area, before the incident of elephant killings, the majority of local people used to utilize covert weapons where they engaged with hidden activities. They used poisonous arrows to kill elephants, while others used a 'silent killer method', as one woman explained:

> 'There are elephants killed one by one. In secret, people place long sharp pointed objects like nails or sharp iron bars or something similar on the elephant's habitual paths. When the elephants are pierced they get infections, and with time they die' (Interview no. 20, Nov. 2009).

Impact of the incident of elephant killings

To what extent have such elephant killings proved to be effective as a means of resistance? Some changes have taken place that may, partly or to a greater extent, be attributed to these killings. Both the Member of Parliament from the area and the District Commissioner arrived at Engare Nairobi soon after the event in order to discuss with the village and ward representatives what action should be taken. More conservation wardens have been seen in the area since the killings, which may have contributed to reducing the elephant problems by helping to chase elephants from farms. The plan by some conservationists to establish a wildlife corridor through Engare Nairobi has also been postponed. Furthermore, AWF has not been able to continue leasing the West Kilimanjaro Ranch as a wildlife sanctuary. Thus, as an act of resistance, the case of the elephant killings might be seen as having achieved some effect. However, during fieldwork two years after the event, villagers continue to face problems with elephants and complain about the lack of compensation for damages, as well as a lack of influence on decision-making.

Conclusions

We have in this article used a 'web of relations' approach to study a particular conservation conflict. This framework includes both social and natural factors and a particular focus on power relations and the influences from various actors and processes at different geographical levels.

The aim of the study was to explain why villagers killed six elephants in West Kilimanjaro during an evening in May 2009. We argue that this incident cannot be explained as a case of ivory poaching. Nor can it be seen as merely a result of drought or increased population pressure causing competition over scarce resources.

While there seems to be a mix of motives involved, we conclude that the immediate cause of this event was resistance by villagers who have experienced increasing crop loss caused by elephants, and who feel marginalized and disempowered by conservation practices. Hence, this case can be seen as an example of the weapons of the weak used as a response to the slow violence that villagers are subjected to by conservation governance. The implicit aim of such resistance is to send a message to the government, to influential international conservation organizations and investors in tourism in a situation in which villagers did not feel that they could reach through with other means. The event was sparked by a general frustration and feeling of powerlessness on the one side and an opportunity that emerged on the other (a small herd of elephants moved close to the village when many people happened to be gathered there). The combination of these two factors may explain why this attack on the elephants happened at this particular place and moment.

In addition, other factors that also played a role in the web of relations behind this event were a growing elephant population, the concentration of people in an area that more and more frequently is visited by elephants, and the fact that there was a severe drought in the area at the time of the event. We argue, however, that the main root cause that produced this act of resistance is the way that conservation is decided and implemented by external actors and with limited concern for the burdens carried by local communities. Actors that, in various ways, have contributed to this situation are national governmental conservation agencies, some foreign conservation groups and their branches in Tanzania, some actors within the tourist industry and some international aid donors.

In order to avoid such events in the future, we recommend the implementation of land use plans that demarcate wildlife areas, settlements and other land uses. Furthermore, local communities should in practice, and not only in rhetoric, be involved and have substantial influence in decision-making on matters pertaining to land use and wildlife conservation, in their immediate environments. Finally, wildlife conservation also needs to take much more seriously the challenge of benefit sharing with local communities and compensation for wildlife damages.

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