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Biopolitics from Below: People's Engagements with Wildlife Management Areas in Southern Tanzania

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Abstract

The manner in which people in southern Tanzania have engaged with wildlife management areas (WMAs)—areas for wildlife conservation established on what used to be village land for livelihood generation—is not clear. Banking on Foucault (2008)'s concept of governmentality ─the conduct of conduct—I indicate that under WMAs, people internalise and apply or challenge nature-nurture divide conservation model on the village land. Reflecting on the qualitative data collected from village communities around Mbarag'andu and Kimbanda WMAs, I show some WMA regulations dispossess people their access to important livelihood and use the concept of biopolitics from below and indicate that try to challenge such dispossession process. Notably, I show that contrary to the proposed fortress conservation under WMAs, people bank on improved road infrastructure and availability of motorcycle transport to gain access to conserved yet highly productive areas for crop-farming. I lastly call for a reconceptualization of conservation practices and their relations to surrounding communities.

Key terms: WMAs, governmentality, biopolitics from below, nature-society divide

Introduction

Towards the end of the 20th century and particularly after the 1992 Rio De Jeneiro Convention, community based natural resources conservation efforts received a new impetus globally (Bluwstein et al., 2017). In Tanzania, like in other African countries, wildlife is an indispensable resource and a key source of national revenue, through tourism, forest products, aesthetic beauty and ecological services. Given such usefulness, wildlife has historically been subjected to different management regimes, (Buscher & Fletcher, 2020). Modern wildlife management science was introduced in Africa during the colonial period (and through the early decades of post-independence) it was clearly framed around nature-society dichotomy (Jansson, 2008, Bluwstein et al., 2017; Noe, 2019; Buscher & Fletcher, 2020).

Eventually, this resulted in fortress conservation, such that in some areas people were evicted in order to create conserved areas (Noe, 2010). Specifically, some odd-human community relations developed between communities and wildlife authorities due to opposed interests and management principles. For instance, while agro-pastoralists wish to clear more land for farming and livestock, conservation authorities wish the natural setting to remain intact. Also, wild animals occasionally cross borders into communities where they destroy properties (Johansson, 2008; Mwakoba, 2021). Johansson (2008:72) further shows that, dangerous wild animals, such as lion, leopard, elephant, buffalo, rhino, hyena, crocodile, etc. threaten the lives of both, people and livestock such that from 1975 to 1994, efforts to keep livestock in various villages of Lindi Rural and Liwale Districts Southern Tanzania proved difficult as livestock were either killed by lions especially tsetse-flies (Johansson, 2008).

Given such odd relations, since the 1980s, collaborative natural resources conservation (CNRC) approaches were adopted. In wildlife, this approach is known as wildlife management areas (WMAs) implemented in Tanzania since the 2000s (the Wildlife Policy of Tanzania, 1998, revised in 2007), the Wildlife Conservation Act (2009), and the Wildlife Management Areas Regulations (2018). According to these guidelines, WMA is a village area rich in wildlife and managed by the communities for their benefit. WMAs are established by the Minister of Natural Resources and Tourism and village(s) manage the areas through their Authorized Associations (AAs). The Tanzania Wildlife Management Authority (TAWA) in collaboration with conservation NGOs provides technical and professional guidance to the AAs. Benefits to communities are in terms of direct revenue from activities conducted in the WMA (e.g. tourism, hunting, levy, rent and so forth), 25 percent payments to village governments by wildlife authorities from tourist hunting revenue (USAID (2013).

The adoption of the WMA strategy implies that communities started to participate directly in wildlife and tourism related activities through wildlife conservation and protection outside park boundaries, as part of rural development efforts. Secondly, is a landscape conservation which is "an ecological approach of how people and wildlife should share space with each other across geographical areas" (Bluwstein, 2018:147). Thus, communities' participation in wildlife management through WMAs is ideally expected to ease the tense relationship between conservation authorities and communities which arises from, either communities intruding into conserved areas or wild

animals crossing boundaries into communities (Johansson, 2008; Bluwstein, 2018).

Available research has shown unfortunately that the WMA approach has resulted in yet another form of fortress conservation, (Noe, 2019). That is, through it, more village land has been converted into conserved areas where livelihood activities like farming, bush-meat hunting, livestock keeping etc. are either strictly prohibited or regulated, (Noe, 2019; Buscher & Fletcher, 2020; Bluwstein, 2022). There is adequate documentation of the manner in which communities in northern Tanzania have reacted to this situation. For instance, some member villages to WMAs have expressed their intension to pull out their membership ─through different means including the court of law ─following their loss of revenues from eco-tourism after such revenues were redirected to an AA and later to the ministry (USAID, 2012; Kicheleri et al., 2020).

What is clear in the above exposition and as will be clear in the next sections, available research has well documented the manner in which establishment of WMAs has impacted on people's livelihoods. However, little research if any has been done to illustrate people's (re)actions to the establishment of WMAs especially in Southern Tanzania where the Selous Niassa Wildlife Corridor (SNWC) is located (Bluwestein et al., 2017). Such research would make two important contributions. First, it would advance social science and specifically sociological and anthropological theory on community-natural resources management. Secondly, it would contribute to charting out a more relevant wildlife conservation model going forward.

Conceptual Issues: Governmentality, Accumulation by Dispossession and Biopolitics from Below

WMAs have been established on the basis of an implicit or explicit assumption within the modern wildlife management discourse that rural people are a homogenous local population which ought to live on the basis of exclusively local and unchanging knowledge, (Green, 2008). The supposed practices ensuing from such local knowledge among rural people, include low acreage agricultural fields, using low production technology and therefore incapable of occupying the extensively available land in the village communities, assumptions which have given birth to the notion of unoccupied land (Bluwstein et al., 2017). Such notions legitimize the extension of conserved areas into the used to be village land, located in the proximity of wildlife protected areas. Participatory methodologies, known as community-based wildlife management approaches are used to achieve this. Eventually, practices like high fertility rates and immigration following improved road

infrastructure ─which, in turn, necessitate opening up new areas for crop farming, bush meat hunting and other forms of wildlife resource use ─ are viewed as a threat to sustainable wildlife conservation efforts, and particularly a threat to permanent development of Selous-Niassa Wildlife Corridor, (SNWC) (Baldus & Hahn, 2009). Against this context, I argue in this paper that the governmentality techniques followed by accumulation by dispossession practices are invoked by development experts to both, gain access to wildlife and other resources, limit local people's access to the same and manage them (local people) in the manner which is compatible with the dominant wildlife conservation discourses such WMAs in this case.

Governmentality refers to techniques or mechanisms of managing thoughts and practices of individuals and the population by moulding them to think and act or conduct themselves in a particular way (Foucault, 1976, 2008). In the context of community-based wildlife conservation (CBWC), it applies by moulding people to live harmoniously in proximity with wildlife. This is supposed to be achieved by people limiting their agricultural acreage, refraining from illegal hunting practices, charcoal burning, etc. practices which would supposedly be rewarded through conservation benefits especially ecological services, incomes from tourism related activities, and quota game-hunting. In short, such practices are expected produce a particular conduct, on the basis of which rural people are said to coexist harmoniously with nature.

Such conduct is actualized through various mechanisms, which in this study and in the Foucauldian tradition, I consider to be governmentality techniques. These include: firstly, enactment of conservation policies, laws and regulations which use coercion as in line with what Foucault calls sovereign (coercive) governmentality. These enactments, for instance, as I will show later, provide for the establishment of WMAs on village land which according to the WMA Regulations of 2012, cannot be claimed back by any of the constituting villages, (URT, 2012; Kichereli et al., 2020). Secondly, it is by the use of conservation knowledge/professional discourse/techniques in line with what Foucault calls disciplinary governmentality. This is for instance by representing cultivation in wetlands and hunting for bush meat as grossly ecologically destructive practices (Baldus, 2009; Noe, 2009, 2019). Thirdly, it is through biopolitical governmentality which entails techniques which, according to Foucault, target and shape/affect the biological conditions of the bodies of individuals or populations. Examples of these include, as it will become clear in the next sections, limiting people' access to bush-meat, loss of crops leading to food shortage, all of which — according to the findings—

have bodily/dietary implications, especially wounds/loss of lives by animals and psychological distress, among others. I think it is not an exaggeration to classify these happenings as letting die, in line with Foucault's classification of pre-modern rule in Western Europe and contrary to his view of modern power, which instead, aims at letting live[1] (Foucault, 2008; Christensen, 2013).

Generally, these efforts produce a particular conservation landscape which Draper et al (2008) describe as "an Edenic vision…", in this case envisioned, in rural Tanzania. Consequently, the local population is expected to lead a traditional livelihood based on indigenous knowledge and perceived to be closer to nature and, hence compatible with conservation. Unfortunately, even the local knowledge intimated here is limited to low acreage in crop-farming as people's fuller control of biodiversity areas is prohibited. Based on this view, conservation managers classify the local population as either good or bad natives; whereby good natives lead traditional livelihood based on indigenous knowledge and bad natives adopt modern lifestyles (Draper et al., 2008).

In the end, conserved areas in communities are further shown not as complex and changing environment in which people have to live. Instead, any changes for modern lifestyles is represented as a threat to such natural treasures (Broch-Due, 2000:29). The implementation of WMAs as I will show in the ensuing sections, directly and indirectly echoes the above framing, the practices of which are significantly impacting on people's lives around Mbarang'andu and Kimbanda WMAs. Conceptually, these are governmentality techniques exercised by conservation authorities to lure or coerce rural people to uptake CBWC (especially WMAs in this case) narratives and practices, the result of which has been, and can further be described as part of the process of accumulation by dispossession.

For Harvey (2003), accumulation by dispassion is the continuation and proliferation of practices which Marx had treated as primitive accumulation, prior to the full development of capitalism. And, primitive accumulation is "a historical process of divorcing a producer from the means of production" (Marx, 1976:875, Bluwstein et al, 2017: 3). In the case of WMAs, primitive accumulation practices are continued and proliferated through suffocation of people's access to livelihood options on environmental resources (land,

fisheries, timber, wildlife, revenues from tourism) for the sake of conservation. Moreover, there is also dispossession in form of losses (of properties especially crops, permanent injuries, lives and psychological distress) to wild animals which — as will be shown — are far severer than the benefits (dividend of incomes from tourist activities and game hunting) which people get from the implementation of CBWC.

By representing the local people as supposedly a homogenous group, expected to live on the basis of local knowledge, the CMWC model seeks to further silence the agency or alienate the human potential of rural people by limiting their evolving modes of access to and utilization of environmental resources. This is because, contrary to the homogeneity narrative, literature on rural differentiation indicates the formation of social classes, on the basis of which peasants are classified as poor, middle and rich, (Shivji, 2009). Thus, the manner in which people in rural areas have for many years gained access to and interacted with their environmental resources (arable land, wildlife, timber, firewood, etc.) is mostly determined by their class positions and other factors like gender, ethnic groups, etc. rather than their sameness and the mere quest to reproduce their indigenous knowledge and practices. Thus, the representation of the rural people as homogeneous, further limits rather than advances an understanding of the nature of rural social organization. That is, both, how people relate with nature and among themselves, which, according to Shivji is already distorted/disarticulated in that less (if any) further production or value addition is envisioned beyond primary production by rich peasants.

Given this configuration, rural people deploy their remaining agentive potentials to engage with homogenizing narratives and practices, including WMAs' through a number of ways. On the one hand, this is by adopting or adapting whatever is useful, and, on the other hand, challenging or rejecting whatever causes trouble. For instance, while the idea of WMA is accepted (adopted), allowing them to participate in wildlife conservation and the accruing benefits like tourist activities and quota hunting, they challenge WMA regulations like restriction of farming activities in the WMA areas by opening up farms in such areas.

Thus, beyond the homogenizing narratives about indigenous knowledge, I argue, in line with Green (2000:75) that, "what people in an area know is neither specifically local, indigenous nor uniformly held". Instead, it is largely based on both, people's conditions of existence and assessment of their situation. Thus, in this case, rural people may stick to WMA directives

(narratives and practices), abandon it and go for what they think or blend WMA narratives with what they think, depending on how they assess their situation, in their attempt to articulate their experiences. This is what I, inspired by Bluwstein et al (2018), call biopolitics from below because it constitutes a conduct (thoughts and practices) which people invent, in order to challenge biopolitical techniques from above. It is the latter which dispossess local people, access to farmland in the designated WMA, and, in turn, increase the presence of wildlife in the neighbourhood which destroy lives and properties among other losses.

Methods

In order to zoom into the experiences of people living in WMAs constituting villages, research activities were conducted in a number of villages around Mbarang'andu and Kimbanda WMAs in Namtumbo District, Ruvuma Region in Southern Tanzania. Mbarang'andu and Kimbanda are part of Selous-Niassa Wildlife corridor via which wildlife migrate from Selous to and Niassa National Park in Mozambique. While much research has been carried out on the WMAs in the northern circuit, which is also doing relatively better (at least in terms of availability of investors and tourist activities and finances therefrom) than the WMAs in the southern circuit. Given this context, it was deemed important to carry out this study in the southern circuit in order to appreciate the manner in which people experience WMAs which are said not to be doing well.

The study was conducted around Mbarang'andu and Kimbanda WMAs in Namtumbo District. These two WMAs were purposely selected for this study because they have some striking differences. For instance, while Mbarang'andu has had an investor in some of its hunting blocks, Kimbanda never had one; which in turn means that villages around Mbarang'andu have had relatively more benefits of having a WMA than villages around Kimbanda. Thus, the two WMAs were studied with a view of complementing one another, in order to get a complete picture of the experience of people living around WMAs in Southern Tanzania.

The study approach was qualitative seeking to explore the experiences of the people from multiple sites around WMAs. Data was collected from seven villages, four villages from Mbarang'andu (Likuyu Seka Maganga, Mandela, Mchomro and Kitanda) and three villages from Kimbanda (Liganga, Matepwende and Lilonje). Data collection methods were focus group discussions (FGDs), in-depth interview (IDIs), and observation. The selection of villages was based on various criteria such as benefits accrued from

WMAs, (Kitanda, Mchomoro) human-wildlife conflicts, (Kitanda, Mandela, and Liganga) changes in the livelihood options (Mchomoro, Matepwende and Lolonje). Data from key informant interviews and focus group discussions were collected from relevant district officials, village leaders, community members, and VGS.

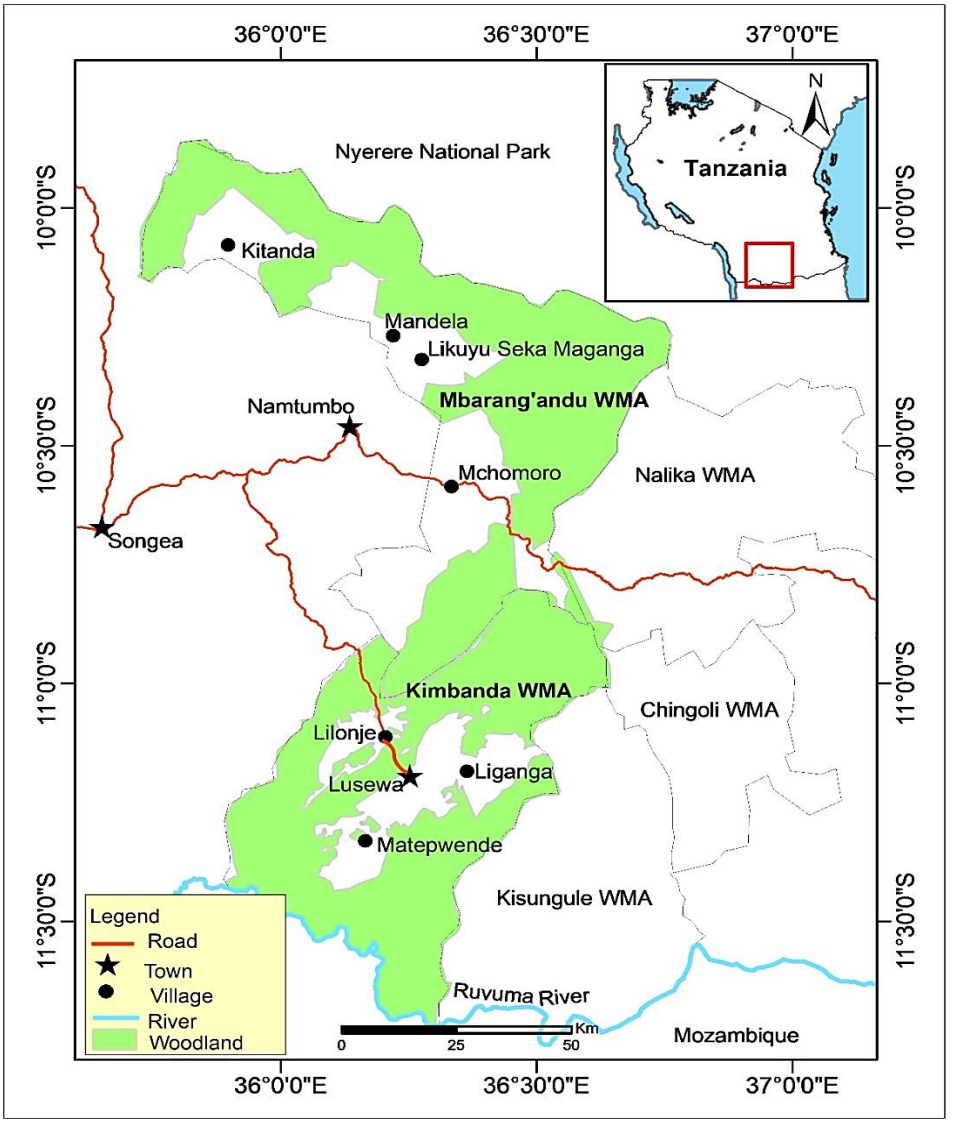


Figure1: Studied Communities and Local Authorities around Mbarang'andu and Kimbanda WMAs

Source: Freelance Cartographer

Data was analysed using content analysis approach where codes, categories and then themes were developed. Ultimately, the emerging findings were made sense of in light of accumulation by dispossession and biopolitics from below. That is, while WMA establishment process was viewed as accumulation by dispossession process, people around WMAs are viewed as hinging on their circumstances to articulate a conduct which protects or at least seeks to protect their interests, especially entitlement to the utilization of resources in the WMA area. The next sections present study findings.

Establishment of a WMA

The available literature and my primary data indicate that there was consultation and engagement of communities before the establishment of WMAs. However, documentary review and KIIs indicate that the benefits of the project were emphasized over the costs; and, some of the implications of establishing a WMA, with regard to land occupancy and control were not clarified. In the villages I conducted this research, participants indicated that they first got the information from their leaders Village executive officers (VEOs), village chairpersons and ward councillors about the project. Later, community meetings were organized and were attended by the District Game Officer (DGO) who explained the purpose, process and benefits of establishing WMAs.

The DGO clarified that the purpose of the project was the villages which surround areas which are sometimes inhabited by wild animals to come together and form an organ for the management of wildlife for the benefits of all constituting communities. Some of the benefits included tourist activities especially through investors for trophy hunting and photography tourist activities; community participation in prevention of poaching to enhance wildlife management; and quota hunting for the benefit of community members. The DGO added, it was narrated during IDIs and FGDs, that a WMA would be run by an independent legally registered organ, called authorized association (AA), formed by five representatives from each of the WMA constituting villages. Then, out of the representatives, the leaders of an AA (chairperson, secretary, treasurer) are elected by constituting members. Thus, villages were supposed to contribute part of their village land (known as village forests) for the establishment of WMAs.

The survey activities in order to demarcate the boundaries of WMAs and the undertaking of village land use plans, were conducted with the assistance of conservation NGOs, especially WWF, which funds conservation activities in the Selous Niassa Wildlife corridor in Southern Tanzania (Noe, 2009). The observations made by the participants of this study, echo those made

elsewhere e.g. Kicheleri et al. (2020) who use the case Minjingu village in Burunge WMA to observe that the proposal to establish WMAs was too sugar-coated to lure communities to join, after which they realized that WMAs were intended to dispossess them of their access to benefits from wildlife resources, especially revenues from eco-tourism investments.

Eventually, much of the village land in the WMA constituting villages has been gazetted/ appropriated. Mbarang'andu WMA for instance, covers 2,318 square kilometres which is equivalent to around 93 percent of all the village land in the constituting villages (Noe, 2019). Yet, whereas available studies (Baldus, 2009; Noe, 2019) indicate that between 89 and 95 percent of community members around SGR depend almost solely on farming for their subsistence, all land on WMAs is earmarked exclusively for wildlife and other natural resources management rather than crop farming. Arguably, like Lyall, Colloredo-Mansfeld and Quick (2019) have observed the proponents of WMA models share the thinking of post-agrarian aspirations for which tourism is envisioned to increasingly become a dominant rural development strategy, expected to replace agrarian production in the global south. Contrary to aspirations, unfortunately, the process of establishment of WMA has been highlighted as both, one of creating local borders in the image of the Berlin (national) borders (Noe, 2009, 2019) and dispossession accentuated through community involvement discourses (Benjaminsen et al., 2013) and law (Kicheleri et al., 2020). These processes have resulted in the marginalisation of people's welfare, the reality which has in turn, as noted earlier, attracted people's contestation of WMA implementation process.

However, learning from these developments (of contestation against WMAs), conservation authorities have been very quick to deploy sovereign techniques of power (Foucault, 2008) to coerce village communities to remain members to WMAs. A case in point here is the 2012 WMA Regulation 34(6) which stipulates that, "where a village withdraws its membership from the AA, the user right shall remain under the AA". This, regulation implies that, any WMA constituting village is legally prohibited to withdraw their membership. Conservation authorities being aware of people's dissatisfaction with the manner in which WMAs are managed and operated, have put in place legal codes which imply that once village land is gazette to form a WMA, it changes its category status from village land to reserved land, (Kicheleri et al., 2020). This regulation augments the process of dispossession of village land ─on which WMAs are located─ into reserved land, arguably in order to establish SNWC on the permanent basis.

Letting die? People's Experiences of an Operational WMA

Mbarang'andu and Kimbanda WMAs were established in terms of both setting up geographical boundaries and AAs in 2008. So, they are since then operational. Eventually, some benefits such as community infrastructure like construction of health facility and school buildings, village government offices, etc. have been constructed in villages around Mbarang'andu WMA. In Kimbanda, however, such benefits have been very minimal, because no investor has shown interest in investing in this WMA. Eventually, community members' experiences of WMAs can be divided into two, namely: people's encounters with wildlife and re-envisioning the promises during the establishment of WMAs. I turn to each of these.

Incidences of crop destruction, injuries and loss of lives to animals are common among the people in the WMA constituting villages. I have hinted above that while Foucault (2008) saw modern power (biopolitics) as managing the living conditions of individuals and the population in the manner which enables them to continue to live, the findings presented here seem to arguably, point to the contrary, i.e. letting die through wild animal attacks on people and crops (the main source of livelihood in the area).

Crop loss due to destruction by wild animals is the commonest for instance. The commonly mentioned crop destructing animals include elephants, wild pigs, hippopotamus, elands etc. available research also echoes this finding. Mwakoba (2021: 22) for instance, notes that human-wildlife (herbivore and carnivore) conflicts have increased such that "after Mbarangadu came into being, until 2017 there were 206 acres destroyed mainly by elephants and 120 people affected". In an interview at Kitanda, one the villages constituting Mbaranga'ndu WMA noted that:

> An elephant gave birth in the rice farm of one of our neighbours. This elephant stayed in the farm for two weeks destroying the grown rice. One day the owner went to his farm and baby elephant started making noise when it saw him. The mother elephant came angrily from the back of this person and crashed him to death. (Mbarang'andu/Mandela/Village leader/KII/May, 2021).

With regard to attacks by animals on human beings, crocodiles are a big problem. One of the participants at one of the villages narrated this encounter by his daughter:

> I received payment for tobacco. Then I went to the field where my family was working to break the news and told them to prepare

> themselves for a marketplace the next day so that they could buy some their personal requirements. So, my daughter went to a nearby river to wash as preparation. After a few minutes we heard her shouting that she was attacked. We thought she was joking. In a while started sinking. We rushed only to find that she was attacked by a crocodile. We pulled her out but she was badly injured on her thigh. We rushed her to the hospital and was treated at Peramiho Hospital. Thanks to the tobacco payment I had received, otherwise, we could not have managed to pay the treatment cost and probably we could have lost her (Village leader, Mandela Village).

Attacks by animals limits a geographical scope of where a person can cultivate. Instead they cultivated areas which are located close to villages. This in some villages resulted in conflicts over boundaries and occupancy of land, because people resumed their pieces of land which they had abandoned for so long and moved way for more fertile areas.

> This year many people did not cultivate farms which are much away from the village and closer to the WMA for fear of elephants. Since farms are located far away from residences, people always construct temporary houses in order to both, shorten distance to the field and to guard farms against vermin. (FGD/Women/Kitanda/May 2021).

Compensation for what is destroyed by animals is said to be inadequate and untimely provided:

> The regulation provides for compensation of destroyed crops which at least one acre. If the destroyed area is less than one acre there is no compensation made. Some older people are incapable cultivating large farms. They cultivate just or quarter an acre for consumption. When their crops are destroyed, they don't get any payment; now you wonder where such people should get food. Some may have their crops destroyed but payments get delayed even for two years. The payment itself is too little and cannot be equated to the costs of cultivating one acre.

Eventually, due to crop destruction, some people are supposed to spend much of their time day and night in the farm guarding the crops. This adds the psychological distress among farmers and makes crop farming an immensely labourious activity (Mugisha, 2019). Moreover, some communities have in

fact gone hungry in this process further pointing to more of letting die than live. In Mandela, one participant noted in an FGD and there was a consensus around a concern that:

> Here is a hunger mine (*mgodi wa njaa*). We work for people and get paid money or maize. One acre it tilled at TZS 50,000.0 or exchanged for 50 *pishi*[2] of maize where every single *pishi* sold at TZS 1,000.0 one can also borrow a bag of maize equivalent to 120kilograms (*roba*) which contains 30 *pishi* and they pay back 60 *pishi*.

Despite the above concerns, some of the studies which have been conducted to justify the establishment of Selous-Niassa Wildlife Corridor (SNWC) in which the two WMAs are found, seem to point to the permanence of this corridor. For instance, Baldus and Hahn (2009:7, italics added) indicate that:

> The Selous - Niassa ecosystem is one of the largest trans-boundary natural dry forest eco-regions in Africa. With a size larger than Malawi, it constitutes one of the largest elephant ranges in the world and contains half of the world remaining wild dog population……In order to conserve the integrity of this eco-system *it is of utmost importance that the SNWC provides and maintains a permanent link between two largest protected areas of Tanzania and Mozambique* enabling migration of wildlife and gene flow and contributing to the conservation of biodiversity.

Such observations made by researchers, further cast doubt if the promise of reviewing the boundaries after 10 years was genuine or just a means to sell the idea of WMA to the would-be constituting communities.

Moreover, conservation actors are aware of such developments and do not seem willing to allow land uses claimed by the people on land currently designated as WMAs. Baldus and Hahn (2009) further register their worries about the possibility of new infrastructural developments in the area, especially the Songea - Tunduru Highway, attracting settlements and livelihood activities and eventually block important wildlife passages in the SNWC. They (Buldus and Hahn 2009:11) specifically note how such developments would be destructive of ecosystems which WMAs are intended to conserve:

[2]1 *pishi* is equivalent to 4 kilograms

> Tobacco and increasingly paddy farming in suitable wetlands contribute to the loss and fragmentation of natural habitat. In combination with ribbon strip developments along the major roads they will form a genetic blockade between the world's largest protected *miombo* forest ecosystems and wildlife habitats.

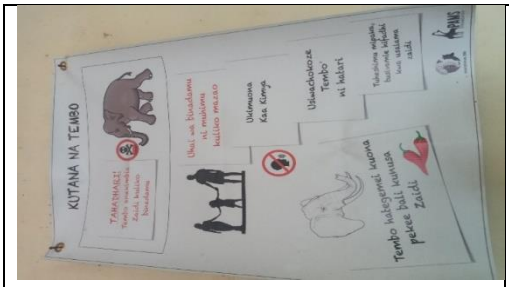
Some attempts to let live? Manufacturing an alternative conduct

The use of the sovereign techniques to coerce membership and ban human activities in the WMAs has been complemented with both disciplinary and biopolitical techniques in order to manufacture in people a conduct which is congruent with or tolerant to WMAs. This mainly includes provision of technical knowledge to avoid losses caused by the increased presence of wild animals or engage in alternative livelihood activities, not susceptible to attacks by wild animals. There has also monetary assistance to cover losses of destroyed crops.

Disciplinary mechanisms of control expressed through the provision of some technical training and assets, I argue, is intended for generating a new set of reality/knowledge or conviction ─ about sources of livelihoods ─ different from WMAs. With regard to provision of assets, an international NGO called Heifer International introduced cattle keeping, literally called "borrow a cow pay back a cow" (Swahili: kopa ng'ombe lipa ng'ombe). In Kitanda Village, around the Mbarang'andu WMA, it was observed that this project benefited 36 households. The intention of the Heifer Project was to use cows to introduce livestock keeping as a new livelihood strategy in order to divert people's attention from wildlife-based livelihoods. Unfortunately, partly due to lack of the culture of livestock keeping, and being preoccupied with crop farming, people were not able to feed the cows because they spent most of their time in the farms. Eventually, the village chairperson revealed that many cows died such that only five have remained, (Chairperson, Kitanda, May, 2021).

WWF trained crop-farmers on how to protect themselves against crop invading animals, especially elephants. The training was about beekeeping using beehives to deter elephants from invading farms. Another method was grinding pepper, mixing it with used vehicle oil, coating it on pieces of cloth and surrounding farms with such clothes especially around the direction where elephants come from. Another method is using elephant dung to construct a brick and burn it so that smell of their own dung would deter elephants from invading farms. This training provides technical knowledge

on the basis of which people in the WMA constituting villages are supposed to coexist with wildlife.

	
	Rice field in the lowland
	
Maize farm under preparation	Cattle at one of the households in the villages around WMA
	
Suggestion box with regard to the management of WMA	Village office constructed by Kimbanda WMA

Source: Fieldwork, May 2021.

Biopolitics from below: Attempts to circumnavigate WMAs

Demands ─from WMA constituting villages─ to review the boundaries of WMAs have been mounting mainly for two reasons. The first is to do with the cumbersome experiences of WMA implementation as narrated above. The second are the ongoing socioeconomic changes like population increase, changing aspirations due to technological change and increased mobility in these villages. In response to such changes, people and their leaders claim

(and this was testified by relevant district officials) that the promise during the establishment of WMAs was that the geographical boundaries would be reviewed after ten years in order for the constituting villages to determine if they needed to remove part of their land from the WMA. Unfortunately, this has not happened. Village leaders further revealed that they have written to their respective district councils and AAs in request for reconsideration of boundaries but there has been no response. This is despite the fact that the population has increased in the last ten years and there have been remarkable land use changes. With regard to population increase one participant noted that:

> The agreement was that we provide the village land for community-based wildlife conservation (wildlife management area, WMA) for ten years. Thereafter the boundaries would be revised and amended if need be. When ten years elapsed, in 2018 we wrote a letter to request for the revisiting of the WMA boundaries because there was an increasing demand for land due to the growing population. Unfortunately, we have not received any response, and nothing has been done to revisit the boundaries, and as such, we are being denied access to our own land (Village leader/Mchomoro/KII/May, 2021).

Relatedly, another youth noted that:

> Available land per household has increasingly become smaller. You can be given a piece of land for some time, and then taken away and given to someone else, may be your younger brother, so that you buy your own. For example, the land which I am working on today was taken from my elder brother and given to me. So, my brother has shifted to another village to look for his own land. Maybe the land I am working on will also be taken away from me and given to my younger brother in the near future. I should plan for that. (Youth FGD/Mchomoro/ KII/May, 2021)

With regard to the changing livelihood options, FGD participants noted how land in low-lying and valley areas, most of which are found in the WMAs, has for many years been suitable for the production of paddy:

> We were already growing crops before this WMA was established. The District Game Officer (DGO) those days advised us to continue growing rice and maize and surround our farms with beehives because bees have ecological benefits and would deter

> elephants from invading our farms. So, we have been working there all the years. We were surprised last year when the WMA management destroyed some of our crops and also harvested much of it without our knowledge and confiscated it all (Village leader/Liganga/KII /May, 2021).

Moreover, paddy is increasingly becoming an important food and cash crop, and is therefore, attracting many people from WMA constituting villages and elsewhere. KIIs at various levels (from district to village levels) revealed how land, especially that which is suitable for paddy cultivation, has become increasingly valuable such that people keep on encroaching areas in WMAs. An officer at the district level had this to say:

> Land in this place has become very valuable after the booming of rice production and the completion of Tunduru-Songea tarmac road. Some people who encroach WMA are not indigenous. Many are business people from Songea and elsewhere. These are the people who cultivate extensive areas: acres and acres and for agrobusiness (KII/District Official/May, 2021).

Development of transportation infrastructure, tarmac road from Tunduru to Songea in this case, is increasingly challenging the notions of indigenous knowledge and practices e.g. of low acreage, on the basis of which local people are represented as exclusively informed by their own local knowledge, rather than learning from elsewhere. On the contrary, in this case, people with some capital from WMA constituting villages, seem to expand their acreage along with those from distant areas like Songea Town. At Matepwende, one of the constituting villages of Kimbanda WMA participants explained how their recent access to bodaboda transport has enabled them to access very fertile land around Kimbanda Hill which is located quite away from their village but currently reachable, and if there were no restrictions by WMA they would have made huge fortunes at that area. He noted:

> In the past we were not farming there because it is quite distant from here. But after we accessed motorcycle transport it became easy, and we started going there. Land in that place is very fertile, and hence very productive. We were earning a lot, but conservation personnel have harvested our crops and prohibited us from going there (KII/Village leader/Matepwende/May, 2021).

The participants further narrated the incidence of their confrontation with conservation personnel over that very fertile land:

> It was not easy for us to give up the area. We tried to resist. In the process, some of us confiscated a firearm from the VGS who wanted to arrest them. Following that incidence, the district council deployed a police force to arrest all those who were involved in that event. Some of them have in fact been jailed, and are still in jail as we are speaking (Adults-FGD/Matepwende/ January, 2022).

The exposition above is an evidence that in southern Tanzania there is a lot of pressure for land for crop farming and other wildlife dependent livelihood activities because tourism is not a vibrant sector.

There is a strong sense in which people's efforts to regain access to resources currently located in the hands of the WMAs in southern Tanzania is also shared by their counter parts in northern Tanzania. In the latter, for instance, the tourism sector is doing well and villages already enjoyed some lucrative contracts with private investors in ecotourism before WMAs were established. The establishment of WMAs has unfortunately denied these villages access to income because since their establishment, revenues were paid to the AA and later to the Ministry. WWF (2014) and Kicheleri et al. (2020) document how some villages in the WMAs in northern Tanzania, e.g. Minjingu Village around Burunge WMA, have entered into a dispute with WMAs, by demanding to withdraw their membership, on grounds that their revenues have significantly fallen after joining WMAs. Moreover, some people have not resorted to open confrontation with conservation authorities but are aware of their capability to do so if they decide. In one of the FGDs, a participant reiterated that *binadamu ni zaidi ya nyoka akinuia*, literally translated as a human being is more dangerous than a venomous snake when determined to do harm.

Conclusions

The findings of this study have indicated the dominant nature-nurture dichotomy approach which characterizes the establishment and operation of the WMAs as disruptive of rural livelihoods and people have challenged it in various ways. Apart from being separationist, this dominant model has also been expansionist, such that WMAs are said to constitute around 13% of the total land area, adding to the previously conserved areas to total to close to 40% of the conserved land area (Bluestein et al, 2017). Consequently, and as noted earlier, in communities located in the Selous Niassa Wildlife Corridor (SNWC), just around 10 percent of the farm land has remained within the jurisdiction of the villages, despite the fact that these communities are predominantly agrarian (Noe, 2019).

The separation of communities from conserved areas in the context of Kimbanda and Mbarang'andu WMAs, has been achieved through the process of accumulation by dispossession by divorcing people from their means of livelihoods (Kelly, 2011), particularly through extension of protected areas into the used to be village land. Accordingly, several biopolitical techniques (legal, PRA, participation, alternative projects, etc.) are used to achieve this objective. Bluwstein et al (2017) use the concept of accumulation by rural dispossession to specifically denote "subtle processes of land *control* grabbing by transferring land into the public domain which in turn profits actors who are not local people, for instance conservation NGOs.

Eventually, communities in this area have been subjected to a number of social and psychological insecurities, ranging from food insecurity, income, and so forth. Against such encounters, communities have devised various mechanisms of either utilizing the same resources or looking for alternatives in order to survive in such a changing context. Notably, people violate regulations by cultivating in WMA valley areas, where soils and water conditions are deemed more suitable for particular crops especially rice. This practice is propelled by an increasing demand for arable land to accommodate the growing population, eased access to such areas following the completion of the Songea-Tunduru Highway and improved bodaboda transport.

In the light of these reactions I show that beyond the idealized notions of exclusively indigenous (local) knowledge and practices, people hinge on the prevailing conditions/ circumstances to (re)produce or transform their thoughts and practices (whether conservation, farming, and livestock keeping). Thus, people in WMA constituting villages like other people, don't exclusively stick to indigenous knowledge and practices. Instead, they adopt, reject or adapt particular knowledge and practices, depending on the manner in which they assess their situation. Moreover, like other human groups and communities, they think and enact practices based on how they assess the circumstances around them and the quest to transform their livelihood conditions for better.

Thus, beyond idealized notions of conservation, it is imperative to develop models which speak to the interests of both communities and biodiversity. For instance, within this thinking, some scholars are currently talking about convivial conservation to imply the quest to democratize biodiversity conservation activities in order to give room for multiple knowledge systems in the quest for human-wildlife co-existence (Buscher & Fletcher, 2020; Bluwstein, 2022; Mabele et al., 2022). In the context of SNWC, instead of assuming that human activities are incompatible with wildlife conservation,

it is important to do a thorough study on the manner in which people used to coexist with wildlife since the far past. For instance, there is evidence to indicate that before the establishment of *Ujamaa Villages* in the 1970s, people settled around Kimbanda Hill (which is currently part of the Kimbanda WMA) where there is a graveyard until today.

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