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Community-Based Conservation in Tanzania: Discourses and Realities

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Declaration of conformity

I confirm that this copy conforms to the original dissertation on the topic:

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Preface

The research for this dissertation was carried out from mid-2013 and to late 2015. The study applies mixed but primarily qualitative methods. Through theoretical and empirical analyses, the study contributes to the scholarly debates concerning the study and effects of community based conservation in the context of development interventions in the countries of the global south. The dissertation comprises an introductory chapter and the following three peer reviewed papers published in free access scientific journals:

1. Jevgeniy Bluwstein, **Francis Moyo** and Rose Peter Kicheleri (2016). Austere Conservation: Understanding Conflicts over Resource Governance in Tanzanian Wildlife Management Areas. *Journal of Conservation and Society* 14(3): 218-231. doi: 10.4103/0972-4923.191156.

2. **Francis Moyo**, Jasper Ijumba and Jens Friis Lund (2016). Failure by Design? Revisiting Tanzania's Flagship Wildlife Management Area Burunge. *Journal of Conservation and Society,* 14(3): 232-242. doi: 10.4103/0972-4923.191160.

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2. Jürgen Pretzsch, Francois Jost, Marolyn, Vidaurre de la Riva, Max Domke, and **Francis Moyo**. (2015). Endogenous Path Dependence of Tropical Forestry Development and Threats by Globalization. XIV WORLD FORESTRY CONGRESS, Durban, South Africa, 7-11 September 2015.

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Summary

This dissertation focuses on understanding the socioeconomic impacts of Community Based Conservation (CBC) initiatives on rural livelihoods. CBC initiatives promise to abate the negative impacts of top down or centralised fortress conservation approaches that have for many decades, hindered rural people from accessing and benefiting from natural resources, and incited land-use conflicts. Yet, despite these promises, the inherently political nature of natural resource governance brings challenges to the implementation of the scientifically designed conservation interventions. It was in the interest of this dissertation, therefore, to compare and contrast the policy premises and the reality on the ground by analysing the socioeconomic impacts of CBC initiatives on rural livelihoods. The research explored Wildlife Management Areas (WMAs), a community based wildlife management initiatives in Tanzania, where the policy promises participating communities improved access to resources and better benefits retentions.

Through political ecology lenses, the research collected and analysed both quantitative but largely qualitative data. Results show that WMAs foster a very limited ownership, participation and collective action at the community level. WMA governance continues to follow a logic of central government control over natural resources and the associated benefits. The WMAs are rife with conflicts and contestations over grievances that remained unsettled since its establishment a decade back. The grievances are accentuated by growing land pressure resulting from an increase in human, livestock and elephant populations, in combination with infrastructure improvements and support for agriculture-led development. Besides WMA governance offers very little or nothing to residents and village leaders in the participating communities who appear hostages in a situation where interests in human development and conservation are pitted against each other. Residents are not compensated for crops and livestock losses and/or human injuries and death caused by wildlife, while very little WMA resources and revenues are directed toward the protection of crops and livestock against wildlife. The current situation, therefore, not only makes a mockery of the notions of community-based conservation but also pinpoint to the tendency of global and national actors promoting conservation in Tanzania and elsewhere to misrepresent or ignore the local realities that defy official policy promises.

Further, the results reveal that WMAs concentrate licit benefits to few elites and criminalises rural peoples' customary livelihoods and claims of rights to natural resources. This leaves the majority of rural people who endure the cost of conservation in forgone individual livelihoods

interests, such as farmland and pasture for livestock, and wildlife damages on crops, livestock, and people, to rely on illicit access mechanisms. This has, in turn, led to violent confrontations between game scouts and people, and protests and struggles to re-gain legal access. But at a more general level, the conflicts created/exacerbated by the WMA regimes erode rural peoples' trust and willingness to support conservation.

It is difficult, therefore, to argue that WMAs are community-owned conservation initiatives until a genuinely devolved and more flexible conservation model is implemented to give space for popular participation in rule-making and resource allocation. This means, in order to advance conservation-development agenda, conservation policies need to understand rural peoples' needs and address them not only as 'add on' but at their very core. CBC interventions must also recognise customary claims to land and use of natural resources, and make sure that benefits accrue from conservation activities trickle down to the household level.

Thus, throughout the analysis of WMAs as a CBC interventions on human-dominated landscapes, this dissertation unveils the following key issues: i) property rights and rule enforcement agency, a persistence challenge in CBC interventions, and ii) governance rationality and limit to governance, a novelty field in policy sciences, focusing on the need to contemplate and synthesise in a more acute and systematic way of understanding the policy promise and human limits to govern ourselves out of environmental problems. To conclude, this dissertation proposes a logical framework for the analysis of CBC intervention through a landscape approach lenses and offer recommendations for development and research.

Zusammenfassung

Diese Dissertation untersucht sozio-ökonomische Auswirkungen von lokal verwalteten Naturschutzinitiativen (Community-based Conservation, CBC) auf die Lebensgrundlagen im ländlichen Raum (rural livelihoods). CBC Initiativen versprechen negative Auswirkungen von traditionellen top-down Naturschutzmaßnahmen zu vermindern. Diese traditionellen Maßnahmen, oft als fortress conservation bezeichnet, verweigern lokalen Zugang zu Land und Ressourcen und haben zu zahlreichen Landkonflikten geführt. Jedoch bringt auch CBC aufgrund der inhärenten politischen Natur von Naturschutz governance Herausforderungen mit sich. Diese Dissertation setzt sich mit diesen Herausforderungen auseinander, indem sie die Versprechen positiver sozio-ökonomischer Auswirkungen mit der Realität von CBC Inititativen vergleicht. Konkret werden dorfbasierte Wildlife Management Areas (WMAs) untersucht. WMAs stellen in Tanzania eine zentrale policy für Wildtierschutz im ländlichen Raum dar, und versprechen den Menschen besseren Zugang zu Resourcen und verbesserte Einnahmequellen.

Im konzeptionellen Rahmen einer politischen Ökologie wurden sowohl quantitative als auch qualitative Daten erhoben. Es wird aufgezeigt, dass WMAs nur bedingt zu Landbesitz und -zugang, politischer Partizipation und kollektivem Handeln im ländlichen Raum beitragen. WMA governance ist weiterhin in der Logik zentralisierter Kontrolle von natürlichen Ressourcen und monetären Einnahmen verhaftet. Konflikte und Auseinandersetzungen über zahlreiche Missstände bleiben ungelöst und spitzen sich angesichts zunehmender Landverknappung zu. Viele Dorfbewohner und -vorsteher sehen sich als Geisel in einer Situation, in der – im Rahmen der WMA - die Interessen ländlicher Entwicklug gegen Naturschutz ausgespielt werden. Es gibt keine Kompensation für wildtierverursachte Verluste in Ackerbau und Nutztierhaltung, und für Körperverletzungen und Verlust von Menschenleben. Nur wenig wird in den Schutz gegen wildtierverursachte Schäden an Leib, Leben, und Eigentum investiert. Die gegenwärtige Situation stellt daher den Begriff und das Konzept von community-based conservation in Frage. Globale und nationale Akteure verdrehen oder ignorieren lokale Realitäten, die sich offiziellen policy Versprechen entziehen.

Desweiteren zeigt diese Dissertation auf, dass im Rahmen der WMA die wenigen Eliten sozio-ökonomisch bevorteilt werden, während die Lebensführung der Landbevölkerung zunehmend kriminalisiert wird. Durch das restriktive WMA Regime in Bezug auf Zugang zu Land und Ressourcen werden die Einnahmen und Kosten von WMA Initiativen ungleich verteilt und die Landbevölkerung in die Illegalität getrieben. Das hat zu gewalttätigen Auseinandersetzungen

um Zugang zu Land und Ressourcen zwischen WMA Aufsehern und Anwohnern geführt. Darüberhinaus trägt das WMA Regime zu einer Erosion von lokalem Vertrauen in und Bereitschaft zu Naturschutzinitiativen.

Es ist daher schwierig WMAs als community-based conservation Initiativen zu bezeichnen bis ein genuin dezentralisiertes und flexibles Naturschutzmodell implementiert ist, welches der Landbevölkerung weitgehende Partizipation in Regelwerksdesign und Ressourcenallokation ermöglicht. Um eine gemeinsame Agenda von Naturschutz und ländlicher Entwicklung voranzubringen bedarf es einer ernsthaften Auseinandersetzung mit lokalen Bedürfnissen im ländlichen Raum, und ihrer Anerkennung als ein zentrales Element von CBC Initiativen. Lokale Ansprüche auf Land und Ressourcen müssen im Rahmen von CBC Initiativen anerkannt werden und Einnahmen aus diesen Initiativen müssen bei den Menschen ankommen.

Durch die Analyse von WMAs als CBC-Maßnahmen in ländlichem Raum zeigt diese Dissertation einige Problemfelder auf, so etwa hinsichtlich von i) Eigentumsrechten und CBC Regelwerksdurchsetzung, die eine stete Herausforderung in den CBC Interventionen darstellen, sowie in Bezug auf ii) Naturschutz governance und deren Grenzen, eine Problematik welche ein recht neues Feld in den Sozial- und Umweltwissenschaften von Naturschutzmaßnahmen darstellt und sich darauf konzentriert, systematische Wege zu finden, Regierungsführung zu verstehen und ihre Grenzen darauf auszuloten, inwiefern und wie kollektive Umweltmaßnahmen umgesetzt werden können. Zusammenfassend bietet diese Dissertation einen logischen Rahmen für die Analyse von CBC Interventionen auf Landschaftsebene und bietet darüber hinaus Empfehlungen für Entwicklung und Forschung.

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Abbreviations

CBC	Community Based Conservation
CBNRM	Community Based Natural Resource Management
NGOs	Non-Governmental Organisations
WMAs	Wildlife Management Areas
CAMPFIRE	Community Areas Management Programme for Indigenous Resources
ADMADE	Administrative Management design
SECURE	Sustainable Environmental Conservation through Utilisation of Natural Resources
CWS	Community Wildlife Service
MNRT	Ministry of Natural Resources and Tourism
VEOs	Village Executive Officers
TME	Tarangire-Manyara Ecosystem
AWF	African Wildlife Foundation
CBO	Community Based Organisation
AA	Authorised Association
VGS	Village Game Scouts

1. Introduction

1.1. Background

This dissertation focuses on understanding the socioeconomic impacts of Community-Based Conservation (CBC) initiatives on rural livelihoods. For many decades, natural resource management policies and governing structures in sub-Saharan Africa, and many other countries of the global south have hindered rural people from accessing and benefiting from natural resources. The adoption and implementation of top-down fortress conservation regimes have incited land-use conflicts and exacerbated degradation of rural landscapes. The injustices and unequal sharing of benefits derived from natural resources intensify poverty, and the inherently political nature of natural resource governance brings challenges to the implementation of scientifically designed conservation interventions.

Efforts to arrest landscape degradation and resolve land-use conflicts have led to the introduction of CBC, an integrated conservation and development initiatives. CBC key goal is to incentivise and motivate rural people to participate in the management and protection of the natural resources. The initiatives are widely acknowledged in international conventions and agreements as the best approach for enhancing conservation and fostering effort to alleviate rural poverty (see WCED, 1987; IUCN/UNEP/WWF, 1991; UN, 1992a; UN, 1992b; MDG, 2000). CBC promise rural people improved access to the natural resource and benefit retention. On the other hand, CBC receives considerable support and funding from international conservation NGOs and donor agencies that view the initiatives as a win-win solution for conservation and development goals (Alix-Garcia et al., 2012; Arriagada et al., 2012; Suich, 2013).

However, the effectiveness of CBC in abating landscape degradation and alleviate rural poverty remains largely hypothetical (Arriagada et al., 2012). The reported environmental successes occur at the expense of rural livelihoods, and therefore, short-lived (Edmunds and Wollenberg, 2002; Ribot, 2002; Goldman, 2009; Dougill et al., 2012; Pascual et al., 2014). Yet, CBC initiatives remain highly supported by conservationist and development experts (Suich, 2013), mainly based on their 'romanticised' premises of its ability and potential to achieve the dual goals of conservation and poverty alleviation (Vette et al., 2012:122).

As an integrated conservation and development initiatives, CBC draws from both neoliberal thinking and theories of decentralisation. Based on the neoliberal school of thought, CBC assumes that landscape degradation is a result of market failure, and therefore, solutions could

be found in market expansion and resource commodification (Arriagada et al., 2012; Pattanayak et al., 2010). Following decentralisation approach, CBC assumes that, by devolving natural resource management powers to local communities, the initiatives would enhance equity and effectiveness in service delivery (Agrawal and Ribot, 1999; Blomley et al., 2008), foster enfranchisement and legitimise management actions, especially the enforcement of access rules at the local level (Wily, 2001; Brockington, 2007). Thus, together, neoliberal and decentralisation are believed by its proponents to foster conservation and improve rural livelihood outcomes.

The reality is, however different, the commodification of rural landscapes introduces property rights, and hence, privatisation of common property (Igoe and Brockington, 2007; Benjaminsen and Bryceson, 2012). This, in turn, alienates access rights for the majority of rural people whose very survival is highly depended on access to natural resources. On the other hand, through decentralisation processes, the central governments tend to give rural communities mainly the mandate to police the resource base, but largely retain resource ownership, and powers to control benefit distribution and rule making (Agrawal and Ribot, 1999).

It is in the interest of this dissertation, therefore, to compare and contrast the policy premises and the reality on the ground by analysing the socioeconomic impacts of CBC initiatives on rural livelihoods. The research explores Wildlife Management Areas (WMAs), a community-based wildlife management initiative in Tanzania. Where the WMA policy promise participating communities improved access to resources, and better benefits retentions. By analysing the distribution of powers over the disposition of resources among different actors, and how WMAs address the divergent interests of a host of actors to prevent (or accelerate) the costs of conservation to be disproportionately borne by any particular group or individuals, the study identifies winners and losers in CBC interventions, and explain the conditions under which the two groups are produced. This dissertation shed light on how conservation and sustainable development ideals and intentions succeed or fail to materialise in rural environments.

1.2. The Origin of CBC Initiatives

Historically, fortress conservation regimes dominated conservation policies, laws, and practices in colonial and post-colonial Africa. The colonial and post-colonial governments viewed rural people and their land-based livelihoods strategies as destructive and unsustainable. Colonial rulers thus hinged on strict access rules and penalties to protect natural resources and the

landscapes against the rural inhabitant. However, rural landscapes were (and still are) primary source of agriculture and livestock production (Kaoneka and Solberg, 1997; Kajembe et al., 2000; Quinn et al., 2003; Mwampamba, 2007; Fischer et al., 2010; Kijazi and Kant, 2011; Sonwa et al., 2012; Rutt, 2014), rural energy, and are an important component of culture and social identities for rural people (Kajembe et al., 2000). The imposed access restrictions marginalised and detached rural people from their primary source of livelihoods, curtailed their development opportunities and exacerbated land-use conflicts (Wilfred, 2010).

In the 1970s, thoughts of, and interests to involve local communities in the management of natural resources started to emerge (Agrawal and Ribot, 1999). International organisations and donor agencies' ideology and policy began to shift toward facilitating rural people to have a major role in their own development. The target was to empower rural people to sustainably manage and use locally available natural resources for poverty alleviation (Ribot et al., 2010). In the mid 1980s debates for the empowerment of local communities to champion conservation and development become more common in local and international forums. The same period saw an increase in poverty levels and a decrease in funding for conservation activities in the countries of the global south (Ribot, 2004). This intensified the political pressure on governments on those countries to adopt conservation policies that promote decentralisation of natural resources management powers to local people and improve their capacity to retain and use the benefits accrue for community development.

In the late 1990s, most sub-Saharan African countries initiated natural resource management reforms to introduce collaborative or participatory conservation approaches that sought to directly or indirectly offer development incentives for rural communities (Ribot et al., 2010). The reforms were popular referred to as decentralisation of natural resource management (Agrawal and Ribot, 1999). The key goals were to vest natural resource management powers to the jurisdiction of local bodies to enhance efficiency and equity. Decentralisation policies and programs assumed that, by bringing decision making processes closer to the local people (more so than outside decision-makers) who feel the costs and benefits of decisions on local matters, local people would take over management activities, and therefore, operations costs would be reduced (Ribot, 2001; Kajembe et al., 2002). The policies also assumed that, when local people are fully involved in the formulation of management rules, compliance would increase (Agrawal and Ribot, 1999). Principally, because local needs are better discerned, and feedback from affected people are efficiently received when governing bodies are closer to the local communities (Rondinelli and Cheema, 1983; Chambers, 1994).

Following, decentralisation policies and programs that promise to empower and incentivise local people to manage natural resources spread across countries in sub-Saharan Africa (World Bank/WWF Alliance 2002; Sunderlin et al., 2008). The programs were given names that reflect community engagement and participation, such as Community-Based Natural Resource Management (CBNRM), Participatory Conservation, Community-Based Conservation (CBC) and Co-management (Ribot et al., 2010). But their core policy premise remained the same, which is to decentralise powers to manage the natural resource to the local communities and improve rural people's access to the resources.

Decentralisation, however, occurs in many forms and in a broad spectrum; as *deconcentration* – where powers to manage the resources are redistributed among different tiers within the centralised regime, or *delegation* – when the central government transfers powers to semi-autonomous organizations which are not completely controlled by central government, but ultimately accountable to it, and lastly as *devolution* – where powers are vested in democratically elected local governing bodies which have significant autonomy and are accountable to the local population (Ribot, 2004). This means that the expected livelihoods outcomes depend on the form and the domain on which decentralisation of natural resources management occurs. As the form and the domain of the decentralisation approach determines *where* and to *whom* conservation benefits are directed to (*actors*), whose voice matters (*powers*), and how different actors interact (*accountability mechanisms*) (Agrawal and Ribot, 1999).

1.3. Local Context

Like most of the colonised African countries, the evolution of natural resource management in Tanzania dates back from the pre-colonial to the colonial and post-colonial era. To document this, the dissertation describes natural resource management goals and approaches in each period but limits its focus and scope on the case of wildlife management, which is the main focus of the investigation in this study.

1.3.1. Wildlife Management in Pre-Colonial and Colonial Tanzania

Before the arrival of the Arabs and Europeans in Tanzania[1], the then Tanganyika, wildlife existence was never threatened by the existing local use trends and practices. Human populations were low and local people used simple and less destructive techniques and

[1] Tanganyika (mainland) and Zanzibar (islands of Pemba and Unguja) united in 1964 to form the United Republic of Tanzania. For convenience the name Tanzania will be applied throughout this dissertation

technologies to collect plants and hunt wildlife for food (Baldus, 2001). Taboos and totemic beliefs controlled methods and harvesting practices by restricting the exploitation of certain species and landscapes (Kjekshus, 1996; Baldus, 2001; Mkumbukwa, 2008). However, the arrival of the Arabs in the 1500s disrupted the traditional management regimes (Vernet, 2009). The Arabs introduced ivory and wildlife hides trade and forced local people and slaves to hunt wildlife in large quantities to satisfy the demand for African wildlife trophies in Asia and Europe (Vernet, 2009). This led to the first major anthropogenic driven shock to African wildlife, which resulted in a sharp decline in elephant population (Iliffe, 1979).

In 1885, the Germans declared Tanzania a colony but left the Arabs to continue with wildlife business. In 1989, rinderpest, an infectious viral disease of even-toed ungulate species, killed about 90% of east African big ungulates (Gichohi et al., 1996). The epidemic pushed the German colonial rulers to issue hunting regulations in 1891 to provide space for wildlife populations to recover (Baldus, 2001; Majamba, 2001). Five years later, in 1896, the German colonial rulers introduced the first wildlife hunting legislation, which prohibited customary hunting practices (Baldus, 2001). This time, the main target was to secure future hunting opportunities for wealthy Europeans elites (Nelson, 2007). This was followed by a series of decrees enforcing access restrictions in 1898, 1900, 1903, 1905 and 1908, which were consolidated to a wildlife Act in 1911 that declared certain rural landscapes a wildlife protected territories (Koponen, 1994). The Act allowed rural people to establish settlements in the designated wildlife protected territories but withdrew their rights to harvest wildlife resources (Nelson, 2007).

In 1916, the Royal Navy and British Indian infantry seized Tanzania territory from the Germans. Yet the British rulers continued to build on the Germans colonial legacy of exclusion and extortion. In 1921, they enacted an ordinance, which prohibited people from settling in some of the wildlife protected teritories. This led to the eviction of rural people from their customary lands in areas such as the now Selous Game Reserve (Kjeckshus, 1996). In 1923, the British rulers declared all lands in Tanzania a property of the British kingdom, vesting powers and control over land and natural resources under the British monarch (Shivji, 1998). In 1940, 1951 and 1959 British rulers introduced wildlife ordinances that paved the way for the establishment of National Parks. This brought stricter access rules and punishments for rural people to access wildlife resources (Neumann 1998; Nelson, 2007), but created more opportunities for colonial government to generate income through tourism in the pristine rural landscapes.

The above historical time line reveals how colonial conservation laws and practices systematically excluded and curtailed rural peoples' rights to access wildlife and natural resources in their landscapes. Colonial rulers focus and interest were to secure future hunting opportunities for wealthy Europeans elites and generate income for the colonial government (Baldus, 2001). They viewed wildlife resources as a source of wonder and admiration with the potential to generate income to fund colonial governments and pay for its own conservation.

1.3.2. Wildlife Management in Post-colonial Tanzania

In 1961, Tanzania attained her independence. Straightaway, the independent government initiated governance reforms to abolish colonial structures that coerced and extorted local citizens. Yet, pertaining to natural resources management, colonial laws remained intact until in the 1974 when the government enacted a new wildlife Act. The new legislation, however, reiterated the colonial thinking and practices by vesting rights and ownership of wildlife on the domain of the central government. Lekan (2011:1) for example, show that just after independence, Tanzanian leaders who fought against colonial laws and extortion practices, continued to view wildlife as a source of wonder and admiration for wealthy Europeans and a potential source of foreign income to fund government activities. They, therefore, reproduced policies and laws that disenfranchise and alienate rural peoples' access rights.

> *"*I am personally not very interested in [wild] animals. I do not want to spend my holidays watching crocodiles. Nevertheless, I am entirely in favour of their survival. I believe that after diamonds and sisal, *wild animals will provide Tanganyika* [Tanzania] *with its greatest source of income*. *Thousands of Americans and Europeans have the strange urge to see these animals* [Italics, the emphasis is mine]" (Julius K. Nyerere: the first president of independent Tanzania, 1961).

The 1974 colonial-like wildlife Act remained into force until in the late 1990s when decentralisation of natural resources governance, pushed by global north conservation NGOs and development agencies, become a new paradigm in the countries of the global south. In Tanzania, natural resource governance reforms were first implemented in the forest sector, and later, in the wildlife sector. Wildlife management reforms lagged behind largely because of the government of Tanzania reluctance to give up control over the resources deemed important for the generation of the foreign income (Lekan, 2011; Fridolin, 2014). However, lack of funds and human resources needed for the government to effectively secure the protection of largely

mobile and scattered wild animals, together with the international pressure for poor countries to empower local communities to manage natural resources, led to the introduction of Wildlife Management Areas (WMAs). WMAs seek to incentivise local people to participate in the management of wildlife, albeit outside the core protected areas.

Tanzanian WMAs policy is celebrated as a major reform in the protection of wildlife and dubbed as one off technical measure for resolving land-use conflicts associated with Park systems and poverty alleviation (see WWF, 2014, AWF, n.d.). Tanzanian WMAs policy was inspired by Community Areas Management Programme for Indigenous Resources (CAMPFIRE) of Zimbabwe, Administrative Management design (ADMADE) of Zambia, Sustainable Environmental Conservation through Utilisation of Natural Resources (SECURE) of Botswana and Community Wildlife Service (CWS) of Kenya. These community-based wildlife management programs gained a wide support from conservationists and developmentalist who view them as tools for empowering local people to manage wildlife resources and use the associated benefits for poverty alleviation.

The WMAs key goal is to incentivise and promote rural people to participate in the protection of wildlife. As a CBC, it seeks to devolve wildlife resource management powers to the local communities and enhance their benefits retentions. WMAs' policy goals are thought to be achieved through its potential to make conservation benefits outcompete other forms of land use (URT, 1998). For this to be achieved, a series of reforms of laws governing the management of land and wildlife were made. In 1999, the Village Land Act was enacted. This gave the village governments powers to manage and decide how village lands and the associated natural resources shall be used (URT, 1999). In 2002, a wildlife Act and the corresponding Wildlife Conservation (Tourism Hunting) Regulations of 2002 (URT, 2002) was enacted. In particular, these repealed the non-inclusive 1974 wildlife Act and provided opportunities for rural communities to participate in wildlife conservation in their village lands.

In 2003, the Ministry of Natural Resources and Tourism (MNRT) issued guidelines for establishing WMAs. The guidelines describe the ecological requirement e.g. presence of wildlife and the legal procedures to be followed by villages wishing to establish a WMA (URT, 2003). Thereafter, the Environment Management Act of 2004 (URT, 2004) and the associated regulations of 2005, which described rights and responsibilities of different levels of government, NGOs and the private sector in the management of environments in Tanzania were enacted. Following, the central government assumed more of the role of a regulator of environmental issues. NGOs inclined more into facilitation roles, such as capacity building and

funding. The private sector is encouraged to directly invest in environmental related businesses, e.g. in ecotourism. In 2007, 2009 and 2012 the wildlife policy, Act, and Regulations, respectively, were once again amended (URT, 2007; 2009; 2012). The amendments were ostensibly meant to foster the protection of wildlife and improve rural peoples' capacity to capture and retain benefits derived from wildlife conservation.

Since the WMAs policy was adopted in 1998, 19 fully operational WMAs have been gazetted and 19 more are underway. The fully operational WMAs cover about 2,743,000 hectares corresponding to about 3% of the country's land and draw the participation of about 150 villages (WWF, 2014). In total, the 38 would cover about 7% of the country's land. WMAs proliferation, however, continues without empirical evidence to justify their effectiveness on rural peoples' livelihoods and resource sustainability (Igoe and Croucher, 2007; Benjaminsen et al., 2013). Besides, many scholars have shown WMA to be top-down and inflexible conservation regimes (Igoe and Croucher, 2007; Baha and Chachage, 2007; Nelson et al., 2007; Schroeder, 2008; Sachedina and Nelson, 2010; Benjaminsen and Svarstad, 2010; Sachedina, 2011; Benjaminsen et al., 2013).

Furthermore, transnational conservation NGOs and environmental agencies that fund these CBC initiatives continue to view rural people as irresponsible and individuals who lack conservation motives (Neumann, 2001; Brockington, 2005). As a result, CBC initiatives remain focused on eliminating rural people from land targeted for conservation (Nelson, 2012). Thus, in spite of a series of legal and policy reforms in Tanzania, land and wildlife ownership remain exclusively centralised. The Village land Act No 5: URT, 1999, section 3 (1) b) for instance asserts that "all land in Tanzania is public land vested in the president as a trustee on behalf of all citizens". This means the president of Tanzania holds discretional powers to allocate land and change land use. The Wildlife Conservation (Wildlife Management Areas) Regulations of 2012 section 26 (h) also centralise to the MNRT powers to approve both consumptive and non-consumptive use of wildlife resources (see URT, 2012).

This brings this dissertation to a host of questions about the effectiveness of CBC as an integrated conservation and development initiatives. In this particular case, interrogating the effectiveness of WMAs to empower and incentivise rural people to participate in wildlife protection. The main questions are: what type of powers has been transferred through WMAs processes and to whom? Who benefits from WMAs implementation practices and how? Through which accountability mechanisms do WMA actors interact?

1.4. Research Objective

In the preceding sections of this introduction, a number of concepts pertaining to the relationship between changes in the environmental systems and power were used to sketch the empirical entry points for understanding the processes and outcomes of CBC initiatives on rural livelihoods. These concepts largely fall under the domain of political ecology, which focuses on the interactions between a host of actors with divergent interests, and their environments (Bryant and Bailey, 1997; Forsyth, 2008). The introduction shows a unique precedence and appearance of the interactions between various actors and environments in Tanzania i.e. actors, powers and accountability mechanisms pertaining to access to and use of natural resources (Agrawal and Ribot, 1999).

In the pre-colonial period, the interactions were regulated through traditional systems using taboos and totemic beliefs, but largely a *de facto* open access, which benefited all actors. In the colonial and postcolonial periods, centralised governing structures took over powers to manage natural resources. Coercive mechanisms were used to restrict customary use rights, and benefits were concentrated to the few elites and the state. Recently, Tanzania has introduced WMAs, which seek to abate the negative impacts of centralised regimes. The initiative is touted to roll back resource management powers to local people and enhance their capacity to retain conservation benefits and use them for community development.

It is in this light, therefore, and the increasing need to find better, less coercive, less exploitative, and more sustainable ways of addressing conservation and development challenges, this dissertation sought to ***investigate the socio-economic impacts of community-based conservation initiatives on rural livelihoods.*** The study explores Burunge WMA, in Babati district, Northern Tanzania, as a case study.

To achieve the main objective of this study, the following specific objectives were investigated:

1. Examine to what extent local communities in WMAs villages participate in managing wildlife and natural resources.
2. Understand how the implementation of WMAs changed the ways in which rural people access wildlife and natural resources.
3. Determine how access to resources and livelihoods outcomes varies across different types of individuals, households, and groups.

The three specific objectives were set in such a way that, the study would achieve the three core steps in the analyses of impacts of a given policy, i.e. the contextualisation, diagnosis, and effect analysis (Robert and Zeckhauser, 2011; Campbell and Harper, 2012). The first specific objective was designated to contextualise WMAs settings and its implementation procedures. Specifically, to identify forms and nature of WMAs processes such as actors, formal and informal structures, power distribution, and participation and representation in decision-making processes.

The second specific objective was designated to diagnose WMAs implementation, i.e. to examine how and why WMAs implementation continues the way it is. It was set to investigate how WMAs' rules affect rural peoples' access to land and natural resources, focusing on, among other things, what has changed and how? How do local people react to the changes (attitudes and compliance)? What products or services were (not) available are now (not) available? What individual or community losses/benefits are associated with the changes? What procedures did local people follow to access resources before WMAs and how has it changed? and how do local people view the changes?

The third specific objective was designated to analyse the effect of WMAs implementation on rural livelihoods. The focus was to understand natural resources use histories and their influence on social relations and economic impact at households and village level. In particular, to distinguish the social and psychological impacts of WMAs implementation from the economic and well-being impacts on the participating communities.

The outcomes reveal issues of WMAs rule enforcement efficacy and locally perceived legitimacy, equity (and lack of), patronage and accountability. These are major, and more common concerns in different forms of collaborative and decentralised natural resources management approaches.

1.5. Dissertation Outline

The remainder of the dissertation is organised as follows: Section 2 present theoretical analyses, section 3 describes the research design i.e. study site and data collection methods. Section 4 is designated for the three research papers that constitute the major results of this dissertation. Section 5 provides the synthesis and conclusions emerging from the three research papers.

2. Analytical Framework

2.1. Conservation in human-dominated landscapes

Landscapes habited by humans host a diverse number of biological resources and provide a wide range of environmental and cultural benefits to people (Nelson et al., 2009). The landscapes are however under enormous pressure from rapid population growth and anthropogenic activities which modify the environments. The modification leads to habitats fragmentation and degradation (DeFries et al., 2010), making protected areas and biodiversity hot spots islands in a matrix of human-dominated landscapes (Nyhus and Tilson, 2004). In efforts to abate this situation, conservationists are increasingly targeting private lands (Rissman et al., 2007), agricultural lands (Fischer et al., 2006; Bhagwat et al., 2008) and communal spaces for biodiversity conservation (Moilanen et al., 2014).

Restoration and prevention of landscapes degradation in areas dominated by human populations, however, requires a deeper understanding of the socioeconomic and ecological processes (Bengtsson, et al., 2003; Lamb, 2005). In particular, the historical and potential human-environment interactions as advocated in political ecology (see Bryant and Bailey, 1997; Forsyth, 2008). Although the use of traditional and local knowledge and the advanced modeling technologies can facilitate the development of plausible conservation interventions that would ensure a sustainable supply of environmental goods and services i.e. achieve both conservation and development goals (Marzluff and Ewing, 2001). Yet, crucial information about actors' divergent interests and powers, which is also contextual and place specific, that influence use and control of resources (Agrawal and Ribot, 1999) are currently accounting less in the designing of conservation interventions. As result, most conservation interventions continue to exclude people from the ecosystems and landscapes they have traditionally occupied and depended on.

Most conservation interventions continue to view humans as 'aliens' to their landscapes and therefore, focuses on preventing them from disturbing the areas targeted for conservation (Bengtsson, et al., 2003). The interventions divide human-dominated landscapes into protected zones and general or production zones. Traditional land-based livelihoods activities such as agriculture and livestock grazing are prohibited in areas categorised as protected zones. Whereas in production zones, access is only permitted to limited types of resources. The categorisation of land use zones and the accompanying restrictions are justified based on the assertion that, the intensity and frequency of anthropogenic disturbances might have large scale, and irreversible ecological and socioeconomic consequences (Dupouey et al., 2002).

However, local people are part of ecosystems and the disturbances they cause are part of the ecosystem dynamics (Bengtsson, et al., 2003). Therefore, it is impractical and unrealistic to prevent all forms of anthropogenic nuisances in human-dominated landscapes. Besides, review of conservation interventions in human-dominated landscapes has demonstrated that increase in access restrictions goes hand in hand with an increase in land use conflicts between conservation and surrounding populations (Daily et al., 2001; Bennett, 2003; Igoe and Croucher, 2007; DeFries et al., 2010). This, consequently, makes the achieved environmental success (if any) short lived.

Therefore, conservationists and developmentalist need to device a consensus approach that would simultaneously address conservation and development challenges. Currently, the consensus seems to have landed on CBC interventions. Which focuses on decentralising resource management powers to local people and improve their capacity to benefit from locally available natural resources. Although, there are some critics on whether the primary objective of CBC interventions is to really ameliorate the negative impacts of top-down conservation regimes on local communities. Yet the approach is widely accepted and supported by international conservation and development agencies alike (see WCED, 1987; IUCN/UNEP/WWF, 1991).

WMAs are part of this global phenomenon of seeking biodiversity refuge on human dominated landscapes. WMAs seek to reconnect a matrix of protected areas and biodiversity hot spots to ensure their ecological integrity and sustainability (Sachedina, 2008). To garner the support of local communities in an effort to restore and prevent further degradation and fragmentation of wildlife habitats, WMAs promises a wide range of socioeconomic incentives to participating communities. It is in the interest of this dissertation threfore, to establish whether WMAs meet its intended conservation and livelihoods goals i.e. compare and contrast the policy promise and implementation realities, and identify potential areas for policy and practice improvement.

2.2. Conceptual framework

WMAs policy design and implementation targets conservation on human-dominated landscapes. It operates on the assumption that local people and the state will share powers, responsibilities, and benefits associated with the conservation activities. Thus, although WMAs are referred to as community-based wildlife conservation, its arrangements fit well in the Plummer and Fitzgibbon (2004:878) co-management conceptual framework, which assert that, "co-management is the distribution of rights and responsibilities pertaining to a particular resource", mainly, between local users and the state (Berkes et al., 1991). Besides, it is

increasingly becoming difficult for academic papers to draw a clear line of distinction between CBC and co-management. Because both approaches involve some degree of community participation and distribution of rights and responsibilities between communities and the state (Plummer and Fitzgibbon, 2004). This dissertation, therefore, adopts Plummer and Fitzgibbon (2004) co-management conceptual framework (Figure 1), as its organisational tool to structure the research problem and identify its various components for investigation. The thesis also borrows from Agrawal and Ribot (1999), actors, powers, and accountability framework to analyse the distribution of real powers among different actors in a co-management arrangement.

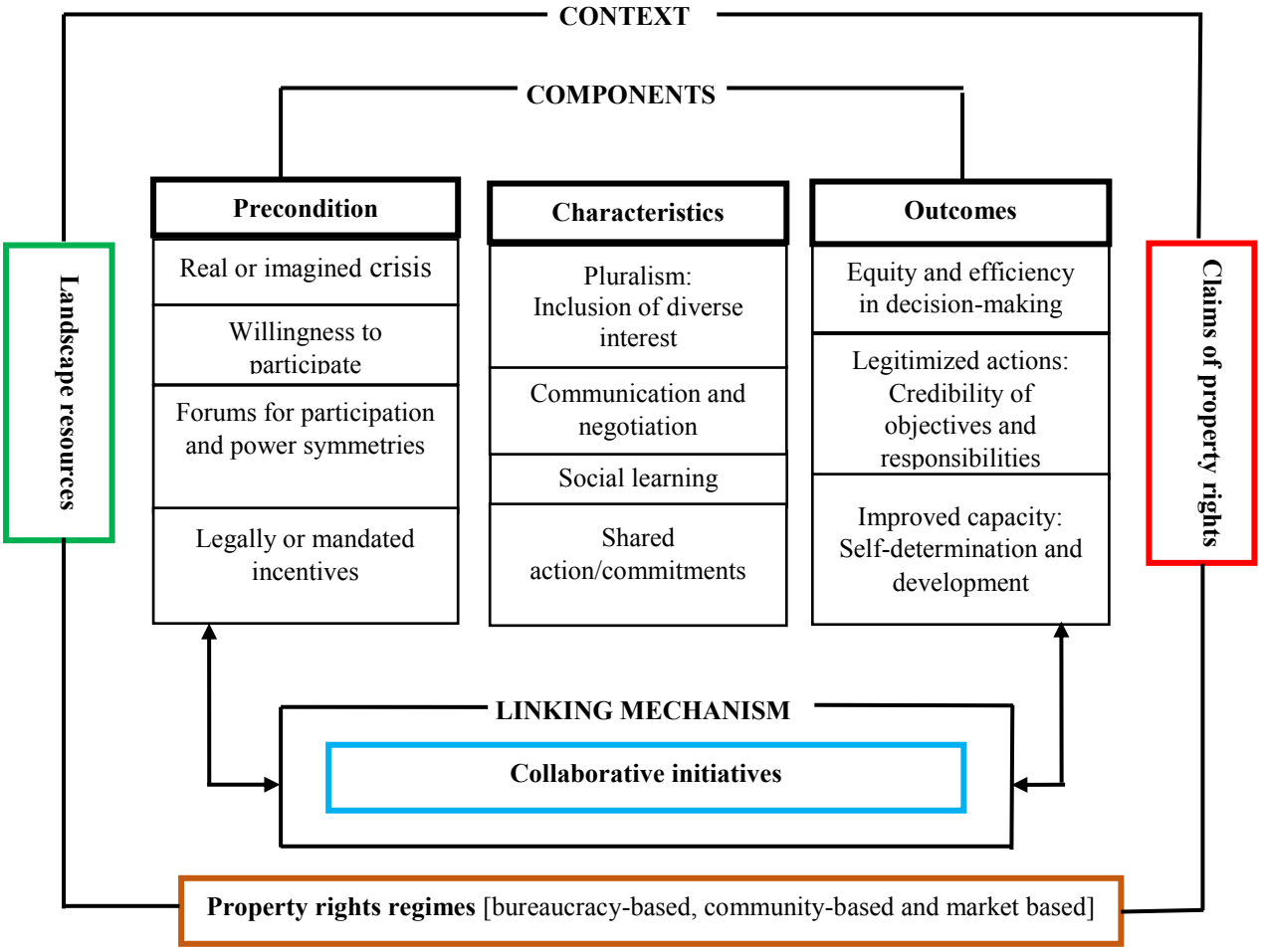

Figure 1: Co-management conceptual framework (modified from Plummer and Fitzgibbon, 2004)

Figure 1 simulates the ideal situation and conditions in areas where powers to manage natural resources are shared between local communities and the state. The framework shows the *context*, *components* and *linking mechanisms* that have the potential to influence conservation and livelihood outcomes. The context presents the resource base (land and natural resources)

and a host of actors with their divergent interests and behaviour. Different actors, such as state, NGOs, the private sector, and local users often have competing claims of use rights and interests. Thus, to understand how WMAs distributes conservation costs and benefits among actors with divergent interests and use rights claims, this dissertation employed Agrawal and Ribot (1999), actors, powers, and accountability framework to analyse whether the costs of conservation are not disproportionately borne by any particular group or individuals.

Components and linking mechanisms present prevailing situation and conditions that could determine conservation intervention success or failure. The preconditions, which include real or imagined crisis, local user's willingness to participate, forums for participation, actors' legally or mandated incentives and power distribution, provide useful information about existing conditions, and threfore, the opportunity for improvement. Idenfication of how and who defines a real or imagined crisis, for example, reveals who have real power to make decisions. As an actor(s) who have power and voice to define real or imagined problems are more likely to have the power to define interventions' goals and rules, such as mandated benefits and access restrictions (Agrawal and Ribot, 1999). In turn, this affects other actors willingness to participate.

The characteristics block presents potential solutions or attributes that could remedy or facilitate alignment of actors' competing interests to a common goal. It offers a number of mechanisms through which actors' perception can be shaped to have shared actions and commitments. Pluralism for instance, which is the need to think and act in an inclusive manner, addresses the necessity to consider the diverse interests as expressed by different groups and individual actors. Such as subsistence needs and social identities for local people, and restoration and reconstruction of ecological ecosystems (ecological memory) for conservationist and state actors. Social learning, on the other hand, is a process of continuous communication and negotiations between and among actors. It provides opportunities for actors to identify shared interest and align their goals and commitment.

The framework also presents a linking mechanism as an inter-organisational structure (in the case of this dissertation, the WMA initiatives). It links the attributes in the precondition and the potential solutions to produce desired outcomes, such as improved conservation efficiency, equity in benefit distribution, the legitimisation of action at the local level and improved livelihoods. The linking mechanisms, therefore, is a collection of formal and informal institutions that mediate the interaction and relationships between individuals, groups of actors, communities and their physical and social environment.

Issues pertaining to actors' interactions and practice of power are, however, multidimensional, interlinked and unpredictable (Cleaver and Koning, 2015). Thus, although the co-management framework seems to present a straightforward *causal - intervention - outcomes,* a successful hypothetical scenario of governing the socioecological environments (Figure 2). The reality is complex and multifaceted (Agrawal and Waylen, n.d.; Agrawal and Ribot, 1999; Cleaver and Koning, 2015). Actors' interests might change following changes in technology, knowledge, and market among many other socioeconomic aspects. Advancement in technology and knowledge, for example, remove old barriers and increase interaction between actors and their environments (and vice versa). What happens at the point of interface, therefore, determine the outcomes. This might in turn change power symmetry, in which real powers to command action might be reinforced or shift from one actor to another - the issues around dependence and bricolage.

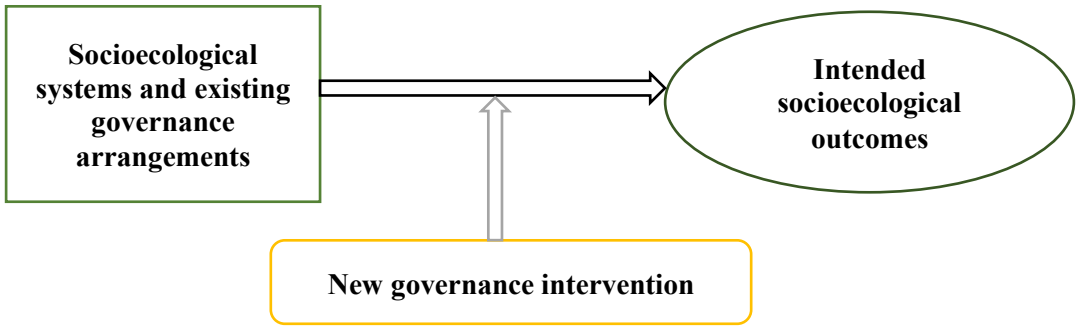

Figure 2: A simplified representation of governance and social-ecological outcomes (source: Agrawal and Waylen, n.d.)

By situating WMAs interventions in the co-management framework and analysing the distribution of real powers to influence the flow of benefits through Agrawal and Ribot (1999) *actors, powers* and *accountability* lenses, this dissertation acquires a greater advantage to unveil the complexity of institutions involved in day-to-day WMAs management and the power relations that are involved (Cleaver and Koning, 2015). Precisely, in the analyses of i) real powers that influence changes between formal institutions that are based on western science and rules which seek to advance conservation agenda, ii) informal institutions that focus on locally evolved traditions and customary experiences, and iii) the local, regional and state political formation that seek to maintain political influence and power.

Following, this dissertation describes the main concepts and terminologies used to structure the main research problem, and explain how they are used to achieve the overarching research objective.

2.2.1. Access

According to Ribot and Peluso (2003:153), "access is the ability to derive benefits from things". Access to natural resources is regulated through property rights rooted in customary and/or formal state-led legal systems and on the structural and relational mechanisms, such as capital, knowledge and skills, technology, markets, labour opportunities and social identity and relations (Sen, 1997; Bebbington, 1999; Ribot and Peluso, 2003; Barret et. al 2006). State-led policies and laws, for instance, regulate access rights (Shivji and Kapinga, 1998; de Janvry and Sadoulet, 2005; Odeny, 2013) and influence the flow of capital and technologies used to exploit the natural resource (AU, 2010; Latina et al., 2011; Prieger, 2013). This makes the state a key player in facilitating an equitable and sustainable use of natural resources.

Local peoples' interests to access natural resources are driven by subsistence and/or development needs (livelihoods). But at the same time, interests to secure natural resources for future generation and science (conservation) necessitate putting in place some measures to control or limit resource exploitation. Thus, despite the complementary nature of conservation and livelihoods, based on actors' interests and priorities, the real or imagined crisis pertaining to a particular resource may differ. Subsistence local users are more likely to always demand increased access to maintain or sustain their livelihoods. While conservationists might focus on putting more access restrictions to allow biodiversity recovery and/or reconstruct ecosystems.

The divergent actors' interests and use claims bring challenges in defining problems and finding viable conservation solutions. This is because the framing of real or imagined problems justifies the rules and methods to protect the resources. However, as argued in preceding sections, state and transnational conservational NGOs who design and fund conservation policies and programs view rural people land-based livelihoods strategies as destructive and unsustainable. Therefore, they tend to introduce conservation measures that target to restrict local peoples' access to land and natural resources or completely remove them from their customary landscapes. However, in attempts to navigate these restrictive measures, rural people whose survival depends on access to natural resources would more likely resort to illicit access mechanisms to sustain their lives. Such illicit access mechanisms might include civil disobedience, social and political pressure, corruption and theft (Ribot and Peluso, 2003). The dissertation, therefore, applies the concepts of access mechanisms as described in access theory by Ribot and Peluso (2003) to assess benefits flows and determine actors who win or lose in WMAs processes. The investigation dwells on analysing both the licit or mandated access mechanisms and the illicit or extra-legal access mechanisms, which encompasses all means by

which an individual or a group of actors employ to navigate access restrictions and acquire benefits.

2.2.2. Actors

Actors are individuals, groups, formal or informal institutions who have a direct or indirect stake in a resource. Different actors are associated with different functions, powers and accountability relations. Their interests, claims, and relations depend on their historical background, socioeconomic status, political affiliation and power they hold. This may be based on ideology, wealth, heredity, elections, appointments or other means (Agrawal and Ribot, 1999). Actors may also be differentiated from each other by their beliefs, objectives, internal structure of their organization, membership, funding sources and the laws to which they are subject (Agrawal and Ribot, 1999). The identification of actors, the types of powers they hold and how they gain or lose power, therefore, facilitate the understanding of who controls access to WMA resources and how. The analysis of actors unveils who are the losers or winners in the WMA processes.

2.2.3. Powers

Power is an important component because the theory predicts that actor' commitments, and conservation and livelihoods outcomes are largely affected by the types of powers ceded to each of them (Agrawal and Ribot, 1999). Ostrom and Schlager (1996) and Agrawal and Ribot (1999) asserts that local peoples' participation is meaningful when they have power to i) create rules or modify old ones, ii) make decisions on how a particular resource shall be used, iii) implement and ensure compliance with new or altered rules, and iv) arbitrate disputes arising from management process or effort to create rules and ensure compliance. Actors may gain power through appointments or employment, elections, NGOs functions, customary leadership, private investments and/or corporate bodies (Agrawal and Ribot, 1999). Power is however effective only when actors are well equipped with the tools to make informed decisions and have enough financial resources to enforce the rules (Smoke, 2003).

This study therefore, build on previous work and experiences on CBC interventions to analyse the socioeconomic and political factors, which influence power symmetries in access to natural resources. The study unveil the information about who hold real powers to allocate resources, and what influences the changes in real powers to influence the flow of WMA benefits in CBC interventions.

2.2.4. Accountability

Accountability is concerned with power relations within and between actors i.e. to whom a WMA actor answer to? The theory predicts that intended outcomes would be realised when governing bodies and actors who represent their communities are downward accountable to their constituency (Agrawal and Ribot, 1999; Smoke, 2003; Ribot, 2004). The mechanisms of accountability vary from transparency and participatory techniques to legal regress, to social control and civil disobedience (Agrawal and Ribot, 1999). Each accountability mechanism produces different outcomes, and the sustainability of the outcomes depends on how the approach was employed to influence the changes.

Participatory approaches are more likely to induce consistence in resources management, whereas civil disobedience divides actors into factions of *us* versus *them*. The latter might heighten division in areas where different groups within a large community have a strong belief in the ethnic or religious-based form of livelihoods. Therefore, the analysis of accountability mechanisms in WMAs facilitates the understanding of how different individuals or groups of actors employ different techniques to circumvent or ensure other actors abide to access rules for personal or communal gain.

2.2.5. Participation

Participation matter because, when all actors are fully and willingly involved in decision-making processes, the social costs of the changes and adjustments are reduced (Rondinelli and Cheema, 1983; Smoke, 2003; Larson and Ribot, 2004; Ribot, 2004). Meaningful participation makes people to have a feeling of being the driver of the change (Mansuri and Rao, 2012). It improves their responsiveness and willingness to accept the change they have pioneered. This means participation could be a *means* and an *end* (Cornwall, 2008). As a *means,* participation gives each actor an opportunity to take part in defining a resource problem and devise a viable and consensus solution. As an *end,* it could mean conservation and livelihoods success when targeted actors' willingness to participate is enhanced, or failure when they refuse to abide by the rules.

Intended outcomes are sustainable when participation is employed as a means to impact a sense of project ownership to the participating community by transforming their perceptions and practices through awareness and dialogue (Menocal and Sharma, 2008; Swindler and Watkins, 2009; NORAD, 2013). Yet, the concept of ownership is complex and ambiguous. Depending on participant's interests, a sense of ownership could mean either actors' commitments to abide

by the rules despite the social and economic cost they endure or actors' control over the resources and other actors' interests (NORAD, 2013).

Additionally, NORAD (2013: 17), argues that "issues around participation, power and gender relations, and inclusion are intangible and often difficult to define precisely or measure objectively or unambiguously." Thus, this dissertation employed case study approach (see Flyvbjerg, 2006) and ethnographic methods (see Mosse, 2007; Davis, 2011), which have the potential to facilitate collection of sensitive and very personal information about participation and use and abuse of power (Nuno and John, 2015; Thomas et al., 2015) to uncover issues of participation in WMAs.

2.2.6. Representation

Representation is the communication of perceived interests, meanings, knowledge, practices and shared reality and motives by an individual or a group, given authority by others or own motives to do so on their behalf (Castiglione and Warren, 2006; Drzyek and Niemeyer, 2008; Bengtsson and Wass, 2011). From this broad meaning of representation, however, it does not mean that representation is the absence of mass or popular participation (Castiglione and Warren, 2006) or the absolute power of representatives to make decisions (Arnstein, 1969). Rather, this dissertation assumes that representation is an avenue for a selected group of actors to consult, dialogue, and debate about issues tabled for decision making on behalf of the wider interests of actors being represented. This is because representatives of a large group of actors or a community would not have the opportunity to consult the entire population they represent for each and every matter placed in front of them for decision making (Warren, 2001). Therefore, the meaningful and effective representation can be reflected and measured based on how representatives communicate and defend the interests of the groups they represent, and on the level of trust between representatives and their constituencies (Castiglione and Warren, 2006).

3. Research design

This chapter presents the research design, starting with the worldview. This is followed by a description of the case study area, data collection methods, and analysis.

3.1. Worldview

The philosophical base of this dissertation is drawn on the epistemology of interpretivism as well as reflective. According to Ruth (2014), individuals' perceptions and actions are always influenced by and are under constant renegotiation with the diverse and dynamic perceptions and actions of other social entities. This means individuals always maintain a subjective meaning of their socioeconomic and physical environments. Therefore, the dissertation employs a subjective epistemology. It inductively constructs the multiple realities and experiences (Pearce, 2015) on how policy mediates relationships between people and natural resources (Cleaver and Koning, 2015). Moreover, because the main target is to explore and discover different realties as experienced by different groups of people and individuals. The study applies a case study approach that provides an opportunity for a research to produce an effective exemplar for policy review and re-adjustment (Flyvbjerg, 2006).

3.2. Case Study Area

3.2.1. Geographical location and demographics

The research for this study was conducted in Burunge WMA, Babati district in northern Tanzania (Figure 3). Burunge WMA is about 190 km from Kilimanjaro international airport, the main entry point for foreign tourists visiting the northern tourism circuit in Tanzania.

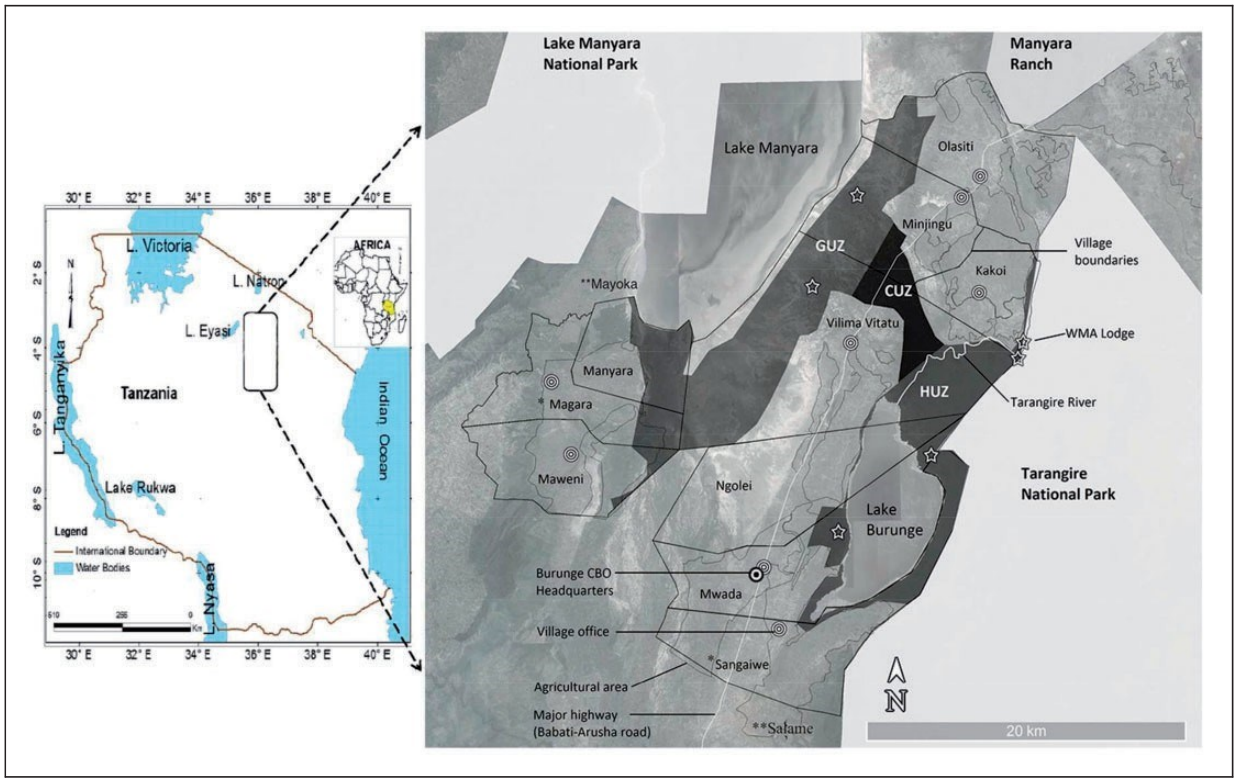

Figure 3: Burunge WMA, member villages and surrounding National Parks and a wildlife ranch (Modified from WWF, 2014)

Burunge WMA was established in 2003, following the lobbying and campaigns conducted by African Wildlife Foundation (AWF), MNRT and district officials from early 1999 (Igoe and Brockington, 1999). The WMA was formally gazetted in 2006, covering a total of 24,319 hectares corresponding to 31 percent of the total land in the member villages (Table 1). Initially it comprised five villages with a total population of around 22,000 individuals (URT, 2002). Between 2004 and 2009, the original five villages split into ten villages (Table 1), and the population increased to around 34,000 in 2012 (URT, 2012). Burunge villages are accessible by all-weather roads except for Manyara village. Primary schools and mobile phone networks are present in each village and health centres are easily accessible. In 2015 efforts to connect Burunge villages to the national electrical grid was launched. However, access to clean tap water remains a challenge to all villages.

Table 1: Burunge WMA villages and their individual land contribution to the WMA

Ward	Initial village	Year seceded	Villages after secession	Total village land before secession (Hectares)	Area set aside for WMA (Hectares)	Percentage
Nkaiti	Minjingu		Minjingu	23,860	3,747	16
		2005	Olasiti			
		2009	Kakoi			
	Vilima Vitatu		Vilima Vitatu	19,800	12,830	65
Mwada	Mwada		Mwada	10,824	3,039	28
		2004	Ngolei			
	Sangaiwe		Sangaiwe	9,200	2,445	27
Magara	Magara		Magara	15,808	2,258	14
		2005	Maweni			
		2005	Manyara			
Total				**79,492**	**24,319**	**31**

Source: Burunge WMA office notice board in 2014

Ethnically, Burunge villages are dominated by Mbugwe, Arusha, Maasai, Barbaig, Iraqw, Nyaturu and Nyiramba. Other minority ethnic groups include Safwa, Hehe, Bena, Manda, and Nyakyusa from the southern part of Tanzania, Jaluo and Kisii from Kenya and Rundi from Burundi. These migrated to Burunge in search for agricultural land and pasture for livestock. Farmland and livestock are the most important household assets and pillars of the Burunge economy. Mbugwe, Iraqw, Nyaturu, and Nyiramba ethnic groups largely depend on agriculture for their livelihoods. They cultivate maize, finger millet, sorghum, and beans, mainly for food, and rice, sunflower, onions, garlic, watermelon, sesame and cotton as cash crops. Livestock keeping is a primary source of livelihoods for Maasai, Arusha, and Barbaigs. Traditionally, these ethnic groups keep large numbers of cattle to support their livelihoods and as a source of pride. Other ethnic groups also keep few herds of cattle to generate income in case of livelihood shocks.

Burunge villages are squeezed in a network of protected areas (Figure 3). The villages are located within the Tarangire-Manyara Ecosystem (TME), covering Tarangire National Park (gazetted in 1970), Lake Manyara National Park (gazetted in 1960), Manyara ranch (operated by AWF since 2000) and a newly established Randileni WMA (gazetted in 2012, to replace the Lolkisale Game Controlled Area). Conservationists view Burunge villages as important landscapes for sustaining the ecology of TME ecosystem. Securing village lands for conservation will ensure free migration of wildlife within a network of protected areas in the region (Goldman, 2009; Kikoti, 2009). On the other hand, agriculture and livestock keeping in

Burunge villages is vulnerable to wildlife damages, yet Burunge WMA is located in an area with lots of tourism activities and wildlife. The latter make up ideal conditions for Burunge villages to realize WMAs promises through tourism related businesses.

WMA facilitators describe Burunge WMA as the best example of community-based wildlife management in Tanzania (AWF, n.d.; WWF, 2014), yet lots of conflicts exist. Its establishment was controversial, and today, ten years later, one of its original five member villages still refuses to acknowledge its legality. In other member villages, people wish to abandon the WMA altogether. This raises questions as to the viability and effectiveness of WMAs in motivating and providing incentives for local people to participate in wildlife management. Conflicting information about realities as offered by different actors makes Burunge WMA an interesting case for this study. Questions such as how is it possible that a village refuses to be a member of a voluntary and participatory wildlife management scheme, yet remains a member? Why do residents in some member villages wish to abandon the WMA, when it is ideally placed to generate revenues? Why should there be so many conflicts, infringements, and violations of rules in the best WMA? Became an important entry point for an empirical investigation to understand the impacts of WMA policy on rural livelihoods.

3.2.2. Burunge villages' governments and political establishment

The original five villages that initially established Burunge WMA originated from 'Ujamaa' villages. Ujamaa is a Swahili word equivalent to socialism. In the late 1960s, the president of the united republic of Tanzania, (then under single political party) issued a presidential decree to establish resettlement schemes in all parts of rural Tanzania. This was followed by Ujamaa villages scheme in the early 1970s. The key goal of Ujamaa villages was to consolidate rural population in areas where the state would provide communal services such as public schools, health facilities, and agricultural extension services. Ujamaa villages intended to improve efficiency in social service delivery and accelerate socioeconomic development. Following, in early to mid-1970s, rural people who were scattered in remote areas of Tanzania were ordered to move voluntarily to new centres identified by state officials. Yet in reality, in most cases, they were forced and coerced (Davis, 2011). However, a few years later, corruption and misuse of power at local levels led to the collapse of Ujamaa villages. Ujamaa village ideology and practices were (and are still) criticised for their devastating effects on societies and environments (Mashalla, 1988; Davis, 2011). Yet, the formal and informal institutional arrangements under which Burunge villages and most other villages in rural Tanzania operate are largely influenced by Ujamaa settings.

In 1982, the Tanzanian government initiated decentralisation reforms to improve local governance. The reforms sought to vest powers to govern rural people in the jurisdiction of elected local bodies. The same year, the Local Government Act and Local Government Finance Act were enacted. These provide legal opportunities for residents to elect village councillors and a chairperson from within the village population to govern village resources and manage finances (URT, 1982a; 1982b). The Local Government Act also gives power to the district executive officers to appoint Village Executive Officers (VEOs) (URT, 1982a). VEOs serve as chief executive officers of village councils (URT, 1982a). This reform implies that Burunge villages' governments are politically and economically responsible to their citizens. Politically, Burunge village governments being close to the local people are expected to provide opportunities for residents to have more say in matters that affect them directly. Specifically, providing forums for residents to decide on how best they shall be governed. Economically, the village governments are obliged to facilitate residents to manage and access benefits derived from their village lands and the associated natural resources.

In 1999, the Village Land Act No. 5 gave powers to village governments to negotiate and enter into contracts with private investors and/or organisations to invest in village lands (URT, 1999). This reinforced the power of village governments in the control and management of village lands. Local governance reforms also provide avenues for democratic accountability. Elected village representatives can be held accountable for their actions through elections conducted after every five years or through village general assemblies held at least four times a year (i.e. after every three months). In general elections, residents can vote to elect individuals who they believe would govern them responsibly. The village general assemblies[2] have the mandate to terminate elected representatives' term of office. However, the decision to terminate representatives' term of office must be approved by the district executive officer. On the other hand, individuals aspiring for a political position to represent their communities e.g. as a village chairperson must seek affiliation and endorsement of a political party. This implies that once elected, the individuals would have the responsibility and obligation to serve the political interests of their political parties and the livelihoods interests of their constituencies.

3.2.3. Burunge WMA structure

WMAs are managed by a Community-Based Organisation (CBO), a registered civil organisation. Once the WMA is gazetted, the CBO becomes an Authorised Association (AA)

[2] The general assembly comprise residents aged 18 years and above, who must have sound mind.

with powers to manage the WMA resources. It assumes the village governments' powers to negotiate contracts, redistribute benefits, resolve conflicts and allocate user rights on parts of village lands that have been designated as WMA. However, the village governments remain with powers to sanction offenders according to the village by-laws. The CBO governance structure includes the CBO general assembly with a board of trustees attached, executive committee and the CBO secretariat (Figure 4).

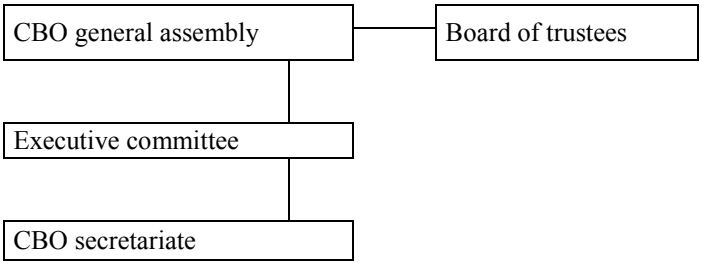

Figure 4: CBO structure (source: Burunge-GMP, 2010)

The CBO general assembly is the highest body of decision making. It comprises three CBO representatives and one member of the board of trustees from each of the member villages. Other members include village officials (village chairpersons and village executive officers), ward officials (ward executive officers and ward councilors), divisional secretary. The district office is represented by district game officer, district land officer, district cooperative officer and the district legal officer. District officials' main task is to provide technical advice to the general assembly. Burunge CBO general assembly has a total of 66 members and meets, at least, three times per year. The assembly receives and deliberates on issues raised by village councils and village assemblies. It elects 10 people among the CBO village representatives to form an executive committee and employs staff and experts whenever deemed necessary.

The executive committee is responsible for a day-to-day management of the CBO. This includes negotiating investment contracts, collection of revenues (until 2012 when it was recentralised again), distribution of incomes to member villages and lead efforts to prevent and resolve conflicts. The CBO secretariat is an administrative unit responsible for maintaining records and management of the CBO office. The secretariat is made up of the CBO secretary, one treasurer, one office secretary and one office attendant. The CBO also employs 30 (during the course of this study) Village Game Scouts (VGS). They are responsible for patrolling and enforcing WMA rules, as well as assisting residents in dealing with wildlife nuisances.

The CBO has managerial and advisory relations with state institutions, NGOs, and the private sector. State institutions, such as the Wildlife Division have direct supervisory powers over the CBO. This distant state institution has sole powers to decide how the CBO and state shall share WMA income, and approve resource management plans. Contrarily, institutions that are close to local people, such as the village assemblies have only advisory and consultative relations (Figure 5).

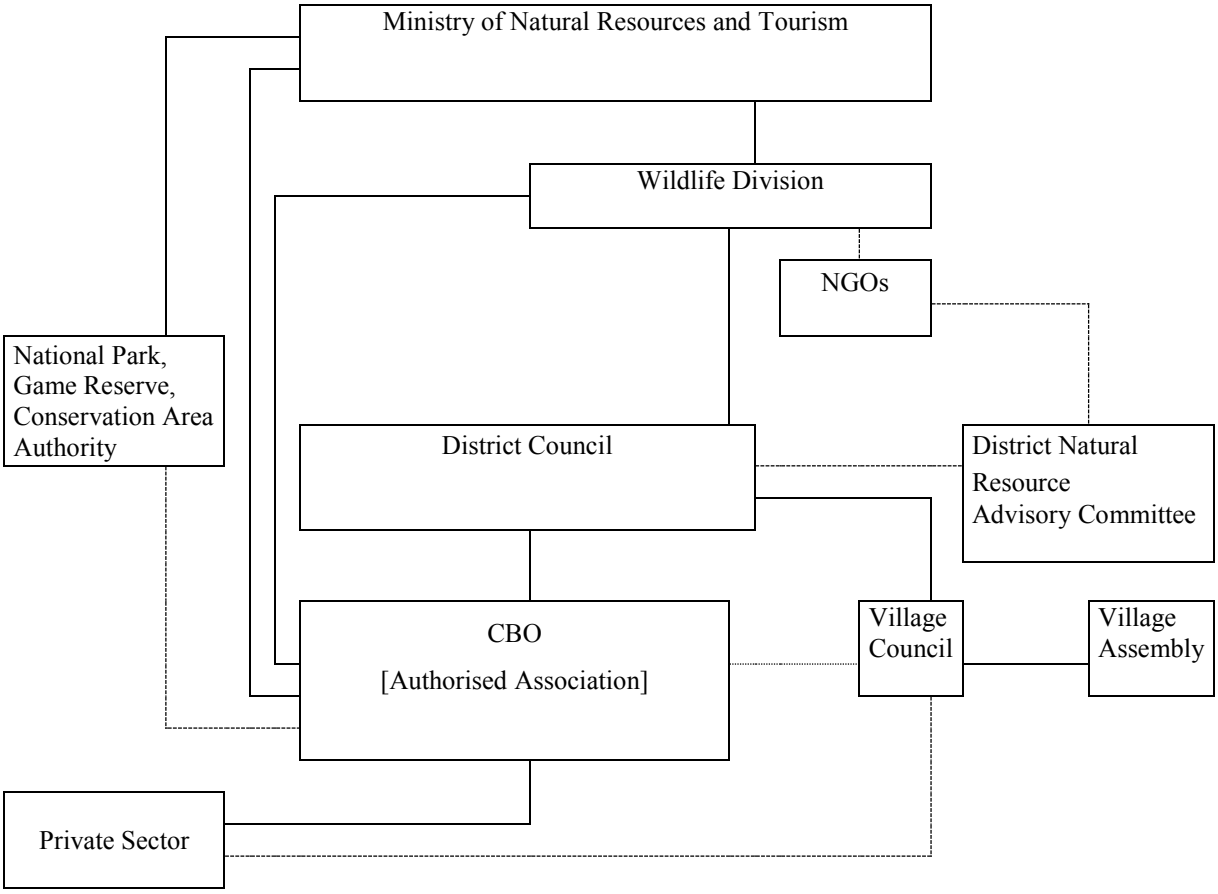

Figure 5: CBO relations with state institutions, NGOs and private sector (Source: modified from WWF, 2014 Burunge-GMP, 2010)

3.3. Research methods

The research for this dissertation follows Pearce (2015) iterative approach for social inquiry. The axes of inquiry and methods of data collection and analysis were continuously revised to suit the conditions in the local context and unfolding situations. Thus, although the initial research design focus was to quantitatively analyse the distribution of costs and benefits of CBC interventions. The unfolding local situation necessitated the focus shift toward qualitative

analysis. The first six months of field work revealed complex social political and economic realities pertaining to WMA policy implementation. This impelled the shift of study practical position (line of inquiry and methods) from quantitative to largely ethnographic. A review of official documents revealed that there are no direct financial benefits directed to the household level. A scoping exercise also indicated that diverse groups of actors hold a subjective meaning of costs and benefits of conservation. This means there is no one objective truth that can be easily quantified. It was important therefore to dwell on understanding the symbolic forms through which, the meanings are experienced and expressed in WMA processes.

Besides, information pertaining to benefits flows and illegal activities are sensitive and personal. Further, the anti-poaching campaign ordered by the President of Tanzania in October 2013 (while the study was in its initial stages of data collection), raised suspicion of rural people toward 'strangers' who investigates about wildlife conservation and use. The president ordered security forces (Policy and Military personnel) to conduct anti-poaching operation throughout the country. Despite the good intentions, the operation had devastating social and economic effects. Security personnel allegedly tortured rural people. There are claims of rape, torching of dwellings and properties, and people missing (Mwananchi Newspaper, 2013). Although a parliamentary select committee formed to investigate the effects of the anti-poaching operation led to the resignation of the ministers for home affairs, defense, and natural resources and tourism. Yet the damage was already done. Rural people become very suspicious of anyone digging information about wildlife management issues.

Thus, to counteract the aforementioned challenges, and ensure validity, the research applied a case study approach (see Flyvbjerg, 2006), and ethnographic methods of data collection (see Mosse, 2007; Davis, 2011). This provided the opportunity for research to learn about local sociopolitical environments and build the trust needed for people to open up and share their life experiences and stories. The approach facilitated the research to reduce chances of non-response and eliminate social desirability biases (Nuno and John, 2015; Thomas et al., 2015). It also provided the opportunity to triangulate information for story consistency and divergences (Ahlborg and Nightingale, 2012). By employing mixed but largely qualitative methods of data collection, the study put emphasis on observing and listening to participants' stories and life experiences. It balances between what new information can be brought into light (ontology), and "how we can justify that what we know, epistemology" (Pearce, 2015:44).

A schematic overview of specific research methods used in this study is present in table 2, and a detailed explanation of each method follows below.

Table 2: Schematic overview of research methods applied in the three papers

Data collection methods	Paper 1	Paper 2	Paper 3
Informal interviews, semi-structured	X	X	X
Formal interviews, semi-structured	X	X	X
In-depth interviews, focus group discussions	X	X	X
Household questionnaire survey	-	X	X
Document analysis	X	X	X
Data analysis methods			
Qualitative thematic analysis of transcripts	X	X	X
Ad hoc interpretation of interviews	X	X	X
Quantitative analysis of survey	-	-	X

3.3.1. Household questionnaire survey

Household questionnaire surveys were conducted in two WMA villages and two non-WMA villages using the household questionnaire (Appendix 1), the non-WMA villages formed counterfactual villages. Lack of baseline data impelled the study to compare villages with and without the WMA intervention. The approach allows this study to estimate the degree to which changes in livelihoods outcomes are attributed to the WMA policy implementation rather than to other factors (see Ferraro, 2009). Counterfactual villages provide the opportunity for research to unveil what the social and economic outcomes would have looked like in the absence of the WMAs interventions (see World Bank, 2006; Ferraro, 2009; Gertler, et al., 2011). This however required matching villages with similar socioeconomic and ecological conditions. To achieve this, the following criteria were used to select villages for the households survey: i) a WMA village and a non-WMA village are adjacent to each or at least shared a boundary before village succession occurred after the WMA establishment ii) a non-WMA village border a National Park. The underlying assumptions for these criteria are that residents in adjacent villages have more or less similar social and ecological conditions: Therefore, are more likely to have similar livelihood strategies. Secondly, when a non-WMA village borders a National Park, residents are more likely to face wildlife nuisances as their counterparts in a WMA village. At the same time, the presence of wildlife in a non-WMA village present tourism opportunities just as in WMA village.

In each of the four villages selected for the households survey, 40 households corresponding to about 8% of villages' households were randomly sampled from a village register (Table 3). A total of 160 household questionnaires were completed. Before sampling the households, village registers were updated. This was done to ensure new households are included and those which seized to exist or moved out are excluded. In each village, village leaders together with elders who were knowledgeable with the village environment and the residents were involved in updating a village register. A household in this dissertation means a group of people living under one roof or compound and share (must) their incomes and expenses.

Table 3: Type of survey and sampling intensity

Survey Type	Respondents	Number /Frequency per village	
		WMA	Non-WMA
Households surveys	Households heads/spouses	80	80
Focus group discussions	Village leaders	10	2
	Women	10	2
	Herdsmen	10	1
	CBO representatives	3	
	Farmers	10	2
In-depth interviews	VGS	7	
	VGS spouses and relatives	7	
	CBO leaders	8	
	District game officer	1	
	District natural resource officer	1	
	District cooperative officer	1	
	The regional natural resource officer	1	
	VGS injured in access struggles	2	
	Longest serving CBO representatives	3	
	Residences fined for trespassing WMA areas	2	
Partcipant observation	Village general assemblies	2	1
	CBO committees meetings	2	
	VGS meeting	1	
	VGS ranger posts	5	
	VGS camp	1	

3.3.2. Formal and Informal interviews

Formal and informal interviews were conducted in all 10 WMA villages and the two non-villages using semi-structured questionnaires (Appendix 2). Respondents for formal and informal interviews were selected based on their knowledge of the village socioeconomic and

political situation, gender, livelihood activities and leadership positions. Followed by snowball sampling to reach data saturation and diagnose information for story consistency and divergence (Ahlborg and Nightingale, 2012). Focus group discussions were conducted separately for village leaders, women, herdsmen, farmers and CBO representatives. This facilitated participant to freely express their views. Because, in each of the focus group discussion, participants shared or had a similar livelihood strategy. Hence they were more likely to have shared interests and face the similar challenges.

In total, 50 focus groups discussions, each comprising five to seven participants, were conducted at the village level. Participants in herdsmen, farmers and women focus group discussions were randomly selected. Selection was done after asking a group of village leaders together with other individuals knowledgeable with village residents and their livelihood activities to group residents in the village register based on their main livelihood activity. Participants in focus groups discussions were asked to, among other things, evaluate how village residents abide by the WMA access rules. Charts with names of environmental services and products in one column and a subjective scale of access rule acceptability or contestation in rows were provided (Appendix 3). Participants were encouraged to discuss and reach consensus before filling in.

In-depth interviews followed to gather more information and triangulate issues raised in focus group discussions. In-depth interviews were conducted with VGS, VGS spouses and relatives, and CBO leaders, district game officer, district natural resource officer, district cooperative officer, and the regional natural resource officer (Table 3). Information obtained in the VGS and district officials' interviews were triangulated with the villages ranking exercises, as well as VGS spouses and relatives. Individuals involved in particular incidences, such as VGS attacked by residents protesting the WMA rules, individuals fined for trespassing on WMA areas and the longest serving CBO representatives were also interviewed to share their specific experiences. Participant observations were conducted in village general assemblies, CBO committee meetings, a VGS meeting, at VGS ranger posts and a VGS camp.

Information gathered was recorded in the form of field notes, and audio clips after seeking respondents consent. Respondents' gestures and facial expression were also noted. In African culture, individuals' gesture and facial expressions are important in understanding the intensity (inner feeling) and capture the real meaning of the words spoken. Swahili people, in particular, tend to combine words and gestures while communicating sensitive issues. All interviews were

conducted in Swahili. Which is not only a national language in Tanzania but also a common language which is spoken by almost (the majority) all Tanzanians.

3.3.3. Document analysis

Data collection methods included an extensive review of official and unofficial documents. This included a review of CBO constitution, business contracts (investment contracts), court rulings (pertaining to WMA related conflicts), CBO financial reports (prepared by CBO and external auditors), and reports posted on CBO notice board. The study also explored reports and documents posted on various internet sites, newspapers and televisions. The review of official and unofficial documents provided a broader opportunity for this research to understand the narratives and the discourses around conservation of wildlife in human-dominated landscapes.

3.4. Data management and analysis

Data was analysed following techniques for both quantitative and qualitative data analysis approaches. Information collected through in-depth interviews were categorized and mapped to explain the functioning and efficiency of WMAs. The narratives were coded to determine how observed realities differ from theory. The analysis of associations between circumstances and behavior (i.e. rule changes and actors' responses), and between attitude and motivation were done to identify the causal relations between WMAs implementation outcomes. Quantitative data were analysed using MS excel. Detailed data analysis approach and methods are presented in each of the three papers that comprise the results section of this dissertation

4. Results

The major findings of this study are presented in the three papers that constitute the remaining part of this dissertation. The three papers are inserted in its original text (as could be seen on the publisher's sites online), but revised page layout to fit in the dissertation format. Followed by a synthesis of the research finding and the concluding section. Below is a snapshot of how the three papers respond to the research questions and the specific objectives (Table 4).

Table 4: How the individual papers respond to the research questions and specific objectives

Specific research objectives	Research questions	Paper I	Paper II	Paper III
i) Examine to what extent local communities in WMA villages participate in managing wildlife and natural resources.	i) To what extent do local communities participate in managing landscape resources?	X	X	
ii) Understand how the implementation of WMA changed the ways in which rural people access wildlife and natural resources.	ii) How has the WMA implementation changed the ways in which people access and perceive wildlife resources?		X	X
iii) Determine how access and livelihoods outcomes of WMA implementation vary across different types of individuals and households.	iii) How does access and livelihoods outcome of WMA implementation vary across different types of individuals and households?			X

Research Papers

4.1. PAPER I: Austere Conservation: Understanding Conflicts over Resource Governance in Tanzanian Wildlife Management Areas

Journal: *Conservation and Society* 14(13): 218-213, 2016

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Abstract

We explore how the regime of rules over access to land, natural, and financial resources reflect the degree of community ownership of a Wildlife Management Area (WMA) in Tanzania. Being discursively associated with participatory and decentralised approaches to natural resource management, WMA policies have the ambition to promote the empowerment of communities to decide over rules that govern access to land and resources. Our purpose is to empirically examine the spaces for popular participation in decision-making over rules of management created by WMA policies: that is, in what sense of the word are WMAs actually community-based? We do this by studying conflicts over the regime of rules over access to land and resources. Analytically, we focus on actors, their rights and meaningful powers to exert control over resource management, and on accountability relationships amongst the actors. Our findings suggest that WMAs foster very limited ownership, participation and collective action at the community level because WMA governance follows an austere logic of centralized control over key resources. Thus, we suggest that it is difficult to argue that WMAs are community-owned conservation initiatives until a genuinely devolved and more flexible conservation model is implemented to give space for popular participation in rule-making.

Keywords: CBNRM, WMA, Tanzania, management plan, participation, accountability, governance, conflict, community-based conservation, decentralised management, wildlife management.

INTRODUCTION

In recent decades, fortress conservation and central government control have been accompanied by policies and legislation that put communities in focus for conserving natural resources in the Global South (Roe et al. 2009). Much has been written about community-based approaches to conservation (Agrawal and Gibson 1999; Songorwa et al. 2000; Balint 2006; Ribot et al. 2006; Nelson 2007; Dressler et al. 2010), illustrating all too well the need for continued critical observation and concern. A number of labels for community-based conservation (CBC) schemes have been promoted in the context of wildlife conservation, such as community wildlife management (CWM) (Balint 2007), CBC (Goldman 2003) or community-based natural resource management (CBNRM) (Nelson and Agrawal 2008). All these schemes are typically defined as systems of resource governance, whereby the rules for resource allocation and management are primarily set by communities themselves (Li 2005: 435).

CBC schemes are uncritically hailed by proponents from government and non-government sectors alike to be participatory and widely beneficial, despite the difficulties of evaluating the impact of what is often framed as 'success' (Blaikie 2006), with little evidence of the actual workings of participation on the ground (Lund et al. 2009). Despite the overabundance of win-win rhetoric in development policy circles and lack of evidence to support it, scholars believe in the virtues of participatory policies if: a) a wide range of information is available to local communities to enable informed decision making (Arnstein 1969; Parkins and Mitchell 2005; Fernandez-Gimenez et al. 2008; Turnhout et al. 2010); b) meaningful powers to manage resources are actually devolved to democratically elected local bodies that are downwardly accountable to their electorate (Smoke 2003; Ribot 2001, 2004); and c) substantial benefits can be generated and captured by the communities to improve their well-being (Homewood et al. 2012).

Tanzanian Wildlife Management Areas (WMAs) represent such a policy for community-based wildlife conservation that is hailed to be participatory and community-owned (WWF 2014; AWF n.d.) because WMAs seem to constitute a break with past, more centralised and exclusion-based approaches, i.e., fortress conservation (Brockington 2002). Critical voices see them as non-participatory, overly focused on conservation, and neoliberal in the sense of expanding the territories and resources that can be commoditised with little attention to local concerns and rural development (Goldman 2003; Igoe and Croucher 2007; Benjaminsen and Svarstad 2010; Benjaminsen et al. 2013). The literature on the politics of participation is typically inspired by

a rich set of critical perspectives on participation (Ribot 1999; Cooke and Kothari 2001; Hickey and Mohan 2005; Cornwall 2008), continuously offering critique pertaining to community-conservation relations in Northern Tanzania (Benjaminsen and Svarstad, 2010; Goldman 2011; Mariki 2013; Loveless 2014) and potential ways to move beyond the critique (Goldman and Milliary 2014). With this article, we wish to explicitly examine an often overlooked, albeit a core assumption of WMAs. That is, in what sense their governance fosters or at least allows for popular participation in decision-making over rules that regulate access to land, natural and financial resources.

Studying CBC through the regime of rules and regulations

Little attention has been paid to the regime of management rules and regulations that constitute a key element for community-based interventions and shape a project's success or failure. Scholars who look at management rules and regulations typically ask whether they are adhered to, what are the effects of lack of adherence, and how can compliance with rules and regulations be ensured (Keane et al. 2011, 2012; Nielsen and Meilby 2013). However, the question of the legitimacy of the regime of rules and regulations is rarely addressed[1]. We wish to contribute to the debates on CBC by explicitly looking at the operational regime of rules and regulations over access to land and resources. Building on previous work done by others who studied the initiation of WMAs (Igoe and Croucher 2007; Trench et al. 2009; Benjaminsen et al. 2013; Loveless 2014), our hypothesis is that processes of broad-based participation and devolved community-led rule-making and implementation are largely absent in operational WMAs, partly because these projects lacked genuine community involvement in the phase of establishment. Empirically, we direct our attention to conflicts over access to land and resources and examine how tensions over rule-making and compliance are dealt with and resolved by different actors. We focus on conflicts because they are indicators of a lack of popular consent to a regime of conservation rules, and can reveal dominant power relations and the workings of politics of participation on the ground.

Conceptual framework

We ground our research interest in political ecology (Robbins 2004) and propose to build an understanding of WMA governance by looking at the rules that govern rights, responsibilities, and powers over access to material and financial resources, and how these rules are made. Having the perspective of a WMA community in mind, we ask if the rules

can be changed by WMA villages to accommodate local needs and conditions. We discuss the policy-driven architecture for WMA governance by identifying key actors pertaining to communal access to land and natural resources, and to tourism-generated revenues from hunting and safari activities on village land. Throughout our analysis, we follow Agrawal and Ribot (1999) in assessing how rules governing access to land, resources and tourism-based revenues in WMAs distribute decision-making powers to different actors and how these actors are tied into relations of accountability. We study the distribution of powers to make decisions in community-based interventions by focusing on the degree of popular participation in rule-making. To do this, we see the need to examine the relationship between the WMA villages and the community-based organisation (CBO), because WMAs are primarily managed at the supra-village level by (CBO, also referred to as 'Authorised Association' in the context of WMAs). Therefore, we are interested in understanding what powers are assigned to the CBO—the managing body comprised of elected village representatives—and what powers are further devolved to village councils. With this, we are able to assess the degree of decentralisation, and to what extent decentralisation policies distribute 'meaningful powers' over resources to WMA governance bodies that are held accountable by their constituencies. When accountability relations force authorities to respond downwardly to its constituency, decentralisation takes democratic traits (Ribot et al. 2010). When local governments are mainly upwardly accountable to higher authorities, it resembles an extension of central government's control into rural areas (Ribot 2004, following Rondinelli 1981) or in other words recentralisation (Ribot et al. 2006). In our exploration of WMA governance at the village level we look at how flexible the rules are and what it takes to change them. If certain rules cannot be changed, we look at patterns of conflict as an indicator for lack of genuine community participation in rule-making.

METHODOLOGY AND CASE DESCRIPTION

We use empirical data collected from a field study in Burunge WMA in Northern Tanzania. We rely on a review of relevant policy documents and on qualitative data compiled through observation (in two village assemblies, three CBO meetings, and one meeting of Village Game Scouts), semi-structured and unstructured interviews with agro-pastoralists and farmers (individually and in focus groups, >100 interviews), village and traditional leaders (>40 interviews), members and employees of the CBO (13 interviews), Village Game Scouts (individually and in focus groups, 23 interviews), district officers (five interviews), ministry

representatives (four interviews and continuous email exchange), conservation NGO representatives (four interviews), investors (two interviews), and Protected Area authorities (one interview with three Tanzanian National Park Authority representatives). Data were collected in all Burunge WMA villages, in Babati town (District centre), in Arusha (Regional centre) and in Dar es Salaam (location of the Ministry of Natural Resources and Tourism). The field work was conducted from January to May 2014, and in February, May, and November 2015 by the authors — either in parallel at different locations or jointly.

We deal with highly sensitive and contentious issues of land ownership, local conflicts, and criminalized access to conservation territories. To build reliable narratives of events and conflicts we triangulated (Nightingale 2003) by talking to actors across all levels of WMA governance and local politics, and we used high-resolution satellite images (Google Earth) to gain a better understanding of different land uses and spatial relations in the area. Triangulation techniques do not always yield consistent accounts and can produce discrepancies and incompatibilities between different sets of data (Nightingale 2003). This dissonance, however, is telling in multiple ways and can inform about local interests and what is at stake for different actors, making social conflicts and the politics of conservation visible. To elicit historical events, we asked the same questions to different research participants until we did not receive new information. To reduce the various biases inherent in the study of conflicts, we put great stress on building trust with our interlocutors, being transparent in our research questions, asking for informed consent to be interviewed, an option to opt out at any time, and ensuring anonymity. Nonetheless, mutual trust does not prevent us from being 'used' by our informants in what they often referred to as a political game that the 'others' are playing, a game that one can hardly observe without being drawn into.

We also recognise that by relying on qualitative methods in the field we lack a number of other techniques that could shed a different light. Our research design and methodology do not include environmental evidence that could inform a study of conflicts over access to land and resources in juxtaposition with claims to environmental stewardship or degradation (e.g., Brockington and Homewood 2001; Benjaminsen 2008). We interacted mostly with members of village governments and other more 'visible' community members, and we probably have not spent enough time in the villages that we study to be able to fully observe the daily workings of local politics.

In this article, we discuss WMA governance at large, despite drawing from one case study only. Every WMA is different as is every village. This makes any generalisation problematic, yet not impossible (Flyvbjerg 2006). We try to overcome the problem of generalisation of ethnographic qualitative research findings by using a conceptual framework that can be equally applied to most localities and contexts. Further, our case was not selected randomly. Rather — following Flyvbjerg (2006) — we selected it purposefully as a case: a) that stands out, being one of the first operational Tanzanian WMAs and attracting more tourism investment than most other WMAs in the country; and is b) with internal variation, being arguably one of the most heterogeneous WMAs in terms of the mix of ethnicities and languages, livelihoods and land use practices.

Case study area

Burunge WMA is located in Babati district in Northern Tanzania, around 190 km from Kilimanjaro international airport, the main entry point for international tourists visiting the Tanzanian northern circuit (Figure 1). Burunge WMA was established in 2003 and registered in 2006 with a total area of 280 sq. km (WWF 2014). The WMA initially comprised of five villages with a total population of around 22,000 individuals (2002 national census). Between 2004 and 2009, the five villages split into ten (Figure 2) and the population increased to around 34,000 in 2012 (2012 Babati District Council Population and Housing Census).

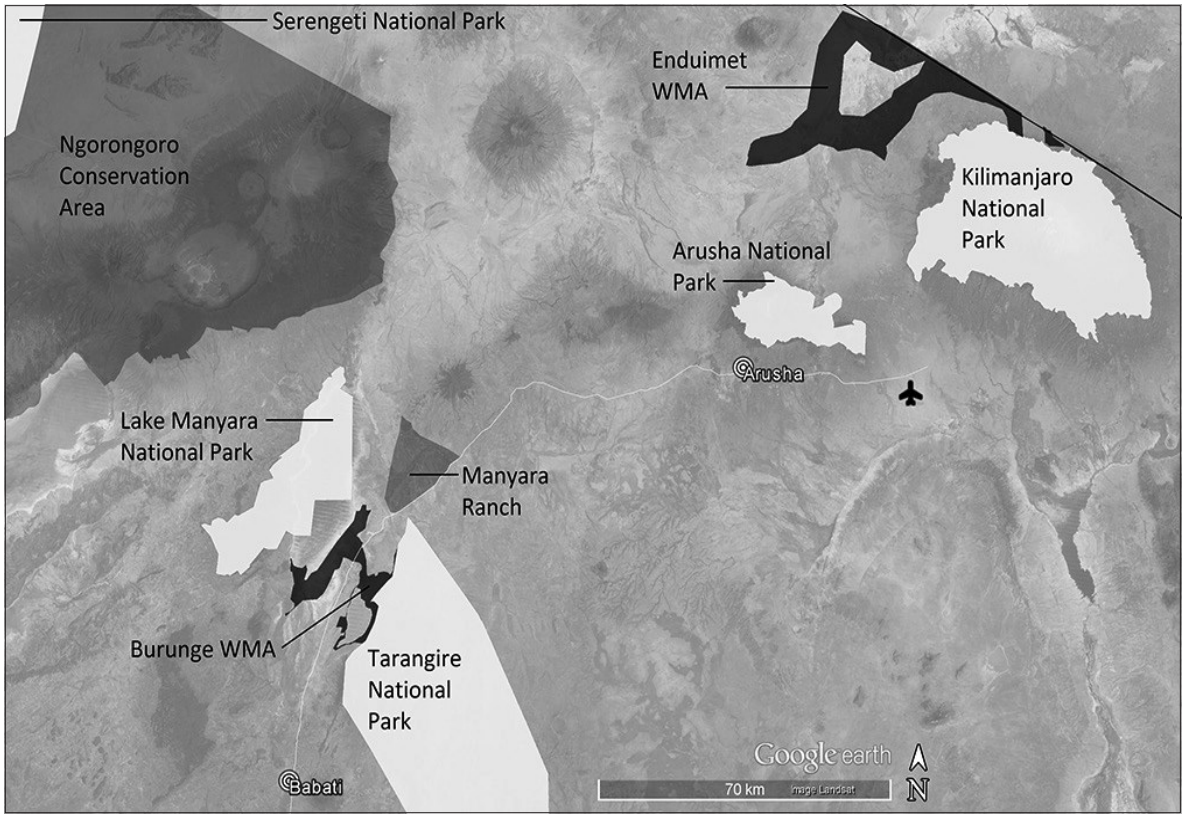

Figure 1: Burunge WMA in the regional context

Note: GIS shapefiles provided by TANAPA, TAWIRI, WWF, and WDPA. Illustration by Jevgeniy Bluwstein

Although Burunge WMA is located within a world-famous network of well-established protected areas that generate significant revenue for the safari industry and the Tanzanian state, Burunge villages cannot capture tourism revenue unless the tourists stay overnight in Burunge WMA lodges, go on a photo-safari, or hunt game in the WMA. The revenues from Burunge WMA-based tourism amounted to TZS 412 million (around USD 248,000) in 2014, after taxation by central and district governments. Assuming a population of 36,000 people in 2014 in Burunge villages based on the past population growth, around USD 7 per person per year are made available for the communities after taxation in 2014. Yet, only half of the sum is distributed to the villages for social development projects; the other half remains with the WMA office for administrative purposes, conservation activities and a development reserve (Homewood et al. 2015).

Agriculture and livestock husbandry continue to be the main livelihood activities, with farmland and livestock herds constituting most important household assets and two pillars of

the local economy. The extent of agricultural activities in Burunge villages is shown in Figure 2. Burunge villages, except Manyara village, are accessible by all-weather roads. Primary schools and mobile phone networks are present in each village, health centres are easily accessible for many, and in 2015, and efforts to connect the area to the national electrical grid have been launched. Access to water remains a challenge for all.

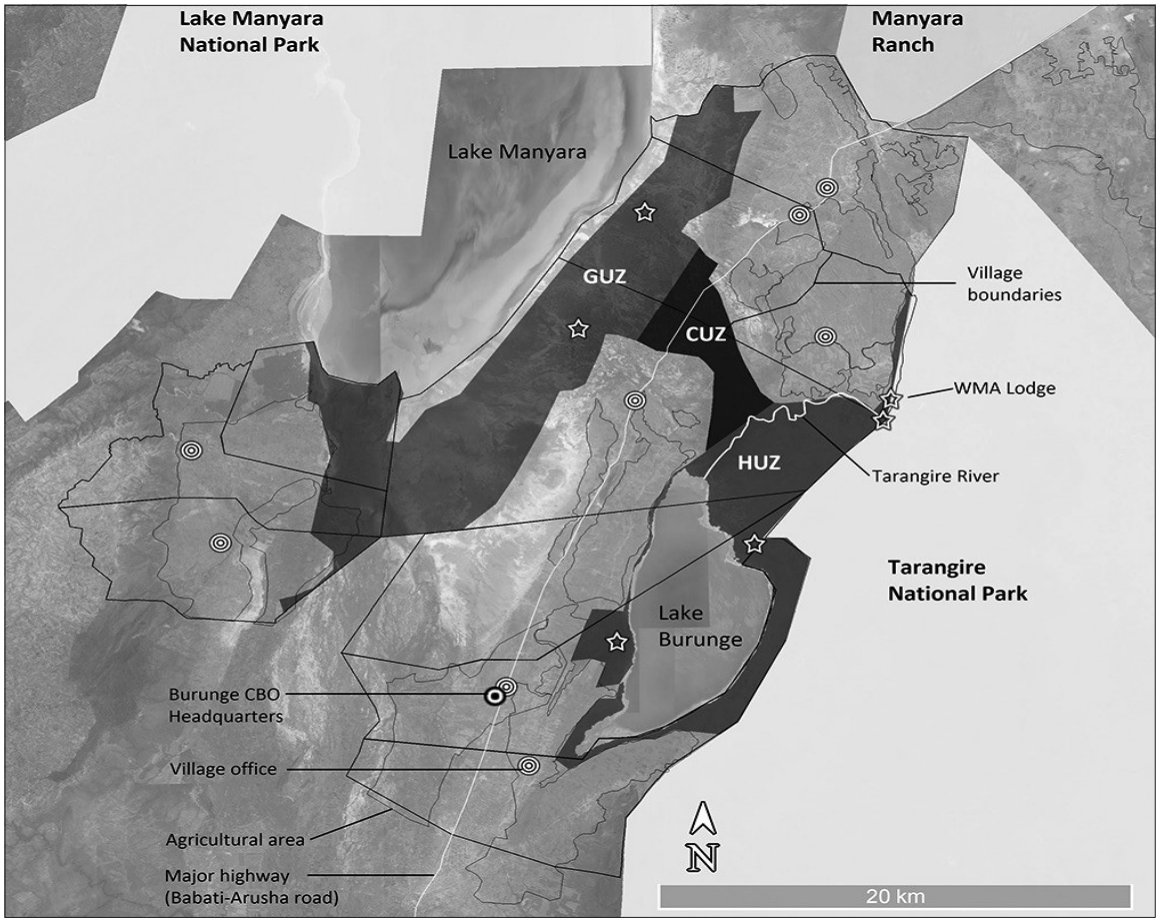

Figure 2: Villages of Burunge WMA

Note: Some village boundaries are not official and might change in local negotiations, estimated to our best knowledge based on field presence and corroborated with preliminary maps from Babati District, Village Land Use Plans, GIS shapefiles (WWF, National Bureau of Statistics) and Google Earth satellite images. Agricultural area is mapped based on2014 GIS shapefiles (Honeyguide Foundation). Burunge WMA is divided into three zones: General Use Zone (GUZ), Corridor Use Zone (CUZ), and Hunting Use Zone (HUZ). Illustration by Jevgeniy Bluwstein.

Past conservation efforts squeezed the local population between a network of various types of

protected areas. Burunge WMA is located within the Tarangire-Manyara Ecosystem (TME), that also encompasses Tarangire National Park (gazetted in 1970), Lake Manyara National Park (gazetted in 1960), Manyara Ranch (since 2000, operated by African Wildlife Foundation), and a newly established Randileni WMA (gazetted in 2012, to replace the Lolkisale Game Controlled Area, not mapped here) (Figure 1). From a conservationist point of view, the priorities are to maintain the ecological integrity of the entire ecosystem by protecting wildlife corridors, enabling wildlife to safely migrate across borders within TME (Goldman 2009; Jones et al. 2009; Kikoti 2009).

ANALYSING RESOURCE GOVERNANCE IN WMAS: RIGHTS, POWERS, AND RELATIONS OF ACCOUNTABILITY

WMA policy aims to establish restrictions on local land use and access to natural resources in return for a share of tourism revenues that are generated on village lands under a WMA regime of rules and regulations. Therefore, taking a community perspective we discuss the kind of changes the WMA policy brings at the village level in terms of local people's ability to access communal lands for cultivation, livestock grazing, collection of natural resources (firewood, timber, non-timber forest products, poles, thatch, bushmeat, water, etc.), and their ability to benefit from tourism-based revenues generated through hunting and safari activities.

Evolution of central government control over tourism activities on village lands

Under the Wildlife Conservation Act of 1974—long before the WMA era—the central government of Tanzania has reconsolidated state control over wildlife resources in post-independent Tanzania, developing a vibrant tourist hunting industry and liberalising it to private investments in the 1980s (Nelson et al. 2007). This led to a growth of tourism activities on village lands. Hunting outfitters received hunting block concessions from the central government to bring in tourists to shoot game in Game Controlled Areas (GCAs) that often overlapped with village lands, while tour operators established direct investment contracts with village governments to conduct non-consumptive activities (e.g., photo safari) and to facilitate tourist camping and lodging on village lands.

While no restrictions on human activities were imposed by central authorities on village lands inside and outside of GCAs, the Director of Wildlife, under the Ministry of Natural Resources and Tourism (MNRT) had the power to allocate a hunting block on village land in a GCA without local consent, to allocate a hunting concession to an outfitter, and to collect the fees and revenues,

channeling back only 25% to the District that would share a small and unspecified amount with the village government (Nelson et al. 2007). Communities were dependent on the goodwill of hunting outfitters to support 'community development' as required through Tourist Hunting Regulations in 2000. The presence of hunting outfitters on village land could entail restrictions to local access to land and natural resources during the hunting season, and some concessions granted exclusive access to the outfitters (Snyder and Sulle 2011).

The Ministry had no role to play in non-consumptive tourism on village land. The village governments could enter into direct negotiations with tour operators and lodging investors, negotiating a shared land-use regime that could entail self-imposed restrictions on access to land and resources to secure an attractive safari experience for visitors, and keep all the revenues (Nelson et al. 2007; Schroeder 2008; Sachedina and Nelson 2010). Obviously, communities would prefer self-negotiated non-consumptive tourism activities on their village land as opposed to having to host non-accountable hunting outfitters. The Ministry, however, benefited from tourist hunting financially and had little interest in seeing the villages interfere with hunting activities by hosting tourism safaris through direct contracts with safari operators (Snyder and Sulle 2011). The growing competition between consumptive and non-consumptive tourism activities within hunting blocks on village land has led the central government to pass a number of reforms to regulate in favour of tourist hunting, banning any kind of tourism activities within a hunting block without the approval of the Director of Wildlife, and introducing new fees on all tourism activities (URT 2000, 2008; Nelson 2011; Snyder and Sulle 2011).

The evolution of wildlife conservation and tourism reforms was paralleled by deliberations over a comprehensive policy for devolved and community-based wildlife conservation. Eventually, it was implemented under the Wildlife Regulations of 2002 (URT 2002), stipulating how WMAs can be established on village lands. Until today, Tanzania's WMA policy has undergone significant changes and is presently codified in form of the Wildlife Conservation Act 2009 (URT 2009) and the Wildlife Regulations 2012 (URT 2012). In what follows, we outline what has changed for communities' access to their lands and resources, and how their relationships vis-à-vis tourist hunting outfitters and safari tour operators have been affected by WMA policies.

What powers over community-based wildlife conservation are vested in the CBO?

When villages set aside a part of village land to be gazetted as a Wildlife Management Area, the WMA is created as a continuous piece of land spanning across village borders. In the process of WMA establishment, participating villages have to elect village representatives who form a supra-village CBO. The CBO has the right to apply for 'user rights to wildlife' at the Ministry of Natural Resources and Tourism. In case of a successful application, the CBO can use the newly acquired powers to attract private investors to establish wildlife-based tourism activities (hunting and/or safari), and it can also apply for a resident hunting quota on behalf of the WMA villages, allowing–albeit very limited–access to legal bushmeat for local communities. While it is still up to the Director of Wildlife to allocate a hunting block even inside WMA territory, the Wildlife Regulations of 2012 give the CBO the right to decide upon whether a hunting block should be established or not, and CBO members are involved in negotiations with potential investors. Ultimately the village who hosts a WMA investor has to approve of the contract between the CBO and the investor. The CBO is in charge of the preparation of a General Management Plan (GMP) that governs local access to land and natural resources on WMA territory as well as tourist operators' conduct and access to WMA-based village lands. This empowers the CBO to manage the WMA on behalf of the participating communities pertaining to local access to land and use of all natural resources, both inside and outside of a WMA hunting block. Hence, powers to make decisions over local access are recentralised away from the village councils up to the CBO pertaining to village lands that are outside of a hunting block and are set aside for a WMA. However, when a hunting block is operated on village land, powers partly shift from the central government to the CBO with the implementation of a WMA. In order to understand whether this shift enables more or less attention to residents' needs and concerns, it is important to study the relationships between the communities, their CBO, and the investor. We will return to this later.

The CBO is also entitled to a share of tourism-based revenues that are generated within WMA territories. Depending on the nature of revenues (consumptive and non-consumptive) and fees, different revenue sharing formulae apply, as specified by the law for hunting (URT 2009, 2012), and suggested but still unspecified (Nelson et al. 2007, URT 2008) for non-consumptive utilisation. A share is allocated to the government, the district and the CBO. As of 2012, the CBO receives 75% of the hunting block fees (25% go to the central government) and 65 % of non-consumptive revenues. Due to a number of additional taxation mechanisms on

hunting-related fees, the revenues from hunting to the CBO are reduced to roughly 60%. The CBO is entitled to keep whatever amount is negotiated between the CBO and the investor above the government-prescribed fees.

The CBO is also encouraged to retain roughly half of the taxed WMA revenues for administration, conservation, and other activities, and to distribute the other half to the participating villages (URT 2012), who manage their share independently, typically investing the funds into public development projects and education. Although it is not regulated how the revenues should be distributed among the villages, the CBOs typically allocate equal amounts 'as an easy answer to a difficult question' (former WWF Tanzania employee, pers. comm. 2014) instead of putting it up for debate amongst the communities within the process of deliberations over the WMA rules. It creates or fuels conflicts amongst communities and the CBO, when a wildlife-rich village hosts a lodge and is persuaded to join other villages to establish a WMA, and subsequently to share tourism revenues with villages that might have much less wildlife and no tourism. These wildlife-poor villages are often more than willing to join and receive tourism-based revenues that are generated elsewhere (Trench et al. 2009; Benjaminsen et al. 2013; Green and Adams 2014).

What powers remain with the central government?

The Director of Wildlife retains its powers to authorise key proposals put forward by the CBO, such as the allocation of a hunting block within a WMA, the choice of tourism investors, the stipulations within the General Management Plan, that is regulating local people's access to village lands inside the WMA, and the collection and distribution of tourism-based revenues on WMA territory.

In 2014, the decision by the former Minister for Natural Resources and Tourism freed several tour operators in three WMAs from paying entry and motor vehicle fees for tourists staying in WMA lodges in a move that by-passed the parliament (Letter by the Minister of Natural Resources and Tourism to Tanzania Association of Tour Operators, 22.12.2014), effectively reducing WMA revenues from tourist visitors from USD 25 to USD 15 per person. This incident is telling in multiple ways: it demonstrates the bargaining power of tour operators who negotiate tourist fees directly with the Ministry (member of Tanzania Association of Tour Operators, pers. comm. 2015), while the villages have no say; it shows the power of the Ministry to decide and influence how much WMA villages will be able to generate from WMA-based tourism; and

it invites patronage and rent-seeking (Nelson and Agrawal 2008; Benjaminsen et al. 2013).

Furthermore, correspondence from Burunge CBO to the Wildlife Division shows that the latter distributes a part of collected revenues to the CBO erratically, with delays and often without a way to trace back the payments to the respective investors and tourism activities, making the revenue generation and distribution non-transparent (Benjaminsen and Bryceson 2012; WWF 2014). This does not allow the CBO to effectively hold the Wildlife Division to account, and it makes adequate financial planning difficult at the CBO and village level.

Perhaps most important and far-reaching is the continuous state ownership of all wildlife in Tanzania (URT 2009), allowing the CBO–on behalf of the Wildlife Division–to retain user rights over wildlife on village land and to manage and benefit from wildlife utilisation for tourism activities, even if the village leaves the WMA (URT 2012, section 34(6)), creating tensions and ambiguities with the Village Land Act No. 5 (URT 1999, section 8). The Village Land Act gives Tanzanian village governments the right to use, administer and manage village land—land that is owned by the state—on behalf of the village assembly, i.e., all adult members of the village. In case a WMA village withdraws from the WMA, all decisions about the use of village land, that are considered by the Wildlife Division to be of importance to wildlife conservation, remain with the CBO (representative of Wildlife Division, and District Game Officer of Babati district pers. comm. 2014). Should the CBO cease to operate in the unlikely case that all villages of a WMA decide to dissolve the WMA and succeed in doing so, the user rights to wildlife over former WMA land return to the Wildlife Division, which then decides whether to 'give' back this land to the village or to use it for hunting tourism (representative of Wildlife Division, and District Game Officer of Babati district pers. comm. 2014). In the case of the latter, the village would not be allowed to utilise its own land, nor benefit from any generated fees or revenues from hunting tourism. While this is not clearly regulated, it has been used by Babati District Game Officer and Wildlife Division as a threat to Burunge WMA villagers. Should villages withdraw from the WMA, their village land set aside for the WMA would be converted into a Game Controlled Area, we were told, which would render this land a protected area without rights to any human activities according to Wildlife Conservation Act 2009 (URT 2009, section 20(1)(c) and section 21(1)). This threat has no legal substance (Edward Lekaita pers. comm. 2016) but can exert political power when central and district government 'experts' use it against villagers with little knowledge of the law, and most importantly little access to independent legal representation to claim their rights. Similarly, WMA villages and

the CBOs seem not to know that the CBO user rights cannot be automatically renewed by the Director of Wildlife if there have been changes to the General Management Plan. In order to pull out from a WMA, a village would have to change its own village land-use plan and announce it to the CBO and the Director of Wildlife. This would force the Wildlife Division to review the WMA status after five years (Edward Lekaita pers. comm. 2016). Because villages do not know their legal rights, nor are they appropriately informed about WMA laws by District authorities or the Wildlife Division, no village has yet managed to pull out of a WMA in Tanzania.

Instead, the confusion about WMA laws and villagers' rights can be used as an opportunity for conservationists and investors to engage with villages that cannot simply pull out from the WMA if residents change their minds about what they are willing to invest in or sacrifice for conservation. The stabilising effect of being under the WMA framework can create incentives for organisations that represent conservation interests to convince or, if necessary, coerce villages to join a WMA as a strategy to put more village land under a conservation regime without an option for reversal.

Accountability relations matter

The apparent lack of downward accountability of the CBO to the villages has already been criticised by others (Shivji 2002; Nelson 2007; Humphries 2013). The CBO does not need to be responsive to communities' requests to change the rules, however, it can ask the village governments for support in enforcing rules that are decided upon elsewhere. Due to the top-down revenue collection, the villages cannot hold the CBO accountable in terms of how revenues are generated and collected, because this responsibility is with the Wildlife Division, not the CBO. Similarly, the CBO is following central government regulations and guidelines on how to allocate the money, leaving little room for maneuver to meet villagers' demands.

The Local Government Act (URT 1982) gives the village assembly, i.e., the villagers, the power to elect and remove the village chairman or village council members. However, in the context of WMA-based tourism villagers can only complain about investors' conduct, but they cannot make an investor leave, as the contract is signed between the CBO and the investor. The most important mechanism to hold the CBO downwardly accountable to the villagers is the power granted to villagers to elect and remove CBO representatives. While this right can be easily exercised in practice, the establishment of a supra-village CBO does not promote the

empowerment of existing village government organs (Shivji 2002; Ribot 2004; Nelson 2007) and weakens accountability links that are already available, because the CBO is spatially further detached from the villagers than the village government that resides in the village office. For most villages, a CBO has its headquarters hours, if not a day trip away, depending on distance, terrain, means of available transport, and season. Burunge villagers are arguably least affected by this, having a tarmac road cutting through the region, but for communities in more remotely located WMAs, this is a serious burden and barrier to access their CBO (e.g., Lake Natron, Makame, the WMAs in the Selous-Niassa Corridor in Southern Tanzania). With the recentralisation of resource management from the village office up to the CBO, negotiations over access to some of the resources are also recentralised to the CBO level away from village committees, such as livestock grazing, and collection of firewood, thatch, or medicinal plants. The bargaining power of villagers also diminishes if people from several villages have to lobby the CBO through village representatives instead of attending village assemblies where demands can be expressed directly to an elected village council.

We conclude that the CBO is upwardly accountable to the Wildlife Division that makes state policy and regulations, gives authority to the CBO to manage the WMA, and can take this authority away. Given the strong relations of accountability between the CBO and the Wildlife Division, CBO's downward accountability to the communities is relatively weakened. That is to say, it does not matter much who will be elected to represent the villagers at the CBO if CBO's powers to do what the villagers like it to do are limited by state policy and regulations that give the Director of Wildlife key decision-making powers in community-based natural resource management. At the same time, the CBO holds the villagers accountable to the rules over access, and it can enforce many of these rules through force or financial sanctioning. Hence, WMA villages are trapped into relations of accountability that make it difficult to leverage political power to change rules that govern rural livelihoods in their communities. In other words, there is no 'balance of powers' (Oyono 2004) to effectively hold community representatives (i.e., CBO members) accountable at the village level.

BURUNGE WMA: GOVERNANCE THROUGH COERCION AND LEGAL STRUGGLES

In the following sections, we review some of the evidence in support of our analysis of WMA governance through the case of Burunge WMA. We focus empirically on local struggles over powers to change rules and the consequences of an ostensibly centralised

management regime. Where it is necessary to ensure protection from possible reprisals, we anonymised the communities.

Creating a conservation regime of rules and regulations

As mentioned already, the CBO is in charge of land-use planning for village land inside a WMA. Depending on the zonation in accordance with the General Management Plan, WMA villagers can have access to pastures for livestock grazing, and to fuelwood and non-timber forest products, while cutting timber, making charcoal, farming or establishing permanent settlement structures are always prohibited in any WMA. Every WMA has to come up with its own regime of rules over access to land and natural resources. A GMP provides—at least in theory—the basis for developing and managing a WMA. Through an environmental resource assessment of the WMA, natural resources are to be valuated, challenges and goals to be identified, and solutions to be proposed. A core element of the management plan is the spatial dividing of a WMA into different resource zones that are assigned respective restrictions and allowable uses. We compile the various activities in Table 1 for Burunge WMA, showing how access to land, natural resources, and tourist activities are spatially contingent. According to Kaswamila (2006), no biophysical or socio-economic data were actually collected for the preparation of the initial management plan in 2005, nor where there any set criteria for zoning. The current GMP (JUHIBU 2011) is based on largely unchanged assumptions and planning. The Corridor Use Zone is situated on village lands of Minjingu and Vilima Vitatu and connects the western and eastern parts of the WMA, acting as an ecological link between Lake Manyara National Park and Tarangire National Park (cf. Figure 2). The General Use Zone spans the villages of Olasiti, Minjingu, Vilima Vitatu, Maweni, Magara, and Manyara, acting as a buffer zone for Lake Manyara National Park and hosting two tourist lodges, located in Minjingu and Vilima Vitatu, respectively (cf. Figure 2). The Hunting Use Zone spans the villages of Kakoi, Vilima Vitatu, Ngolei, Mwada and Sangaiwe, acting as a buffer zone for Tarangire NP, hosting Burunge's hunting block and three tourist lodges (cf. Figure 2). Further, access to the west shore of Lake Burunge is prohibited to villagers, hosting a tourist lodge in Mwada.

Table 1: Burunge WMA zone-based regime of allowable and prohibited activities

Activity	CUZ*	GUZ^	HUZ+
Dry fire wood collection	A†	A	P‡
Tree felling (poles for house construction)	P	P	P
Collecting Non-Timber Forest Products	A	A	P
Charcoal burning	P	P	P
Livestock grazing	P	A	P
Agriculture	P	P	P
Permanent settlements	P	P	P
Temporary settlements	P	A	P
Tourist hunting	P	P	A
Photo safari/game viewing	A	A	A
Local hunting	P	A	P
Entry without permit	A	A	P

Compiled based on Burunge General Management Plan 2010-2020 (JUHIBU 2011) and fieldwork. *Corridor Use Zone, ^General Use Zone, +Hunting Use Zone, †Allowable and ‡Prohibited

Our fieldwork suggests that Burunge's regime of rules over access to land and natural resources is overly restrictive for many. How were these rules made? Formally, WMA policy and regulations put the responsibility to design access-specific rules in the hands of the CBO that should do it on behalf of the villagers. The policy is clear on the participation aspect here, it encourages participation of all and the village assembly has to sign off decisions pertaining to land use planning and the choice of investor. By unpacking the rhetoric of participation, we are looking at the distribution of powers in rule-making to qualify what it means when everyone is 'participating', and who holds meaningful powers in what is framed as decentralisation. We follow Agrawal and Ribot (1999) in order to focus on different types of powers for our analysis—powers to make or change rules and regulations, and powers to enforce restrictions.

Before becoming a WMA village, a village land-use plan needs to be prepared. Village land-use plans are in theory decided at the village level, being regulated through a set of Tanzanian laws (cf. ILC 2013), enabling all those who would normally attend village meetings to participate. Most likely, less than half of the adult population attends village meetings in communities that we studied for this article. Kaswamila and Songorwa (2009) report that 21% and 43% of adults (individuals above 18 years of age) participated in village land-use planning

in Burunge WMA villages of Vilima Vitatu and Sangaiwe, respectively. The authors further add that most of the active participants were 'district officials and ward/village leaders'. This counteracts claims of popular participation, and often the plans are actually done by 'experts' without involving the villagers (Goldman 2003; ILC 2013; Bluwstein and Lund, in review). We argue that this is due to what we call a 'conservation bias' which can override local needs and conditions, and is built into WMA governance from the outset on through the logic of wildlife corridors as the basis for a WMA, and the obligatory assistance of the District Game Officer and a conservation NGO in the establishment of a WMA.

Because a WMA is by default a continuous piece of land cutting across several villages to constitute a wildlife corridor or a buffer zone for a protected area, options for village land-use planning and WMA land allocation are restricted since the goal is to establish a block of land instead of discontinuous patches. In addition, as soon as a part of village land is surrendered to the WMA through an approval in the village assembly, the power to make rules for 'how' to use this particular piece of village land is also surrendered to a group of actors—CBO members, District Natural Resources Advisory Board with the District Game Officer acting as a secretary, consultants and NGO facilitators—who prepare a WMA-wide GMP. Although District officers and the NGO have an advisory role of facilitators, and are merely supposed to bring together stakeholders at the negotiation table, in the case of Burunge WMA the District Game Officer and the facilitating NGO, AWF, did have a substantial impact on decisions over the establishment of Burunge WMA and WMA land-use planning (Igoe and Croucher 2007; Sachedina 2011). Villagers were misinformed and manipulated–including claims of forgery–to accept the WMA without informed consent (Baha and Chachage 2007; Igoe and Croucher 2007; Interviews by authors). The District Game Officer was allegedly demarcating parts of village lands for WMA without informing anyone, creating confusion, and sawing seeds for future land conflicts (interviews with anonymous). Sachedina (2008, 2011) offers a convincing ethnographic account on AWF's role in conservation projects across the Tarangire-Manyara Ecosystem, being the primary organisation in the region in pursuit of community-based conservation that is not so community-friendly (also see Goldman 2011; Goldman et al. 2013; Benjaminsen et al. 2013). The influence of the facilitators in the decision-making process over rules for conservation management explains why villagers have little to no access to natural resources such as dry-season pastures and non-timber forest products, despite the fact that the CBO is in a position to grant access to these resources without the central

government watching over it. In an environment of imposed conservation 'expertise', the NGO and the District Game Officer appear to act in unison, as perceived by a village official:

> AWF and other conservation organisations all go to District level first and share the same ideas and beliefs. So District Game Officer might sometimes represent conservation NGOs perspective. NGOs always come together with the District Game Officer, they coordinate their activities. The District Game Officer is the advisor to wildlife management. NGOs and District Game Officer say the same things, so they must accept each other's positions. (Interview with a member of the village government in Olasiti, 2014).

The CBO is the only actor with an assigned budget for rule enforcement and monitoring. Official rules are enforced through village game scouts or private investor guards (on investor's concession), and by relying on traditional leaders and village governments. As another instrument for rule enforcement, the CBO might threaten to withhold some of the revenues to a particular village, if the village WMA is not well maintained. This is not explicitly regulated, but expressing threats has been a common practice in Burunge WMA. Some of management plan rules, so far, only exist on paper. For instance, temporal limits to grazing (carrying capacity) and other livelihood activities are arbitrarily defined, yet not implemented. Access to land for livestock grazing in the General Use Zone is allowed according to the management plan but is insecure, because a tourist lodge operator claims much of that area and uses his guards to harass and police the residents. The residents never agreed to the establishment of the WMA and won a legal case against the CBO and the village government, but efforts to evict the people continue to this day. Farming restrictions on Burunge WMA land in the villages of Manyara, Magara, and Maweni are not policed by CBO's village game scouts for various reasons, including the challenge to patrolling wetland areas and contesting claims to land ownership.

CBO's powers to change arrangements in response to conflicts are often constrained by higher levels of government, poor understanding of the land laws or simply reluctance to listen to WMA communities.

> This is a complicated process. The village would have to request to change boundaries at the Authorised Association [i.e., the CBO], the Authorised Association would have to ask the District and the Wildlife Division. Burunge

> WMA does not accept such requests, because villages would keep asking for more and more changes. (Interview with former member of Burunge CBO, 2015).

Having a conservation NGO and the District Game Officer as facilitators and watchmen further reduces incentives to listen to demands from below.

> Although we have village representatives [at the CBO], they are not well educated and not well aware of legal issues, so the District and Wildlife Division impose their own will on WMA. Authorised Association [i.e., the CBO] members are sometimes tricked by District and other authorities by being taken to seminars and treated nicely. Authorised Association members feel obliged to accept whatever is told them. They forget that they should be representing the villagers. Only a few Authorised Association members are strong enough to keep representing the village needs. (Interview with a member of Olasiti village government, 2014).

Community struggles over access to grazing land

One of Burunge's villages used to be part of another village until about five years ago when it separated and became independent. The newly created village had to be sensitised by the District Game Officer anew to be persuaded to join Burunge WMA. With the attained independence, all grazing land set aside during the WMA establishment remained with the old village. To complicate matters, the new village is located next to and overlaps with the WMA hunting block, an area that has been traditionally used by livestock keepers from adjacent communities for dry season grazing. In 2013, the hunting block has been taken over by a new investor who does not offer any hunting tourism but uses the concession for non-consumptive (safari) activities throughout the year. Until recently, livestock keepers from the new village believed that the village leadership gave away their land to the WMA, while the leadership sees itself as being lured into accepting the WMA, not being fully informed about the challenges during the sensitisation process (interview with former member of village government, 2015).

Not having enough land for dry season grazing, pastoralists from this and other Burunge villages continue to bring livestock into banned WMA territory (the hunting block), even though they are facing punishment from Burunge village game scouts and private investor guards who can hand them over to the CBO and the police. Private investor guards might seize their livestock and either leave it unattended for predators or push it across the border to Tarangire

National Park in order to criminalise the herders in the eyes of the Tanzanian National Park Authority (TANAPA). “They [investor and village game scouts] deny us to graze on our land [WMA], they attack our children and push our livestock to Tarangire [National Park] to be eaten by lions.” (Interview with a female villager, 2014). People are generally more afraid to be caught by private investor guards who are sourced from different parts of the region, unlike the village game scouts who have to be local villagers, which promotes restraint on the side of village game scouts and fosters confrontation on the side of private guards.

Yet, it is not merely a conflict over rules that are contested by livestock keepers when they knowingly risk severe punishment by entering the hunting block. Underlying is a conflict over land ownership. The investment contract gives the investor the right to use the area exclusively and throughout the year. In fact, the investor advertises the territory as a ‘private wildlife concession’ offering luxurious tourism on around 35 sq. km (estimation using Google Earth; for comparison: village land area of the adjacent community is ~ 33 sq. km) for ‘only 10 guests’, who can ‘blend into the wilderness’ (Chemchem safari 2015). These claims to exclusive land ownership and nature that is untouched by human use are contested by pastoralists from adjacent WMA communities on the grounds that the land does not belong to the investor. “It is very shameful that we have to write a letter to apply for grazing land to a French guy [the Investor], we are like guests in our own land.” (Interview with a member of local pastoralist association, 2014). The fact that a previous arrangement was preferred by the local communities even though the contract was made between other parties, shows that some arrangements are accepted and others are not. As long as access to ‘our land’ is granted, the question of land ownership can rest. Yet, it will erupt as soon as access is taken away.

This is also evident from conflicts with a previous investor who operated in the hunting block before Burunge WMA was launched (Igoe and Croucher 2007). Back in 2005, villagers from all adjacent villages called for the replacement of the investor with someone who would cooperate with local communities in land-sharing (Ihucha 2005). Apparently, not much changed until recently, as the conflict intensified under the WMA regime, this time with a different investor and hard-edged front lines. Already back then, the Babati District Game Officer sided with the old investor (Igoe and Croucher 2007), and he does so again with the current investor, this time supported by the Burunge CBO.

The village leaders perceive the CBO, not the investor, to have decision-making powers over the area that is used by the investor; they blame the CBO, not the investor, for having

negotiated an arrangement that is disadvantageous to the communities' access to land for dry season grazing. This is further supported by the fact, that according to the contract between the CBO, the investor 'agrees' not to allow livestock in the hunting block throughout the year. In addition to grazing restrictions, people living close to the hunting block are cut off from access to dry firewood and construction materials (poles and thatch). Being too far from alternative areas that allow access, villagers see themselves forced to enter the hunting block illegally, risking fines and excessive punishment. Members of the new village keep requesting to change the rules of access to the hunting block to ease the situation ever since the new investor took over the hunting block in 2013. Their pleas have been rejected by the CBO. To the contrary, five village leaders were imprisoned and sued in court for trespassing and herding livestock in the hunting block (Criminal Case 182/2014, Resident's Magistrate Court of Manyara). The fact that the investor is not the land 'owner' as wrongfully stated in the court documents, but only an investor on village land, does not allow him to sue villagers in a 'criminal offence' for trespassing through village land (Edward Lekaita pers. comm. 2016). Likely for that reason the charges were eventually dropped (Defendants and lawyer pers. comm. 2015).

As of 2015, after a series of violent confrontations between local herders and the investor's guards, the investor realised that insisting on exclusive access to the hunting block will only produce more conflicts with local communities. Therefore, the investor is changing the strategy towards more negotiations and room for concessions (Bluwstein, in preparation). Remarkably, it was not the CBO leadership but the investor who realised that only negotiations can solve the hard-edged conflicts with local herders.

When conservation competes with rice cultivation

The two communities next to Lake Manyara became independent few years ago. After secession from an old village (at the time of WMA establishment) parts of WMA land in these new villages were taken for rice cultivation by local farmers and fishermen, non-resident land owners, and amongst others, district officials. In addition, some villagers established settlements inside the WMA. Both communities are dependent on agriculture and have little wildlife to offer, which does not make the villages interesting for tourism. The two communities surrendered a relatively small part of village land to the WMA, subsequently benefiting from WMA revenues that are generated in other villages. The CBO did not succeed in enforcing the rules given the terrain (wetlands), and the fact, that some of the farmers are district officials. "I am just a mouse against the elephants" (member of the village government, 2015). "The VEO[2] cannot

stop his bosses from farming on WMA land" (member of the Village Natural Resource Committee, 2015).

In July 2014, the CBO decided to stop paying both villages parts of their share of WMA revenues, putting pressure on the villages. One of the villages asked the CBO to change the WMA boundaries to release the land that is used for settlements from being part of WMA because they cannot resettle people without force and they lack village funds to compensate them. Both village governments are also trying to clear the WMA from farming, but feel powerless to make its villagers follow WMA rules and the CBO cannot effectively enforce them. People keep coming back to cultivate rice, that is simply more attractive to many, while the WMA revenues provide indirect benefits that cannot compete with a cash crop. The CBO insists on compliance with WMA rules, disregards requests to change the boundaries and cuts off the revenues.

Local struggles over autonomy in dealing with tourism investors

According to virtually all respondents across all Burunge villages, one of the villages was forced to join Burunge WMA through manipulation and forgery of official documents (pers. comm. with the implicated individual, 2014, also see Igoe and Croucher 2007). This village is not interested in being part of a conservation model that redistributes tourism revenues from villages that are rich in wildlife to villages without any wildlife. Because the CBO and the District Game Officer insist that all communities joined the WMA voluntarily, the village is not allowed to directly collect revenues from a lodge that operates on its WMA territory. The village government refuses to accept its accumulated WMA share of almost USD 70,000 since 2006-2007 as a form of protest against being part of the WMA, arguing that they do not need the WMA to conserve wildlife; the community has been doing it for years before the WMA was established, having had a village land-use plan that includes a conservation area. The village wants to leave the WMA and to reinstate a direct contract with the tourist lodge that was forced by Burunge CBO to pay the WMA instead of the village. The following statement attests to the widely perceived injustice of imposed equal benefit sharing. "Imagine you have a hundred cows, your neighbour has one, he asks you to enter into joint venture with him and share milk equally, will you accept?" (Interview with a member of Ngoley village government, 2014).

The Wildlife Regulations of 2012 (URT 2012) make the District Natural Resource Advisory Board an arbitrator to resolve WMA conflicts, rendering impartial conflict resolution impossible

if members of the Board (such as the District Game Officer) are part of the very conflict they are supposed to help to resolve. This is exactly the case in this village. Leaving a WMA is effectively impossible and the avenue for conflict resolution at the WMA level is blocked through the involvement of a District Game Officer who was, by all accounts, the mastermind behind the coercive inclusion of the village into the WMA over 10 years ago. Having exhausted all political options for conflict resolution, the village government went to court to sue the CBO for the foregone revenues, demanding to be paid out what was directly agreed with the investor in 2006 (more than USD 300,000 by the end of 2015, own estimation). As of July 2016, the court has ruled in favour of this village, potentially creating a legal precedent for other WMA villages across Tanzania interested in pulling out of a WMA.

'If this is a community project, then who is the community?'

The question was raised by a Kakoi villager in a conversation about Burunge WMA. It reflects a general discontent with the WMA. The various conflicts and perceived injustices have led to a number of violent incidents in Burunge WMA in the past few years. Local people were incited to destroy WMA infrastructure. Several village game scouts have been beaten up by a group of Barabaig residents when a Barabaig woman was apprehended by a WMA village game scout for cutting a tree inside the WMA. During the dry season in 2014, Waarusha residents collectively decided to enter the hunting block with their livestock and their spears seeking direct confrontation with the security forces, which led to an injured guard of the hunting block operator. Several legal cases have been pursued by WMA actors and village governments to safeguard the territorial integrity of Burunge WMA against its own residents. Many of the people whom we talked to and who are not affiliated with the CBO, insisted that CBO members either do not represent them or are powerless to do what their constituencies expect them to do. "These people become part of CBO once they are elected. They stop caring about us, they only think about their stomachs" (Member of Kakoi village government, interview 2014).

We can barely recognise the participating villages when we look for the 'C' in CBNRM or CBC, rather it seems to us that at best it is the CBO that is the actual 'community' if we follow the framing of a WMA as community-based natural resource management. This fits well with our analysis of actors and powers in WMA governance. The CBO is positioned to make rules that govern people's access to land and natural resources, and the CBO is vested with authority and powers to enforce the rules and to withstand pressure from below to modify them, while the central government is–supported by the facilitators from the District and NGOs–making

sure that the rules are following the logic of conservation corridors first, and rural development second. The effects on people's livelihoods begin to emerge. Being an area where human and livestock population have been on the rise for years, communities most squeezed by conservation territories and exposed to an intensifying human-wildlife conflict (especially in Kakoi) are increasingly looking for opportunities to rent farmland and graze livestock outside of Burunge WMA. Despite the promise of rural development through WMA membership, tourism-based revenues cannot be sufficiently captured by the communities to represent viable options for alternative livelihood strategies. Instead, sesame has become a popular cash crop in response to intensifying crop damage by wildlife, which makes the cultivation of corn–a key staple food–a risky endeavor, and has the potential to transform food security strategies for those who ostensibly become dependent on markets instead of subsistence farming.

CONCLUSION

With this article, we have shown how WMA governance distributes rights to land and resources to different actors and regulates access in a way that villagers feel disempowered to hold their representatives at the CBO to account. We have also argued that the prevalent conservation bias acts as a backdrop to WMA governance, inhibiting genuine participation in decisions over management goals and access to land and natural resources. Consequently, the general management plan hardly reflects local needs and conditions, leading to or exacerbating pre-existing conflicts over land and access to natural resources that the rural population relies on to sustain livelihoods. This situation is aggravated by an inflexible, in other words 'austere', conservation regime of fixed boundaries, rules and restrictions. It is no coincidence that as of 2016, AWF has been effectively de-funded by its main donor United States Agency for International Development (USAID), and the Babati District Game Officer has been demoted from his position. After two decades of conservation through coercion and 'decentralized despotism' (Igoe, 2006) their actions have produced a legacy of conflicts for years to come.

If our case is framed as a 'successful' WMA, what can we expect from other 'less' successful examples? Using a prominent community-based scheme, we have demonstrated how decentralisation is constrained to the level of a CBO that is weakly accountable to its constituencies, while recentralisation over some of the key resources to the central government or the CBO took place where village governments were previously in control. It remains to

be seen how WMAs with more homogenous livelihoods and land-use practices fare in terms of the communities' ability to negotiate a regime of rules over access to land and resources that work for the majority of people. There are some positive examples from Northern Tanzanian WMAs that are more internally united and have a more supportive relationship with their CBO (Enduimet WMA, Makame WMA, personal observations). Our case shows that inter- and intra-communal differences can easily yield into full-blown conflicts if several villages are coerced into a WMA regime that is perceived unfair without the possibility to pull out.

If the promise of community-based conservation is to be taken seriously—i.e., natural and financial resource management 'by' communities instead of 'an austere quasi- fortress model' (Vaccaro et al. 2013) on village land; attention to power and accountability relations is needed during the process of WMA establishment and the making of the regime of rules over access to land and resources. If community-based management is to embody community ownership of the WMA, a claim widely advertised by facilitating NGOs and government representatives, the needs of the villagers must be reflected in the land-use and management plans. With our analysis, we have tried to point to some of the key obstacles preventing a genuinely devolved community-based management, highlighting continuous central government control of key resources and the problematic role of facilitating NGOs, district authorities, and tourism investors. While we are not promoting a particular kind of policy for wildlife conservation, we do hope that our study can problematise some of the key aspects of Tanzania's land, wildlife and conservation policies that reproduce past inequalities for rural populations.

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NOTES

1. One such instance is a Special Issue in *Biological Conservation*, Vol. 189, of September 2015, 'Detecting and Understanding Non-Compliance with Conservation Rules' where the entire issue does not consider the question of the legitimacy of conservation rules.

2. Village Executive Officers are not elected village officials but are put in power by the government to share village government duties with the Village Chairman who is elected by the villagers.

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4.2. Paper II: Failure by design? Revisiting Tanzania's Flagship Wildlife Management Area Burunge

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Abstract

In this paper, we revisit the on-the-ground reality of Burunge Wildlife Management Area (WMA) that is celebrated as one of Tanzania's best examples of community-based conservation (CBC). We find Burunge WMA rife with conflict and contestation over grievances that remained unsettled since its establishment a decade ago. These grievances have been accentuated by growing land pressure resulting from increasing human, livestock, and elephant populations, in combination with infrastructure improvements and support for agriculture-led development. The WMA governance regime has little to offer the residents and village leaders of Burunge member villages who appear hostages in a situation where interests in human development and conservation are pitted against each other, making a mockery of the notions of CBC. By re-examining this exemplary WMA case and compare our findings with the way it is being portrayed by supporting agencies, we pinpoint the tendency of the actors promoting conservation in Tanzania to misrepresent or ignore the realities on the ground that defy official policy promises. In doing this, we hope to call upon the many empathetic and hard-working individuals to end the collective failure to address this detrimental discrepancy between reality and representation, and start supporting affected residents in their struggles for self-determination.

Keywords: WMAs, conservation, politics, participation, community, East Africa, community-based conservation.

INTRODUCTION

Wildlife Management Areas (WMAs) denote a community-based wildlife conservation approach whereby a number of villages set aside part of their village lands for wildlife protection (URT 1998). Ideally, WMAs provide a legal opportunity for local communities to participate in wildlife management and are designed to address issues related to wildlife habitat fragmentation, disjointed conservation and rural poverty (URT 1998; WWF 2014). Proponents of WMAs present them as 'win-win' solutions to conservation and poverty challenges as they generate revenues for participating local communities whilst conserving large and interconnected landscapes for wildlife protection:

> [The] growth of the WMA movement from an initial 16 pilot WMAs to 17 gazetted, with more in progress (involving about one million rural people), indicates the popularity of the approach across the country and the wide acceptance it has received among communities as a promising approach for conservation and community development. […] WMAs have the potential to enhance livelihoods of their [associated] communities and secure valuable areas for wildlife protection. (WWF 2014: 39).

Financial and so-called technical support to WMA implementation comes from a number of aid agencies and NGOs such as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), World Wildlife Fund for Nature (WWF), African Wildlife Fund (AWF), PAMS foundation, and Honeyguide Foundation (HGF), among others. These institutions, along with the responsible ministry, also form partnerships with wildlife tourism companies that invest in WMAs in the form of land leases for hunting and photographic tourism as well as the establishment of lodges etc. Such investments form the economic underpinning of revenues to WMAs. Community-Based Conservation (CBC) is, thus, thoroughly embedded in larger projects connecting them to the industries of conservation, tourism, and development.

In practice, this embedding appears to have led to processes that defy the theoretical assumptions of meaningful participation. Rather, a picture emerges of de facto centralised and top-down management approaches that facilitate private investments and favour conservation under a thin veil of win-win rhetoric (Igoe and Croucher 2007; Nelson and Agrawal 2008; Noe 2009; Benjaminsen and Svarstad 2010; Benjaminsen et al. 2013; Humphries 2012).

McShane et al. (2011), for example, argues that the win-win rhetoric, such as that illustrated in the quote above, is used instrumentally by implementing institutions to garner support from local people and politicians, who would most likely reject CBC if the likely trade-offs are fully revealed. Later on, however, as the trade-offs of the imposed conservation unfold, community frustrations build (Loveless 2014; Bluwstein et al. 2016). As a result, many WMAs are rife with natural resource-related conflicts and locally-perceived grievances, and the WMA concept has been severely criticised (Benjaminsen and Svarstad 2010; Loveless 2014; Homewood et al. 2015; Noe and Kangalawe 2015; Bluwstein et al. 2016).

Yet, the WMA implementation train rolls on with 21 WMAs fully operational and another 17 underway (MNRT 2015). Together, these 38 WMAs are estimated to cover approximately 7% of Tanzania's total surface area, or an area the size of Sierra Leone. Given this speed of implementation alongside a critique of how local concerns are overheard and ignored, we wish to re-examine Burunge WMA. Re-examine, because Igoe and Croucher (2007) almost 10 years ago wrote about how its initiation involved manipulation and coercion.

Burunge WMA is in many ways an interesting and paradoxical case. It is often highlighted as the best example of CBC in Tanzania (WWF 2014; AWF n.d.). It is located at the centre of northern Tanzania's wildlife tourism circuit, which constitutes ideal conditions to realise the WMA promises of garnering local benefits and development opportunities through wildlife-related tourism. Thus, it is in some senses a 'white swan'–or best scenario–case (Flyvbjerg 2006). Yet, it is rife with conflict; one of its five original member villages have never acknowledged its legality and there have been several recent instances of violent confrontations between village residents and village game scouts (Bluwstein et al. 2016). The apparent dis-juncture between how this WMA is both, portrayed as an exemplary of CBC and seen as rife with old and new grievances and conflicts, is the starting point for the present study. In revisiting Burunge and its portrayals, we hope to contribute to a movement towards ending the collective failure to address this discrepancy between reality and representations.

METHODOLOGY

The empirical work underlying the present article employed what can broadly be called an ethnographic approach. The first author spent several months in and around Burunge villages over two periods in 2014 and 2015. The second author has done research on agriculture in the area for more than five years. The third author spent approximately four weeks over two periods

in 2014 and 2015 doing field work in different Burunge villages, including accompanying a group of M.Sc. students who were doing a field course. Neither of these field activities were coordinated, yet the first author has spent time in Burunge WMA with both the second and third author. Multiple methods have been applied by us during the course of these different immersions in Burunge, including focus group discussions, semi-structured interviews and informal discussions with individuals and groups, and participant observation at meetings and village assemblies. The empirics gathered through these methods were recorded in the form of field notes and audio clips. Prior to any interviewing and audio recording, informed consent was sought from interviewees after explaining the purpose for which the information was sought.

In constructing the present article, we have drawn on our collective knowledge and sought to create a coherent representation of events through triangulations for convergence and divergence (Ahlborg and Nightingale 2012). Thus, the present article can be seen as flowing from a collective process of drawing upon multifarious impressions to come up with our representation of Burunge WMA.

BURUNGE WMA

Burunge WMA is situated in Babati district, Manyara, Tanzania. The WMA has 10 member villages[1] that are situated between Lake Manyara and Tarangire National Parks and Manyara Ranch (Figure 1).

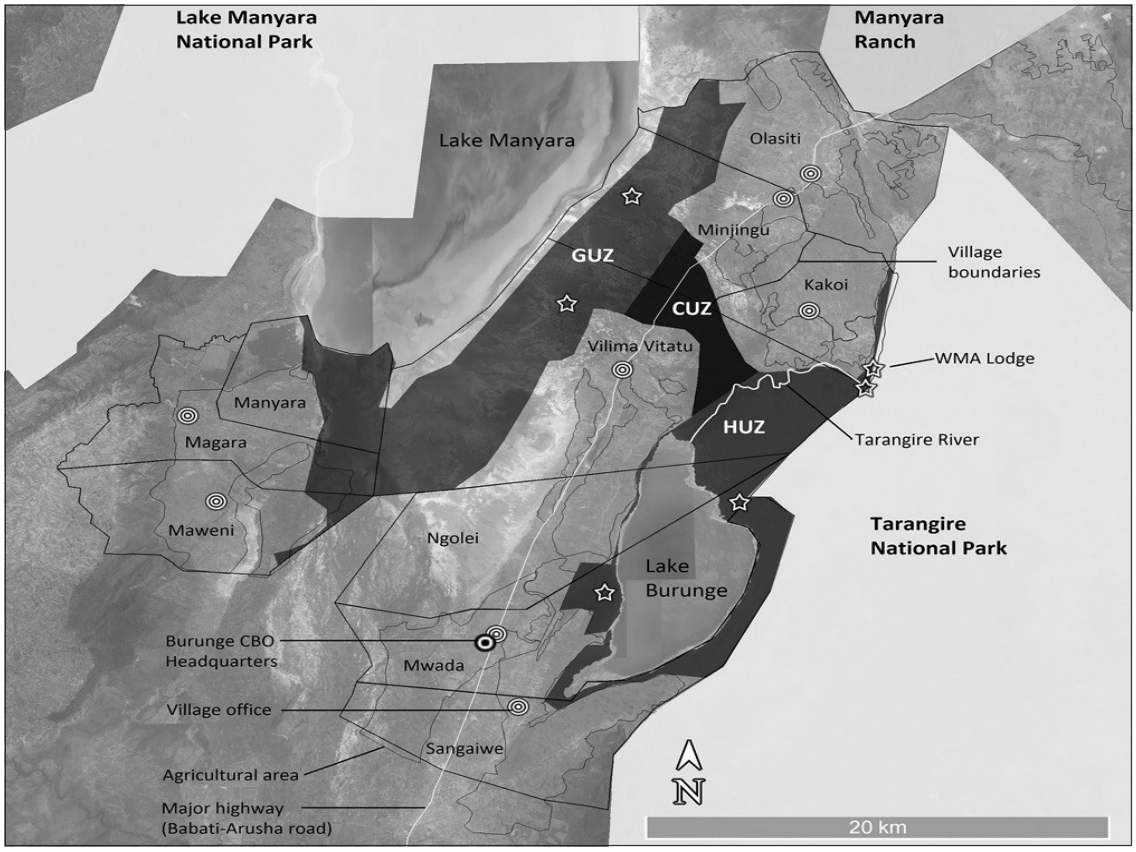

Figure 1: Burunge WMA[16] General use zone (GUZ), Corridor use zone (CUZ) and Hunting use zone (HUZ).

The almost 35,000 people residing in the 10 member villages are dominated by the ethnic groups of Mbugwe, Waarusha, Maasai, Barbaig, Iraqw, Nyaturu, and Nyiramba. Other ethnic groups include Safwa, Hehe, Bena, Manda, and Nyakyusa from the southern part of the country, and Jaluo and Kisii from Kenya, and Rundi from Burundi.

People in the villages depend on agriculture and livestock- keeping for their livelihood. The main agricultural crops include maize, finger millet, sorghum, and beans cultivated primarily for subsistence, and rice, sunflower, onions, garlic, sesame, and cotton cultivated as cash crops. Livestock are kept in large numbers by people from the Waarusha, Maasai, and Barbaig ethnic groups. Other ethnic groups also often keep smaller herds of cattle. The Burunge villages are accessible by road throughout the year, except for Manyara village where a seasonal river blocks road access to the village during the rainy season. Whereas all the 10 member villages have a village government office and a primary school, only eight have a health centre.

The WMA was formally initiated in 2006, and since, the village land areas that were designated for the WMA have been managed by a community-based organisation (CBO) known as Burunge

Authorised Association (JUHIBU). The CBO has assumed the member village councils' powers to negotiate contracts, redistribute revenues, resolve conflicts, and allocate user rights on the WMA lands. The CBO governance structure includes the CBO general assembly with a board of trustees attached, executive committee, and the CBO secretariat. The CBO general assembly is the highest body of decision-making, and its participants include three representatives from each member village and one member of board of trustees from each member village, village officials (village chairpersons and village executive officers), ward officials (ward executive officers and ward councillors), divisional secretary, and district officials, including, district game officer, district land officer, district cooperative officer, and the district legal officer. Only village representatives hold voting rights; village, ward, and districts officials' participation in the general assembly is meant for provision of legal and technical advice to representatives to make informed decisions. The general assembly has a total of 66 members and meets at least three times each year. The assembly receives and deliberates on issues raised by village councils and village assemblies, elects 10 people among the CBO village representatives to form an executive committee, and employs staff and experts whenever deemed necessary.

The executive committee is responsible for day-to-day management of the CBO, such as negotiating investment contracts, distribution of revenue to member villages, and leading efforts to prevent and resolve conflicts. The CBO secretariat is an administrative unit, which maintains records and manages the CBO office. This secretariat comprises the CBO secretary, treasurer, office secretary, and an attendant. The CBO employs 30 village game scouts who conduct patrols and enforce the rules governing the WMA as well as seek to assist farmers in dealing with wildlife nuisances, in particular, crop damages. Burunge CBO has both managerial and advisory relations with many other institutions and private individuals. However, whilst distant institutions, e.g., the Wildlife Division under the Ministry of Natural Resources and Tourism of the government of Tanzania, have direct supervisory powers over the CBO, e.g., approval of management plans, the institutions close to local people, namely, village assemblies, which have power to hold elected village representatives accountable (URT 1982), have only advisory and consultative relations (Figure 2).

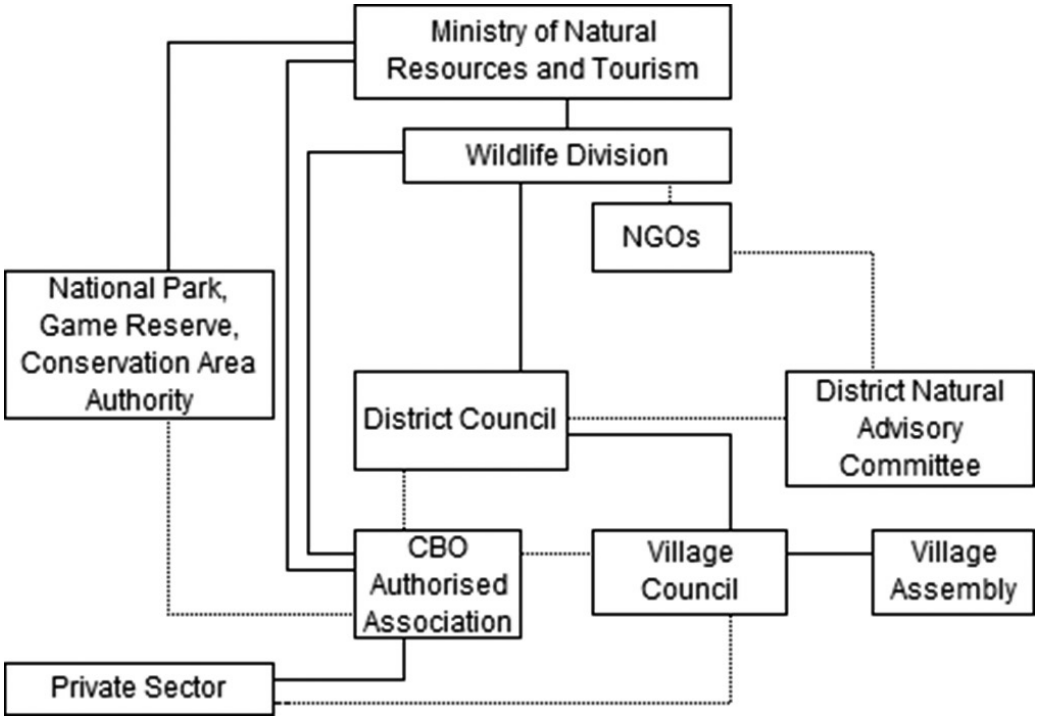

Figure 2: **Burunge CBO interaction with WMA stakeholders (Source: Modified from WWF, 2014).**

Notes: —— Administrative relations,

……..Consultative/ Advisory relations

WMA INITIATION: OFF TO A BAD START

In the process of joining Burunge WMA, the present-day 10 member villages agreed to set aside 24,319 ha or around 31% of their total village land area for the WMA (Table 1). The process has been described as externally driven and ridden with manipulation and coercion (Igoe and Croucher 2007; Baha and Chachage 2007; Sachedina 2008). This impression was confirmed by our field work in the present-day Burunge, 10 years after the events.

Table 1: Burunge WMA villages and their individual land contributions

Ward name	Original village	Year of secession	Names of villages after secession	Total village land before secession (ha)	Land designated for	
					ha	In %
Nkaiti	Minjingu		Minjingu	23,860	3,747	16
		2005	Olasiti			
		2009	Kakoi			
	Vilima		Vilima Vitatu	19,800	12,830	65
Mwada	Mwada		Mwada	10,824	3,039	28
		2004	Ngolei			
	Sangaiwe		Sangaiwe	9,200	2,445	27
Magara	Magara		Magara	15,808	2,258	14
		2005	Maweni			
		2005	Manyara			
Total				79,492	24,319	31

Source: Burunge WMA office notice board in 2014.

The initiation campaigns were led by the District Wildlife Officer with support from the African Wildlife Foundation, among others. It targeted six villages located within an area that had become known as part of the Tarangire-Manyara wildlife corridor, namely Mwada, Sangaiwe, Vilima Vitatu and Magara that quickly accepted the idea, and Minjingu and Mayoka that were sceptical. The four villages that readily accepted the WMA had vast tracts of land readily available for their relatively low populations at the time and perceived the areas proposed for the WMA as marginal lands. In Magara village (the area that now comprises the villages of Magara, Manyara, and Maweni. See Table 1), for instance, swampland areas that were regarded marginal for agriculture were proposed for the WMA by facilitators. In Mwada, Sangaiwe, and Vilima Vitatu, facilitators proposed lands that were situated along the border with Tarangire National Park and wildlife migratory routes that were also seen by residents as less valuable for agriculture due to risks of crop damage by wildlife. In Vilima Vitatu, the Barbaig ethnic minority was wilfully ignored by the village government in the initial land-use planning processes, and their settlement and livestock grazing area close to Lake Manyara was suggested to be included for Burunge WMA. The perceived low land pressure around the time is reflected in the land price: one acre of fertile agricultural land in this area could be bought for USD 10-20 (1 USD ≈ TSH 1,000, in the early 2000s). In addition, not all residents were well-informed about the extent of lands set aside, which, later resulted in conflicts over access to grazing areas. Finally, these four villages had no prior income from wildlife-related sources. Therefore, the potential to obtain revenue from wildlife-related tourism promised a profitable use of 'marginal' lands.

The two sceptical villages were so, for different reasons. Mayoka suspected that the WMA was merely another attempt to include their (disputed) land into Lake Manyara National Park. Since 1984, Lake Manyara National Park authorities had claimed an area that Mayoka residents believed was their village land and prevented residents from using it. Minjingu, on the other hand, at the time generated about USD 30,000 per year from private wildlife tourism campsites operating on their village land. Minjingu residents were, therefore, not interested in joining the WMA if that entailed sharing this income with other villages. They decided to delay the decision until more information about income-sharing mechanisms and potential sources of income from other villages was availed. Yet, through manipulation and alleged forgery, facilitators succeeded in seeing Minjingu included in the WMA (Igoe and Croucher 2007). However, to this day, Minjingu village has not consented to be part of the WMA and is actively seeking to withdraw from it (Bluwstein et al. 2016).

FROM BAD TO WORSE, 10 YEARS LATER

The contestations around Burunge WMA's establishment were just a pretext to the mounting challenges that would face its governance regime over the years to come. Bluwstein et al. (2016) describe how the WMA today is ridden with conflicts and contestation over its legality and the restrictions on uses of WMA land. The CBO appears unwilling to listen to demands and grievances from WMA communities that experience disproportionally high costs through the WMA. Instead, the CBO spends substantial financial resources in legal trials against Minjingu village that challenges its membership, and there have been several violent encounters between groups of villagers and village game scouts and/or the guards hired by the tourism investors in Burunge.

While there is little doubt that past grievances and present discontent with CBO management underlies these conflicts, the WMA is also structurally challenged on several accounts. Human, livestock and wildlife populations and general socio-economic developments assert an increasing pressure on the WMA governance regime. According to national and local-level censuses, the human population in the villages that today comprise Burunge WMA has grown from around 17,000 individuals in 2000 (URT 2003) to 34,000 in 2012 (NBS 2012)[2]. This development has contributed to a growing land pressure.

> In this village, many young people have completed primary and some secondary school, but they have no jobs. They need land to start their

> own farms and have their own incomes. But the village has no land to distribute, not like 10 years ago, when we even gave land to people from town [outside the village] to farm. (Interview with a village chairperson, a Burunge WMA member village, 2015).

Further, the past decade has seen an increase in the potential for agriculture-led development in the area. Prices for agricultural crops have increased substantially in Tanzania over this period (Minot 2010; Adam et al. 2012), and the Burunge area has seen infrastructure improvement and State-led initiatives aimed at agriculture-led development. The Manyara regional government, the NGO Farm Africa, and the Selian Agriculture Research Institute (SARI), among others, have supported agriculture-led development in the area in various ways, such as promoting farming of cash crops, e.g. rice, onions and sesame, through extension services and education as well as direct marketing. This has changed people' outlook with regard to farmlands areas. Swamplands that were previously considered marginal are now highly profitable agricultural lands. Today, the cost of leasing one acre of wetland suitable for rice production is estimated at USD 60-90 (1 USD ≈ TSH 2,000, in June 2015) per production cycle, and the selling price for such land is estimated at USD 600-700 per acre. In an interview, a male resident of a Burunge WMA member village said in 2015, "Land for our youth is a big problem. Few households still have land to give to their children. The prices show how valuable land is in the village. And with more people coming to the village for farming, land conflicts increase."

Elephants raiding peoples' farms add to the pressure on Burunge WMA governance. A recent census estimates that the elephant population density in the Tarangire-Manyara ecosystem has grown by more than 60% since 2009 to reach approximately 1 elephant per sq. km in 2014 (TAWIRI 2010; 2015). The census results are mirrored in the perceptions of people residing in the Burunge villages of Kakoi, Vilima Vitatu, Minjingu, Olasiti, and Sangaiwe who report increasing intensity of crop raids in the early harvesting season for maize, watermelons, and cowpea. The rampant destruction of near-ripe crops, and the feeling of insecurity and powerlessness when facing elephant herds in the agricultural fields at night, lead to anger and resentment against the CBO that is seen as one of the prominent faces of conservation in the area. In response to the elephant problem, and as a consequence of the support to agriculture-led development mentioned above, some farmers in elephant-prone areas are now growing sesame[3].

Yet, this has, in turn, increased the overall demand for agricultural land, as most people farming sesame also rent land further away to grow maize for subsistence.

Alongside the growth in human and elephant populations, the Burunge area has apparently seen an increase in overall livestock populations. Table 2 presents official statistics on the development of livestock populations since 2002 in Burunge member villages. While we are critical of these figures, there are other indications that livestock populations in the area have increased. A survey of 161 households among eight[4] Burunge member villages in 2014, for instance, indicated that since 2007 cattle ownership had grown by 4% and ownership of goats and sheep by 27%. This is a much lower growth rate than what is reflected in the statistics, but the survey excluded changes in livestock populations as a consequence of population growth. In sum, these 161 households reported ownership of a total of 3,048 heads of cattle and 4,026 sheep and goats in 2014. Extrapolating these numbers to the total sample population of the survey[5] gives 53,033 heads of cattle and 73,750 sheep and goats[6]. While this estimate only covers the survey population, which is a subset of the total populations of eight of Burunge's nine member villages, it appears to support the broader range of estimates in the official statistics report for 2010 and 2012[7]. While we cannot provide precise estimates of the growth in livestock populations, there is little doubt that such growth has taken place and that it is attributed as much to a growth in the number of resident households and outsiders coming to the area in search of pasture as it is to increase in livestock numbers kept by individual households:

> Mbulu and Mang'ati migrants from Dareda [a highland division of Babati district] come with many cows. [Name of Mbulu migrant] alone has maybe 150 cows. Some villagers [residents] here own about 10 to 20 cows, grazing areas were enough for us, but now Mbulu graze even in our farms. (Interview with a village chairperson, a Burunge WMA member village, 2014).

Therefore, today, 10 years after it was established, the governance regime of Burunge WMA is severely challenged. Grievances associated with its manipulative initiation (Igoe and Croucher 2007) continue to haunt present-day governance efforts in the form of court trials and everyday challenges to the grazing restrictions by herdsmen who feel that they were not consulted during the initial land-use planning process (Bluwstein et al. 2016). In addition, the growth in human, livestock, and elephant populations, and in opportunities for agriculture-led development has added considerable pressure on the WMA governance regime. In the following, we examine how the governance regime responds to these challenges.

Table 2: Livestock trends in Burunge WMA

Name of livestock	Population		
Year	2003	2010	2012
Cattle	10,683	39,015	61,118
Goat	3,227	47,900	35,077
Sheep	2,781	9,623	20,090
Donkey	150	1,246	3,238

Source: Compiled from URT (2003), Burunge-GMP (2010b) and Babati district livestock census 2012[17]

A FAILING GOVERNANCE REGIME

Wildlife-related tourism, and the revenues and labour opportunities it may give rise to, is the main tangible benefit that may offset or at least counter the costs for villages associated with joining into a WMA. Burunge is a leading income-generating WMA in Tanzania, second only to Ikona (WWF 2014). The WMA income sources include photographic tourism, fees from game hunting, fines, research fees, and NGO donations. The WMA receives 65% of non-consumptive revenues paid as tourist fees or commonly referred to as photographic tourism revenue while 20% and 15% are retained by the Wildlife Division and District council, respectively (WWF 2014). Our attempts at gaining an overview of the finances of Burunge CBO showed that the records are scattered and internally contradictory[8]. Yet, from the evidence available, our best estimate of the total WMA income over the past 10 years is USD 1,951,010. Annual incomes appear to have increased over this period from USD 29,997 in 2006-2007 to over USD 488,445 in 2014-2015 due to an increase in the number of tourist lodges paying revenues to the WMA over the period (Table 3).

Table 3: Burunge WMA revenues and expenses in USD[18]

Financial Year	Reported Revenue	CBO Expenses	Shared with member villages	Number of villages	Revenue received by each village
2006-2007	29,997.59	6,637.13	14,998.80	9#	1,666.53
2007-2008	62,714.08	20,202.52	31,357.04	8^	3,919.63
2008-2009	53,534.91	26,316.16	24,840.53	9*	2,760.05
2009-2010	151,745.88	67,555.45	75,872.94	10†	7,587.29
2010-2011	244,662.35	93,953.24	122,331.17	10†	12,233.12
2011-2012	301,744.50	112,064.19	150,872.25	9^	16,763.58
2012-2013	293,015.00	128,570.64	119,875.50	10†	14,103.00
2013-2014	325,150.60	146,205.92	105,633.49	10†	12,427.47
2014-2015	488,445.58	224,937.10	114,971.40	10†	13,526.05
Total	1,951,010.49	826,442.34	760,753.12	10	84,986.72

Source: Burunge CBO office notice board in 2015 and audit reports. *Notes*: # Burunge WMA has 9 member villages; ^ Minjingu refuses to accept income share, and it was distributed to other villages; * Kakoi village is formed; † Minjingu income is being held by the CBO

The officially declared incomes are equally distributed between a share going towards WMA administration and management, i.e., CBO office expenses and village game scouts salaries and operational expenses, and a share that is distributed equally among Burunge's member villages. Over the 10 years USD 826,442 were used to pay for office expenses, administration and rule enforcement, USD 760,753 were shared among member villages. Around USD 360,564 were kept in four different CBO bank accounts, and about USD 3,250 remained unaccounted for in official records[9].

The funding of village game scouts contributes to some degree towards alleviating problems with crop raiding by elephants. Yet, although appreciated by villagers, the efforts by village game scouts are seen as wholly inadequate to effectively reduce wildlife damages. A Burunge WMA member village resident said in a 2015 interview, "If they [village game scouts] are around when the elephants come, they bomb them [using chili bombs]. But many times, we call them, they don't come, sometimes they came late, they have only one car."

On average, Burunge member villages have received USD 7,606 per year corresponding to roughly USD 2.2 per person per year (based on the 2012 census estimate of 34,000 people residing in the Burunge member villages). As Table 3 indicates, Minjingu village has never accepted its share of the revenues. Rather, its share from the periods 2009-2010 and 2012-2014 is held by the Burunge CBO.

The funds received by the villages have been invested in village development activities, such as construction and maintenance of public school classrooms, teachers' houses, village offices, and a ward health centre, which is yet to be completed. Burunge residents perceive that WMA incomes have resulted in fewer requests from the village councils for individual contributions to village development activities. Yet, many see this as wholly inadequate to compensate for forgone access to agricultural and grazing lands. The common sentiments from residents, especially those from the 'livestock villages' of Kakoi, Minjingu and Vilima Vitatu include statement from an interview of a Burunge WMA member village resident in 2015, "Yes we don't contribute anymore, but we still have to pay school fees and buy uniforms and shoes for our children. I have to sell a cow or may be two goats. We need to graze there [in a

hunting block].” In another statement, an elderly man, participating in a focus group discussion in one of the Burunge WMA member village in 2014, said:

> Who is the community? They [CBO and district game officer] say it is a community conservation. Where do they get all the powers to push villagers not to graze in the community land? Livestock is our life, when a cow dies it is very painful.

WMA revenue is not used to compensate residents for damages caused by wildlife (WWF 2014). The government has no compensatory policy either. Rather it may decide to provide money to individuals as a consolation for their loss (URT 1998). Yet, such consolation is rarely offered in Tanzania. In Burunge for instance, residents complained that district officials would send someone to record their losses, but nothing follows after that: “They [district officials] write our names and acres of crops eaten by elephants, but we don’t see money” (interview with a Burunge WMA member village resident, 2014).

The equality principle applied in the sharing of WMAs revenue between villages is contested. While revenues are shared equally, tourism investments that generate the revenue are located in a few villages, namely Mwada, Kakoi, Vilima Vitatu and Minjingu. Olasiti and Sangaiwe villages, each has two campsites on land that is outside the WMA and, therefore, the full incomes accrue to the villages, not the WMA. The remaining villages, Magara, Maweni, Ngolei, and Manyara, are rarely if ever, visited by the larger wildlife species of interests to tourists[10]. Thus, these three villages do not currently provide any wildlife corridor function. So, while revenue is distributed equally, the underlying ‘production’ of that revenue through hosting of investments on village WMA-land and associated higher wildlife densities, and thereby costs of wildlife damages to crops and livestock, are not. In effect, some Burunge villages free-ride on others by receiving revenue they do not contribute to producing, and Kakoi, Olasiti, and Sangaiwe villages in addition to that, also reap full benefits from investments on their lands that are not part of the WMA.

Furthermore, some of the freeriding villages today perceive the restrictions on their WMA land as severely compromising their development opportunities. Wetlands within the Magara, Manyara, and Maweni villages WMA areas, for instance, are today seen as highly valuable agricultural land for rice production. Thus, the WMA restrictions have become ‘real’ constraints.

Elsewhere in Burunge, restrictions on the use of WMA land follow from the specifics of contracts made with investors. In Vilima Vitatu, for instance, a large tract of WMA land has become off limits for people and livestock due to the establishment of a luxury wildlife tourism business that requires a large tract of 'pristine' and undisturbed wilderness for its high end accommodation and game drives. Ironically, this lodge–which imposes high costs on the villages in terms of a large reduction in the area where grazing is permitted– brings in only small amounts of revenue. In another Burunge village, Mwada, another lodge that offers more modest accommodation and no game drives, but for a higher number of visitors, only takes up a fraction of the land and brings in much more revenue[11].

Thus, the cost-benefit ratio of the WMA varies over time and space due to a number of factors that determine the restrictions on WMA land and the costs associated with such restrictions. These have not been constant over time, but have generally increased with the developments in populations of humans, livestock and elephants, and agriculture-led development opportunities described above. Unfortunately, the land-use planning done during the establishment of Burunge WMA and in subsequent negotiations with investors has not resulted in favourable cost-benefit ratios. The original land-use planning exercise did not anticipate a growing demand for land for grazing and farming and the contract made with the investor in Vilima Vitatu has imposed additional costs on villagers.

REALITY AND REPRESENTATION: WMAS IN TANZANIA

Burunge WMA is a story of unsettled past grievances and growing pressure on a governance regime that is unable or unwilling to respond (Bluwstein et al., 2016). To this date, Minjingu village rejects its status as a member and residents explore multiple ways of exiting and pursuing compensation for what they perceive as an illegal and coercive take-over of rights to their village land and the profits generated thereon. A mere 10 years following its implementation, the restrictions on land-use associated with Burunge WMA are seen as severely limiting peoples' development opportunities, and as adding insult to injury for the many people who never agreed to enter into the WMA in the first place. The meagre revenues–and their sharing across too many villages–do little to appease peoples' feelings of losses and injustice. Thus, on a closer look, one of the most celebrated WMAs in Tanzania–ideally situated in the midst of the northern wildlife tourism circuit–is rife with conflict and contestation.

Unfortunately, evidence from other, including much more recent, WMA establishment processes across Tanzania indicates that manipulative, haphazard, and illegitimate WMA implementation processes that result in villages losing rights to large shares of their village land territories remain the standard today (Loveless 2014; Homewood et al. 2015; Bluwstein and Lund, in review). This seriously contradicts the portrayal of WMAs and their implementation processes by the Government of Tanzania, donors, NGOs, and other actors involved in legislating, financing, and implementing this policy and clearly defies the notion of 'CBC'.

It takes little imagination to see how the situation could be changed in favour of more local support and legitimacy. Indeed, many of the ideas we will present below are also described in the recent WMA evaluations by United States Agency for International Development (USAID) and WWF (USAID 2013; WWF 2014). The Government of Tanzania could forfeit its share of the revenues to favour villages, for instance, by doing away with the 35% tax on non-consumptive tourism revenues[12]. Such an arrangement would be logical because WMAs ostensibly serve as corridors between and/or buffer zones for protected areas and game reserves. Thus, the positive externalities rendered by WMAs support the generation of substantial foreign exchange earnings and revenue for the central government through tourism in protected areas and game reserves managed by the Wildlife Division. At the WMA level, the sharing of revenues could be changed to favour villages that bear the brunt of the costs, and/ or villages that do not contribute to corridor functions could be excluded. In Burunge, for instance, there seems to be agreement that the main rationale for its establishment was to maintain the area as a viable wildlife corridor (Igoe and Croucher 2007; Sachedina 2008; District game officer, CBO representatives, and AWF staff. pers. comm. 2013). Yet, presently, Minjingu, Kakoi, Vilima Vitatu, and Olasiti village serve this function. The setup of Burunge WMA, thus, brings an unnecessary (from the point of view of the corridor function) element of conflict and illegitimacy to the WMA. Another possibility that could tilt the cost-benefit in favour of the WMA would be a greater allowance for grazing within the WMA.

In Burunge, for instance, grazing is, in principle[13], allowed in the General Use Zone, while banned in the Hunting Use Zone, and Corridor Use Zone. While the business models of investors in photographic and hunting tourism may be incompatible with livestock grazing, there is less evidence to suggest that the corridor function of Burunge, and other WMAs, would suffer from a general allowance of grazing within the WMA. Evidence exists of close and peaceful co-habitation among livestock, pastoralists, and wildlife (e.g., Nepal and Webber 1995; Woodroffe et al. 2005; Goldman 2009; Odadi et al. 2011), and use of the WMA Corridor Use Zones for grazing

would not imply changed land uses or the establishment of permanent settlements that could defy the purposes of the WMA. Finally, the Government of Tanzania could support the Burunge CBO (and other CBOs with similar problems) in rule enforcement against political and economic elites, such as district level civil servants, tourism operators, and wealthy individuals who today appear to more or less act with impunity (see also Homewood et al. 2015).

While it is not difficult to point to sensible policy measures that could support the legitimacy and long-term viability of WMAs, we are not optimistic with regard to the possibilities for change. Recent years have seen a recentralisation of wildlife-based revenue collection and a rise in repressive and militarised anti-poaching measures in Tanzania that does not bode well for the enfranchisement of village residents (Benjaminsen and Bryceson 2012; Homewood et al. 2015). Meanwhile, new WMAs are established at a high pace and with deleterious consequences for rural residents who are subjected to haphazard and top-down planning processes without the due attention to process and consultation promised in official WMA implementation guidelines (Loveless 2014; Bluwstein and Lund, in review). And while villages, such as Sinya in Enduimet WMA and Minjingu in Burunge WMA, have struggled for years to regain rights over their village lands, there appears to be no responsiveness to their calls for justice.

This brings us to the question—that was posed already by Igoe and Croucher in 2007—of why the blatant differences between realities on the ground and the 'sacred simplified' descriptions offered by implementing agencies can persist? Relevant staff at the implementing agencies, such as the Wildlife Division, WWF, AWF, GIZ, Honeyguide Foundation, and Wildlife Conservation Society of Tanzania, are hardly unaware of the failure of the WMA policy to bring about the promises of improved rural livelihoods and its glaring lack of local legitimacy in many places. Yet, this evidence remains ignored or downplayed in reports. For instance, the cases of Sinya village in Enduimet and Minjingu village in Burunge that were coerced and manipulated into joining the WMAs (Igoe and Croucher 2007; Benjaminsen et al. 2013) is written off in recent WMA evaluations by USAID and WWF as a question of villagers being disgruntled with having to share wildlife tourism revenues that they would previously keep to themselves (USAID 2013; WWF 2014). Yet, this representation erases the processes whereby these two villages ended up being part of the WMA, processes that defy the notion of CBC as well[14]. While staff from these organisations acknowledge the existence of such fundamental problems in private conversation (see Transnational conservation NGO staff,

pers. comm. 2013; Bluwstein and Lund, in review), there are no indications that such acknowledgement will lead to a serious rethinking of the WMA policy model or to the reopening of negotiations about existing WMAs (see PINGOs forum 2013; Bluwstein and Lund, in review). Rather, there are indications that WMAs are increasingly seen as strategic entities for increased anti-poaching efforts[15].

So, resourceful actors continue to support and publicly celebrate the WMA policy. The Wildlife Division and the host of NGOs and donor agencies thereby choose to ignore the evidence of fundamental problems for reasons we can only speculate about. From the point of view of conservation, WMAs have allowed conservation interests to gain a foothold on massive amounts of village land—the 38 WMAs will cover ~7% of Tanzania's total territory (WWF 2014; MNRT 2015). When viewed as such, the rush to establish WMAs has accomplished quite a lot in a decade— allowing conservationists a possibility to further affirm and consolidate conservation interests on village lands for years to come. Yet, we are fully aware that construing the observed discrepancy between public and private transcripts of the actors involved in funding and implementing WMAs as owing to a conservationist plot is too simplistic. Rather, we follow Benjaminsen et al. (2013: 7) who argue that the broader developments within wildlife policy in Tanzania owes to "a complex interaction of several factors, including neoliberal conservation, neo-patrimonial state practices, and foreign control of wildlife conservation discourse and practice."

Yet, while we agree with Benjaminsen et al. (2013) that the policy, practice, and outcomes of WMAs and the wider wildlife policy environment resonate with the interacting forces they identify, we do not believe that neoliberal ideology, profit, and rent-seeking are the only motives driving individual professionals within conservation in Tanzania. Rather, our impression is that many of the people working as professionals within the conservation-development industry in Tanzania— professionals within the Government of Tanzania, funders, conservation and research organizations—believe in the value of seeking to do better for both, people and wildlife in Tanzania.

However, there is a collective failure to fully acknowledge and confront on the ground realities in public. As such, the discrepancy between realities on the ground and what can be gleaned from official evaluation reports by funders and implementing agencies as well as some research publications echo findings from other critical studies of policy formation (Mosse 2004; Goldman 2007; Büscher 2014 Blundo 2015). These studies, often based on ethnographic work,

show that staffs of development organisations and public bureaucracies manage multiple competing and contradicting logics and claims. The contradictions inherent in ends and means present professionals within the environment-development industry with a stream of dilemmas. Few can claim to be outside of that stream. Yet, acknowledging that our hands are not completely free does not absolve us from responsibility. People in the areas affected by the WMA policy are caught in the midst of a gross injustice that is unlikely to go away in the absence of concerted contestation. It is our common responsibility to see that injustice undone. This cannot be achieved in the same top-down manner that led residents (knowingly or unknowingly) into the WMAs in the first place. Yet, in many WMA areas, contestation from below takes place. It is high time for those who fund, legislate, implement, and study WMAs to lend time and support directly to such efforts of people who seek to unravel themselves from an unwanted and unfair policy.

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NOTES

1. This number includes Minjingu village that, however, has never acknowledged its membership status and is currently pursuing its independence and land rights in a court case against the WMA.

2. The growth of the human population of the area over time is documented in various sources: approximately 22,500 people when the WMA was initiated in 2002 (NBS 2002); Approximately. 27,000 in 2010 (Burunge-GMP 2010a) and; Approximately. 34,000 in the 2012 national census (NBS 2012). The 2012 national census data were corroborated by checking contemporary census data held at the member village offices.

3. According to local residents, sesame is not eaten by elephants.

4. The 161 households were distributed among eight of Burunge's nine current member villages. Yet, the sampling was done on the basis of villages in existence in 2002. Thus, the households in the sample are divided as: 41 from the 2002 Minjingu village (only sampled within present-day Kakoi and Olasiti, as Minjingu village does not recognize being member of Burunge WMA); 40 from 2002 Magara village (present-day Magara, Manyara and Maweni villages); 40 from 2002 Mwada village (present-day Mwada and Ngolei villages); and 40 from Sangaiwe village (no village secessions since 2002). Selection was stratified random. Only households that were present in the village in 2007 were included in the sample frame. This implied, inter alia, that the sampling targeted older households and, therefore, likely households owning more livestock than the average household.

5. The total sample population included households that had been formed prior to 2007, i.e., it is a sub-sample of the total village population. We do not attempt extrapolation to the total village population due to our hypothesis that the sample population is different from the total population, i.e., likely to be older households owning more livestock.

6. The survey sample included one very large cattle owner. Excluding that household from the estimate changes the overall estimate to 29,098 heads of cattle and 68,267 sheep and goats.

7. Interviews with members of the pastoralists association of the village Vilima Vitatu–that is one of three member villages (Vilima Vitatu, Olasiti, Kakoi) having the majority of livestock among Burunge member villages—further corroborate the estimate. In 2014, a local census revealed around 15,000 heads of cattle in this village. The census implied that 4,000 heads were moved out of the village on grounds that they belonged to non-residents.

8. There were no well-kept records that show income and expenditure for early years of the WMA. We obtained annual incomes and funds distributed to village from the CBO office notice board, and for other expenditures, we gathered data from different meeting reports. A complete set of financial records were available for financial years 2012-2013, 2013-2014, and 2014-2015 only.

9. The amount in bank accounts include USD 44,540 owed to Minjingu village, unaccounted revenue is, therefore, more than USD 3,250.

10. We interviewed several villagers who all claimed that large wildlife did not pass through the villages, apart from the rare hippopotamus in the wet season. Monthly reports from village game scouts confirmed this as does the research done by Kikoti (2009) on wildlife movements in the area.

11. The lodge in Mwada village has 65 beds (i.e., can accommodate 65 tourist per night) and is estimated to generate about USD 268,800 per year i.e., four times more than the lodge which offer game drives on a large pristine land but accommodate only 12 tourists per night, bringing about USD 50,400 for the WMA per year.

12. This would bring WMAs in line with community-based forest management that is, in many ways, a parallel to WMAs only focusing on forests, rather than wildlife (Nelson and Blomley, 2010). Villages retain all revenues from products from community-based forest management, whereas the government waives all royalties and fees (Lund, 2007). Community-based forest management in Tanzania is not free of environmentalist-paternalistic oversight (Green and Lund 2015). Yet, the revenue sharing formulae does favour villages to a much higher degree than other CBC schemes in Tanzania, such as those of Joint Forest Management and Wildlife Management Areas.

13. Due to an agreement with investors operating in the General Use Zone down towards Lake Manyara, the WMA has agreed to ban grazing there too.

14. Sinya's case has been described by Benjaminsen et al. (2013). The village hosted wildlife tourism investments before the arrival of the WMA policy and did not wish to join a WMA. Yet, Benjaminsen et al. (2013) describe how the investor was pushed to relocate investments to a neighboring village that was WMA member and from then one only paid the government fees, while Sinya suddenly received no income from the continued use of its lands for game drives.

15. In 2015, for instance, USAID initiated two projects 'Promoting Tanzania's Environment, Conservation, and Tourism (PROTECT)' and 'Endangered Ecosystems - Northern Tanzania (EENT)' focusing on WMAs and anti-poaching efforts in Northern Tanzania with a total budget of app. 25 million USD over five years (USAID, 2015a, 2015b).

16. The map was graciously provided to us by Jevgeniy Bluwstein. It also features in Bluwstein et al. (2016). Importantly, this is not an official map. Many village boundaries are not official and might change in local negotiations. The boundaries have been estimated as best possible based on

field presence and corroborated with preliminary maps from Babati District, Village Land Use Plans, GIS shapefiles (WWF, National Bureau of Statistics Tanzania) and Google Earth satellite images. Agricultural area is mapped based on 2014 shapefiles (Honeyguide Foundation).

17. Livestock population data were compiled from the socio-economic baseline study for Burunge WMA in 2003, the general management plan that use information sourced from member villages in 2010, and the district livestock survey conducted in 2012 where village leaders collected information about livestock populations in their respective villages.

18. Income and revenue records were obtained in Tanzanian shilling, and changed to USD based on the annual exchange rate. Data for 2006-2007 to 2011-2012 were obtained from CBO notice board (posted as part of accountability and transparency agenda), between 2012-2012 and 2013-2014 from audit reports (audits conducted by a freelance certified auditor as part of capacity building program) and for 2014-2015 information was obtained from handover report for CBO leadership changes.

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4.3. Paper III: Between Policy Intent and Practice: Negotiating Access to Land and Other Resources in Tanzania's Wildlife Management Areas

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Abstract

This article analyses how states and non-state actors' efforts at sustaining natural resource lead to the exclusion of those who are most dependent on access to it. An access lenses review of Burunge Wildlife Management Area unravels the paradox between policy promise and practice. Situating our case in the context of neoliberal conservation that offers opportunities of patronage, rent-seeking, and capital accumulation to various state and private investors, we show that Wildlife Management Areas concentrate licit benefits to a few elites while excluding the majority of rural peoples in accessing their customary lands and natural resources. This leads people to rely on illicit access mechanisms, and consequently, leading to violent confrontations between game scouts and people and protests and struggles to regain legal access. These conflicts erode rural peoples' trust and willingness to support conservation. The widely overlooked socioeconomic and political contextualization in conservation policy formation, often framed in apolitical and normative terms, acts as a vehicle for different meanings and practices that are mobilized by different actors to promote their own interests. Thus, state and non-state actors, whose interests override ideals of an apolitical conservation vision, jointly produce an austere conservation regime that strips local people from access to resources.

Key Words:

Wildlife Management Areas, land, access, elite capture, conflicts

Introduction

For the past two decades, the discourse and policy negotiations in conservation - development nexus has been to harmonize compliance with conservation rules (Kahler & Gore, 2012; Solomon, Gavin, & Gore, 2015) and improve equality in benefits distribution (Belsky 1999; Dressler et al., 2010; Miller, Minteer, & Malan, 2011; Ribot, Lund, & Treue, 2010; Roe, Mohammed, Porras, & Giuliani, 2013). Policy documents and programs promoted greater inclusion of local communities in natural resource management and sustainable use of the resources for poverty alleviation (see World Commission on Environment and Development, 1987; International Union for Conservation of Nature/United Nations Environment Programme/World Wide Fund for Nature, 1991; United Nation, 1992; MDG, 2000).

The paradox is, however, that while policy level dialogue seems to favour community inclusion, developments on the ground appear to further exclude communities from accessing land and resources (Green & Adams, 2015; Sachedina, 2010). This divide between policy intent and outcome can be explained by the way of how policy is formulated and implemented in apolitical and normative terms (Benjaminsen, Goldman, Minwary, & Maganga, 2013; Humphries, 2013; Kiwango, Komakech, Tarimo, & Martz, 2015). While calls for good governance, transparency, and accountability abound, the political economy of patronage, rent-seeking, and elite capture is ignored rather than actively engaged and transformed (Sachedina, Igoe, & Brockington, 2010). Consequently, neoliberal conservation does not promote the principles of good governance, transparency, and accountability, but rather acts as a vehicle for practices of exclusion that are mobilized by different conservation actors in pursuit of their interests in the name of conservation (Moyo, Ijumba, & Lund, 2016).

In Tanzania, state and non-state conservation actors[1] have, with substantial donor financing, promoted wildlife conservation outside of core protected areas through the implementation of Wildlife Management Areas (WMAs) on village lands[2] (Sachedina, 2010; Sachedina et al., 2010; Wilfred, 2010). WMAs, a community-based wildlife management policy, intends to foster wildlife conservation and promote local people's participation in the management of wildlife in their village lands (URT, 1998). However, the past two decades of WMAs policy implementation have so far not produced the intended socioeconomic outcomes (see; Benjaminsen et al., 2013; Bluwstein, Moyo, & Kicheleri, 2016; Moyo et al., 2016; Pailler, Naidoo, Burgess, Freeman, & Fisher, 2015). Instead, various studies have shown how WMAs operate through top-down interventions that lack space for local peoples' meaningful

participation (e.g., Baha & Chachage, 2007; Benjaminsen et al., 2013; Benjaminsen & Svarstad, 2010; Bluwstein et al., 2016; Igoe & Croucher, 2007; Loveless, 2014). The centralization of meaningful powers has led to technical planning that offers no room for the accommodation of local peoples' needs in the light of emerging socioeconomic developments (Moyo et al., 2016). However, a recent scholarship by Wright (2017) aptly asserts that WMAs creates spaces for the community to collectively demand change and influence access decisions. Yet, Wright (2017) argues that in diverse communities with largely heterogeneous livelihoods strategies, averting top-down drawn access limitations might be less effective.

To illustrate how policy intent is translated into an exclusionary practice of conservation, we explored a prominent Tanzanian WMA, Burunge WMA. Burunge WMA is an interesting case because it is portrayed by its initiators — the African Wildlife Foundation (AWF) and the World Wide Fund for Nature (WWF), as a model example of Community Based Wildlife Management (CBWM) (see AWF, n.d.; WWF, 2014), and the WMA training manuals and the proliferation of WMAs in Tanzania have been much based on reported Burunge successes. AWF's practical handbook for setting up and managing a WMA, for instance, refers to Burunge WMA as ''one of the most well managed WMAs in Tanzania and a source of many good practices'' (AWF, n.d., p. 15). Burunge WMA is also located in an area with lots of tourism activities (Moyo et al., 2016), which is an ideal condition for realizing WMAs goal to promote activities that are less dependent on land such as ecotourism to reduce pressure on land (Goldman, 2003; Nelson, 2013). Yet a large body of literature exists that shows that Burunge WMA is rife with community grievances pertaining to access to land and others resources (see e.g., Bluwstein et al., 2016; Moyo et al., 2016; Igoe & Croucher, 2007; Sachedina, 2008). By employing mixed methods, but largely, ethnographic approaches, this study illustrates the discrepancy between policy promise and practice, and unfolds the underlying reasons for the observed access grievances across a wide range of people practicing different livelihoods strategies in Burunge communities.

Analytical Framework

To illustrate the discrepancy between policy intents and outcomes on the ground, we studied how the WMA access rules and the different actors have contributed to a restrictive conservation regime that changed the way local people access land and other resources. We employed Ribot and Peluso (2003) access theory as our analytical tool to assess the distribution of WMA benefits across different individuals and groups of actors. Ribot and Peluso (2003, p.

153), define access as the ‘‘ability [of an actor] to derive benefits from things’’. Thus, following this definition, we set our mission to analyse what an actor actually can do with or without entitlements. Access theory, as an analytical tool, guides the unveiling of the actual distribution of WMA resources and benefits among different actors, and the multiple mechanisms underpinning that distribution, such as property rights (based on customary rights, formal rights, and legal rights), and the structural and relational mechanisms, such as capital, knowledge and skills, technology, markets, labor opportunities, and social identity and relations (see Barrett, Carter, & Little, 2006; Bebbington, 1999; Ribot & Peluso, 2003; Sen, 1997).

Yet, communities are not homogeneous units with a single or aligned interests (Agrawal & Gibson, 1999). Thus, different communities or actors may employ these mechanisms differently to keep access open to themselves or exert power over others (Neimark, 2010). Property rights, for example, may enhance licit access for holders of titles, permits, and licenses (De Janvry & Sadoulet, 2005; Odeny, 2013; Shivji & Kapinga, 1998), but capital, technology, and market opportunities may determine actors' power and influence over the resources (African Union, 2010; Latina, Piermartini, & Ruta, 2011; Prieger, 2013). On the other hand, social relations and culture may play a key role in mediating access to resources (Neimark 2010). Thus, restrictive access rules (Myers & Muhajir, 2015; Peluso, 1993; Redford & Sanderson, 2000) and neoliberal conservation approaches that promote property rights (Igoe & Croucher, 2007) may drive those who depend on customary claims of rights to resort to illicit access mechanisms to sustain their livelihoods.

We, therefore, pay due attention to licit or mandated rights, as well as to illicit actions to identify factors beyond the policy that influence benefits distribution (Ribot & Peluso, 2003). Through access theory lenses, we unveil how different people, depending on their livelihoods strategies, access resources through either contestations and compliance of WMAs rules, and identify actors who benefit or lose and how. As an analytical tool, access theory also helps to unravel the multiple interests and identities within participating communities and their relationships to external actors (Ameha, Nielsen, & Larsen, 2014; Blaikie, 1987; Belsky, 1999; Bandyopadhyay & Tembo, 2010; Bryant & Bailey, 1997; Forsyth, 2003). We show that different state and non-state conservation actors assume mediating roles to translate WMA policy into conservation practice by following their own interests in the name of conservation. In this process of policy translation, the WMA policy notion of combining the agenda of rural peoples' development and sustainable resource management is lost in the struggles over access to land and resources.

Methods

Case Study Area and Methods

Burunge WMA is located in Babati district, Manyara region in northern Tanzania (Figure 1). Burunge WMA was gazzeted in 2006 as one of the first WMAs in Tanzania. It is managed by a registered community-based organization (CBO), comprising elected representatives from each of the member villages (Moyo et al., 2016). Initially, Burunge WMA consisted of five villages, which released 60,094 acres or 31% of their village lands for wildlife conservation. Between 2005 and 2009, the original five villages split into 10 villages. According to district officials, in response to the rapidly growing population in the area, the district divided the villages as a strategy to bring social services closer to local people (Moyo et al., 2016). Burunge dwellers livelihoods largely depend on agriculture and livestock (Funk, 2015). Agriculture is a primary source of livelihoods for the Mbugwe, Iraqw, Nyaturu, and Nyiramba who dominate the population in Mwada, Sangaiwe, Ngolei, Maweni, Magara, and Manyara villages. They mainly grow maize and beans for subsistence, and rice, sesame, and cotton to generate cash. Livestock are the main source of livelihoods for Arusha and Maasai, ethnicities who are predominant in Minjingu, Kakoi and Olasiti villages, and for the Barbaig in Vilima Vitatu village. However, agriculture and livestock keeping in Burunge are under constant threats from wildlife from the Lake Manyara and Tarangire National Parks and The Manyara Wildlife Ranch (Sachedina, 2008; Tanzania Wildlife Research Institute, 2015) that engulf the villages (see Figure 1).

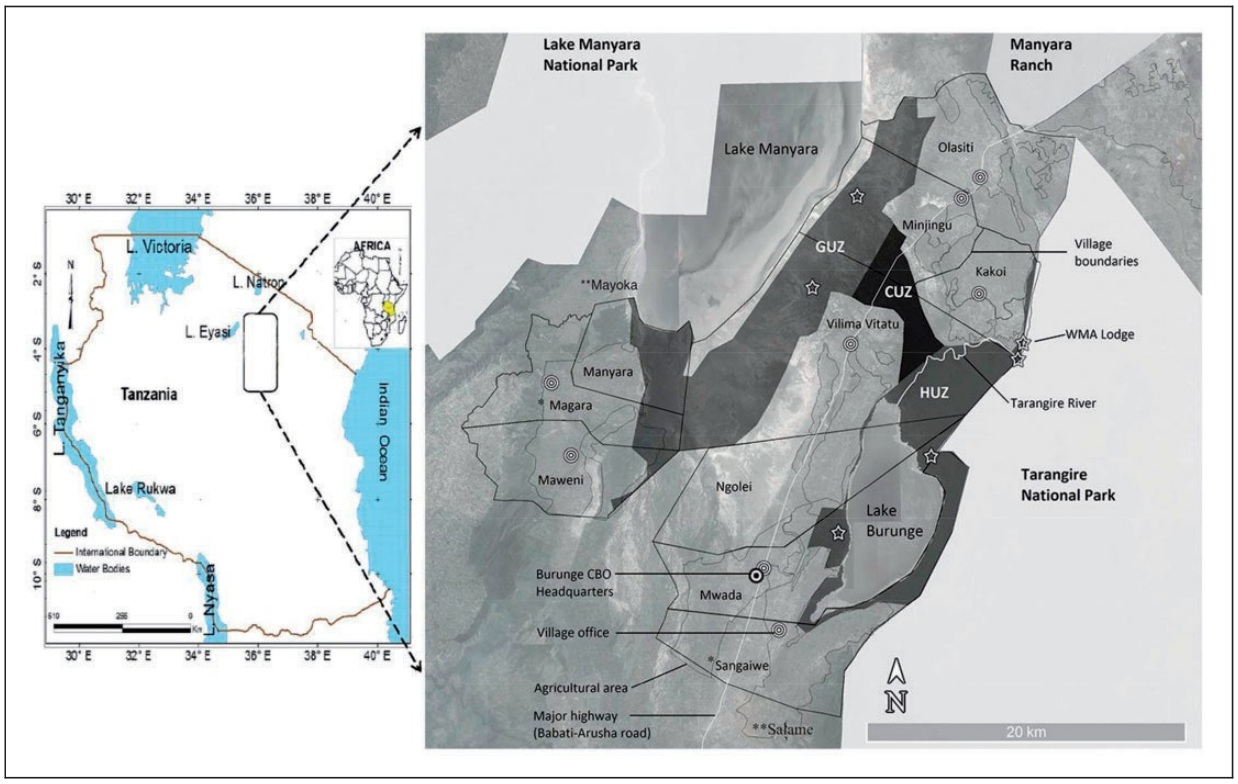

Figure 1. Burunge WMA, member villages, tourism investment, and the three use zones (modified from Bluwstein et al., 2016).

GUZ =general use zone; CUZ =corridor use zone; HUZ= hunting use zone

Methodologically, we used both qualitative and quantitative methods of data collection. Quantitative methods were used to capture information about licit or mandated benefits. Data were collected over a period of 11 months[3]. Ethnographic approach following Thomas, Gavin, and Milfont (2015) was used to collect information about illicit activities or extra-legal access mechanisms. The longer duration spent in the field helped us to build trust and establish rapport with local people, hence reducing chances of nonresponse and social desirability biases (Nuno & John, 2015). Twelve villages were surveyed — 10 WMA villages and two non-WMA villages. The two non-WMA villages serve as control or comparator villages, whereby information collected from the two non-WMA villages is used as a mirror to filter out access challenges which are not related to WMA interventions. Selection of non-WMA villages was based on (a) the village being adjacent to a WMA village, (b) a non-WMA village borders a National Park, and (c) a village not involved in any wildlife conservation project that requires it to surrender part of their village lands to conservation. The underlying assumptions were that, residents in neighbouring villages are more likely to have similar livelihood strategies, and a non-WMA village bordering a National Park face a more or less similar wildlife nuisances and

tourism potentials like a WMA village. The similarities in socioeconomic and ecological conditions in the study villages make possible the analysis of the impacts of policy on access changes (Noe & Kangalawe, 2015).

We used a semi-structured questionnaire to conduct 33 in-depth interviews and 50 focus group discussions, and participated in 13 events, including village assembly meetings, CBO committees, village game scout (VGS) camp and ranger posts (Table 1). Prior to the interviews, we explained the aim of our research to the prospective respondents to obtain their informed consent and promised them anonymity. Participants in focus groups discussions were asked, among other things, to evaluate how village residents abide by the WMA access rules. Using village households register[4], we selected respondents based on their knowledge of the village socioeconomic and political situation, gender, livelihood activities, leadership position and specific experiences, and relationship with rule-enforcing agents. To minimize biases associated with this purposive sampling techniques, we repeated the same questions to different respondents, and conducted follow-up interviews with the same respondents and through snowballing sampling to triangulate responses. We carefully observed respondents' facial expressions and gestures to capture the real meaning they wished to convey. All interviews were conducted in Kiswahili by the first author. Kiswahili is a native language for the first author, which is also spoken by almost all residents in Burunge area and in Tanzania.

Table 1: Type of survey and sampling intensity

Survey Type	Respondents	Number /Frequency	
		WMA villages	Non-WMA villages
Focus group discussions	Village leaders	10	2
	Women	10	2
	Herdsmen	10	1
	CBO representatives	3	
	Farmers	10	2
In-depth interviews	VGS	7	
	VGS spouses and relatives	7	
	CBO leaders	8	
	District game officer	1	
	District natural resource officer	1	
	District cooperative officer	1	
	The regional natural resource officer	1	
	VGS injured in access struggles	2	
	Longest serving CBO representatives	3	
	Residences fined for trespassing WMA areas	2	
Partcipant observation	Village general assemblies	2	1
	CBO committees meetings	2	
	VGS meeting	1	
	VGS ranger posts	5	
	VGS camp	1	

Results

This section documents access conflicts and grievances in Burunge WMA and show how different actors and segments of the Burunge community, a congregation of villages and people bound together by a WMA, navigate WMA access rules to gain or restrict others from accessing WMA resources. It also focuses on unveiling the effectiveness of different resistance mechanisms as practiced by different groups of people and actors. Later on, we mirror the experiences of WMA villages residents to that of non-WMA villages. By doing so, we are able

to show how WMAs processes offer very minimal space political space or democratic processes to influence change. Rather WMA process creates spaces for elite capture and incites conflicts among participating communities.

De facto Common Pool Resource Access

Burunge WMA hosts valuable livelihoods resources, such as potential land for agriculture, settlements and livestock grazing, building poles, dry firewood, wood for charcoal production, tourism income, wildlife, as well as thatch grasses and other non-timber forest products (NTFPs). The CBO, which manages the WMA on behalf of the local communities, with the support from the state and non-state conservation actors (WWF and AWF), has put forward a set of rules in the General Management Plan (GMP) that guide where, how, and by who a particular resource shall be used (Burunge GMP, 2010). The GMP categorizes the WMA lands into three use zones: corridor use zone, general use zone, and hunting use zone (see Figure 1 above).

Dry firewood and NTFP collection are permitted in corridor use zone and general use zone, through a free permit issued by the CBO. Yet, none of the residents had applied for one. The CBO office is located about 5 km away from the nearest next WMA village and the furthest village is about 25 km away (one day travel by foot). The distance and the associated transportation costs discourage residents from obtaining the free permits. The VGS' role is to enforce access rules, but they seem to ''understand and accept'' the situation. They let residents to collect dry firewood and NTFPs without permits, making it a *de facto* common pool resource in certain areas (see Table 2). The lax enforcement could be attributed to (a) the fact that the permit is free of charge and (b) state actors and transnational conservation non- governmental organizations (NGOs) funding WMAs do not consider collection of dry firewood and NTFP as a threat to conservation, and thus do not put emphasis on its control as in the control of livestock grazing, tree felling, and agriculture (see the sections that follows). This implies that access rules are only enforced when revenues for the WMAs (and state) and conservation interests are thought to be jeopardised. Yet, permits are useful tools for collecting information about natural resource use trends (Reinganum & Stokey, 1985; Schlager & Ostrom, 1992)—thus Burunge WMA misses useful data for management planning.

Table 5. Burunge WMA access rules contestation/acceptability

Products/service	Restrictions are broadly accepted and adhered to	Restrictions are obeyed by some/not always	Restrictions are generally (but not openly) ignored	Restrictions are openly contested and ignored
Dry fuel wood collection				All villages (*de facto* free access)
Tree felling (poles for house construction)		Four agricultural villages and two pastoral villages	One agricultural village and one pastoral village	Two pastoral villages and one agricultural village*
Collecting NTFPs				All villages (*de facto* free access)
Charcoal burning	Four agricultural villages and two pastoral villages	Three agricultural villages and one pastoral village		
Livestock grazing		Five agricultural villages	One agricultural village (*migrants herders from other areas*)	Four pastoral villages (*host the hunting use zone*)
Agricultural land	Five pastoral villages (*host the corridor use zone or share boundary with the Tarangire national park*)	Two agricultural village		Three agricultural villages (*lucrative wetlands for rice production*)
Permanent settlements	All villages except one agricultural village			One agricultural village*
Temporary settlements	All villages except, one pastoral village			One pastoral village (*allegedly Barbaigs newcomers*)
Local hunting		All villages		

***** This particular agricultural village is home to fishermen who cut trees to establish dwellings close the shores of Lake Manyara.

Restricted Access and Contestations Patterns

Burunge WMA regime allows livestock grazing in the general use zone only. Cattle are seen by state actors, transnational conservation NGOs funding WMAs and tourism investors as a source of landscape degradation (Goldman, 2009), and disturbance to tourism: ‘‘Tourists don’t come all the way from Europe to see cattle’’ (interview with a campsite investor, 2015). Agriculture, tree felling, permanent settlements, and charcoal production are also viewed as the driver of environmental degradation and disjointed conservation (see WWF, 2014), and are therefore prohibited in all the three use zones. However, persistent old grievances and changes in socioeconomic factors (Moyo et al., 2016) have led Burunge residents to systematically contest and neglect WMA access rules.

Contestation of access rules largely follows a combination of geographical positioning of the village and land use zonation and residents’ livelihood strategies. In Burunge, villages located along the corridor and hunting use zone are predominantly pastoralist. Historically and prior to the WMA, the abundance of fodder for livestock in these areas attracted Maasai, Waarusha, and Barbaig agro-pastoralists to settle in. These ethnic groups depended on open access to livestock grazing areas, mainly governed by a communally managed[5] access mechanism to sustain their pastoral based livelihoods. The introduction of WMA, however, has changed access to grazing lands from communal to a private control. Corridor use zone is seen by state actors and transnational conservation NGOs as an important land needed to connect Tarangire and Manyara National Parks, and the hunting zone is leased to a private investor who has sole use rights. As a result, grazing restrictions in these two zones are highly enforced by VGS and guards hired by private investors to protect their now private property. These changes in property rights impel dwellers in these villages to resort to illicit mechanisms and openly contest grazing restrictions through violence. Access to agricultural land is openly contested in villages where WMA areas host lucrative wetlands for rice production and have less wildlife that could nuance agriculture production (Moyo et al., 2016). The predominant population in these villages also happens to be Mbugwe, Iraqw, Nyaturu, and Nyiramba who have historically exploited their lands for agriculture. Contestations for other natural resources perceived equally important across the different segments of the Burunge communities were more or less similar across the villages (Table 2).

The manifestation of access struggles along the lines of the largely ethnic-based livelihoods strategies deepens existing societal division between pastoralist and farmers (see Benjaminsen,

Maganga, & Abdallah, 2009). While farmers see the absence of wildlife in their areas as an opportunity to advance agriculture, pastoralists believe agriculture pushes away wildlife. An elder Maasai man said: ‘‘you will only see wildlife in Maasai villages, we take care of them’’ (Focus group interview with pastoralists, 2015). The divergent interests among the different segments of the community block the opportunities for a community level collective action against state and conservationist NGOs. The Burunge case also affirms Benjaminsen et al.'s (2009) assertion that, in Tanzania, conflicts pertaining to access to land and natural resources result in policy and conservation interventions failures to consider historical and past land use experiences.

The restrictive conservation regime also has negative outcomes on wealth generation in WMA communities. A parallel study (conducted by the second author) has shown through a quasi-experimental impact evaluation design that since WMA was established, poor WMA households have, on average, experienced a slower growth in wealth compared to similar non-WMA households (see Funk, 2015). Therefore, we devote the remaining part of this article in unravelling the struggles and unveiling the mechanisms employed by different actors to gain, maintain access, and restrict others from accessing WMA resources. Although we focus on demonstrating access mechanisms in WMA villages, we use the information gathered from the two non-WMA villages as a mirror to eliminate access challenges that are not originating from the WMA interventions (non-intervention nuisances). Throughout, we demonstrate that although policy intent is to improve local peoples' access to land and resources, state and non-state conservation actors' efforts at realizing the policy goals lead to the very negative outcomes they strive to abate.

Access to Land for Cultivation and Settlements

Agriculturalists and individuals seeking to establish permanent dwellings often use political maneuvers and bribe village officials to influence WMA rule enforcement. They avoid any form of violent confrontations, which could trigger their immediate eviction, because dwellings are permanent and crops need to grow for at least one agricultural cycle (mostly more than 3 months until they are harvested). Their sedentary nature, therefore, requires ‘‘good’’ relations with village officials, assuring their very existence. In one of the WMA villages, for example, about 13 individuals (some of them district officials) possess documents which show that between the year 2001 and 2005[6] the village council offered

them land in the area now pertaining to the WMA. The documents issued by the then village executive officer granted each of the individuals about 10 to 30 acres of lucrative wetlands for agriculture. The documents, however, do not meet the legal requirements, as they were not accompanied by village assembly or village council minutes of consent as required by the Village Land Act No. 5 of 1999 (URT, 1999). Village council members whose signatures appear in the documents also disowned them[7]. Yet, the costly and slow legal processes make the village government less effective in reclaiming the lands. The village chairman argued: ''[. . .] every day [frequently] we [village leaders] have to go to the police, they tell us to bring this, bring that, but there is no action.''

In another WMA village, the village leadership was protective of people who have established themselves in the WMA area. In July 1, 2010, the then Babati district commissioner ordered the village to evict all individuals who were seen by the CBO to be encroaching on the WMA area. Part of the district commissioner's order read: ''By authority rendered to me by the Prime Minister's Act of 1962, Section 182 C, I order that all people from the [name] village and other areas, to vacate the WMA lands within seven days.'' Village leaders, however, ignored the order, arguing that they do not have alternative land or funds to offer as compensation. Also, the district authorities were silent thereafter; most likely because (a) this particular village has less wildlife and therefore is less important for the generation of WMA revenues and (b) some of the farms in this village are ''owned'' and cultivated by district elites who use their office affiliation to suppress actions taken against them (Moyo et al., 2016). On the other hand, in areas such as a hunting use zone and areas where tourist campsites are located, those encroaching the WMA lands have been immediately evicted or taken to court[8]. These areas generate all the income for the CBO (except for income from NGOs donations) and state. This implies that lack of potential revenues for the CBO and state, and absence of wildlife and private investors' interests in some parts of the WMA lands, offers opportunity for less violent access mechanisms such as political pressure and mimicking behind powerful district elites mistakes to be effective. However, the lax enforcement lessens opportunities for ecological restoration in the areas thought as ''less valuable WMA areas,'' which if properly managed through land enclosures[9], vegetation regeneration would allow wildlife to comeback.

Access to Grazing Land

Traditionally, pastoralists organize themselves and work in groups to exploit communal land rights that provide them access to shared grazing areas. But some Burunge residents feel that WMA rules infringe on their grazing access (Funk, 2015). They thus use their customary organization structures, such as Morans, groups of young Arusha and Maasai warriors, to demand and gain access to grazing areas. This is different from the way in which pastoralists contest access restrictions: Rather than employing political pressure (like how agriculturalist do), pastoralists have often physically confronted VGS and guards hired by private investors. Pastoralists can move their herds of cattle quickly to avoid fines and confiscation for illicit grazing access. Thanks to this, and their ability to organize and work in groups, they are more effective in using physical confrontation to demand access.

In early 2015, pastoralists in one of the villages where the hunting use zone is located attacked two guards hired by a private investor in an attempt to force their way into hunting use zone where grazing is prohibited. Village leaders, who were aware of the incident and of the perpetrators, refused to take action and instead used the incident to pressure the investor to agree to their customary claims of rights to graze in the hunting use zone which is also the only source of fodder for their livestock during the dry season. They argued: ‘‘If he [the investor] wants peace in his business he should allow us to graze there [hunting use zone], as no one will attack his guards, we will protect them.’’ (Interview with a village leader, 2015).

In another WMA village, a resident was fined about US$500 by Tarangire National Park authorities for bringing 100 cows to the National Park. The cattle were grazing in the hunting use zone when they were ‘‘pushed to the National Park by guards hired by a private investor’’ (interview with the village resident, 2014). Park authorities are stricter than VGS and have a well-equipped paramilitary unit, which local people cannot easily challenge. A number of court cases involving Burunge pastoralists and the CBO, and relating to illicit grazing access, were also reported. These cases consumed money and time of both pastoralists and the CBO (see Table 4). A former village leader accused of spearheading pastoralists to graze in the hunting use zone, for example, sold a cow to pay lawyers to fight the criminal charges he was facing at Babati district court: ‘‘I travelled every day [frequently] to Babati [Court]. I sold a cow to pay the lawyer, at the end, the court said it

is not true [charges were dropped], but who is going to pay me? my money is gone'' (interview with a village resident, 2015).

Burunge pastoralists also have an association (Nkaiti Herders Association) that ostensibly represents their interests across the villages. Yet Maasai and Waarusha, who are the majority ethnic groups in villages hosting the hunting use zone, vowed to put their lives on line in order to maintain dry season grazing access in this restricted area. A village leader argued:

> Although investor's guards [guards hired by private investors] patrol with guns, we are not afraid of them, we will not leave our cows to die. If they want peace they have to let us graze there [hunting use zone] when we need (interview with a village leader, 2015).

Maasai and Waarusha, who are the majority in Minjingu and Kakoi villages, share traditions and speak a more or less similar language. They view themselves as ''native'' to the area and consider the Barbaigs, who are the majority in Vilima Vitatu village, as newcomers and rival competitors for the grazing resources. Thus, they do not cooperate with or comprehend Barbaigs' efforts to fight for grazing restrictions. VGS also reported that Barbaigs are more aggressive against VGS of Maasai origin. Barbaigs believe Maasai VGS are harsh on them but merciful toward Maasai and Waarusha. In previous years, attempts to resist WMAs' restrictions to access grazing lands led Maasai and Waarusha pastoralists to destroy WMA infrastructure, such as roads leading to tourism campsites and VGS ranger posts, and attack guards hired by private investors. Barbaigs pastoralists on the other hand selectively attacked VGS of Maasai and Waarusha origin. It is important also to note that, of the 30 VGS positions, none is Barbaig. The Mbugwe hold 12 VGS positions followed by Maasai who hold 5 positions and other minorities share the remaining 13 positions. CBO and village leaders also refer to Barbaigs as newcomers and intruders (Moyo et al., 2016).

The narrative described earlier suggests that in Burunge, access to grazing areas is regulated through social ties and ethnic identities. This defies the notion that WMAs would foster community ties to aptly offer opportunity for communal-level action to influence change (see in Wright, 2017). Rather, it demonstrates that conservation territorialisation and zonation (Bluwstein & Lund, 2016), and the tendency of conservation programs to

ignore historical and cultural land uses (Benjaminsen et al., 2009), exacerbate community divisions, inflict loss of wealth to individuals, and cause community to resent conservation.

Access to Poles for Construction

Tree felling is prohibited in WMA areas. The WMA regulations state that:

> any person who fells trees in a WMA commits an offence and is liable on conviction to a fine not exceeding one mil- lion [Tanzanian] shillings or to imprisonment for a term not less than six months and not exceeding one year or both such fine and imprisonment. (URT, 2012, Section 54 (4))

Yet, in-depth interviews revealed that collection of poles is tolerated outside the hunting use zone where a private investor has a sole use right. VGS turn a blind eye toward individuals who collect poles for personal use in other use zones. Thus, residents collect poles in small quantities, over a period of time, until their demands are fulfilled. In some villages, residents felled big trees and used branches for livestock fencing, leaving the rest to dry for firewood. In other villages, piles of poles were seen outside some of the dwellings. The owners reported having collected them from the WMA areas. Residents of the villages where the hunting use zone is located reported that poles of good quality are found in the hunting use zone, where restrictions are enforced by both VGS and guards hired by a private investor from outside Burunge villages. This demonstrates that although property rights regimes are more effective in eliminating others from accessing common resources, when property rights are not directly transferred to a particular individual, social and relational access mechanism can still be effective.

Access to Bushmeat

Restrictions for wildlife hunting are not a new phenomenon attributable to the WMA policy implementation. The Wildlife Act of 1974 and its amendment in 2002 barred wildlife hunting without a permit issued by the wildlife department, regardless of where it occurs (URT, 1974, 2002). WMAs, therefore, mainly seek to garner the support of rural people living close to wildlife in preventing wildlife poaching. Burunge communities, however, seem to have taken on the role of a ‘‘watch-man’’ who regulates access to wildlife based on social relations. In the first 6 months of the year 2015, for instance, VGS reported two poaching incidents involving Burunge residents. VGS arrested two Burunge residents in

connection with the killing of a giraffe and a wildebeest. But most residents defended the suspects and blamed it on non-residents. VGS also reported that local residents tend to alert them if they see or suspect a non-resident poaching, but not if fellow residents are committing the crime. In early 2015, for instance, the residents of Vilima Vitatu village called VGS to arrest ‘‘four unfamiliar men with motorbikes chasing zebra’’ (VGS focus group discussion, 2015).

In-depth interviews revealed that VGS behaviour also favoured local residents. Before VGS would arrest a suspected local poacher, they assess the suspect’s economic situation and consider the type of wildlife poached. Poor local residents seen with small wildlife, such as rabbits or warthogs, are given a verbal warning and left to walk free. VGS believe that poor individuals are desperate and therefore compelled to poach for subsistence. Arresting a poor resident who is trying to find ‘‘food’’ would cause community members, who often tend to side with the poor, to disapprove VGS’ work, and refuse to cooperate with them. VGS argued: ‘‘we don’t arrest poor old men, if you arrest [name of an old man seen with a rabbit], people will get angry’’ (VGS focus group discussion, 2015). In Burunge, therefore, access to bushmeat is regulated through social identity and relations. Although CBO leaders and transnational conservation NGOs funding the implementation of WMA policy in Burunge do not accept or condone any form of wildlife poaching, Burunge residents together with VGS use the opportunity of being the primary protectors of wildlife in WMA areas to open access to bushmeat for their ‘poor’ while at the same time eliminating access for outsiders.

WMA Revenues

Burunge WMA hosts five tourist campsites and a hunting block, which are the main sources of income for the WMA (Table 3)[10]. Other sources of income include fines, NGOs’ donations, and research fees. The campsites are privately owned, and a hunting block is leased to private investors who are from outside Burunge villages. The state collects campsite and hunting fees and remits part of it to the CBO based on the 2012 wildlife regulations (URT, 2012), which direct the state to retain 20% of the campsite fees, and remit 65% and 15% to the CBO and district council, respectively. For the hunting fees, which include block and permit fees, the state retains 25% of the block fee and 85% of permit fees. Originally, the director of the wildlife division of the Ministry of Natural Resources and Tourism held discretionary powers to decide on how the WMAs income

should be shared (see URT, 1998, p. 19). In the 2012 regulations, this power was shared with the CBO for some parts of the incomes, providing some assurance to WMAs in terms of financial planning (WWF, 2014). Yet in the same year, 2012, the revenue collection was taken over by the state actors again, reinforcing state control over WMA resources, and resulting in diminishing transparency in revenue collection and delays in disbursement of the same to the villages (Funk, 2015).

Table 3: Reported Burunge WMA income (in US$)

Income category	2012/2013	2013/2014	2014/2015
Opening balance	15,210	39,212	106,611
Campsite fees	263,949 [a]	197,142	295,703
Game hunting	-	50,237	85,425
Fines	231	277	56
NGOs Donations and other* sources	3,728	38,282	651
Total	**283,118**	**325,151**	**488,447**

* 'Other' sources include research fees and unidentified sources

[a] Hunting and campsite fees were available as a single entry

The CBO uses 50% of its income to run the WMA and distributes the remaining half to its member villages, as stipulated in the CBO constitution. The villages use the income to fund village development activities (e.g., village office building, schools, water pumps, etc.). Later we narrate how different actors gain and maintain access to WMA revenues. Through these narratives, we demonstrate how the WMA process concentrates licit financial benefits to local elites by virtue of their position in CBO or WMA ranks. We also show how state and transnational conservation NGOs attempt at improving revenue sharing between state, private investors and local communities (and within local communities), lead to exclusion of the communities and the emergence of local elites.

Accessing WMA Revenues through VGS and Other CBO Employments

Burunge CBO locally recruits 30 VGS, one accountant, one office assistant, and one attendant who receive a monthly salary and other allowances (Table 4). Accountancy and office assistance are professional fulltime jobs for maintaining CBO financial records and office, respectively. VGS patrol WMA areas to enforce WMA rules. They are required to work day and night—throughout the year—and receive wages of about US$80 per month. VGS job requirements imply that they have no free time to carry on other livelihood activities. Yet, VGS and their spouses are proud that their work protects wildlife and the

environment, and consider the monthly wages as an appreciation of their work. In reality, however, VGS have informal arrangements that free them from their patrol duties, alternately offering themselves breaks. This gives VGS chances to continue with regular income-earning activities such as agriculture and livestock keeping while maintaining access to WMA income. The CBO, for example, requires two VGS to be positioned at a ranger post to monitor tourist entry and exit in the campsite at all times, but we observed that only one VGS was carrying out the duty.

VGS agree informally to work on shifts, one during the day and another at night or on a weekly rotation. The special anti-poaching VGS unit, comprising 10 VGS, also frees three of its members daily to carry on other livelihoods activities (participant observation). CBO leaders and residents tolerate these informal arrangements, but yet most of the residents refute VGS' claims of service to the community. To them, VGS positions are an income-earning opportunity that also gives VGS members an excuse to skip social responsibilities, such as contributing manpower to community development activities and participating in social events without being officially or socially sanctioned.

Burunge residents' claims that VGS positions are income-earning opportunities are substantiated by an increasing number of individuals aspiring for VGS and CBO positions. According to individuals who served in the CBO since its initiation, previously village assemblies had to plead with residents to fill these positions. Today, since residents have learned about the associated personal benefits, such as salaries and allowances, competition has emerged. In 2014, the CBO announced one VGS vacancy to be filled by a resident of Mwada village (VGS positions are divided equally among member villages). More than 30 young people from Mwada responded to the call. In March, the same year, elections for CBO representatives in Burunge WMA member villages saw a surge of aspirants and voters. Election assemblies were packed and participation in terms of questioning aspirants' motives was relatively high (personal observation)[12]. Although issues related to access rights dominated questioning sessions, voting decision was much based on how WMA incomes are spent. CBO representatives seeking re-election were seen as ''individuals representing their own stomach'' (inter- view with a village resident, 2014). Thus, of the 34 seeking reelection[13], only 13 were re-elected. When we asked residents why they did not re-elect a CBO representative who was also a CBO leader, residents pointed to the wealth accumulated while in power: ''[name] was not rich before, just a few

years after becoming a WMA leader, [name] started to build a big house, where does [name] get all the money? They eat [steal] our money'' (interview with a village resident, 2014).

Accessing WMA Revenues through CBO Membership and Leadership

The CBO consists of 40 representatives, 20 village leaders (village chairpersons and village executive officers), 3 ward executive officers, and 3 district officials. They access WMA incomes through allowances for attending CBO meetings, training, and other WMA-related duties. In a period of 3 years (from July 2012 to June 2015), the CBO has spent an average of US$32,568 and US$9,416 as meeting and travel allowances per year, respectively, together corresponding to 17% of average total expenditures (Table 4). The allowances cover members' costs when attending CBO general meetings, held at least three times a year and involving all CBO members, village, ward, and district officials. They also cover costs for CBO executive committee and finance committee meetings, comprising ten and five individuals, respectively, selected among the CBO representatives, held at least once a month. In addition, the CBO speaker, deputy speaker, and the secretary receive a leadership allowance of about US$110 per month. There can also be frequent additional consultation meetings involving CBO representatives, and other benefits, which give them increased access to WMA income. In 2014, for example, each CBO representative received a gratuity of about US$356, for their 3 years of service (CBO representative positions last for 3 years). In total, the 40 members received US$14,259 (5.3% of total expenditures in 2014–2015), which is more than the amount remitted by the CBO to the individual member village annually.

Table 4: Burunge WMA expenditures (in US$)

Expenditure category	2012/2013	2013/2014	2014/2015
Member villages' share (10 villages)	141,030	124,275	135,260
VGS salaries and allowances	30,834	34,725	31,053
CBO office staff Salaries	7,664	2,024	1,842
CBO office running cost	4,338	6,445	8,880
Meeting allowances	44,445	26,622	26,640
Travel allowances	7,481	8,424	12,343
Leadership allowances	5,850	4,337	3,349
WMA patrol cost	1,634	3,801	2,830
WMA infrastucture and assets	10,694	1,489	9,364
Maintenance of assets and infrastructure	633	1,120	7,573
Conflicts resolution (Legal fees)	7,500	12,587	8,372
CBO members gratuity	-	-	14,259
Other*	1,564	2,928	6,287
Total	**263,665**	**228,777**	**268,052**

* 'Others' include condolences, VGS health care, guest entertainments and uncategorised expenditures.

Source: Compilation based on CBO office financial records.

Member Villages' Access to WMA Revenues

The average member village annual income in the past 3 years was US$13,352 (Table 4) or US$3.90 per person per year (based on villages population estimates of 2012). Residents do not, however, receive cash payments equal to their share. Rather, the money belongs to the village and decisions on how to spend it are made by the village assembly (where individuals older than 18 years can participate). Most often the money is used for public service projects, such as village office building, schools, and infrastructure improvements. Previously, these were financed through individuals' contribution and state grants. Individual contribution was adjusted to the residents' level of wealth and the number of adults in the households. With WMA revenue now financing these projects, the wealthier households, and households with many adults are implicitly favoured, since they used to pay more in village development contribution.

Residents also complained about WMA funds misappropriation at the village level. In one of the villages, residents argued: ''the [village] chairman and the village executive officer

used our [WMA] money to build [hand] water pumps in their hamlets [where the two leaders reside], we never agreed to build water pumps, [but] they decided by themselves'' (interview with a village resident, 2014). Rules governing WMA income expenditure are not as strict as those governing the use of state grants. State grants are allocated for a specific activity and the district council would provide direct supervision to ensure villages comply with rules governing the use of state funds. This leaves no or less room for manipulation by village officials as compared to WMA income, whose expenditure is mainly determined by village officials who, according to the residents, collude with service providers to hike prices, and use most of the WMA income to pay themselves allowances. Elected village officials are working on a voluntary basis (no monthly salaries), gaining mostly honour and respect in return. Yet, their responsibilities, such as that of a village chairman, often demand substantial amounts of time. This creates costs since this time is then lacking for engaging in other livelihoods activities. Therefore, village officials might regard the WMA revenues as a welcome opportunity to compensate themselves for the time and effort they invest in serving the community (Funk, 2015).

Accessing WMA Revenues through WMA Tourism Investments and Other Labor and Business Opportunities

In Burunge, all tourism investments such as campsites and a hunting block are owned by non-residents. Tourism investments require a substantial amount of capital and knowledge (Chachage, 1999; Salazar, 2009; Temu & Due, 2000), which most Burunge residents do not have. WMA income opportunities for regular residents are therefore limited to sales of crafts and souvenirs and providing labor to investors. But souvenir business is not a new income opportunity, as it existed prior to the WMA, and still, residents maintained access to natural resources in all parts of their village lands. Moreover, in-depth interviews revealed income from tourism-related activities, such as income from sales of crafts or souvenirs benefited only a few villagers who live around the National Parks entrance gates that are popular with tourists entering the National Parks, mainly in Olasiti and Kakoi villages. Sale of crafts and souvenirs are therefore not necessarily related to the WMA implementation, but rather to the direct proximity to the National Park entrance gates, which are frequently used by tourists.

Burunge residents also lack skills to work as tour guides, chefs or other ''well paid'' positions in tourist campsites. Previously, few residents worked as guards for private

investors. Yet, access struggles made these positions socially risky and professionally difficult. Strict enforcement against fellow residents presented them as obstacles to their communities' livelihoods strategies; thus, they acted leniently. In response, investors started to replace locally hired guards with individuals from outside Burunge to increase security. One investor argued: ''I was employing local guards, my generator was stolen and it was found within one day, but they [locally hired guards] don't care about cows being close to my hotels, it is not good for tourism'' (interview with tourist campsite investor, 2015). This implies that the notion that WMAs would attract external capital to diversify local peoples' income opportunities is a simplistic idea. It ignores past experiences in community-based conservation, where issues of elite capture and profit-seeking behaviours are common (see e.g., Brooks, Waylen, & Mulder, 2013; Green & Lund, 2015; Lund & Saito-Jensen, 2013; Lund & Treue, 2008; Platteau, 2004), and when conservation dwells on restrictive access rules, local enforcement becomes ineffective as rural communities would apply social pressure on VGS and rely on relational access mechanisms.

Mirroring WMA Residents' Access Experiences Against non-WMA Residents

In the preceding sections, we have largely narrated how WMA rules have affected WMAs residents' access to land and other resources and how different segments of the WMA community have responded to restrictions. In this section, we contrast those experiences to non-WMA residents who either refused to join the WMA or were not included (by the WMA initiators) in the program (see Moyo et al., 2016). By not surrendering parts of their village land to WMA, the non-WMA residents maintain access to all parts of their village lands. Although this means the villages miss potential WMA incomes that would have ostensibly reduce individuals' burden for financial contribution to community development projects (and at the same continue to experience wildlife nuisances like WMA villages), there were no access conflicts. Non-WMA residents felt free of conservation ''oppression'' and frequently referred to conflicts about access to grazing and agricultural lands in WMA villages as something that ''eats'' the people in WMA villages. A resident in one of the non-WMA village, where villagers refused to join the WMA, for example, argued: ''we had good leaders other-wise we would be suffering like those in Vilima Vitatu [a WMA village]''. In another village, residents viewed WMAs' access limitations rules in a neighbouring Sangaiwe village, a WMA village, as domination and an oppression to

the people who offered their lands to the conservation of wildlife. The general sentiments were ‘‘Sangaiwe people are not free’’ (interview with a village council member non- WMA village, 2015) and ‘‘we don’t want to be prisoners in our own land like those in Sangaiwe’’ (interview with a female resident in non-WMA village, 2015).

WMA is thus perceived as state’s attempt at retaining control over wildlife resources and village lands, and effort to discipline local people to comply with conservationist’ NGOs as well as global investors’ interests. This matters because WMA success hinges on the participating communities’ positive perception toward the policy intention to improve their livelihoods and access to resources. The dissatisfaction in WMA villages communities and the negative thinking toward WMA access rules in non-WMA villages thus showcases a policy failure to impact a sense of conservation ownership and attract local communities to participate in wildlife conservation. As a result, those who have accepted WMA resort to a host of illicit access mechanism, which are likely to jeopardise conservation efforts. On the other hand, those who refused or are yet to accept WMAs become more sceptical of the conservation approach.

Discussion

Using access theory analytical framework, we have explored Burunge WMA to demonstrate access struggles in community based conservation (CBC). We have shown how state and non-state conservation actors’ efforts at sustaining a natural resource base for all lead to the exclusion of those who are most dependent on access to it. By mirroring WMA residents’ access experiences against non-WMA residents, we were able to eliminate many other processes such as ‘‘land grabbing for large scale agriculture’’ that are taking place in Tanzania (Funk, 2015), that would have impact on access changes. Access struggles in WMA villages show that state actors and conservationists NGOs promotion of conservation by territorialisation and zonation of WMAs lands (Bluwstein & Lund, 2016) incite access and land use conflicts. The categorization of community lands into go and no go zones curtails local peoples’ access to land and natural resources. The process denies them their customary use rights and claims to resources.

On the hand, WMA success hinges on the neoliberal conservation thinking, which assumes that by attracting external capital to be invested in ecotourism activities in village lands (now WMAs lands), local peoples’ livelihood strategies will be diversified, consequently

reducing pressure on land (Igoe & Croucher, 2007; Green & Adams, 2015). In reality, however, neoliberal conservation transfers communal lands to private individuals. Specifically, it privileges actors who have access to large amounts of financial capital and connections required to invest in the lucrative tourism businesses (Chachage, 1999; Salazar, 2009; Temu & Due, 2000) and disadvantages poor rural people who endure the losses caused by wildlife nuisances (Moyo et al., 2016) and forgone interest such as access to land for agriculture and livestock grazing (Noe & Kangalawe, 2015).

WMAs processes also create spaces for elite capture by local elites. It concentrates licit benefits, such as income opportunities to those who hold official positions such as CBO leaders, representatives, and VGS. These individuals pocket a large share of WMA income through allowances and salaries. By reassuming powers to collect WMA fees, and thereafter remit part of it to the CBO, the state also amplified its control village lands. Thus, instead of empowering local communities to benefit from natural resources, WMAs processes legitimize transfer of land and natural resources from the hands of local communities to the state and elites (Benjaminsen & Bryceson, 2012; Noe & Kangalawe, 2015) and consolidate resource control powers to the state and create space for elite capture (Benjaminsen et al., 2013; Igoe & Croucher, 2007).

Implicitly, WMAs policy implementation supports platforms for capital accumulation by wealth investors and elite capture by local elites. The process leaves the majority of poor rural people, whose livelihoods largely depend on access to natural resources, to rely on illicit access mechanisms. As a result, in Burunge, communities have employed a wide range of access mechanisms such as social and relational mechanism to demand or gain access to lands and natural resources. Different actors and segments of the community have exerted remarkable determination and political perspicuity, knowing especially when to adopt covert and more diplomatic means or adopt overt, forceful means such as destroying WMA infrastructure. While these mechanisms seem to have worked successfully on providing local people access to land and natural resources such as grazing and agricultural lands, the direct incomes generated by WMAs remain in the hands of the few elites. This raises alarm on the WMA capacity to promote equity in natural resources management and on its long-term impact on the protection of wildlife corridors and biodiversity. It thus necessitates the need to revisit the WMA policy design and implementation processes, which are currently firmly built on the domain of state and conservationist NGOs agendas

(Benjaminsen & Svarstad, 2010; Sachedina, 2008), to refocus its emphasis on meeting community needs and ensuring equity in sharing benefits accrued from conservation activates. Yet in Burunge, the implementation of WMA policy reveals typical state and NGOs' behaviour, where state institutions tend to focus on land control while retaining a necessary level of legitimacy, while NGOs often focus on accountability toward their donors (Mosse, 2007; Myers & Muhajir, 2015; Sachedina et al., 2010). Although state actors' and trans- national conservation NGOs' narrative is to promote good governance, transparency, and accountability, the practice is at odds with the policy goals and local participating communities' interests. WMAs policy is implemented without considering local people's livelihoods needs and aspects of costs and benefits sharing. By not recognizing rural people's customary claims to land and resource use (Myers & Muhajir, 2015), the official policy prescriptions of inclusion becomes ineffective.

Implication for Conservation

This article shows that different actors view conservation success differently. State and donors consider income at community level as a measure of success, while the community's measure of success is individual incomes and access to resources deemed vital to support their livelihoods. This misjudgement in policy design and implementation processes, or failure to align the various actors' interests, makes conservation unprofitable and unattractive to rural people (Belsky, 2009; Benjaminsen et al., 2009), and leaves ''black holes'' for local powers to colonize and turn the intended outcomes to different ends (see also Scheba & Rakotonarivo, 2016). State and donor attempts' to empower and promote local communities to participate in conservation has lead to (a) strengthening of states' power to collect and retain revenues accrued from conservation activities (Benjaminsen et al., 2013; Brockington & Schmidt-Soltau, 2004; Igoe & Croucher, 2007), (b) creation of property rights to elites who then use these rights to alienate others from accessing common resources (Benjaminsen & Bryceson, 2012; Lund & Saito-Jensen, 2013), and (c) emergence of local elites who through leadership positions and employment in conservation projects pocket a significant share of conservation income that would otherwise be used for community development (Lund & Saito-Jensen, 2013). This leads to protests against conservation, and attempts to regain access, resorting to violent struggles against state and private investors. Consequently, the conflicts created by the failed states' and donors' attempts at inclusion erodes rural peoples' trust and willingness to support

conservation, in areas where previously, people coexisted with wildlife and collaborated with private investors in conservation and tourism activities (Benjaminsen et al., 2013).

It shows that rural the peoples' need to access natural resources has come to an age in which ''the unthinkable has become, frankly, inevitable.'' It posits that some of our best minds remain anchored in older ways of ''seeing and thinking'' leading to ''repeated misjudgements'' about new realities. It shows that the integrity of conservation and the willingness of rural communities to support conservation and trust that CBC programs understand their needs-or, for that matter, CBC programs are telling the truth about access rights—is leaching away. The situation leads to the emergence of a violent wave of protests and struggles against conservation, a change that a few years ago, many thought of as ''unthinkable'' in communities where historically rural people ''harmoniously'' shared landscapes with wildlife. Thus, state and conservationists' NGOs attempts' to eliminate conservation challenges must better acknowledge the inherent trade-offs of natural resources conservation and livelihoods and take into consideration the local situation. We argue that conservation policies and programs should come into terms with, and embrace reality that conservation success is fundamentally driven by and is no longer immune to local socioeconomics dynamics. We call upon states, conservationist NGOs, and the private sector, each at their capacity, to provide conducive and friendly environments that iteratively learn from and incorporate new local experiences that would assure that the long-term policy goals on conservation and community amity are secured.

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Notes

1. By non-state conservation actors we refer to transnational conservation NGOs or agencies.

2. Village land means a piece of land owned by the village and all decisions pertaining to sell or change land use are taken by the village council or village assembly.

3. Field work was divided into two field visits. January to June 2014 and February to June 2015

4. The register was first updated by asking village leaders and council members to add new households and remove those which are no longer existing.

5. The management of dry season grazing was headed by village elders who used social sanctions to protect common property.

6. The villages had already set aside the areas for establishing WMA but were not officially recognised until 2006 when Burunge was registered

7. First author has in possession copies of statements signed by individual council members at the village assembly on 28th November 2013 to disown the signature in the documents.

8. In 2013, CBO and state agencies burned temporary herdsmen dwellings in one of the WMA areas (corridor use zone) needed by a tourist investor for game rides (‘‘Kijiji Chachomwa Kumpisha’’, 2013).

9. A system where land is closed for all human activities to allow vegetation to regenerate.

10. Complete records of WMA income and expenditure were available for the period of three financial years, starting from July 2012 to June 2015. Currency exchange rate was adjusted at end of each fiscal year.

11. Since 2012 the wildlife department collects campsite fees. VGS records are therefore used by CBOs to reconcile incomes reported by the state and the actual number of tourists who visited the campsites.

12. First author attended other village assemblies that discussed issues related to education and election of members of primary school board, where residents were less interested and members of the school board were simply nominated.

13. Two individuals did not seek re-election and Minjingu village refused to conduct election as the village does not recognise the WMA.

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5. Synthesis of key findings and their implication for policy, development, and research

5.1. Overview of key results: Conservation-development nexus

This synopsis provides an outlook for the complex issue of the conservation-development nexus based on the recollection of the rich history of resource use trends, and the evolution of its management regimes presented in the introductory chapters. The synopsis also integrates empirical findings from the three papers which respond to the three research questions set on the onset on this dissertation, which are: i) to what extent do local communities participate in managing landscape resources? ii) how has WMA implementation changed the way in which local people access and perceive wildlife resources? and iii) how does access to resources and livelihoods outcomes of WMA implementation vary across different types of individuals and households? In attempt to advance knowledge and contribute to the efforts on finding better ways and less coercive ways to manage natural resource, the synopsis proposes a framework for tailoring adaptive co-management (see Plummer and Hashimoto, 2011; Sayer et al., 2013). This synopsis concludes by presenting a critical review of the research methods and analytical generalisation of study results, and an outlook that puts forward recommendations for research, policy, and development.

The first paper in this dissertation demonstrates that there are enormous discrepancies between discourses and ground realities pertaining to attempts to empower rural people to take charge of conservation and their own development. It shows that, in spite of the optimistic portrayals of WMAs from state and conservationist NGOs, the reality is messy and chaotic. WMAs foster limited ownership, participation and collective action at the community level. WMAs governance continues to follow a logic of central government control over natural resources and the associated benefit. Thus, drawing from empirical evidence on power constellation in Burunge case, this dissertation puts forward an explanatory model for predicting power transfer under *status quo* CBC regimes (Figure 6). The model is build based on Schlager and Ostrom (1992) types of actors, namely i) authorised users, ii) claimants, iii) proprietors and, iv) owners. Together with Agrawal and Ribot's (1999) four types of powers: i) create rules or modify old ones, ii) make decisions on how a particular resource shall be used iii) implement and ensure compliance with new or altered rules and, iv) arbitrate disputes arising from management process or effort to create rules and ensure compliance to access rules. The concentration of powers at the state level reveal that the so-called community-led conservation initiatives do not constitute genuine community ownership of the resources and space for popular participation

in rule-making and resource allocation. WMAs, therefore, cannot be referred to as CBC unless genuine ownership and powers are transferred to participating communities.

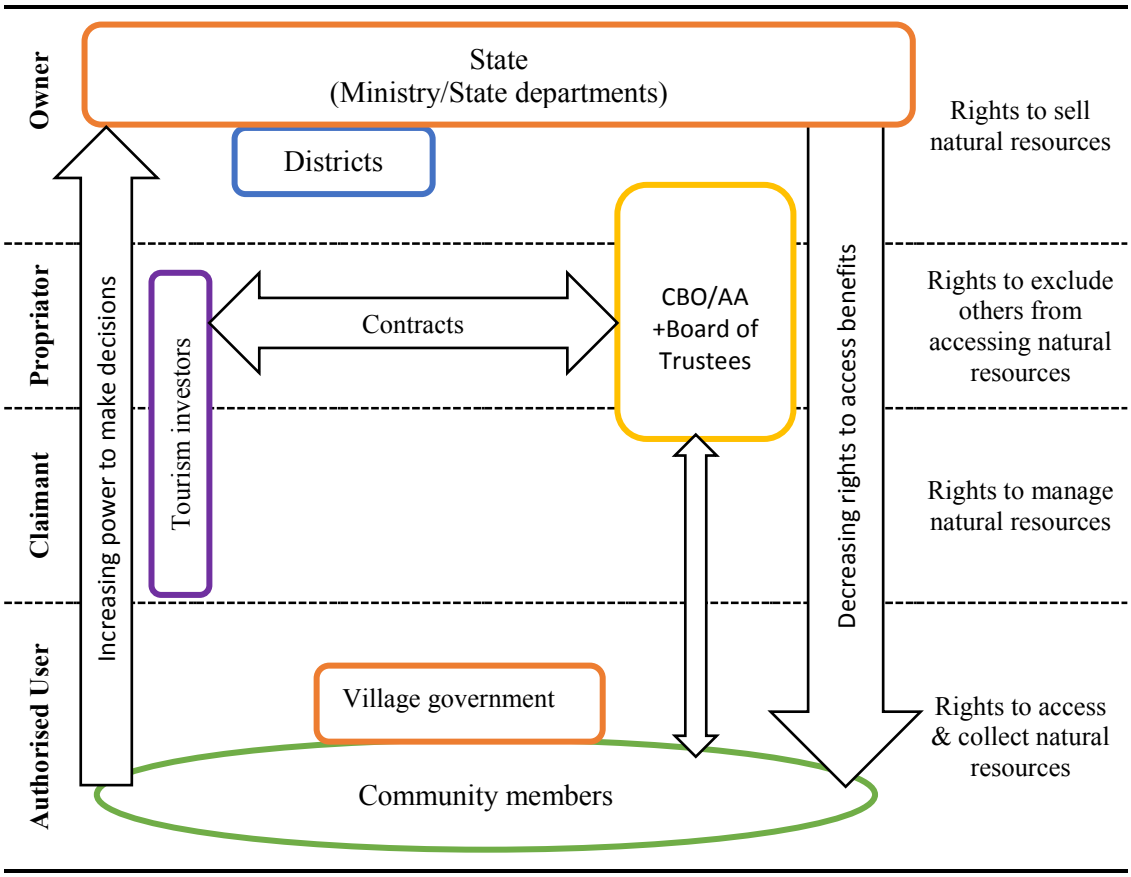

Figure 6. An explanatory model of power transfer in current CBC processes (Own illustration based on Schlager and Ostrom, (1992) and Agrawal and Ribot (1999)

The second paper reveals how WMAs are rife with conflicts and contestations over grievances that it sought to abate. The grievances are accentuated by growing land pressure resulting from an increase in human, livestock and wildlife populations, in combination with infrastructure improvements and support for agriculture-led development. It shed light on the complex interactions between conservation and development by exposing the precarious feedbacks within the nexus. Improvement in agriculture, livestock, infrastructure and access to markets, for example, increases pressure on land and landscape resources. Yet, the inflexible WMAs governance regimes offer very little or nothing to the residents and village leaders in the participating communities who appear hostages in a situation where interests in human development and conservation are pitted against each other. Rural populations are not compensated for crop and livestock losses and/or even human injuries and death caused by

wildlife. Besides, WMA regimes invest very little resources (revenues) in the protection of crops and livestock against wildlife. Yet, state agencies and transnational conservationists NGOs continue to praise and embrace WMA regimes. This situation not only makes a mockery of the notions of community-based conservation but also pinpoint to the tendency of global and national actors promoting conservation in Tanzania and elsewhere to misrepresent or ignore the local realities that defy official policy promises.

The third article shows that WMAs concentrate licit benefits to few elites and criminalises rural peoples' customary livelihoods and claims of access rights to natural resources. This leaves the majority of rural people who endure the cost of conservation in forgone individual livelihoods interests, such as farmland and pasture for livestock, and wildlife damages on crops, livestock, and people, to rely on illicit access mechanisms. In Burunge, this has led to violent confrontations between game scouts and people, and protests and struggles to re-gain legal access. But at a more general level, the conflicts created/exacerbated by the WMA regimes gradually erodes rural peoples' trust and willingness to support conservation. Thus, in order to advance conservation-development agenda, conservation policies need to understand rural peoples' needs and address them not only as 'add on' but at their very core. CBC interventions, therefore, must recognise customary claims to land and use of natural resources, and make sure that benefits accruing from conservation activities trickle down to the household level. State and conservation agencies need to clearly communicate the intended outcomes and beneficiaries of development and conservation interventions. Participating communities shall be given the opportunity to principally agree on benefit sharing mechanisms, largely, based on the need or merit. Institutions entrusted with natural resource management must be accountable to affected people, across scales of governance to allow local communities to challenge power relations.

Based on the above empirical evidence, and the historical trends on natural resource use and management regimes presented on the onset of this dissertation, it is evident that any conservation interventions on human-dominated landscape will result in the emergence of new competing claims of property rights, legitimacy and access rights (see also Rasmussen and Lund, 2018). In particular, conservation interventions' attempts to simultaneously improve conservation and alleviate rural peoples' poverty by seeking biodiversity refuge on human-dominated landscapes produce a wave of unpredictable and precarious feedbacks to both conservation and livelihoods. The interventions are largely designed and implemented based

on global and state level interests, hence continue to reinforce states' powers over access to and control over landscape resources (Vorlaufer, 2002). This failure to empower and clearly address rural dwellers' access needs is the leading cause of community grievances and resource conflicts in conservation interventions. Attempts to resolve conflicts and achieve long lasting conservation impacts, therefore, need to put emphasis on facilitating rural populations' access to land and natural resources which are an important source of rural peoples' livelihood and culture. This means the intervention should be able to provide opportunity for community's self-evaluation of outcomes, social cultural norms and values (the subjective wellbeing), food and health security, and access to incomes (the objective wellbeing), and freedom of choice and action, power relation between stakeholders, and social relation and conflicts resolution (the relational wellbeing) (see Woodhouse et al., 2018).

There is a need also to facilitate local communities to meaningfully participate in the design and implementation of conservation intervention. This will allow transparent and logical changes (Sandker, 2010, Sayer et al., 2013), and facilitate state and conservation agencies to identify and put forward conservation interventions and policies that not only clarify rights and responsibilities but also accommodate interests of the multiple stakeholders. Meaningful participation in the design and implementation of conservation intervention also have the potential to reduce the risks for adjacent populations to bear disproportionate costs of conservation and enhance chances for access rule compliance. This, together with transparent and logical changes will improve actors' freedom of choice and action, power relations, and end state tendency to coerce rural people into conducting themselves in ways that are compatible with states' conservation ideals (see Bluwstein, 2018).

Thus, in order to help policy makers and practitioners to effectively set up co-management regimes that could exploit the multifunctionality of rural landscapes for the benefit of the multiple stakeholders and conservation at a particular locality, this dissertation breaks down the empirical findings in to two main theoretical concepts, namely: i) property rights and rule enforcement agency, and ii) governance rationality and limit to governance. The former has been revealed in many previous CBC studies which have also offered a way out of this challenge, yet it is persistent and common in new CBC interventions (e.g. Agrawal and Ribot, 1999; Igoe and Brockington, 1999; 2007; Igoe and Croucher, 2007; Hall, 2013). The latter is a relatively new school of thought. It is a novelty arm of political ecology that seek to put emphasise on the need to contemplate and synthesise in a more acute and systematic way the

understanding of the policy promise having in mind the potential tradeoffs and human capacity to predict future socioecological events (see Lyall et al., 2009). However, for purpose of operationalisation, the two theoretical concepts are further boiled-down to issues of i) creation property rights and extension of the capitalist market into the rural economy, ii) disenchanted rule enforcement agency and knowledge dichotomy (authority, legitimacy, accountability), and iii) governance rationality and limits to governance.

5.1.1. Creation of property rights and extension of capitalist market to rural economies

Empirical evidence shows that CBC legitimises the transfer of ownership, and power to control access to land and natural resources from local communities to the state and elites (figure 6) (see also Hall, 2013; Noe et al., 2015). This alters labor and production relations as private investments use economic means to expand and reproduce capitalist social relations in their attempt to maximise profit and assume control over the resources (Hall, 2013). This process of accumulation by dispossession or primitive accumulation engrained in CBC implementation is however not a new phenomenon to conservation processes in Tanzania and beyond (Neumann, 1998; Pearce, 2010; Lekan, 2011; Gardner, 2016). Rather, it has roots in colonial and post-colonial governance regimes that in many cases chose to maximise state gains by enhancing access to natural resources for elites who pay rents and taxes to the government (Gardner, 2016). As a result, the decades of policy and law reforms to return ownership and control of the resources to rural people has not generated any notable outcomes in Tanzania.

Conservation and land legislations in Tanzania and most of the countries in sub-Saharan Africa continue to view natural resources as an important source of income for central governments, making rural people tenants on their own landscape (Wily, 2011). This persistent failure of national policies and laws to recognise customary land rights and rural peoples' livelihoods interests impede efforts to restore ownership and transfer power and control of the resources to the local people. The situation deters the ability of local people to challenge state actors and the associated elites from abusing common or public resources for private gain through the official channel. It also makes CBC become part of broader discourses and mostly historical trends in elite capture and criminalisation of rural livelihoods in Tanzania and beyond. This dissertation, therefore, calls upon the many empathetic and hard-working individuals to end the collective failure to address this detrimental discrepancy between reality and representation and start to support affected residents in their struggles for self-determination by supporting interventions that promote forums for negotiations and continual learning.

5.1.2. Disenchanted rule enforcement agency and knowledge dichotomy

CBCs are trapped in the dichotomy of local knowledge versus the official knowledge based on western science. Conservation interventions use official knowledge to override local knowledge and experiences to impose conservation. However, empirical evidence from this study shows that local knowledge is simply a way of life. It constitutes real and perceived values of landscape resources, cultural and ethical standards, and the social and power relations that animate them (see also Berkes, 2009). This means the suppression of local knowledge in the design and implementation of conservation interventions, is simply the suppression of rural peoples' ways of life and their wellbeing (Pilgrim and Pretty, 2010). In this study, in particular, the suppression of local knowledge has resulted in the emergence of access conflicts in landscapes where previously people co-existed with wildlife. Further, in paper three, this dissertation shows that, through training, transnational conservation NGOs and state agencies impart official knowledge to selected few community representatives, who then turn against the people they are supposed to represent. Arguably, because, the new knowledge acquired facilitate them to gain and maintain access to personal incomes through meeting allowances and salaries, which then make representative become royal to the state-driven conservation narratives.

Besides, by entrusting control of landscape resources to the CBO comprising few local individuals who acquire official knowledge through employments (e.g. VGS) and leadership or representation positions, CBC creates space for elite capture and control (see Lund and Saito-Jensen, 2013). This situation drives a wedge of ideological and power relation between representatives and the community, and leads to a feeling of *them* versus *us.* 'Them' being representatives and state and conservationist NGOs actors, and 'us' being the community. Local people normally view CBO, a supra-village government organ with no mechanisms for downward accountability, and VGS as an obstacle for them to access landscapes resources for food security and incomes. This situation gives rise to contending accounts of environmental and institutional change (Robbins, 2000), and it intensifies the unnecessary struggles over resources at the local level. It also limits the efficiency of rule enforcing agency to protect the resources and the ability and effectiveness of civil movements (local people) to resist dispossession and reclaim access to landscape resources through the official channels.

However, to abate the aforementioned challenges arising from knowledge dichotomy, conservation interventions should strive to match local and official knowledge (Pearce, 2010).

This is because, although global driven socioecological changes (Moller et al., 2004) necessitate conservation interventions to engage official knowledge (Gagnon and Berteaux, 2009), the knowledge formulated based on the national and global agenda alone cannot bring development and real change in rural environment (see Scoones et al., 1992; Inglis, 1993; Pearce, 2010; Gardner; 2016). It implies that, vagueness and intentional or unintentional misrepresentation of local knowledge in conservation policies and programs would only mean decisions about how the resources shall be governed are made based on incomplete information, and therefore failure to meet the intended conservation and livelihoods goals are inevitable (Ballard et al., 2008; Pearce, 2010). To end the dichotomy of local versus official knowledge, CBC needs to embrace the congruence and contrast between the local and official knowledge. This will facilitate conservation interventions to exploit the comparative advantages of different regimes and knowledge formation to produce alternative resource management approaches that are less coercive and more sustainable (Berkes, 2009; Berkes et al., 2000).

5.1.3. Governance rationality and limit to governance

According to Agrawal and Waylen (n.d.), there is a limit on which we can govern our way out of socioecological problems. Their arguments are based on human limitations in the understanding of the specific ecological and environmental processes at a particular time and space, and our limitations to predict future social and environmental events. This limitations deter our ability to design conservation interventions and plan safety nets with exactness. In this dissertation, in particular, the rapid growth in human, elephant and livestock population, and improvements in infrastructure and markets for agricultural products came as a shock to the WMA design and the prescribed management rules. During the planning and initiation period, low human and livestock population were seen as an advantage for the conservation intervention to use the so perceived as 'less important village lands' for wildlife protection. At the time, the prevailing local situation and the available information made the WMA's core objective to reconstruct and restore the ecological integrity of wildlife corridor in the village lands, rational to both local populations[3] and state and conservationist agencies. However, later on, changes in local socioeconomic situations made setting aside village lands for wildlife

[3] However, two villages refuse for different reasons. One village refused because they were going to lose village income from tourism investment already existing in their village lands, and the other refused because they believed WMA was a back door approach to include their land into a national park.

corridors to become contrary to local population needs for increased access to agriculture and grazing lands.

Thus, the precarious feedbacks of development on conservation, and the inflexible management regimes make the effectiveness of CBC which hinges on the community's 'self-policing' to become unpredictable and unrealistic. The prevailing social relations and local politics compel local law enforcing agencies (VGS and village leaders) to become less strict on local rule breakers. This makes the realisation of the programmatic conservation interventions impossible. It implies that, in spite of the advancement in science and modeling technologies, perfection in landscape resources governance is not a one off invention. There is a need, therefore, to consider the different facets of the state-led conservation policies as a governance continuum (Lyall et al., 2009), because different socioecological aspects may challenge governance approach at different points or locality and time. Conservation interventions must use a pragmatist-interactionism approach (Welch et al., 2015) to address the problems of regime fit i.e. the capacity of a particular intervention to deal with resource subjective values and functionality at particular locality and time. The interventions need to put emphasise on iterative learning and forums for stakeholders' negotiations to revitalise management regimes with empirical realities and potential limitations. The acknowledgement of limits to governance, therefore, shall not be seen as an acceptance of failure or incapacity to achieve success. Rather, as a wakeup call for promotion and adoption of adaptive management approaches that provide avenue for systematic and pragmatic review of access rules to accommodate the unfolding socioeconomic and environmental realities.

Therefore, given the complexity of ecological systems, and the need to address multiple stakeholders' interests, this disseration adopts a modifed Plummer and Hashimoto, (2011) framework for tailoring adaptive co-management (Figure 7) to assist policy makers and practitioners to pragmaticatically design and plan conservation interventions in a more sensible and realistic manner. The framework consists of two layers, the context and the socioecological resilience and sustainable trajectories can help resolve challenges originating from space specfic situations. The context represents the highly dynamic and inseparable charactericts of natural resources. It includes the landscape resources and social dynamics. Landscape resource dynamics encompasses the distinctive features of natural resources such as discreteness or connection, progression or temporal, and mobility and boundary. The social context, on the other hand, comprises culture and traditions, power and salience that operate on a certain space

and time. Further, the social and ecological context is embedded in wider issues of subjectivity, relativism, and functionality. In particular, embeddeness is an important consideration for adaptative co-management to addresses issues of resource fluidity, dependency, and psychological attachment.

The sociecological and sustainable trajectories layer comprise ecological system functioning, population wellbeing and the proccesses that influence population actions toward the resources. Population wellbeing is a function of access to environmental services and goods. Therefore the multifunctionality of landscape resources can offer alternative development pathways to different stakeholders who frame and express interests and objectives differently (Sayer et al., 2013). This can facilitate adaptive co-managemnet to resolve the problem of fit or the capacity of particular conservation intervention to address challenges related to locality.

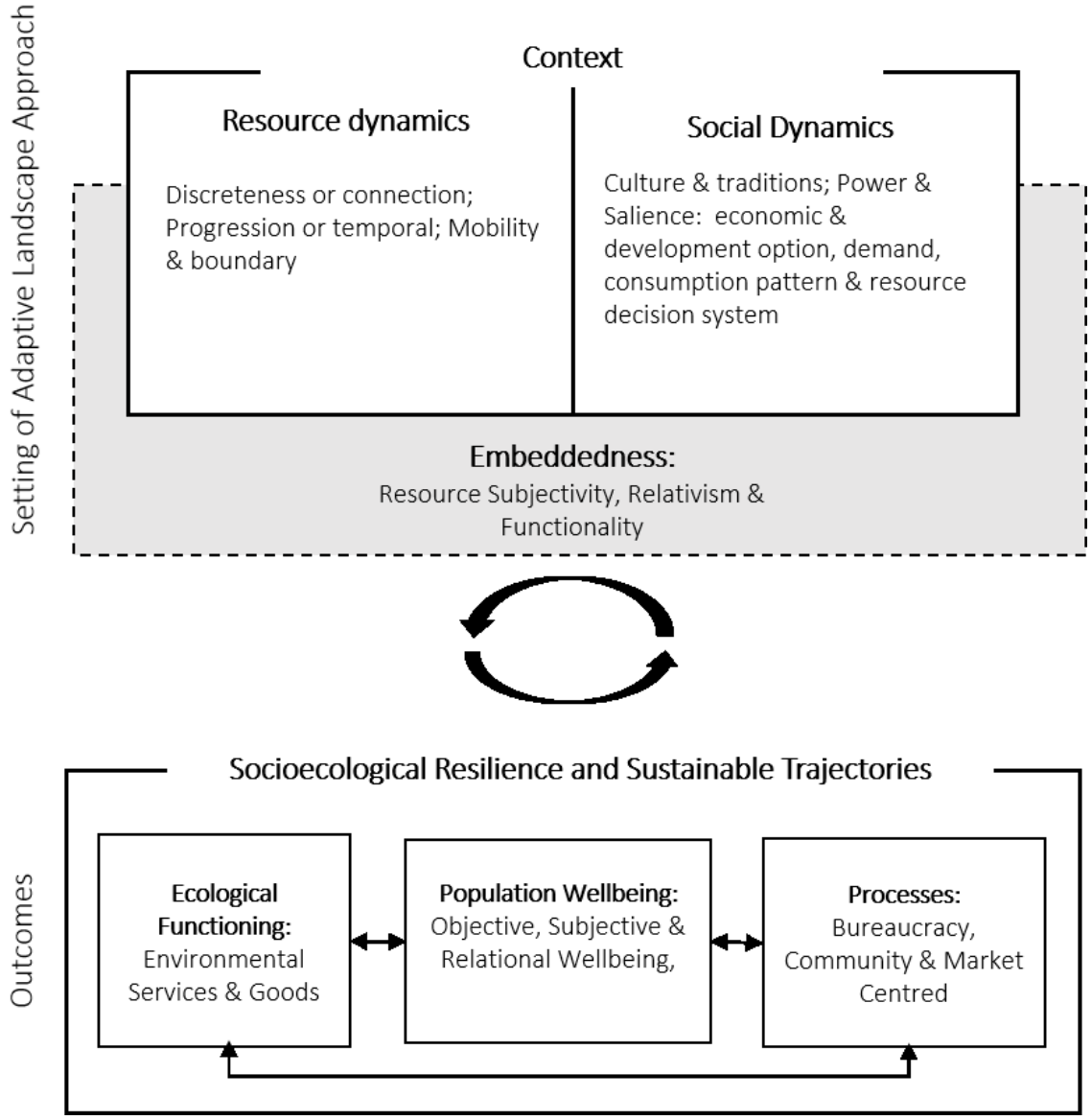

Figure 7. A modified framework for adaptive co-management (Based on Plummer and Hashimoto, 2011; Sayer et al., 2013; Pretzsch et al., 2015 and Woodhouse et al., 2018)

5.2. A critical review of research methods and analytical generalisation of the results

The conservation-development nexus encompasses complex socioecological systems associated with multiple drivers of change and feedbacks (Folke, 2006; Bennett et al., 2009). Therefore, in order to attribute livelihood outcomes to the WMA policy implementation, and filter out other nuisances, this study used the following methods: First, a case study approach or site-by-site assessment, this was important to understand space specific livelihood outcomes of implementing state-led conservation policies at the local level. The approach allowed the capture of the wider and most important political and institutional factors that influence policy

outcomes at the local level (see Flyvbjerg, 2006). Second, counterfactual techniques, where the study compared villages with and without the WMA intervention, and before and after the WMA intervention. In particular, this provided an opportunity for this study to filter out impacts that are not related to WMA policy implementation (see Ferraro, 2009). Third, a mixture of quantitative but largely qualitative methods. This was specifically important in capturing information and symbolic forms through which perceptions and meanings are experienced and expressed in conservation processes (see Creswell, 2009 and Pearce, 2015).

Moreover, conservation actors are diverse, and so are their interests. Different individuals and groups of actors hold subjective perceptions of costs and benefits of conservation. Thus observing and listening to research participants' stories and life experiences, opened access to highly sensitive information about contentious issues of land ownership, local conflicts, and criminalisation of access rights to conservation territories. The issues that are vital for understanding and managing rule compliance and equity. Additionally, although critics of ethnographic research approaches may argue that the techniques might produce discrepancies and incompatibilities in story lines (see Nightingale 2003), in this dissertation, the dissonance was however telling in multiple ways. It informed the study about local interests and what is at stake for different actors, making social conflicts and the politics of conservation visible. Furthermore, in order to reduce the various biases inherent in the study of conflicts, the study put emphasis on building trust with research interlocutors. Prior to the interviews, respondents were asked for their informed consent, ensured anonymity and given an option to opt out at any time.

Further, analytical generalisation based on the results from a single case study is possible because of the following: First, the study uses a conceptual framework that can be equally applied to most localities and contexts. According to Yin (2009; 2010), analytical generalisation of a case study results is valid if the goal is to expand and generalise theory. This is exactly the case for this study, it does not attempt to infer statistical generalisation, rather, analytical generalisation through the expansion of the two theoretical concepts in section 5.1. Secondly, the case study was not randomly selected, rather purposefully following Flyvbjerg (2006), who argues for research to explore 'black swan' case studies to solve real societal problems. Black swan is a highly unlikely incident or event with three principal characteristics: i) it is unpredictable; ii) it carries massive impact; and, iii) after the fact, people create an explanation that makes the incidence appear less random, and more predictable, than it actually was (Taleb,

2007). Burunge case is a black swan in the following sense: it is one of the first operational WMA in Tanzania and attracts more tourism investment than most other WMAs in the country. Therefore it is exceptional. It also carries major impact because its funding initiators rationalise and promote it as the best example of community based wildlife management approach, and the proliferation of WMAs in Tanzania is largely rationalised based on Burunge 'success' (see WWF, 2014; AWF, n.d.). Burunge case is also arguably one of the most heterogeneous WMAs in terms of the mix of ethnicities and languages, livelihoods and land use practices.

Thus, as a black swan case, result from Burunge case shed light on what to expect on other WMAs with varied tourism potentials and less ethnic diversity. Among many other things, it demonstrates that in areas with lots of tourism income potentials, one should expect to see increased interests for state control and elite capture and vice-versa. Pertaining to ethnic diversity, it shows that, the less the diversity the less the chances of observing land-use conflicts that emanate from ethnic-based livelihoods strategies. Largely because less heterogeneous communities are likely to have more or less similar interests and attitudes toward landscape resources.

5.3. Outlook

The main body of this dissertation presents challenges of CBC, pinpointing to the causes and potential solutions. The lack of successful exemplars or stories is not an oversight, but rather an attempt to narrate the complex and highly dynamic issues of the conservation-development nexus without making explanations that would present short lived success cases as less random, and more predictable than they really are. Moreover, the widely publicised success stories such as the Graskop, Makuleke, Richtersveld community-based wildlife conservation projects in South (see DEAT and GIZ, n.d.) and Burunge in Tanzania, are told by their funders. The South African government and GIZ for example, used the three success stories to justify the proliferation of community-based wildlife conservation by using "the similar methods and techniques to promote rural development and extend conservation to all provinces in South Africa" (see DEAT and GIZ, n.d.:2). This was also the case for Burunge, where AWF and WWF's self-assessment success story were used to develop 'WMA guide book' and rationalise proliferation of WMAs in others areas of Tanzania. The reported success, however, is largely based on increased densities of wildlife (Lee and Bond, 2018), rather than population wellbeing or distributive rights. The precarious feedbacks of improved conservation and increased wildlife population such as wildlife raids on crops and wildlife are also merely mentioned.

This tendency of state and donor agencies to ignore the multiple factors and feedbacks in integrated conservation and development projects deter poor countries to achieve development goals and find alternative and better approaches for wildlife conservation (Newmark and Hough, 2000). There is need therefore for independent research and continuous monitoring of both ecological and socioeconomic outcomes to avoid justification of coercive conservation regimes based on short-term or unsustainable conservation outcomes. In lieu of this, the empirical results and the theoretical lessons, this dissertation put forward the following recommendations for development, policy, and research.

First, state and conservation actors need to understand that policy promise to benefit rural people is one thing, but if those benefits do not trickle down to the household level, there will always be animosity. Conservation policies therefore should consider, and clearly address issues of resources ownership, benefit sharing, and rights and responsibilities. State and other actors shall focus on translating the rhetoric rooted in national and global conservation-development agenda, to return ownership of land and natural resources to local people, into national laws. State laws must recognise customary use rights, and empower rural people to manage natural resources. Pertaining to benefits sharing, in particular, conservation policies should put emphasis on distributive rights. Conservation investments need to provide an anchor for rural people to participate in trade, secure job opportunities, and more importantly, use the returns from the investment to improve infrastructure and social services at local level.

In regard to rational governance, conservation interventions need to embrace, and strategically utilise knowledge generated through local practices and experiences, and science and modern technologies, to align growth strategies with land and ecosystems management. State agencies, transnational conservation and development NGOs, and local institutions should focus on building structures and mechanisms that will facilitate the identification of comparative advantages of each level of institution, stakeholder and/or groups of actors in generating and mobilising knowledge, and coordinate planning and implementation of conservation activities. To this end, state and NGOs shall focus on capacity building and facilitation of local institutions and communities to gain knowledge and negotiating skills on issues pertaining to land tenure security, land use planning and management, and contract engagements.

Furthermore, conservation interventions on human-dominated landscapes should consider competitive advantage of the targeted landscapes in order to make conservation benefits outcompete other forms of land use. The interventions should not only focus on restoration and

reconstruction of ecological systems but also strive to improve the lives of rural people by promoting livelihoods strategies that have less or no detrimental effect on biodiversity such as livestock grazing (see Schieltz and Rubenstein, 2016) and ecotourism. In areas where agriculture is more profitable, growth must encourage value-added strategies through processing of agricultural products to increase profit and diversify job opportunities at local level. Conservation policies should also provide safety nets to minimize risks to farmers and pastoralist when exclusion of some customary livelihoods strategies such as agriculture and extractive utilisation of natural resources is inevitable or when agriculture and livestock production become unprofitable due to wildlife raids on crops and livestock. State-led conservation policies should offer avenues for compensation schemes, where part of revenues generated in conservation activities would be used to compensate local populations for damages caused by wildlife. State agencies should also promote crops which are less prone to wildlife predation such as sesame, and planting of small woodlots for poles and fuel wood.

In conclusion, this dissertation calls upon research to focus on, and iteratively continue to, explore social and environmental relations and changes to find better, less coercive, less exploitative, and more sustainable ways of governing natural resources. It is important to begin with the understanding of local values and opportunities, and learn from elsewhere experiences, to design and adopt conservation policies that would work at local level. Specifically, the research shall dwell on the site-by-site investigations to find best exemplars for policy design and adjustments, and identify competitive advantage for land use, which will foster rational governance in land use and natural resources management.

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7. Appendices

Appendix 1 Household survey questionnaire

A. Identification

1. Identification and location of household.

1. Household name and code		*(name)	(HID)
2. Village name and code		*(name)	(VID)
3. District name and code		*(name)	(DID)
4. Name of respondent		*(name)	(RID)
5. Date of interview	Day	Month	Year
7. GPS reference point of household (UTM format)			
8. Distance of the household from the centre of village (in minutes of walking and in km)	1. min	2. km	

B. Household composition

1. Who are the members of the household?

1.Personal Identification number (PID)	* Name of household member	2. Relation to household head[1)]	3. Year born[2)] (yyyy)	4. Sex 1=male 2=female	5. Education[3)]
1		Household head = code 0			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

1) Codes: 1=spouse (legally married or cohabiting); 2=son/daughter; 3=son/daughter in law; 4=grandchild; 5=mother/father; 6=mother/father in law; 7=brother or sister; 8=brother/sister in law; 9=uncle/aunt; 10=nephew/niece; 11=step/foster child; 12=other family; 13=not related (e.g., servant).

2) One may ask about age, and the calculate 'year born' when entering data.

3) 1=No formal education; 2=Primary education; 3=Secondary education; 4=Vocational training; 5=College (Diploma/Certificate); 6=University (Degree)

2. We would like to ask some questions regarding the head of this household.

1. What is the marital status of household head? Codes: 1=married and living together; 2=married but spouse working 3=widow/widower; 4=divorced; 5=never married; 9=other,	
2. How long ago was this household formed?	years
3. Was the household head born in this village? If 'yes', go to 5.	(1-2)
4. If 'no': how long has the household head lived in the village?	years
5. Does the household head belong to the largest ethnic group/caste in the village?	(1-2)

C. Land

1. Please indicate the amount of land (in acres) that is currently owned by the household including land that you have rented in/out.

Category	1. Area (acre)	2. Ownership (code-tenure)[1]	Main products grown/harvested in the past 12 months; Max 3		
			3. Rank1	4. Rank2	5. Rank3
Forest:					
1. Natural forest					
2. Managed forests					
3. Plantations					
Agricultural land:					
4. Cropland					
5. Pasture (natural or planted)					
6. Agroforestry					
7. Silvipasture					
8. Fallow					
9. Other vegetation types/land uses (residential, bush, grassland, wetland, etc.)					
10. Total land owned (1+2+3+…+9)					
11. Land rented out (included in 1-9)					
12. Land rented in (not included in 1-9)					

1) Ownership code: 1. State, 2. Community, 3. Private, 4. Open access 5. Other, specify.
2) Product code: 1. Fire-wood/charcoal; 2. Timber/poles or other wood; 3. Vegetables; 5. Fruits 4. Medicine; 5. Forage/fodder; 6. Thatch grass, 7. Honey, 8. Ropes, 99. Other specify.

2. Do you think the land owned by the household is enough? (If yes skip to section 4)
1=Yes; 2=No

3. If no, indicate category of land which is not enough (e.g. agricultural, enumerator read category from the table above)

4. Where can you get more land if needed? (cycle all responses)
1=From village officials for free
2=From village officials but pay
3=From family and friend for free
4=From family and friend for free
5=Buy from other villagers
6=Other, specify

5. If buy from other villagers, how much per acre? [ ]

6. If get from village official but pay, how much per acre? [ ]

7. If get from village officials for free, describe the process?

8. Compare now and 10 years ago, when is it easy to get land?
1=now, 2=before, 3=don't know

9. If before, why?
1=few people, 2=no rules, 3=there were rules but not enforced, 4=other, specify

10. Did the household clear any forest during the past 12 months? If 'no', go to 17.				(1-2)
	11. How much forest was cleared?			(acres)
	12. What was the cleared forest (land) used for? Codes: 1=cropping; 2=tree plantation; 3=pasture; 4=non-agric uses (Rank max 3)	1.Rank1	2.Rank2	3.Rank3
	13. If used for crops (fill in crops in swahili), which principal crop was grown? max 3	1.Rank1	2.Rank2	3.Rank3
	14. What type of forest did you clear? (code forest: 1. Natural forest, 2. Managed forest 3. Plantation)			
	15. What was the ownership status of the forest cleared? (code tenure: 1. State, 2. Community, 3. Private, 4. Open access 5. Other, specify)			
	16. How far from the house was the forest cleared located?			Km
17. Has the household over the last 10 years cleared forest? If 'no', go to 19.				1-2
18. If 'yes': how much forest (approx.) has been cleared over the last 10 years? Note: This should include the area reported in question 11.				acres
19. How much land used by the household has over the last 10 years been abandoned (left to convert to natural re-vegetation)?				acres

D. Assets and savings

1. Please indicate the type of house you have?

1. Do you have your own house? 1)	
2. What is the type of material of (most of) the walls? 2)	
3. What is the type of material of (most of) the roof? 3)	
4. How many m^2 approx. is the house?	m^2

1) Codes: 0=no; 1=own the house on their own; 2=own the house together with other household(s); 3=renting the house alone; 4=renting the house with other household(s); 9=other, specify:
2) Codes: 1=mud/soil; 2=wooden (boards, trunks); 3=iron (or other metal) sheets; 4=bricks or concrete; 5=reeds/straw/grass/fibers/bamboo; 99=other, specify:
3) Codes: 1=thatch; 2=wooden (boards); 3=iron or other metal sheets; 4=tiles; 99=other, specify:

2. Please indicate the number and value of implements and other large household items that are owned by the household.

	1. No. of units owned	2. Total value (current sales value of all units, not purchasing price)	3. Time purchased (year purchased for none WMA villages) or ask 1 Before WMA; 2. After WMA for WMA
1. Car/truck			
2. Tractor			
3. Motorcycle			
4. Bicycle			
5. Handphone/phone			
6. TV			
7. Radio			
8. Cassette/CD/ VHS/VCD/DVD/			
9. Stove for cooking (gas or electric			
10. Refrigerator/freezer			
11. Fishing boat and boat engine			
12. Chainsaw			
13. Plough			
14. Shotgun/rifle			
15. Wooden cart or wheelbarrow			
16. Furniture			
17. Water pump			
18. Solar panel			
99. Other			

3. Please indicate the savings and debt the household has.

1. How much does the household have in savings in banks, credit associations or	
2. How much does the household have in savings in non-productive assets such as	
3. How much does the household have in outstanding debt?	

E. WMA/Forest resource base

1. How far is it from the house/homestead to the edge of the nearest WMA/natural or managed forest that you have access to and can use?	1. … measured in terms of distance?	km
	2. … measured in terms of time (in minutes	min
2. Does your household collect firewood? If 'no', go to 7.		(1-0)
3. If 'yes': how many hours per week do the members of your household spend on collecting firewood		(hours)
4. Does your household now spend more or less time on getting firewood than you did 10 years Codes: 1=more; 2=about the same;		
5. How has availability of firewood changed over the past 10 years? Codes:1=declined;2=aboutthesame;3=increased If code '2' or' 3', go to 7.		

6. If declined (code '1' on the question above), how has the household responded to the decline in the availability of firewood? Please rank the most important responses, max 3.	Response	Rank 1-3
	1. Increased collection time (e.g., from further away from	
	2. Planting of trees on private land	
	3. Increased use of agricultural residues as fuel	
	4. Buying (more) fuelwood and/or charcoal	
	5. Buying (more) commercial fuels (kerosene, gas or	
	6. Reduced the need for use of fuels, such as using improved	
	7. More conservative use of fuelwood for cooking and	
	8. Reduced number of cooked meals	
	9. Use of improved technology	
	10. Increased use of non-wood wild products (ex. reeds)	
	11. Restricting access/use to own forest	
	12. Conserving standing trees for future	
	13. Making charcoal	
	99. Other, specify:	

7. Has your household planted any woodlots or trees on farm over the past 10 years? If 'no', go to next section.		(1-0)
8. If yes: what are the main purpose(s) of the trees planted? Please rank the most important purposes,max3.	Purpose	Rank 1-3
	1. Firewood for domestic use	
	2. Firewood for sale	
	3. Fodder for own use	
	4. Fodder for sale	
	5. Timber/poles for own use	
	6. Timber/poles for sale	
	7. Other domestic uses	
	8. Other products for sale	
	9. Carbon sequestration	
	10. Other environmental services	
	11. Land demarcation	
	12. To increase the value of my land	
	13. To allow my children and/or grandchildren to see these trees	
	99. Other, specify:	

G. Crisis and unexpected expenditures

1. Has the household faced any major income shortfalls or unexpectedly large expenditures during the past 12 months?

Event	1. How severe?[1)]	How did you cope with the income loss or costs? Rank max. 3[2)]		
		2. Rank1	3. Rank2	4. Rank3
1. Serious crop failure				
2. Serious illness in family (productive age-group adult unable to work for more than one month during past 12 months, due to illness, or to taking care of ill person; or high medical costs)				
3. Death of productive age-group adult				
4. Land loss (expropriation, etc.)				
5. Major livestock loss (theft, drought, etc.)				
6. Other major asset loss (fire, theft, flood, etc.)				
7. Lost wage employment				
8. Wedding or other costly social events				
9. Payment for sale of hh products arrive later than expected				
10. Delayed income from forest products				
11. Fine from environmental regulation agency				
99. Other, specify				

1) Codes severity: 1=no crisis; 2=yes, moderate crisis; 3=yes, severe crisis

2) Codes coping:

1=Harvest more forest products
2=Harvest more wild products not in the forest
3=Harvest more agricultural products
4=Spend cash savings
5=Sell assets (land, livestock, etc.)
6=Do extra casual labour work
7=Assistance from friends and relatives
8=Assistance from NGO, community org., religious org. or similar
9=Get loan from money lender, credit association, bank etc.
10=Tried to reduce household spending
11=Did nothing in particular
12=Spent savings / retirement money
13=Reduced number of meals taken
14=Borrowed against future earnings
15=Sold food that would otherwise be used for household consumption
16=Rented out land
17=Started new business
18=Changed to different type of livestock
19=Harvested premature crops.
20=Changed cropping patterns or types of crops planted
99=Other, specify:

H. WMA/Forest services

1. Has the household ever received any cash or in kind payments related to the following forest services?

Principal purpose	1. Ever received? 1. Yes 2. No	2. If yes, amounts (values) received (if nothing, put '0')							
		Year	Amount	Year	Amount	Year	Amount	Year	Amount
1. Tourism									
2. Carbon projects									
3. Water catchments									
4. Biodiversity									
5. Others, specify:									
6. Tree planting									
7. Timber concessions									

I. Household Participation

We want to measure perception, attitudes and views toward existing WMA.

1. Do you consider your village (community) to be a good place to live?
   1=Yes; 2=yes; 3=partly; trust some and not others

2. Do you in general trust people in the village (community)?
   1=Yes; 2=yes; 3=partly, trust some and not others;

3. .Can you get help from other people in the village (community) if you are in need, for example, if you need extra money because someone in your family is sick?
   1=Yes; 2=yes; 3=can sometimes get help, but not always;

4. How well-off is your household today compared with the situation before WMA/ (10 years ago for none WMA villages)

1=lesswell-offnow;2=aboutthesame;3=betteroffnow (If 1 or 3, go to 5. If 2, go to 6).

5. If worse- or better-off: what is the main reason for the change? Please rank the most important responses, max **Reason: Change in**

1=off farm employment
2=land holding (e.g., bought/sold land, eviction)
3=forest resources
4=output prices (forest, agric,…)
5=outside support (govt., NGO,..)
6=remittances
7=cost of living (e.g., high inflation)
8=war, civil strife, unrest
9=conflicts in village (non-violent)
10=change in family situation (e.g. loss of family member/a major bread-winner)
11=illness
12=access (e.g. new road,…)
13=increased/reduced land area for agric. production
14=religious awakening (i.e., found religion, converted to a new religion, born again or saved)
15=started a new business/lost or less business
16=livestock (gain or loss)
17=material assets, incl. house (gain or loss)
18=increased regulations
20=education / increased knowledge
21=more engaged in marketing/trade
22=political stability
23=crop failure/raiding
24=changed drinking habits (started/stopped drinking alcohol)
25=changes in natural resources (fish, etc.)
26=working for themselves (no longer under a patron)
27=more time to work
28=Joined cooperative
29=Forced to travel for family matters
30=Fire destroyed everything
31=Change in job
99=other (specify)

6. All things considered, how satisfied are you with your life over the past 12 months?
   1=very unsatisfied; 2=unsatisfied; 3=neither unsatisfied or satisfied;
   4=satisfied; 5=very satisfied

7. Has the household's food production and income over the past 12 months been sufficient to cover what you consider to be the needs of the household?
   1=Yes; 2=No; 3=reasonable (just about sufficient)
8. Compared with other households in the village (or community), how well-off is your household?
   1=worse-off; 2=about average; 3=better-of

9. What do you understand about WMAs? (Rank according to respondent response)
   1. Community participation [ ]
   2. Benefit sharing [ ]
   3. Resource conservation [ ]
   4. Others [ ]
   5. Don't know [ ]

10. Did .....? (ask question from the table)

1.Personal Identification number (PID)	2. Name	3.Sex 1=male 2=female	4. Village meetings 1=Yes 2=No	5. If yes, how many times in	6. Did .. speak in the meeting 1=Yes 2=No	7. Did.. participate in WMA in the last 12 month	8. If yes how? 1. Fire line 2. Fire extinguishing	9. Was.. paid? 1=Yes 2=No	10. If yes, how much
1									
2									
3									
4									
5									
6									

10. If attended the village general meetings what did you discuss about? (cycle all respoenses)
    1=Resource use conflict
    2=Investment contracts
    3=Benefit sharing mechanisms
    4=Approval of annual plans and budgets
    5=Resource conservation
    99=Others (specify)

11. Have you discussed about the operation of WMA/forest in village assembly?
    1=Yes; 2=No; 3=Don't know

12. Are you aware of any project in your village that has benefited from income from the WMA/forest income (if yes, mention project)
    1=Yes; 2=No; 3=Don't know

13. Are there poaching incidences in this village?
    1=Yes; 2=No; 3=Don't know

14. If yes in the last year, how often did you have poaching incidences in this village?
    1=More than three times
    2=Thrice
    3=Twice
    4= Once
    5=Never happened

15. In your opinion are poaching incidences increasing or decreasing?
    1=Increasing
    2=Decreasing
    3=Don't know

16. Have your household member ever experienced any disputes and conflicts related to wildlife management in this village? (If no go to 18)
    1=Yes
    2=No
17. If yes, what type of disputes and conflict are related to wildlife management in your village? (cycle all response)

    1=Village boundaries
    2=Wild animal attack
    3=Destruction of crops by wild animals
    4=Misunderstanding between Villagers and investors
    5=Disagreement on benefit sharing mechanism
    99=Others (specify)

18. Since establishment of WMAs what are the potential productive activities that WMA broughtr bring to the village? (cycle all response)
    1=None
    2=Cash crop farming
    3=Food crop production
    4=Small business (food-vending,)
    5=Wage employment
    6=Horticulture
    7=Handcrafts for sale
    8=Water vending
    9=Game meat business
    10=Tourist guide
    99=Others, specify

19. Has the WMA had any impact on the condition of the wildlife in your area? (cycle all response)
    1=Increase abundance (in situ)
    2=Provides reproduction grounds
    3=Stop habitat destruction
    4=Bringing species back
    99=other, specify

20. In the last 12 month, how often did you have fire incidences in this village?
    1=More than three times
    2=Three times
    3=Two times
    4=Once
    5=Never happened

21. In your opinion has WMAs been beneficial to you or to your area?
    1=Yes
    2=No
    3=Don't know

22. If yes, what benefits? (cycle all response)
    1=Increased incomes
    2=Reduced poaching incidences and practices
    3 =Conserves resource for future generations
    4=Reduces conflicts
    5=Improves livelihood
    6=Provides access/security to resources (property rights)
    99=Other

23. Do you think the system of sharing the benefits accrued from WMAs is fair?
    1=Yes
    2=No

24. Overall, how has WMA impacted your livelihood?
    1=Decreased
    2=No changes
    3=Increased
    4=Don't know

25. Overall, do you think that WMA has been good or bad for businesses?
    1=good
    2=Bad
    3=Don't know

26. In your opinion, what are some of the problems with WMA? (cycle all response)
    1=Too many regulations
    2=Regulations not well enforced
    3=Reduce benefit
    4=Causes conflicts
    5=Erodes traditional authority
    6=Inequity
    7=Don't know
    99=Other

27. Have you/or any other member of the household been harassed because of WMA/forest resources? (If no go to 30)
    1=Yes
    2=No

28. If yes, who harassed you/member of your household?
    1=scouts/guards
    2=VNRC members
    3=village government leaders
    4=District officials
    5=Other specify

29. Have ever been caught for breaking WMA/forest laws? (If no go to next section)
    1=Yes
    2=No

30. If yes what happened? (cycle all responses)
    1=fined and paid fine
    2=fined but did not pay the fine
    3=nothing, was allowed to walk freely
    4=bribed officials
    5=products were confisticated
    6=tools were confisticate
    7=both tools and products were confisticated

31. If paid fine how much?

32. If bribed officials (enumerator probe and document the details)

33. Have you or any other member of the household been a member or leader of WMA/VNRC committee of patrol/scout?
    1=Yes
    2=No
34. If yes, who and what was his/her position

35. For how long has .....been member or leader of WMA/VNRC committee of patrol/scout?

Section B Household Quarterly surveys (Q1-Q2)

A Direct forest income (past 6 month income from unprocessed forest p roducts)

1. What are the quantities and values of raw-material wildlife/forest products the members of your household collected for both own use and sale over the past 6 month?

Note: Income from plantations is defined as forest income, while agroforestry income is categorized as agric. income (F), and the quantities of unprocessed forest products used as inputs in making processed forest products should only be reported in section B, table 2, and not in the table below.

1. Forest product (name)	2. Collected by whom?[1]	Collected where?		5. Quantity collected (7+8)	6. Unit	7. Own use (incl. gifts)	8. Sold (incl. barter)	9. Price per unit	10. Type of market (code-market)	11. Gross value (5*9)	12. Tran-sport/ marketing costs (total)	13. Purch. inputs & hired labour	14. Net income (11-12-13)
		3. Land type (code-	4. Ownership (code-tenure										

1) Codes: 1=only/mainly by wife and adult female household members; 2=both adult males and adult females participate about equally; 3=only/mainly by the husband and adult male household members; 4=only/mainly by girls (<15 years); 5=only/mainly by boys (<15 years); 6=only/mainly by children (<15 years), and boys and girls participate about equally; 7=all members of household participate equally; 8=none of the above alternatives; 9=person employed by and living with the household. Note: Answers in columns 3 and 4 should be consistent with land categories reported in village questionnaire and in the annual household questionnaire.

Code market: 1=district market; 2= market for major consumption goods; 3= market where agric. products are sold; 4= market where forest products are sold

B. Forest-derived income (income from processed forest products)

1. What are the quantities and values of processed forest products that members of your household produced during the past month?

1. Product (Name)	2. Who in the house hold did the work?[1)]	3. Quantity produced (5+6)	4. Unit	5. Own use (incl. gifts)	6. Sold (incl. barter)	7. Price per unit	8. Type of market (code-market	9. Gross value (3*7)	10. Purchased inputs & hired labour	11. Transport marketing costs	12. Net income excl. costs of forest inputs

1) Codes: 1=only/mainly by wife and adult female household members; 2=both adult males and adult females participate about equally; 3=only/mainly by the husband and adult male household members; 4=only/mainly by girls (<15 years); 5=only/mainly by boys (<15 years); 6=only/mainly by children (<15 years), and boys and girls participate about equally; 7=all members of household participate equally; 8=none of the above alternatives.

2. What are the quantities and values of unprocessed forest products used as inputs (raw material) to produce the processed forest products in the table above? Note: Avoid double counting with section B: only products used as inputs are recorded in the table below, and these quantities should not be included in what is recorded in section B.

1. Processed (final) products (Name)	2. Unprocessed forest product used as input (code-product)	3. Quantity used (5+6)	4. Unit	5. Quantity purchased	6. Quantity collected by household	Collected where?		9. Who in the house-hold collected the forest product?[1)]	10. Price per unit	11. Value (3*10)
						7. Land type (code-land)	8. Ownership (code-tenure)			

Note: The products in column 1 should be exactly the same as those in column 1 in the table above.
Note: Columns 7,8,9 should be left blank if no collection by household. Column 10 (price) should be asked even if only from collection, but if not available, see the Technical Guidelines on valuation.
Note: Answers in columns 7 and 8 should be consistent with land categories reported in village questionnaire and in the annual household questionnaire.

C. Wild animals

1. How many wild animals did your household catch exclusively from the wild during the past 6 month?

1.Type of animal (local names)*	Collected where? 2. Land type (code-land)	3. Owner-ship (code-	4. Total catch (5+6)	5. Own use (incl. gifts)	6. Sold (incl. barter)	7. Price per animal	8. Gross value (4*7)	9. Costs (inputs, hired labour, marketing)	10. Net income (8-9)

Note: Answers in columns 2 and 3 should be consistent with land categories reported in the village questionnaire and in the annual household questionnaire.

D. Wage income

1. Has any member of the household had paid work over the past 6 month?
Note: One person can be listed more than once for different jobs.

1. Household member (PID)	2. Type of work (code-work)	3. Days worked past month	4. Daily wage rate	5. Total wage income (3*4)

E. Income from own business (not forest or agriculture)

1. Are you involved in any types of business, and if so, what are the gross income and costs related to that business over the past **6** month? Note: If the household is involved in several different types of business, you should fill in one column for each business.

	1. Business 1	2. Business 2	3. Business 3
1. What is your type of business? [1)]			
2. Gross income (sales)			
Costs:			
3. Purchased inputs			
4. Own non-labour inputs (equivalent market value)			
5. Hired labour			
6. Transport and marketing cost			
7. Capital costs (repair, maintenance, etc.)			
8. Other costs			
9. Net income (2 - items 3-8)			
10. Current value of capital stock			

1) Codes: 1=shop/trade; 2=agric. processing; 3=handicraft; 4=carpentry; 5=other forest based; 6=other skilled labour; 7=transport (car, boat,…); 8=lodging/restaurant; 9=brewing; 10=brick making; 11=landlord/real estate; 12=herbalist/traditional healer/witch doctor; 13=quarrying; 14= contracted work (cleaning/maintenance); 15=renting out equipment; 19=other, specify:

F. Income from agriculture – crops

1. What are the quantities and values of crops that household has harvested during the past 6 months?

1. Crops (Name)	2. Area of production (acre)	3. Total production (5+6)	4. Unit (for production)	5.Own use (incl. gifts)	6. Sold (incl. barter)	7. Price per unit	8.Total value (3*7)

2. What are the quantities and values of inputs used in crop production over the past 6 months (this refers to agricultural cash expenditures)?
Note: Take into account all the crops in the previous table. Note: See codes-list (section 3.2) for additional codes.

1. Inputs	2. Quantity	3. Unit	4. Price per unit	5. Total costs (2*4)
1. Seeds				
2. Fertilizers				
3. Pesticides/herbicides				
4. Manure				
5. Draught power				
6. Hired labour				
7. Hired machinery				
8. Transport/marketing				
9. Payment for land rental				
99. Other, specify:				

G. Income from livestock

1. What is the number of ADULT animals your household has now, and how many have you sold, bought, slaughtered or lost during the past 6 months?

1. Livestock	2. Beginning number (3 months ago)	3.Sold (incl. barter), live or slaughtered	4.Slaughtered for own use (or gift	5. Lost (theft, died)	6. Bought or gift received	7. New from own stock	8. End number (now) (2-3-4-5+6+7)	9. Price per adult animal	10. Total end value (8*9)
1. Cattle									
2. Buffalos									
3. Goats									
4. Sheep									
5. Pigs									
6. Donkeys									
7. Ducks									
8. Chicken									
9. Horses									
10. Guinepig									
11. Rabbit									
12. Turkey									
13.Guineafowl									
99. Other, specify:									

2. What are the quantities and values of animal products and services that you have produced during the past 6 months?

1. Product/service	2. Production (4+5)	3. Unit	4. Own use (incl. gifts)	5. Sold (incl. barter)	6. Price per unit	7. Total value (2*6)
1. Meat [1)]						
2. Milk [2)]						
3. Butter						
4. Cheese						
5. Ghee						
6. Eggs						
7. Hides and skin						
8. Wool						
9. Manure						
10. Draught power						
11. Bee hives						
12. Honey						
13. Curdled milk						
14. Soap						
19. Other, specify						

1) Make sure this corresponds with the above table on sale and consumption of animals.
2) Only milk consumed or sold should be included. If used for making, for example, cheese it should not be reported (only the amount and value of cheese).

3. What are the quantities and values of inputs used in livestock production during the past 6 months (cash expenditures)?

1. Inputs	2. Unit	3. Quantity	4. Price per unit	5. Total costs (3*4)
1. Feed/fodder				
2. Rental of grazing land				
3. Medicines, vaccination and other veterinary services				
4. Costs of maintaining barns, enclosures, pens, etc.				
5. Hired labour				
6. Inputs from own farm				
99. Other, specify:				

4. Please indicate approx. share of fodder, either grazed by your animals or brought to the farm by household members.

Type of grazing land or source of fodder		3. Approx. share (%)
1. Land type (code-land)	2. Ownership (code-tenure)	

H. Other income sources

1. Please list any other income that the household has received during the past 6 months.

1. Type of income	2. Total amount received past 3 months
1. Remittances	
2. Support from government, NGO, organization or similar	
3. Gifts/support from friends and relatives	
4. Pension	
5. Payment for forest services	
6. Payment for renting out land (if in kind, state the equivalent in cash)	
7. Compensation from logging or mining company (or similar)	
8. Payments from FUG	
99. Other, specify:	

2. On average how much do you spend on…….for the past six month?

1. Health [ ]
2. Education [ ]
3. Clothes [ ]
4. Other specify [ ]

I. Enumerator/researcher assessment of the household

1. Based on your impression and what you have seen (house, assets, etc.), how well-off do you consider this household to be compared with other households in the village? Codes: 1=worse-off; 2=about average; 3=better-off	
2. How reliable is the information generally provided by this household? Codes: 1=poor; 2=reasonably reliable; 3=very reliable	
3. How reliable is the information on forest collection/use provided by this household? Codes: 1=poor; 2=reasonably reliable; 3=very reliable	
4. If the forest information is not so reliable (code 1 above), do you think the information provided overestimate or underestimate the actual forest use? Codes: 1=underestimate; 2=overestimate; 3= no systematic over- or underestimation; 4=don't know.	

Thank you

Appendix 2. Formal and Informal interview guide

A: General information

1. Population size, trends, ethnic composition in the village/WMA village
2. Available social services in the villages forming such as Hospitals/Health Centers/dispensaries, education/schools, transport and communications roads (land lines/internet/markets etc.)
3. Available resources such as wildlife, village forest, minerals, water sources, etc.
4. Main economic activities i.e. agriculture, businesses, pastoralist etc.
5. Available investments in the village/WMA i.e. tented camps/lodges/hotels/etc.
6. Number of investors in the village/WMA areas

B: Governance

1. Conservation efforts: how do community participate in conservation activities in the village/WMA areas?
2. Are there any incidences of poaching and fire outbreak in your village/WMA?
3. Presence of CSOs and CBOs
4. Who manages the daily activities of WMA/forest your village?
5. How are members of the CBO/village natural resource committee (VNRC) elected/chosen?
6. How are the staff of the CBO office employed, i.e. who pays their salary and to whom do they answer to? *(underlying research question; are they the willing servants of the villages or an autonomous local bureaucracy with their own agendas)*
7. How often does the CBO/VNRC council (or whatever it is called) meet? (*Are there meeting minutes with signatures of participants/records of attendance? If so, check them to see how many (do not) participate. Are there meeting minutes? If so, it would be good to copy/photograph them so we can see what is (not) being discussed?)*
8. Are CBO office staff bureaucrats or village levels representatives? If there are professional bureaucrats in the CBO office, what are village based representatives supposed to do? Are they bringing issues and complaints from the villages? How does AA office deal with complaints? *(Underlying research questions; Are physical distances a problem for participation in the*

governance of the CBO? Does CBO council meetings discuss the distribution of effort between wildlife protection and community development or other important issues?)

9. Who sits on the Board of Trustees? *(check for "independence", wealth, benevolence, stakes/hidden agendas)*
10. Are there safeguards to prevent corruption at WMA/CBO/VNRC level? What do you do to prevent people with bad motives to get elected into key CBO/WMA/VNRC positions?
11. What are the perceptions about villagers among WMA/VNRC leaders *(those we serve, ignorant/backward destroyers of the environment, other)? (underlying research question; do AA leaders see themselves as being different from (the majority of) villagers – do they see themselves as more environmentally aware, local experts)*

C: Finances

1. What types of revenue does the village collect from natural resources?
2. Describe how revenues from hunting and fototourism are reaching the CBO, directly or through wildlife department? If directly, how much does the CBO forward to the district or wildlife department (broken down into hunting and non-consumptive)? If indirectly, how much money is retained by wildlife department and the district?
3. What share of total CBO/VNRC budget comes from fees and donors? *(underlying research question; do CBO/VNRC leaders look more to the priorities of donors than those of villagers and how financially sustainable is the CBO/VNRC)*
4. What share of total CBO/VNRC budget spent on: administration, anti-poaching/patrol, wildlife abatement (control of wildlife damages), and community development? *(underlying research question; do CBO/VNRC leaders look more to the priorities of donors than those of villagers)*
5. Is there a benefit sharing plan? What is the distribution of WMA revenues amongst villages? What forms of community development has been financed and how? Are there special arrangements to compensate a village with higher revenues if this village contributes more land? Can we see accounts and finances (over the whole year, possibly several years)?
6. Relationship of CBO office (and WMA in general) to donors who finance the CBO and VGS. What are the conditions for getting donor money and manage WMA?
7. How would things go/change if CBO/VNRC was running without donor money (self-sustaining through higher tourism revenues)?

8. Relationship between CBO office and village governments: can villages decide independently how to spend WMA revenues? Is there a formula how much money (hunting vs fototourism) can be spend by the village on what? How often does CBO report back to villagers about WMA?
9. Describe the contract/agreement between the village and the operator? (Hunting or photo?) Are contracts renewed (with or without renegotiation?) after 3 years?
10. How was the contract negotiated? Is the village government satisfied? Are villagers satisfied? Are there problems with the operator? Do they have wishes for the future/changes?

D: Land use planning and management plans, rules

1. Is it true that the resource zone management plan (RZMP) plays a preliminary role until a General Management Plan (GMP) is in place? Or do both (RZMP and GMP) apply in parallel? Does/can WMA GMP change over time? How?
2. Is carrying capacity defined in village land use plans (VLUPs) and/or RZMPs? Do you know if village by-laws define how much/at what times/where livestock can graze?
3. Are there special provisions in land use plans and management regulations for times of crises?
4. Did/do village leaders want to change anything in the WMA land use plan? If so, what? Did village leaders try to do it already and was it accepted by the AA/wildlife department? If not, can the land use plan be changed?
5. What are the rules and restrictions imposed through WMA on the village and villagers?
6. Are there/have there been plans to reduce livestock numbers in the WMA? In the future?
7. What rules do people agree/disagree with?
8. What sorts of people are most likely to ignore or violate WMA/forest rules?
9. What happens if people break rules?
10. How many times did people get caught breaking these rules in the last 12 months? Which rules are most contested? Do you know how were VLUPs made? And RZMP?

D: Wildlife conflicts

1. Is wildlife damage a problem in villages? Is it a big problem? How was it in the past/before WMA?
2. How many incidents of animals having killed or seriously injured people in the village in the past ten years?

3. When is wildlife crop damage an issue (probe for which months are considered risky?)
4. Are households compensated for damage to crops and livestock? How?
5. Do villagers do (are they allowed to) something to minimise damage (what are their strategies)? Is the village government supporting them here?
6. Is there anything the villagers would like to be able to do to prevent damage?
7. Impression of people about the role of WMA in their ability to avoid damage? Do they feel helpless or do they have agency/authority to prevent damage?
8. Does the village receive a hunting quota for subsistence use from WMA/District etc.? If yes, what and how much can be hunted? Can the quota be sold? How was it before WMA/in the past?

E: Displacements of people and/or activities (due to WMA)

1. Have there been displacements of villagers or their assets due to WMA/forest?
2. How was that dealt with by village government in terms of compensation, conflicts, etc.?
3. Who was displaced and what happened to people who were displaced?
4. Was there compensation? If yes, what kind of compensation?
5. Probe for the quality of newly used land, access to water, grazing areas, housing etc. for people who were displaced.

Appendix 3. WMA access rules contestation/acceptability chart

Products/service	Restrictions are broadly accepted and adhered to	Restrictions are obeyed by some/not always	Restrictions are generally (but not openly) ignored	Restrictions are openly contested and ignored
Dry fuel wood collection				
Tree felling (poles for house construction)				
Collecting NTFPs				
Charcoal burning				
Livestock grazing				
Agricultural land				
Permanent settlements				
Temporary settlements				
Local hunting				

Note on the commencement of the doctoral procedure

(1) I hereby assure that I have produced the present work without inadmissible help from third parties and without aids other than those stated; ideas taken directly from external sources are identified as such.

(2) When selecting and evaluating the material and also when producing the manuscript, I have received support from the following persons: Prof. Dr. Jürgen, Prof. Jens Friis Lund, Prof. Bernhard Müller, Jevgeniy Bluwstein, Rose Peter Kicheleri, Sharissa Funk and Jasper Ijumba.

(3) No further persons were involved in the intellectual production of the present work. In particular, I have not received help from a commercial doctor adviser. No third parties have received monetary benefits from me, either directly or indirectly, for work relating to the content of the presented dissertation.

(4) The work has not previously been presented in the same or a similar format to another examination body in Germany or abroad, nor has it – unless it is a cumulative dissertation – been published.

(5) If this concerns a cumulative dissertation in accordance with Section 10 Para. 2, I assure compliance with the conditions laid down therein.

(6) I confirm that I acknowledge the doctoral regulations of the Faculty of Environmental Sciences of the Technische Universität Dresden.

Tharandt, 10. 09. 2018

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